

Invitation for Bids

Republic of Indonesia

Strengthen University Teaching Hospitals in the Fight against COVID-19 and Pandemic Preparedness

Procurement of Medical Equipment for ICU for severe COVID-19 Cases/Infectious Disease and BSL3 Laboratory for Virology Diagnostics

4th of August 2025

ICB Number: EU-UNHAS-48511-GOODS1 / KfW Tender ID: 511657

The Ministry of Higher Education, Science, and Technology of the Republic of Indonesia has received funds from the European Union through Kreditanstalt für Wiederaufbau (KfW) Development Bank towards the cost of the rehabilitation works to upgrade a biosafety laboratory for virology diagnostics and the establishment of an Intensive Care Unit (ICU) for severe COVID-19 cases/Infectious diseases, as well as the procurement of medical equipment for ICU for severe COVID-19 cases/Infectious disease and BSL3 laboratory for virology diagnostics for the hospital UNHAS Makassar, Building EF. It is intended to apply part of the budget to subsidize the procurement of Goods, including the supply, installation, testing, commissioning, user training and maintenance of the medical equipment.

The Project Executing Agency is the Ministry of Higher Education, Science, and Technology of the Republic of Indonesia (as "The Purchaser").

The goal of the project is to upgrade the UNHAS Hospital in Makassar by improving hospital care services and facilities including diagnostic and treatment capacities of the hospital and by improving the training capacities for medical professional staff, with the objective that more people have access to quality diagnostics and appropriate intensive care treatment, if necessary of COVID-19/Infectious diseases. This is to contribute to establishing of adequate medical services in Makassar and its catchment area and hence to contribute to an improved health situation for the Indonesian population.

Therefore, the MoECRT seeks procurement of medical equipment for the modernisation of the existing ICU to be upgraded to the new ICU for severe COVID-19 cases/Infectious disease wards and for the modernization of the existing laboratory for virology diagnostic to be upgraded to the BSL Level 3.

The Purchaser intends to assign a Supplier for the following:

Supply, installation, testing, commissioning, user training and maintenance of medical equipment for ICU for severe COVID-19 cases/Infectious disease and BSL3 laboratory for virology diagnostics for the hospital UNHAS Makassar, Building EF

1. The existing area on the 3rd floor (Building EF, between axes I-P and 6-9) to be upgraded to the new ICU intensive care unit (ICU) for severe COVID-19 cases/Infectious disease wards: The BoQs and Specification in Lot 1: ICU for severe COVID-19 cases/Infectious disease have been elaborated.
2. The existing laboratory on the 6th floor (Building A, existing laboratory for virology diagnostic) to be upgraded to the BSL Level 3: The BoQs and Specification in Lot 2: BSL3 laboratory for virology diagnostics have been elaborated.
3. The Bidders shall make themselves familiar with the context on the Site and scrutinize the physical conditions on the Site to submit comprehensive proposals for

the supply, installation, testing and commissioning, user training and maintenance of the medical equipment technically responsive to the BoQs and Specification as per Lot 1: ICU for severe COVID-19 cases/Infectious disease and Lot 2: BSL3 laboratory for virology diagnostics (please also refer to the Important Notice to the Technical Specification).

The Ministry of Higher Education, Science, and Technology now invites sealed Bids from eligible Bidders for medical equipment for ICU for severe COVID-19 cases/Infectious disease and BSL3 laboratory for virology diagnostics for the hospital UNHAS Makassar, Building EF. The tender consists of 2 Lots, Lot 1: ICU for severe COVID-19 cases/Infectious disease and Lot 2: BSL3 laboratory for virology diagnostics. Bidders may bid for either Lot separately or for all Lots.

Bidding will be conducted by means of the International Competitive Bidding (ICB) with qualification as specified in the **Guidelines for the Procurement of Consulting Services, Works, Plant, Goods and Non-Consulting Services in Financial Cooperation with Partner Countries** ("KfW Guidelines"). ICB will be conducted in accordance with the Single Stage, one-envelope procedure. The ICB procedure is open to all Bidders from eligible source.

Interested eligible Bidders may obtain further information in respect to the bid documents from the Project Implementation Unit Office, Hospital Hasanuddin University (UNHAS) Makassar, Building EF, Hasanuddin University Hospital, JL Perintis Kemerdekaan Km 11, Pintu II Unhas, Kecamatan Tamalanrea, Kota Makassar, South Sulawesi, Republic of Indonesia, Email: grant_rsu@rs.unhas.ac.id All correspondence shall be copied to GITEC-IGIP GmbH, Carlswerkstrasse 13d 51063 Cologne Germany, Email: christian.jaminon@gic-group.com.

A complete set of bidding documents is available to interested Bidders as download from the Purchaser at <https://rs.unhas.ac.id> until the last date of tender submission.

All interested bidders who received the bidding documents from either the Purchaser or the address given in the notice of the GTAI (German Trade & Invest, website www.gtai.de) must register their interest to participate in the bidding, specifying the Lot(s), at the Project Implementation Unit Office, Hospital Hasanuddin University (UNHAS) Makassar, Building EF, Hasanuddin University Hospital, JL Perintis Kemerdekaan Km 11, Pintu II Unhas, Kecamatan Tamalanrea, Kota Makassar, South Sulawesi, Republic of Indonesia, Email: grant_rsu@rs.unhas.ac.id by means of letter or email to allow inclusion of all such bidders into any correspondence during the tender process. The bidding documents received from the Purchaser are not transferable.

A pre-bid meeting is being scheduled on **19 August 2025**.

Bids must be delivered to the address indicated in the clause ITB 22.1 of the bidding document on or before **19 September 2025 at 10:00 am CIT**. Late Bids will be rejected.

In a public session, the Bids will be opened in the presence of the Bidders' designated representatives.

Supply, installation, testing, commissioning, user training and maintenance of medical equipment for ICU for severe COVID-19 cases/Infectious disease and BSL3 laboratory for virology diagnostics for the hospital UNHAS Makassar, Building EF has to be executed by a firm or entrepreneur eligible in accordance to the criteria listed in the bidding documents in accordance with the legislation applicable in the Republic of Indonesia.

Among the eligibility criteria as detailed in the complete bidding documents, the minimum required level of similar experience will be to have successfully carried out a minimum of three (3) similar¹ contracts of a minimum value of 1.750.000,00 Euros for Lot 1: ICU for severe COVID-19 cases/Infectious disease and 2: 1.000.000,00 Euros for Lot 2: BSL3 laboratory for virology diagnostics that have been satisfactorily, and substantially² completed as Supplier, or joint venture member³ during the past five (5) years.

All Bids must be accompanied by a Bid Security, as defined in the BDS, ITB 18.1.

¹ The similarity shall be based on the physical size, complexity, methods/technology and/or other characteristics described in Section VII, Schedule of Requirements. Summation of number of small value contracts (less than the value specified under requirement) to meet the overall requirement will not be allowed.



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KFW

German Financial Cooperation with the Republic of Indonesia

Hospital Hasanuddin University (UNHAS) Makassar

**Strengthen University Teaching Hospitals in the Fight against
COVID-19 and Pandemic Preparedness**

Bidding Documents

for

**Procurement of Medical Equipment for ICU for severe COVID-19
Cases/Infectious Disease and BSL3 Laboratory for Virology
Diagnostics**

Employer:

Ministry of Higher Education, Science, and Technology

August 2025

[EU-UNHAS-48511-GOODS1]

KfW Tender ID: 511657

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PART 1 – Bidding Procedures

Section I. Instructions to Bidders

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Section I. Instructions to Bidders¹

A. General

- 1. Scope of Bid**

 - 1.1 In connection with the Invitation for Bids, **specified in the Bid Data Sheet (BDS)**, the Purchaser, **as specified in the BDS**, issues these Bidding Documents for the Procurement of Goods and Related Services incidental thereto as specified in Section VII, Schedule of Requirements. The name, identification and number of lots (contracts) of this International Competitive Bidding (ICB) are **specified in the BDS**.
 - 1.2 Throughout these Bidding Documents:

 - (a) The term “in writing” means communicated in written form (e.g. by mail, e-mail, fax, telex) with proof of receipt;
 - (b) If the context so requires, “singular” means “plural” and vice versa; and
 - (c) “Day” means calendar day.
- 2. Source of Funds**

 - 2.1 The Purchaser **specified in the BDS** has applied for or received financing (hereinafter called “funds”) from the KfW Entwicklungsbank (hereinafter called “the KfW”), toward the project **named in the BDS**. The Purchaser intends to apply a portion of the funds to eligible payments under the contract for which these Bidding Documents are issued.
- 3. Corrupt and Fraudulent Practices**

 - 3.1 KfW requires compliance with its policy in regard to corrupt and fraudulent practices as set forth in Section VI.
 - 3.2 In further pursuance of this policy, Bidders shall permit and shall cause its agents to provide information and permit KfW or an agent appointed by KfW to inspect on site all accounts, records and other documents relating to bid submission and contract performance (in the case of award), and to have them audited by auditors or agents appointed by KfW.
- 4. Eligible Bidders**

 - 4.1 A Bidder may be a firm that is a private entity, a state-owned entity- subject to ITB 4.3 - or any combination of such entities in the form of a joint venture (“JV”) under an existing JV Agreement or with the intent to enter into such an agreement supported by a letter of intent to execute a JV Agreement, in accordance with ITB 11.2. In the case of a JV, all members shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms. The Bidder shall nominate an authorised representative who shall have the authority to conduct all

¹ [Text in this Section shall not be modified.]

business for and on behalf of Bidder and any and all its members, if the Bidder is a JV, during bidding and contract execution (in the event the Bidder is awarded the Contract). Unless specified in the BDS, there is no limit on the number of members in a JV.

- 4.2 A Bidder shall not have a conflict of interest. Any Bidder found to have a conflict of interest shall be disqualified. A Bidder may be considered to have a conflict of interest for the purpose of this bidding process, if the Bidder:
- (a) Directly or indirectly controls, is controlled by or is under common control with another Bidder; or
 - (b) Receives or has received any direct or indirect subsidy from another Bidder; or
 - (c) Has the same legal representative as another Bidder; or
 - (d) Has a relationship with another Bidder, directly or through common third parties, that puts it in a position to influence the bid of another Bidder, or influence the decisions of the Purchaser regarding this bidding process; or
 - (e) Participates in more than one bid in this bidding process, both as an individual firm and as a JV member. Participation by a Bidder in more than one Bid will result in the disqualification of all Bids in which such Bidder is involved. However, this does not limit the inclusion of the same subcontractor in more than one bid; or
 - (f) Any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the goods that are the subject of the bid; or
 - (g) Any of its affiliates has been hired (or is proposed to be hired) by the Purchaser for the Contract implementation; or
 - (h) Has a close business or family relationship with a professional staff of the Purchaser (or of the project implementing agency, or of a recipient of a part of the funds) who: (i) are directly or indirectly involved in the preparation of the bidding documents or specifications of the contract, and/or the bid evaluation process of such contract; or (ii) would be involved in the implementation or supervision of such contract unless the conflict stemming from such relationship has been resolved in a manner acceptable to the KfW throughout the procurement process and execution of the contract.

- 4.3 The KfW's eligibility criteria to bid are described in Section V, Eligibility criteria.
- 4.4 A Bidder shall not be under suspension from bidding by the Purchaser as the result of the execution of a Bid-Securing Declaration.
- 4.5 This bidding is open only to eligible Bidders, who will be subject to qualification.
- 4.6 A Bidder shall provide such evidence of eligibility satisfactory to the Purchaser, as specified in ITB 17.1 or as the Purchaser shall reasonably request.
- 5. Eligible Goods and Related Services**
- 5.1 All the Goods and Related Services to be supplied under the Contract and financed by the KfW shall have their origin in any country in accordance with Section V, Eligibility Criteria.
- 5.2 For purposes of this Clause, the term "goods" includes commodities, raw material, machinery, equipment, and industrial plants; and "related services" includes services such as insurance, installation, training, and initial maintenance.
- 5.3 The term "origin" means the country where the goods have been mined, grown, cultivated, produced, manufactured or processed; or, through manufacture, processing, or assembly, another commercially recognized article results that differs substantially in its basic characteristics from its components.

B. Contents of Bidding Documents

- 6. Sections of Bidding Documents**
- 6.1 The Bidding Documents consist of Parts 1, 2, and 3, which include all the Sections indicated below, and should be read in conjunction with any Addenda issued in accordance with ITB 8.

PART 1 - Bidding Procedures

- Section I. Instructions to Bidders (ITB);
- Section II. Bid Data Sheet (BDS);
- Section III. Qualification and Evaluation Criteria;
- Section IV. Bidding Forms;
- Section V. Eligibility Criteria;
- Section VI. KfW Policy - Corrupt and Fraudulent Practices and Social and Environmental Responsibility;

PART 2 - Supply Requirements

- Section VII. Schedule of Requirements;

PART 3 - Contract

- Section VIII. General Conditions of Contract (GC);
- Section IX. Particular Conditions of Contract (PC);
- Section X. Contract Forms.

6.2 The Invitation for Bids issued by the Purchaser is not part of the Bidding Documents.

6.3 Unless obtained directly from the Purchaser, the Purchaser is not responsible for the completeness of the Bidding Documents, responses to requests for clarification or Addenda to the Bidding Documents in accordance with ITB 8. In case of any contradiction, documents obtained directly from the Purchaser shall prevail.

6.4 The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Documents and to furnish with its Bid all information or documentation as is required by the Bidding Documents.

7. Clarification of Bidding Documents

7.1 A Bidder requiring any clarification of the Bidding Documents shall contact the Purchaser in writing at the Purchaser's address **specified in the BDS**. The Purchaser will respond in writing to any request for clarification, provided that such request is received no later than 14 (fourteen) days prior to the deadline for submission of bids. The Purchaser shall forward copies of its response to all Bidders who have acquired the Bidding Documents in accordance with ITB 6.3, including a description of the inquiry but without identifying its source. If so **specified in the BDS**, the Purchaser shall also promptly publish its response at the web page **identified in the BDS**. Should the clarification result in changes to the essential elements of the Bidding Documents, the Purchaser shall amend the Bidding Documents following the procedure under ITB 8 and ITB 22.2.

8. Amendment of Bidding Document

8.1 At any time prior to the deadline for submission of bids, the Purchaser may amend the Bidding Documents by issuing addenda.

8.2 Any addendum issued shall be part of the Bidding Documents and shall be communicated in writing to all who have obtained the Bidding Documents from the Purchaser in accordance with ITB 6.3. The Purchaser

shall also promptly publish the addendum on the Purchaser's web page in accordance with ITB 7.1.

- 8.3 To give Bidders reasonable time in which to take an addendum into account in preparing their bids, the Purchaser may, at its discretion, extend the deadline for the submission of bids, pursuant to ITB 22.2.

C. Preparation of Bids

- 9. Cost of Bidding** 9.1 The Bidder shall bear all costs associated with the preparation and submission of its bid, and the Purchaser shall not be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.
- 10. Language of Bid** 10.1 The Bid, as well as all correspondence and documents relating to the Bid exchanged by the Bidder and the Purchaser, shall be written in the language **specified in the BDS**. Supporting documents and printed literature that are part of the Bid may be in another language provided they are accompanied by an accurate translation of the relevant passages into the language **specified in the BDS**, in which case, for purposes of interpretation of the Bid, such translation shall govern.
- 11. Documents Comprising the Bid** 11.1 The Bid shall comprise the following:
- (a) Qualification
 - (i) Bid Submission Form [see also (b)(i) below], in accordance with Section III (1.2) (Table 1);
 - (ii) Declaration of Undertaking duly signed, in accordance with Section III (1.2) (Table 1);
 - (iii) Written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB 20.2 and Section III (1.2) (Table 1);
 - (iv) Any other forms and supporting documents required in Section III (1.1) (1.2) (Tables 1 to 5).
 - (b) Technical and Financial Bid
 - (i) Bid Submission Form and the Bidding Forms in accordance with ITB 12;
 - (ii) Completed schedules, in accordance with ITB 12 and 14;
 - (iii) Bid Security, in accordance with ITB 19.1;
 - (iv) Alternative bids, if permissible, in accordance with ITB 13;

- (v) Documentary evidence in accordance with ITB 17 establishing the Bidder's qualifications to perform the contract if its Bid is accepted;
 - (vi) Documentary evidence in accordance with ITB 17 establishing the Bidder's eligibility to bid;
 - (vii) Documentary evidence in accordance with ITB 16, that the Goods and Related Services to be supplied by the Bidder are of eligible origin;
 - (viii) Documentary evidence in accordance with ITB 16 and 30, that the Goods and Related Services conform to the Bidding Documents;
 - (ix) Any other document **required in the BDS**.
- 11.2 In addition to the requirements under ITB 11.1, bids submitted by a JV shall include a copy of the Joint Venture Agreement entered into by all members. Alternatively, a letter of intent to execute a Joint Venture Agreement in the event of a successful bid shall be signed by all members and submitted with the bid, together with a copy of the proposed Agreement.
- 11.3 The Bidder shall furnish in the Bid Submission Form information on commissions and gratuities, if any, paid or to be paid to agents or any other party relating to this Bid.
- 12. Declaration of Undertaking, Qualification Forms, and Bid Submission Form, Bidding Forms, Price Schedules**
- 12.1 The Declaration of Undertaking and the Qualification Forms as listed in ITB 11.1(a) shall be prepared using the relevant forms furnished in Section IV, Bidding Forms. The forms must be completed without any alterations to the text, and no substitutes shall be accepted except as provided under ITB 20.4. All blank spaces shall be filled in with the information requested.
- 12.2 The Bid Submission Form, the Price Schedules, and the Bidding Forms as listed in ITB 11.1(b) shall be prepared using the relevant forms furnished in Section IV, Bidding Forms. The forms must be completed without any alterations to the text, and no substitutes shall be accepted except as provided under ITB 20.4. All blank spaces shall be filled in with the information requested.
- 13. Alternative Bids**
- 13.1. Unless otherwise **specified in the BDS**, alternative bids shall not be considered.
- 14. Bid Prices and Discounts**
- 14.1 The prices and discounts quoted by the Bidder in the Bid Submission Form and in the Price Schedules shall conform to the requirements specified below.

- 14.2 All lots (contracts) and items must be listed and priced separately in the Price Schedules.
- 14.3 The price to be quoted in the Bid Submission Form shall be the total price of the bid, excluding any discounts offered.
- 14.4 The Bidder shall quote any discounts and indicate the methodology for their application in the Bid Submission Form.
- 14.5 Prices quoted by the Bidder shall be fixed during the Bidder's performance of the Contract and not subject to variation on any account, **unless otherwise specified in the BDS**. A bid submitted with an adjustable price quotation shall be treated as nonresponsive and shall be rejected, pursuant to ITB 30. However, if in accordance with the BDS, prices quoted by the Bidder shall be subject to adjustment during the performance of the Contract, a bid submitted with a fixed price quotation shall not be rejected, but the price adjustment shall be treated as zero.
- 14.6 If so specified in ITB 1.1, bids are being invited for individual lots (contracts) or for any combination of lots (packages). Prices quoted shall correspond to 100 % of the items specified for each lot and to 100% of the quantities specified for each item of a lot. Bidders wishing to offer discounts for the award of more than one Contract shall specify in their bid the price reductions applicable to each package, or alternatively, to individual Contracts within the package. Discounts shall be submitted in accordance with ITB 14.4 provided the bids for all lots (contracts) are opened at the same time.
- 14.7 The term CIP (Carriage and Insurance Paid to), and other similar terms shall be governed by the rules prescribed in the current edition of Incoterms, published by The International Chamber of Commerce, as **specified in the BDS**.
- 14.8 Prices shall be quoted as specified in each Price Schedule included in Section IV, Bidding Forms. The disaggregation of price components is required solely for the purpose of facilitating the comparison of bids by the Purchaser. In quoting prices, the Bidder shall be free to use transportation through carriers registered in any eligible country, in accordance with Section V, Eligibility Criteria. Similarly, the Bidder may obtain insurance services from any eligible country in accordance with Section V, Eligibility Criteria. Prices shall be entered in the following manner:

- (a) For Goods manufactured in the Purchaser's Country:
- (i) The price of the Goods quoted CIP named place of destination (final destinations), including all customs duties and sales and other taxes already paid or payable on the components and raw material used in the manufacture or assembly of the Goods;
 - (ii) All related services required in these Bidding Documents; and
 - (iii) Any Purchaser's Country sales tax and other taxes which will be payable on the Goods if the contract is awarded to the Bidder.
- (b) For Goods manufactured outside the Purchaser's Country, to be imported:
- (i) The price of the Goods, quoted CIP named place of destination (port of entry and/or place of customs clearance), in the Purchaser's Country, **as specified in the BDS**; and
 - (ii) All related services required in these Bidding Documents.
- (c) For Goods manufactured outside the Purchaser's Country, already imported:
- (i) The price of the Goods, quoted CIP named place of destination (final destinations), excluding the custom duties and other import taxes already paid (need to be supported with documentary evidence) or to be paid on the Goods already imported;
 - (ii) All related services required in these Bidding Documents; and
 - (iii) All custom duties and other import taxes already paid (need to be supported with documentary evidence) or to be paid on the Goods already imported in the Purchaser's country, payable on the Goods, if the Contract is awarded to the Bidder;
 - (iv) Any Purchaser's Country sales and other taxes which will be payable on the Goods if the contract is awarded to the Bidder; and
- (d) For Related Services specified in Section VII - Schedule of Requirements:
- (i) All related services are to be included in the respective Price Schedule [(a), (b), or (c) above] submitted by each Bidder.

- 15. Currencies of Bid and Payment**
- 15.1 The currency(ies) of the bid and the currency(ies) of payments shall be **as specified in the BDS**. The Bidder shall quote in the currency of the Purchaser's Country the portion of the bid price that corresponds to expenditures incurred in the currency of the Purchaser's country, unless otherwise **specified in the BDS**.
- 16. Documents Establishing the Eligibility and Conformity of the Goods and Related Services**
- 16.1 To establish the eligibility of the Goods and Related Services in accordance with ITB 5, Bidders shall complete the country of origin declarations in the Price Schedule Forms, included in Section IV, Bidding Forms.
- 16.2 To establish the conformity of the Goods and Related Services to the Bidding Documents, the Bidder shall furnish as part of its Bid the documentary evidence that the Goods conform to the technical specifications and standards specified in Section VII, Schedule of Requirements.
- 16.3 The documentary evidence may be in the form of literature, drawings or data, and shall consist of a detailed item by item description of the essential technical and performance characteristics of the Goods and Related Services, demonstrating substantial responsiveness of the Goods and Related Services to the technical specification, and if applicable, a statement of deviations and exceptions to the provisions of the Section VII, Schedule of Requirements.
- 16.4 The Bidder shall also furnish a list giving full particulars, including available sources and current prices of spare parts, special tools, etc., necessary for the proper and continuing functioning of the Goods during the period **specified in the BDS** following commencement of the use of the goods by the Purchaser.
- 16.5 Standards for workmanship, process, material, and equipment, as well as references to brand names or catalogue numbers specified by the Purchaser in the Schedule of Requirements, are intended to be descriptive only and not restrictive. The Bidder may offer other standards of quality, brand names, and/or catalogue numbers, provided that it demonstrates, to the Purchaser's satisfaction, that the substitutions ensure substantial equivalence or are superior to those specified in the Section VII, Schedule of Requirements.

- 17. Documents Establishing the Eligibility and Qualifications of the Bidder**
- 17.1 To establish Bidder's their eligibility in accordance with ITB 4, Bidders shall complete the Bid Submission Form, included in Section IV, Bidding Forms.
- 17.2 The documentary evidence of the Bidder's qualifications to perform the contract if its bid is accepted shall establish to the Purchaser's satisfaction:
- (a) That, if **required in the BDS**, a Bidder that does not manufacture or produce the Goods it offers to supply shall submit the Manufacturer's Authorization using the form included in Section IV, Bidding Forms to demonstrate that it has been duly authorized by the manufacturer or producer of the Goods to supply these Goods in the Purchaser's Country;
 - (b) That, if **required in the BDS**, in case of a Bidder not doing business within the Purchaser's Country, the Bidder is represented by an Agent in the country equipped and able to carry out the Supplier's maintenance, repair and spare parts-stocking obligations prescribed in the Conditions of Contract and/or Technical Specifications; and
 - (c) That the Bidder meets each of the qualification criterion specified in Section III, Qualification and Evaluation and Criteria.
- 18. Period of Validity of Bids**
- 18.1 Bids shall remain valid for the period **specified in the BDS** after the bid submission deadline date prescribed by the Purchaser in accordance with ITB 22.1. A bid valid for a shorter period shall be rejected by the Purchaser as nonresponsive.
- 18.2 In exceptional circumstances, prior to the expiration of the bid validity period, the Purchaser may request bidders to extend the period of validity of their bids. The request and the responses shall be made in writing. If a Bid Security is requested in accordance with ITB Clause 19, it shall also be extended for forty-two (42) days beyond the deadline of the extended validity period. A Bidder may refuse the request without forfeiting its Bid Security. A Bidder granting the request shall not be required or permitted to modify its bid, except as provided in ITB 18.3.
- 18.3 If the award is delayed by a period exceeding fifty-six (56) days beyond the expiry of the initial bid validity, the Contract price shall be determined as follows:
- (a) In the case of fixed price contracts, the Contract price shall be the bid price adjusted by the factor **specified in the BDS**;

- (b) In the case of adjustable price contracts, no adjustment shall be made;
- (c) In any case, bid evaluation shall be based on the bid price without taking into consideration the applicable correction from those indicated above.

19. Bid Security

- 19.1 The Bidder shall furnish as part of its bid, a Bid Security, as **specified in the BDS**, in original form and in the amount and currency **specified in the BDS**.
- 19.2 A Bid Security shall use the form included in Section IV, Bidding Forms, without deviations. The Bid Security must be issued in the currency of the Bid.
- 19.3 If a Bid Security is specified pursuant to ITB 19.1, the Bid Security shall be a demand guarantee in any of the following forms at the Bidder's option:
- (a) An unconditional guarantee issued by a reputable bank or financial institution (such as an insurance, bonding or surety company);
 - (b) A cashier's or certified check issued by a bank; or
 - (c) Another security **specified in the BDS**;

From a reputable source from an eligible country as specified in Section V, Eligibility Criteria. Bidders are free to use any reputable bank for the purpose of issuing the required Bid Security, subject to all conditions of ITB 19 are being met without exception; the issuing bank shall have a correspondent bank in the Purchaser's country. In the case of a bank guarantee, the Bid Security shall be submitted either using the Bid Security Form included in Section IV, Bidding Forms, or in another substantially similar format approved by the Purchaser prior to bid submission. The Bid Security shall be valid for forty-two (42) days beyond the original validity period of the bid, or beyond any period of extension if requested under ITB 18.2.

- 19.4 If a Bid Security is specified pursuant to ITB 19.1, any bid not accompanied by a substantially responsive Bid Security shall be rejected by the Purchaser as non-responsive.
- 19.5 The Bid Security of unsuccessful Bidders shall be returned as promptly as possible upon the successful Bidder's signing the contract and furnishing the Performance Security pursuant to ITB 42.
- 19.6 The Bid Security of the successful Bidder shall be returned as promptly as possible once the successful Bidder has signed the contract and furnished the required performance security.

19.7 The Bid Security may be forfeited:

- (a) If a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Bid Submission Form, or any extension thereto provided by the Bidder; or
- (b) If the successful Bidder fails to:
 - (i) Sign the Contract in accordance with ITB 41; or
 - (ii) Furnish a performance security in accordance with ITB 42.

19.8 The Bid Security of a JV must be in the name of the JV that submits the bid. If the JV has not been legally constituted into a legally enforceable JV at the time of bidding, the Bid Security shall be in the names of all future members as named in the letter of intent referred to in ITB 4.1 and ITB 11.2.

19.9 If a Bid Security is **not required in the BDS**, pursuant to ITB 19.1, and:

- (a) If a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Bid Submission Form, or any extension thereto provided by the Bidder; or
- (b) If the successful Bidder fails to: sign the Contract in accordance with ITB 41; or furnish a performance security in accordance with ITB 42;

the Purchaser may, **if provided for in the BDS**, declare the Bidder ineligible to be awarded a contract by the Purchaser for a period of time **as stated in the BDS**.

20. Format and Signing of Bid

20.1 The Bidder shall prepare one original of the documents comprising the bid as described in ITB 11, clearly mark "ORIGINAL". Alternative bids, if permitted in accordance with ITB 13, shall be clearly marked "ALTERNATIVE". In addition, the Bidder shall submit copies of the bid, in the number **specified in the BDS** and clearly mark them "COPY". In the event of any discrepancy between the original and the copies, the original shall prevail.

20.2 The original and all copies of the bid shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Bidder. This authorization shall consist of a written confirmation **as specified in the BDS** and shall be attached to the bid. The name and position held by each person signing the authorization must be typed or printed below the signature. All pages of the bid where entries or

amendments have been made shall be signed or initialed by the person signing the bid.

- 20.3 In case the Bidder is a JV, the Bid shall be signed by an authorized representative of the JV on behalf of the JV, and so as to be legally binding on all the members as evidenced by a power of attorney signed by their legally authorized representatives. If the JV has not been legally constituted into a legally enforceable JV at the time of bidding, then the Bid shall be signed by every member of the proposed JV.
- 20.4 Any inter-lineation, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the bid.

D. Submission and Opening of Bids

21. Sealing and Marking of Bids

- 21.1 The Bidder shall enclose the original and all copies of the bid, including alternative bids, if permitted in accordance with ITB 13, in separate sealed envelopes, duly marking the envelopes as "ORIGINAL", "ALTERNATIVE" and "COPY". These envelopes containing the original and the copies shall then be enclosed in one single envelope/package.

In addition an electronic version as true and complete colour copy in one file in unalterable PDF format on CD or flashdrive must be submitted; Considering that a CD or flashdrive and its content may be considered dutiable goods by customs authorities in the Purchaser's country, it is the full responsibility and risk of the Bidder, pursuant to ITB 22 and ITB 23, to either (i) include the electronic version in the inner envelope containing the original or (ii) send the electronic version separately to arrive within one week from the date and time stipulated in ITB 22; the electronic version is meant for convenience of the Purchaser and shall have no legal status.

- 21.2 The inner and outer envelopes shall:
- (a) Bear the name and address of the Bidder;
 - (b) Be addressed to the Purchaser in accordance with ITB 22.1;
 - (c) Bear the specific identification of this bidding process indicated in ITB 1.1; and
 - (d) Bear a warning not to open before the time and date for opening of the qualification documents.
- 21.3 If all envelopes are not sealed and marked as required, the Purchaser will assume no responsibility for the misplacement or premature opening of the qualification documents and/or bid.

- 22. Deadline for Submission of Bids**
- 22.1 Bids, as defined in ITB 21.1, must be received by the Purchaser at the address and no later than the date and time **specified in the BDS**.
- 22.2 The Purchaser may, at its discretion, extend the deadline for the submission of Bids by amending the Bidding Documents in accordance with ITB 8, in which case all rights and obligations of the Purchaser and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.
- 23. Late Bids**
- 23.1. The Purchaser shall not consider any Bid that arrives after the deadline for submission of bids, in accordance with ITB 22. Any Bid received by the Purchaser after the deadline for submission of bids shall be declared late, rejected, and returned unopened to the Bidder.
- 24. Withdrawal, Substitution, and Modification of Bids**
- 24.1 A Bidder may withdraw, substitute, or modify its bid after it has been submitted by sending a written notice, duly signed by an authorized representative, and shall include a copy of the authorization (the power of attorney) in accordance with ITB 20.2. The corresponding substitution or modification of the bid must accompany the respective written notice. All notices must be:
- (a) Prepared and submitted in accordance with ITB 20 and 21 (except that withdrawal notices do not require copies), and in addition, the respective envelopes shall be clearly marked "WITHDRAWAL," "SUBSTITUTION," or "MODIFICATION"; and
- (b) Received by the Purchaser prior to the deadline prescribed for submission of bids, in accordance with ITB 22.
- 24.2 Bids requested to be withdrawn in accordance with ITB 24.1 shall be returned unopened to the Bidders.
- 24.3 No Bid may be withdrawn, substituted, or modified in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Bid Submission Form or any extension thereof.
- 25. Bid Opening**
- 25.1 Except in cases specified in ITB 23 and ITB 24, the Purchaser shall publicly open and read out in accordance with ITB 25.2 all Bids received by the deadline (regardless of the number of Bids received), at the date, time and place **specified in the BDS**, in public and in the presence of Bidders' designated representatives.
- 25.2 First, envelopes marked "WITHDRAWAL" shall be opened and read out and the envelope with the corresponding bid shall not be opened, but returned to

the Bidder. No bid withdrawal shall be permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal and is read out at bid opening.

Next, envelopes marked "SUBSTITUTION" shall be opened and read out and exchanged with the corresponding Bid being substituted, and the substituted Bid shall not be opened, but returned to the Bidder. No Bid substitution shall be permitted unless the corresponding substitution notice contains a valid authorization to request the substitution and is read out at bid opening.

Envelopes marked "MODIFICATION" shall be opened and read out with the corresponding Bid. No Bid modification shall be permitted unless the corresponding modification notice contains a valid authorization to request the modification and is read out at Bid opening.

Only bids that are opened and read out at Bid opening shall be considered further.

- 25.3 All other envelopes shall be opened one at a time, reading out: the name of the Bidder and whether there is a modification; the total Bid Prices, per lot (contract) if applicable, including any discounts and alternative bids (if permitted pursuant to ITB 13); the presence or absence of a Bid Security, if required; and any other details as the Purchaser may consider appropriate. Only discounts and alternative bids read out at bid opening shall be considered for evaluation. The Purchaser shall neither discuss the merits of any bid nor reject any bid (except for late bids, in accordance with ITB 23.1).
- 25.4 The Purchaser shall prepare a record of the opening session that shall include, as a minimum: the name of the Bidder and whether there is a withdrawal, substitution, or modification; the Bid Price, per lot (contract) if applicable, including any discounts, and alternative bids; and the presence or absence of a Bid Security, if one was required. The Bidders' representatives who are present shall be requested to sign the record. The omission of a Bidder's signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Bidders.

E. Evaluation and Comparison of Bids

- 26. Confidentiality** 26.1 Information relating to the examination, evaluation, and comparison of the bids, and qualification of the Bidders and recommendation of contract award, shall not be disclosed to Bidders or any other persons not officially

concerned with the bidding process until information on Contract Award is communicated to all Bidders in accordance with ITB 40.

- 26.2 Any attempt by a Bidder to influence the Purchaser in the examination, evaluation, and comparison of the bids, and qualification of the bidders, or contract award decisions may result in the rejection of its Bid.
- 26.3 Notwithstanding ITB 26.2, from the time of bid opening to the time of Contract Award, if any Bidder wishes to contact the Purchaser on any matter related to the bidding process, it shall do so in writing.
- 27. Qualification of the Bidder**
- 27.1 The Purchaser shall determine to its satisfaction whether the Bidder meets the qualifying criteria specified in Section III, Qualification and Evaluation Criteria, Qualification.
- 27.2 The determination shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB 17.2 (c), Qualification.
- 27.3 Only those criteria listed in Section III, Qualification and Evaluation Criteria, 1. Qualification, shall be used during this evaluation step.
- 27.4 An affirmative determination shall be a prerequisite for successful qualification of the Bidder, and continued evaluation of the Bidder's Bid. A negative determination shall result in disqualification of the bid.
- 28. Clarification of Bids**
- 28.1 To assist in the examination, evaluation, comparison of the qualification and technical and financial bids of the Bidders, the Purchaser may, at its discretion, ask any Bidder for a clarification of its Bid, given a reasonable time for a response. Any clarification submitted by a Bidder that is not in response to a request by the Purchaser shall not be considered. The Purchaser's request for clarification and the response shall be in writing. No change, including any voluntary increase or decrease, in the prices or substance of the Bid shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Purchaser in the Evaluation of the bids, in accordance with ITB 32.
- 28.2 If a Bidder does not provide clarifications of its Bid by the date and time set in the Purchaser's request for clarification, its Bid may be rejected.
- 29. Deviations, Reservations, and Omissions**
- 29.1 During the evaluation of bids, the following definitions apply:
- (a) "Deviation" is a departure from the requirements specified in the Bidding Documents;

- (b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding Documents; and
 - (c) "Omission" is the failure to submit part or all of the information or documentation required in the Bidding Documents.
- 30. Determination of Responsiveness**
 - 30.1 The Purchaser's determination of a bid's responsiveness is to be based on the contents of the bid itself, as defined in ITB 11.
 - 30.2 A substantially responsive Bid is one that meets the requirements of the Bidding Documents without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that:
 - (a) If accepted, would:
 - (i) Affect in any substantial way the scope, quality, or performance of the Goods and Related Services specified in the Contract; or
 - (ii) Limit in any substantial way, inconsistent with the Bidding Documents, the Purchaser's rights or the Bidder's obligations under the proposed Contract; or
 - (b) If rectified, would unfairly affect the competitive position of other bidders presenting substantially responsive bids.
 - 30.3 The Purchaser shall examine the technical aspects of the bid submitted in accordance with ITB 16, in particular, to confirm that all requirements of Section VII, Schedule of Requirements have been met without any material deviation or reservation, or omission.
 - 30.4 If a bid is not substantially responsive to the requirements of the Bidding Documents, it shall be rejected by the Purchaser and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.
- 31. Non-conformities, Errors and Omissions**
 - 31.1 Provided that a Bid is substantially responsive, the Purchaser may waive any nonmaterial nonconformities in the Bid.
 - 31.2 Provided that a bid is substantially responsive, the Purchaser may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities in the bid related to documentation requirements. Requesting information or documentation on such nonconformities shall not be related to any aspect

of the price of the Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid.

- 31.3 Provided that a bid is substantially responsive, the Purchaser shall rectify quantifiable nonmaterial nonconformities related to the Bid Price. To this effect, the Bid Price shall be **adjusted as specified in the BDS**, for comparison purposes only, to reflect the price of a missing or non-conforming item or component.
- 32. Correction of Arithmetical Errors**
- 32.1 Provided that the Bid is substantially responsive, the Purchaser shall correct arithmetical errors on the following basis:
- (a) If there is a discrepancy between the unit price and the line item total that is obtained by multiplying the unit price by the quantity, the unit price shall prevail and the line item total shall be corrected, unless in the opinion of the Purchaser there is an obvious misplacement of the decimal point in the unit price, in which case the line item total as quoted shall govern and the unit price shall be corrected;
 - (b) If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
 - (c) If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.
- 32.2 Bidders shall be requested to accept correction of arithmetical errors. Failure to accept the correction in accordance with ITB 32.1 shall result in the rejection of the Bid.
- 33. Conversion to Single Currency**
- 33.1 For evaluation and comparison purposes, the currency(ies) of the Bid shall be converted in a single currency as **specified in the BDS**.
- 34. Margin of Preference**
- 34.1 **Unless otherwise specified in the BDS**, a margin of preference shall not apply.
- 35. Evaluation of Bids**
- 35.1 The Purchaser shall use the criteria and methodologies listed in this Clause. No other evaluation criteria or methodologies shall be permitted.
- 35.2 To evaluate a Bid (evaluation will be done for Lots (contracts)), the Purchaser shall consider the following:
- (a) The Bid Price as quoted in accordance with clause 14;
 - (b) Price adjustment for correction of arithmetic errors in accordance with ITB 32.1;

- (c) Price adjustment due to discounts offered in accordance with ITB 14.4;
 - (d) Price adjustment due to quantifiable nonmaterial nonconformities in accordance with ITB 31.3;
 - (e) Converting the amount resulting from applying (a) to (d) above, if relevant, to a single currency in accordance with ITB 33;
 - (f) The additional evaluation factors as specified in Section III, Qualification and Evaluation Criteria, 2. Evaluation.
- 35.3 The estimated effect of the price adjustment provisions of the Conditions of Contract, applied over the period of execution of the Contract, shall not be taken into account in bid evaluation.
- 35.4 If these Bidding Documents allows Bidders to quote separate prices for different lots (contracts), the methodology to determine the lowest evaluated price of the lot (contract) combinations, including any discounts offered in the Bid Submission Form, is specified in Section III, Qualification and Evaluation Criteria.
- 35.5 The Purchaser's evaluation of a bid will exclude and not take into account:
- (a) In the case of Goods manufactured in the Purchaser's Country, sales and other similar taxes, which will be payable on the goods if a contract is awarded to the Bidder;
 - (b) In the case of Goods manufactured outside the Purchaser's Country, already imported or to be imported, customs duties and other import taxes levied on the imported Good, sales and other similar taxes, which will be payable on the Goods if the contract is awarded to the Bidder;
 - (c) In the case of Related Services, customs duties and sales and other similar taxes that will be payable on the Related Services if the contract is awarded to the Bidder;
 - (d) Any allowance for price adjustment during the period of execution of the contract, if provided in the bid.
- 35.6 The Purchaser's evaluation of a bid may require the consideration of other factors, in addition to the Bid Price quoted in accordance with ITB 14. These factors may be related to the characteristics, performance, and terms and conditions of purchase of the Goods and Related Services. The effect of the factors selected, if any, shall be expressed in monetary terms to facilitate comparison of bids, unless otherwise **specified in Section III, Qualification and Evaluation Criteria**. The criteria and

methodologies to be used shall be as specified in Section III, Qualification and Evaluation Criteria.

- 35.7 If the bid, which results in the lowest Evaluated Bid Price, is significantly lower than the Purchaser's estimate, the Purchaser shall require the Bidder to produce detailed price analyses for any or all items of the Price Schedules, to demonstrate the internal consistency of those prices with the supply requirements and the method and schedule proposed. If one or several inconsistencies are evidenced, or if a bidder does not provide the required detailed price analyses, the bid shall be declared non-compliant and rejected.
- 36. Comparison of Bids** 36.1 The Purchaser shall compare the evaluated prices of all substantially responsive bids established in accordance with ITB 35.2 to determine the lowest evaluated bid.
- 37. Purchaser's Right to Accept Any Bid, and to Reject Any or All Bids** 37.1 The Purchaser reserves the right to accept or reject any Bid, and to annul the bidding process and reject all Bids at any time prior to Contract Award, without thereby incurring any liability to Bidders. In case of annulment, all Bids submitted and specifically, bid securities, shall be promptly returned to the Bidders.

F. Award of Contract

- 38. Award Criteria** 38.1 Subject to ITB 37.1, the Purchaser shall award the Contract to the qualified, pursuant to ITB 27, Bidder whose bid has been determined to be the lowest evaluated bid and is substantially responsive to the Bidding Documents.
- 39. Purchaser's Right to Vary Quantities at Time of Award** 39.1 At the time the Contract is awarded, the Purchaser reserves the right to increase or decrease the quantity of Goods and Related Services originally specified in Section VII, Schedule of Requirements, provided this does not exceed the percentages **specified in the BDS**, and without any change in the unit prices or other terms and conditions of the bid and the Bidding Documents.
- 40. Notification of Award** 40.1 Prior to the expiration of the period of bid validity, the Purchaser shall notify the successful Bidder, in writing, that its Bid has been accepted; for this purpose the Letter of Acceptance Form attached to these Bidding Documents shall be used. The notification letter (hereinafter and in the Conditions of Contract and Contract Forms called the "Letter of Acceptance") shall specify the sum that the Purchaser will pay the Supplier in consideration of the supply of Goods (hereinafter and in the Conditions of Contract and Contract Forms called "the Contract Price"). At the same time, the Purchaser shall also notify all other Bidders of the results of the bidding.
- 40.2 Until a formal Contract is prepared and executed, the notification of award shall constitute a binding Contract.

- 40.3 The Purchaser shall promptly respond in writing to any unsuccessful Bidder who, after notification of award in accordance with ITB 40.1, requests in writing the grounds on which its bid was not selected.
- 41. Signing of Contract**
- 41.1 Promptly after notification, the Purchaser shall send the successful Bidder the Contract Agreement.
- 41.2 Within twenty-eight (28) days of receipt of the Contract Agreement, the successful Bidder shall sign, date, and return it to the Purchaser.
- 41.3 Notwithstanding ITB 41.2 above, in case signing of the Contract Agreement is prevented by any export restrictions attributable to the Purchaser, to the country of the Purchaser, or to the use of the products/goods, systems or services to be supplied, where such export restrictions arise from trade regulations from a country supplying those products/goods, systems or services, the Bidder shall not be bound by its bid, always provided however, that the Bidder can demonstrate to the satisfaction of the Purchaser and of the KfW that signing of the Contract Agreement has not been prevented by any lack of diligence on the part of the Bidder in completing any formalities, including applying for permits, authorizations and licenses necessary for the export of the products/goods, systems or services under the terms of the Contract.
- 42. Performance Security**
- 42.1 Within twenty-eight (28) days of the receipt of notification of award from the Purchaser, the successful Bidder shall furnish the Performance Security² in accordance with the GC, using for that purpose the Performance Security Form included in Section X, Contract Forms. Bidders are free to use any reputable bank acceptable to the Purchaser for the purpose of issuing the required performance security, subject to all conditions of ITB 42 and GC are being met without exception the issuing bank shall have a correspondent bank in the Purchaser's country.
- 42.2 Failure of the successful Bidder to submit the above-mentioned Performance Security or sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security. In that event the Purchaser may award the Contract to the next lowest evaluated Bidder, whose bid is qualified, pursuant to ITB 27, and substantially responsive.

² Bonds shall only be permitted with prior approval from KfW.

Section II. Bid Data Sheet (BDS)

The following specific data for the goods to be procured shall complement, supplement, or amend the provisions in the Instructions to Bidders (ITB). Whenever there is a conflict, the provisions herein shall prevail over those in ITB.

ITB Clause Reference	A. General
ITB 1.1	<p>The number of the Invitation for Bids is: EU-UNHAS-48511-GOODS1 Bids may be submitted for one or two lots. Lot 1: Equipment - ICU for severe COVID-19 cases/Infectious disease Lot 2: Equipment - BSL3 laboratory for virology diagnostics Bidders are required to bid on a lot basis. Bidders which do not offer the complete required items and/or quantities per lot shall not be considered responsive to the concerned Lot.</p>
ITB 1.1	<p>The Purchaser is the Ministry of Higher Education, Science, and Technology The name and identification number of the ICB are: Supply, installation, testing, commissioning, user training and maintenance of medical equipment for ICU for severe COVID-19 cases/Infectious disease and BSL3 laboratory for virology diagnostics for the hospital UNHAS Makassar, Building EF: EU-UNHAS-48511-GOODS1</p>
ITB 2.1	<p>The name of the Project is: Hospital Hasanuddin University (UNHAS) Makassar Strengthen University Teaching Hospitals in the Fight against COVID-19 and Pandemic Preparedness</p>
	B. Contents of Bidding Documents
ITB 7.1	<p>For <u>clarification of bid purposes</u> only, the Purchaser's address is: Attention: Dr. Andi Indahwati Sidin, MHSM Hospital Hasanuddin University (UNHAS) Makassar Address: Building EF, Hasanuddin University Hospital, JL Perintis Kemerdekaan Km 11, Pintu II Unhas, Kecamatan Tamalanrea, Kota Makassar City: Makassar, South Sulawesi Country: Republic of Indonesia Email: grant_rsu@rs.unhas.ac.id cc: christian.jaminon@gic-group.com The Bidders shall make themselves familiar with the context of the Site and scrutinize the conditions on the Site. A site visit will be organized by the Purchaser and takes place at the following date, time and place: Date: 19 Agustus 2025 Time: 02:00 PM Place: RS UNHAS Buildings EF, Makassar.</p>

ITB 7.1	Web page: www.unhas.ac.id
C. Preparation of Bids	
ITB 10.1	The language of the bid is: English. All correspondence exchange shall be in the English language. Language for translation of supporting documents and printed literature is English.
ITB 11.1 (k)	The Bidder shall submit the following additional documents in its bid: Technical Documentation from manufacturers to confirm detailed specifications of major medical equipment. The bidder shall submit with its bid the following additional documents concerning his proposed additional maintenance services: <ul style="list-style-type: none"> (i) Name & Profile of Local Agent (if applicable) (ii) Draft Maintenance Contract as per Annex 4, including (but not limited to): <ul style="list-style-type: none"> 1. Preventive maintenance (PM) Schedules of the Principal Manufacturers for the additional 3 years not included in the proposed price (please refer to Section VII, 5. Incidental Services). 2. Estimates for repairs for three (3) years post warranty period under PM/ Normal wear & tear.
ITB 13.1	Alternative Bids shall not be considered.
ITB 14.5	The prices quoted by the Bidder shall not be adjustable.
ITB 14.7	The Incoterms edition is Incoterms 2010, Delivered at Place (DAP) Where applicable, Carriage Insurance Paid (CIP) shall be replaced by DAP.
ITB 14.8 (b) (i)	Where applicable, CIP shall be replaced by DAP. Named Place of Destination (DAP): Hospital Hasanuddin University (UNHAS) Makassar, Indonesia
ITB 15.1	The prices shall be quoted by the bidder in: Euros (EUR)
ITB 16.4	Period of time the Goods are expected to be functioning (for the purpose of spare parts): At least 10 years for Major Equipment and for the rest of the items at least 5 years.
ITB 17.2 (a)	Manufacturer's authorization is: required for major equipment only as defined in Section VII, Schedule of Requirements
ITB 17.2 (b)	Not Applicable
ITB 18.1	The bid validity period shall be 90 days from the closing date of Bids.
ITB 18.3 (a)	Not Applicable
ITB 19.1	A Bid Security of 2.5% of the bid amount in EUR is required for each Lot. In case the bidder submits bids for more than one Lot, a Bid Security of 2.5% of the total combined bid amount in EUR is required.
ITB 19.3 (c)	Other types of acceptable securities: None
ITB 19.9	Not Applicable

ITB 20.1	In addition to the original of the bid, the number of copies is: two (2)
ITB 20.2	The written confirmation of authorization to sign on behalf of the Bidder shall consist of Power of Attorney established in the name of the signatory of the bid.
ITB 21.1 (b)	If a bidder bids for more than one Lot, the bids shall be separated by Lot into separately marked and sealed envelopes, each one with a separate bid submission form.
	D. Submission and Opening of Bids
ITB 22.1	For bid submission purposes, the Purchaser's address is: Attention: dr. Andi Muhammad Ichsan, Ph.D, Sp.M, Head of PIU Hospital Hasanuddin University (UNHAS) Makassar Address: Building EF, Hasanuddin University Hospital, JL Perintis Kemerdekaan Km 11, Pintu II Unhas, Kecamatan Tamalanrea, Kota Makassar City: Makassar, South Sulawesi Country: Republic of Indonesia The deadline for the submission of bids is: Date: 19 September 2025 Time: 10:00 AM (Central Indonesian Time)
ITB 25.2	The public bid opening session shall take place on/at: Hospital Hasanuddin University (UNHAS) Makassar Address: Building EF, Hasanuddin University Hospital, JL Perintis Kemerdekaan Km 11, Pintu II Unhas, Kecamatan Tamalanrea, Kota Makassar City: Makassar, South Sulawesi Country: Republic of Indonesia Date: 19 September 2025 Time: 10:30 AM (Central Indonesian Time)
	E. Evaluation and Comparison of Bids
ITB 31.1	The provisions in ITB 31.1 do not apply to items classified as major items in Section VII. For items other than major items, for which no bid price is provided in the respective price schedule(s), the bid price of the most expensive qualified and substantially responsive bidder for such items shall be used in the comparison of otherwise qualified and substantially responsive bids. In the absence of another bidder pricing these items, the Project Consultant may estimate the market value of such items if delivered to the Purchaser's country. This correction procedure is limited to a max. of five (5) per cent of the total bid price in any given lot.
ITB 33.1	Not applicable. All bids have to be quoted in Euros (EUR)
ITB 34.1	Domestic Preference shall NOT apply.
ITB 35.6	For additional evaluation criteria refer to Section III, Clause 2, Evaluation Criteria.

F. Award of Contract	
ITB 39.1	<p>The Purchaser reserves the right to award a contract for each of the Lots, to the eligible and qualified Bidders issuing the Lowest Responsive Bids for each lot, or to cancel to the award of Contract for each or single Lots, without disclosing reasons for this decision.</p> <p>The maximum percentage by which quantities may be decreased is: 30%</p> <p>The maximum percentage by which quantities may be increased is: 30%</p>

Section III. Qualification and Evaluation Criteria

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1. Qualification (ITB 27)

All qualification documents listed here (including attached forms, and required support documents) shall be submitted in accordance with ITB 25 and ITB 27, and will be evaluated first; only bids passing the qualification shall be evaluated further.

1.1 The Qualification Document submission shall consist of:

- (1) Qualification Submission Form, Declaration of Undertaking, and Eligibility (Table 1)
Bidder shall meet the requirements as per Table 1 and submit the required forms and supporting documents; forms provided in this bidding document may not be amended but only completed following the instructions in this bidding document.
Mandatory or Optional (when required) + power of attorney
- (2) Historical Contract Non-Performance (Table 2)
Both forms must be submitted duly filled and signed; any non-performance during the required period stated in Form CON-2 will lead to disqualification of the Bidder's bid.
- (3) Financial Situation and Performance (Table 3)
Bidders shall meet the requirements as per Table 3 and submit the required forms and supporting documents; forms provided in this bidding document may not be amended but only completed following the instructions in this bidding document.
- (4) Experience (Table 4)
Submission of the required number of references (similar experience / contracts).
- (5) Technical Capacity, Spare Parts and Local Agent (if applicable) (Table 5)
Submission of the required information, in response the requirements stated in Section VII, Schedule of Requirements.

1.2. Requirements and Criteria

The following tables describe qualification requirements and criteria, in accordance with ITB 27 and Section III (Qualification), which must be satisfied by each Bidder. Only specified requirements and criteria shall be used, and requirements and criteria not included in the tables below shall not be used in the evaluation of the Bidder's Qualification.

Table 1							
Qualification Criteria			Compliance Requirements				Documentation
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Parties Combined	Each Member	One Member	
1. Qualification Submission Form, Declaration of Undertaking, and Eligibility							
1.1	Qualification Submission Form	Submission, in accordance with Section III, Qualification	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Qualification Submission Form
1.2	Declaration of Undertaking	Submission, in accordance with ITB 12	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Declaration of Undertaking
1.3	Power of Attorney	Submission, in accordance with ITB 20.2	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Power of Attorney (free format)
1.4	Joint Venture Agreement	JV Agreement or Letter of Intent, (in case of a JV), in accordance with ITB 4.1	N/A	Must meet requirement	Must meet requirement	N/A	Relevant pages of an existing JV Agreement or Letter of Intent (free format)
1.5	Nationality	Nationality in accordance with ITB 4.3	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Forms ELI – 1.1 and ELI - 1.2 (in case of JV), with attachments.
1.6	Conflict of Interest	No conflicts of interest in accordance with ITB 4.2	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Qualification Submission Form
1.7	KfW Eligibility	Not being ineligible for KfW financing, as described in ITB 4.3	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Qualification Submission Form
1.8	State-owned Entity	Meets conditions of ITB 4.3	Must meet requirement	Must meet requirement	Must meet requirement		Forms ELI – 1.1 and ELI - 1.2 (in case of JV), with attachments.

Table 2							
Qualification Criteria			Compliance Requirements				Documentation
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Parties Combined	Each Member	One Member	
2. Historical Contract Non-Performance							
2.1	History of Non-Performing Contracts	Termination of a contract ¹ did not occur as a result of Supplier default in the past 5 years.	Must meet requirement ²	Must meet requirements	Must meet requirement	N/A	Form CON-2
2.2	Suspension Based on Execution of Bid Securing Declaration by the Purchaser or Withdrawal of the Bid Within Bid Validity	Not under suspension based on execution of a Bid Securing Declaration pursuant to ITB 4.4 or withdrawal of a Bid pursuant ITB 19.9.	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Qualification Submission Form
2.3	Pending Litigation	All pending litigation shall in total not represent more than one hundred percent (100%) of the Bidder's net worth and shall be treated as resolved against the Bidder.	Must meet requirement	N/A	Must meet requirement	N/A	Form CON – 2

¹ Non-performance shall include all terminations of contracts where (a) non-performance was not challenged by the supplier, including through referral to the dispute resolution mechanism under the respective contract, and (b) contracts that were so challenged but fully settled against the supplier. Non-performance shall not include contracts where Purchaser's decision was overruled by the dispute resolution mechanism.

² This requirement also applies to contracts executed by the Bidder as a JV member

Table 3							
Qualification Criteria			Compliance Requirements			Documentation	
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Parties Combined	Each Member	One Member	
3. Financial Situation and Performance							
3.1	Financial Capabilities	<p>Submission of audited balance sheets or if not required by the law of the Bidder's country, other financial statements acceptable to the Purchaser, for the last 3 years to demonstrate the current soundness of the Bidder's financial position based on the following criteria:</p> <p>a) Liquidity ratio ≥ 1.1 $((\text{Current Assets}) / (\text{Current Liabilities})) \geq 1.1$</p> <p>b) Indebtedness ratio $\leq 80\%$ $((\text{Total Liabilities}) \times 100 / (\text{Total Assets})) \leq 80\%$</p>	Must meet requirement	N/A	Must meet requirement	N/A	Form FIN – 3.1, with attachments

Table 3							
Qualification Criteria			Compliance Requirements				Documentation
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Parties Combined	Each Member	One Member	
3. Financial Situation and Performance							
3.2	Average Annual Supplier Turnover	For each individual Lot the following minimum average annual supplier turnover in EUR is required: Lot 1: 3.500.000,00 Euros Lot 2: 2.000.000,00 Euros calculated as total certified payments received for contracts in progress and/or completed within the last 3 years is required. Bidding for more than one Lot increases the annual turnover accordingly	Must meet requirement	Must meet requirement	Must meet at least twenty-five percent (25%) of the requirement	Must meet at least forty percent (40%) of the requirement	Form FIN – 3.2
3.3	Access to Liquidity	For each individual Lot, the following access to liquidity in EUR is required: Lot 1: 1.750.000,00 Euros Lot 2: 1.000.000,00 Euros Bidding for more than one Lot increases the access to liquidity accordingly	Must meet requirement	Must meet requirement	Must meet at least twenty-five percent (25%) of the requirement	Must meet at least forty percent (40%) of the requirement	Liquidity Letter issued by the Bidder's bankers (free format)

Table 4							
Qualification Criteria			Compliance Requirements				Documentation
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Parties Combined	Each Member	One Member	
4. Experience							
4.1	Similar Experience	A minimum number of three (3) similar ³ contracts specified below that have been satisfactorily and substantially ⁴ completed as Supplier, or joint venture member ⁵ , during the past five (5) years, for each individual similar contract per lot in EUR, as follows: Lot 1: 1.750.000,00 Euros Lot 2: 1.000.000,00 Euros Bidding for more than one Lot increases the contract value accordingly	Must meet requirement	Must meet requirement	N/A	N/A	Form EXP - 4.1 (one per contract)

³ The similarity shall be based on the physical size, complexity, methods/technology and/or other characteristics described in Section VII, Schedule of Requirements. Summation of number of small value contracts (less than the value specified under requirement) to meet the overall requirement will not be accepted.

⁴ Substantial completion shall be based on 80% or more completed under the contract.

⁵ For contracts under which the Bidder participated as a joint venture member or sub-contractor, only the Bidder's share, by value, shall be considered to meet this requirement.

Table 5							
Qualification Criteria			Compliance Requirements				Documentation
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Parties Combined	Each Member	One Member	
5. Technical Capacity, Spare Parts and Local Agent (if applicable)							
5.1	Technical Capacity	If so required in Section VII, Schedule of Requirements, the Bidder's must have qualified personnel to satisfy the requirements.	Must meet requirement	Must meet requirement	N/A	N/A	Support documents as required in Section VII, Schedule of Requirements
5.2	Spare Parts	If so required in Section VII, Schedule of Requirements, the Bidder's must confirm availability of spare parts.	Must meet requirement	Must meet requirement	N/A	N/A	Form SPA - 5.1, and any support documents as required in Section VII, Schedule of Requirements
5.3	Local Agent	If so required in Section VII, Schedule of Requirements, the Bidder's must have a local agent including qualified personnel for the purpose of after sales services.	Must meet requirement	Must meet requirement	N/A	N/A	Support documents as required in Section VII, Schedule of Requirements

2. Evaluation (ITB 35)

2.1 Evaluation Criteria (ITB 35.6)

The Purchaser's evaluation of Bids for Goods will take into account, in addition to the Bid Price quoted in accordance with ITB Clause 14.8, the following factors as specified in ITB Sub-Clause 35.2 (f), using the following criteria and methodologies.

(a) Mandatory Spare Parts

A written statement shall be submitted by the bidders or the manufacturer, in the case of the bidder does not manufacture the Goods, committing that the availability in the Purchaser's Country of spare parts and after sales services for the major equipment offered in the bid for a period of ten (10) years from the date of delivery and commissioning and five (5) years for all other equipment.

(b) Maintenance Costs

An adjustment to take into account the maintenance costs as per the required draft Maintenance Contract of the Goods (Section II, BDS, ITB 11.1(k)), will be added to the Bid Price, for evaluation purposes only. The adjustment will be calculated by:

- (i) Aggregating the maintenance average annual rate priced by the Bidder in its Bid over a period of *five (5)* years.

(c) Specific Additional Criteria

As all tendered items are standard medical equipment with a high margin of off-the-shelf items the lowest price evaluation method in line with the KfW Procurement Guidelines shall be used. The financial Bids for each lot, shall be evaluated separately.

The Bids shall be evaluated on a line-by line item per Lot basis to determine the responsiveness to the technical specifications given by the Purchaser in the BoQ using four (4) evaluation criteria:

Nr	Term
1	Compliant Fully responsive to the specifications
2	Minor Deviations Not fully responsive to specifications which do not hinder the intended use of the item (i. e. colour, size, weight, material), however all requested features of the equipment are offered and the item is fully suitable for the intended usage.
3	Major Deviations Major deviations from technical specifications to be considered not suitable and thus not responsive. Items still suitable for the intended usage are to be categorized as minor deviations.
4	Not compliant Features which are a vital prerequisite for the intended use are not being offered. Will be rated as not responsive.

Principally 'major deviation' is to be considered being non-responsive. For major equipment all items must be evaluated compliant or with minor deviations. If any major item is rated with major deviations or not compliant, the bid is considered being non-responsive.

For non-major equipment a total of up to 5 items rated with major deviations or rated not compliant shall be accepted as responsive under the condition that the items shall be replaced by items compliant with the specifications at the same price as the original bid price for the original offered item.

Bids will be evaluated against the criteria which are detailed in the table below.

The evaluation of the information provided will be at the sole discretion of the evaluators and no details will be provided to the bidders regarding the process at any time

The criteria for the technical evaluation are:

Ref	Category	Evaluation
1	Bid Security	Pass/Fail ("Fail" in case of Bid Security 2,5% of the bid price as requested in Clause ITB 19.1 is not submitted)
2	Technical Evaluation of major equipment	Pass/Fail ("Fail" in case of one or more major items are rated with Major Deviations or Not Compliant)
3	Technical Evaluation of other equipment	Pass/Fail ("Fail" in case of 6 or more non-major equipment items are rated Not Compliant)
4	Initial Training offered for all major equipment and cost included in price for equipment	Pass/Fail ("Fail" in case for any item major equipment as to Section VII, List of related services, initial training is not offered and included in the bid price)
5	2-years Warranty Period offered for all equipment and cost included in price for equipment	Pass/Fail ("Fail" in case for any item of any equipment as to Section VII, List of related services, a 2-years warranty period is offered and included in the bid price)
	Overall Decision	Pass/Fail

A "Fail" in any of the listed evaluation categories leads to a disqualification of this Bidder.

The availability and competence of a local agent, the technical capacity of the Bidder and the availability of spare parts was evaluated already in the Qualification therefore shall not be subject of the technical evaluation.

2.2. Multiple Contracts (ITB 35.4)

The Purchaser shall award multiple contracts to the Bidder that offers the lowest evaluated combination of bids (one contract per bid) and has met the qualification criteria (this Section III, 1. Qualification (ITB 27)).

The Purchaser shall:

- (a) Evaluate only lots or contracts that include at least the percentages of items per lot and quantity per item as specified in ITB Sub Clause 14.6;
- (b) Take into account:
 - (i) The lowest-evaluated bid for each lot; and
 - (ii) The price reduction per lot and the methodology for its application as offered by the Bidder in its bid.

3. Domestic Preference (ITB 34)

Not applicable

Section IV. Bidding Forms

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Declaration of Undertaking

Reference name of the Application/Offer/Contract: ("Contract")¹

To: ("Project Executing Agency")

1. We recognise and accept that KfW only finances projects of the Project Executing Agency ("PEA")² subject to its own conditions which are set out in the Funding Agreement it has entered into with the PEA. As a matter of consequence, no legal relationship exists between KfW and our company, our Joint Venture or our Subcontractors under the Contract. The PEA retains exclusive responsibility for the preparation and implementation of the Tender Process and the performance of the Contract.
2. We hereby certify that neither we nor any of our board members or legal representatives nor any other member of our Joint Venture including Subcontractors under the Contract are in any of the following situations:
 - 2.1) being bankrupt, wound up or ceasing our activities, having our activities administered by courts, having entered into receivership, reorganisation or being in any analogous situation;
 - 2.2) convicted by a final judgement or a final administrative decision or subject to financial sanctions by the United Nations, the European Union or Germany for involvement in a criminal organisation, money laundering, terrorist-related offences, child labour or trafficking in human beings; this criterion of exclusion is also applicable to legal Persons, whose majority of shares are held or factually controlled by natural or legal Persons which themselves are subject to such convictions or sanctions;
 - 2.3) having been convicted by a final court decision or a final administrative decision by a court, the European Union, national authorities in the Partner Country or in Germany for Sanctionable Practice in connection with a Tender Process or the performance of a Contract or for an irregularity affecting the EU's financial interests (*in the event of such a conviction, the Applicant or Bidder shall attach to this Declaration of Undertaking supporting information showing that this conviction is not relevant in the context of this Contract and that adequate compliance measures have been taken in reaction*);
 - 2.4) having been subject, within the past five years to a contract termination fully settled against us for significant or persistent failure to comply with our contractual obligations during such Contract performance, unless this termination was challenged and dispute resolution is still pending or has not confirmed a full settlement against us;
 - 2.5) not having fulfilled the applicable fiscal obligations with regard to the payment of taxes at the respective tax residence and in the country of origin of the PEA (contractors based in Annex 1 countries (<https://www.consilium.europa.eu/de/policies/eu-list-of-non-cooperative-jurisdictions/>) must submit a fully completed and legally countersigned declaration of tax conformity (Appendix 1 to the Declaration of Undertaking) in addition to the Declaration of Undertaking at the time of award

¹ Capitalised terms used, but not otherwise defined in this Declaration of Undertaking have the meaning given to such term in KfW's "Guidelines for the Procurement of Consulting Services, Works, Goods, Plant and Non-Consulting Services in Financial Cooperation with Partner Countries".

² The PEA means the purchaser, the employer, the client, as the case may be, for the procurement of Consulting Services, Works, Plant, Goods or Non-Consulting Services.

of the contract/contract review. This shall become an integral part of the contract. Failure to submit may result in exclusion from the awarding procedure. For contractors based in countries not listed as Annex I countries, only the Declaration of Undertaking must be submitted, and not the declaration of tax conformity;

2.6) being subject to an exclusion decision of the World Bank or any other multilateral development bank and being listed on the website <http://www.worldbank.org/debarr> or respectively on the relevant list of any other multilateral development bank (*in the event of such exclusion, the Applicant or Bidder shall attach to this Declaration of Undertaking supporting information showing that this exclusion is not relevant in the context of this Contract and that adequate compliance measures have been taken in reaction*); or

2.7) being guilty of misrepresentation in supplying the information required as condition to participation in this Tender Procedure.

3. We hereby certify that neither we, nor any of the members of our Joint Venture or any of our Subcontractors under the Contract are in any of the following situations of conflict of interest:

3.1) being an affiliate controlled by the PEA or a shareholder controlling the PEA, unless the stemming conflict of interest has been brought to the attention of KfW and resolved to its satisfaction;

3.2) having a business or family relationship with a PEA's staff involved in the Tender Process or the supervision of the resulting Contract, unless the stemming conflict of interest has been brought to the attention of KfW and resolved to its satisfaction;

3.3) being controlled by or controlling another Applicant or Bidder, or being under common control with another Applicant or Bidder, or receiving from or granting subsidies directly or indirectly to another Applicant or Bidder, having the same legal representative as another Applicant or Bidder, maintaining direct or indirect contacts with another Applicant or Bidder which allows us to have or give access to information contained in the respective Applications or Offers, influencing them or influencing decisions of the PEA;

3.4) being engaged in a Consulting Services activity, which, by its nature, may be in conflict with the assignments that we would carry out for the PEA;

3.5) in the case of procurement of Works, Plant or Goods:

- i. having prepared or having been associated with a Person who prepared specifications, drawings, calculations and other documentation to be used in the Tender Process of this Contract;
- ii. having been recruited (or being proposed to be recruited) ourselves or any of our affiliates, to carry out works supervision or inspection for this Contract;

4. If we are a state-owned entity, and compete in a Tender Process, we certify that we have legal and financial autonomy and that we operate under commercial laws and regulations.

5. We undertake to bring to the attention of the PEA, which will inform KfW, any change in situation with regard to points 2 to 4 here above.

6. In the context of the Tender Process and performance of the corresponding Contract:

- 6.1) neither we nor any of the members of our Joint Venture nor any of our Subcontractors under the Contract have engaged or will engage in any Sanctionable Practice during the Tender Process and in the case of being awarded a Contract will engage in any Sanctionable Practice during the performance of the Contract;
- 6.2) neither we nor any of the members of our Joint Venture or any of our Subcontractors under the Contract shall acquire or supply any equipment nor operate in any sectors under an embargo of the United Nations, the European Union or Germany; and
- 6.3) we commit ourselves to complying with and ensuring that our Subcontractors and major suppliers under the Contract comply with international environmental and labour standards, consistent with laws and regulations applicable in the country of implementation of the Contract and the fundamental conventions of the International Labour Organisation³ (ILO) and international environmental treaties. Moreover, we shall implement environmental and social risks mitigation measures when specified in the relevant environmental and social management plans or other similar documents provided by the PEA and, in any case, implement measures to prevent sexual exploitation and abuse and gender based violence.
7. In the case of being awarded a Contract, we, as well as all members of our Joint Venture partners and Subcontractors under the Contract will, (i) upon request, provide information relating to the Tender Process and the performance of the Contract and (ii) permit the PEA and KfW or an auditor appointed by either of them, and in the case of financing by the European Union also to European institutions having competence under European Union law, to inspect the respective accounts, records and documents, to permit on the spot checks and to ensure access to sites and the respective project.
8. In the case of being awarded a Contract, we, as well as all our Joint Venture partners and Subcontractors under the Contract undertake to preserve above mentioned records and documents in accordance with applicable law, but in any case for at least six years from the date of fulfillment or termination of the Contract. Our financial transactions and financial statements shall be subject to auditing procedures in accordance with applicable law. Furthermore, we accept that our data (including personal data) generated in connection with the preparation and implementation of the Tender Process and the performance of the Contract are stored and processed according to the applicable law by the PEA and KfW.

Name: _____ In the capacity of: _____

Duly empowered to sign in the name and on behalf of⁴: _____

Signature: _____

Dated:

³ In case ILO conventions have not been fully ratified or implemented in the Employer's country the Applicant/Bidder/Contractor shall, to the satisfaction of the Employer and KfW, propose and implement appropriate measures in the spirit of the said ILO conventions with respect to a) workers grievances on working conditions and terms of employment, b) child labour, c) forced labour, d) worker's organisations and e) non-discrimination.

⁴ In the case of a JV, insert the name of the JV. The person who will sign the application, bid or proposal on behalf of the Applicant/Bidder shall attach a power of attorney from the Applicant/Bidder.

Appendix 1

Declaration of tax conformity – binding confirmation for legal persons

Name of company

I hereby confirm with my signature that:

1. I am authorised to make this declaration on behalf of the above company;
2. the company properly pays all taxes in accordance with the tax laws of the country in which the company is domiciled;
3. the company is not currently nor has been in the past involved in any legal proceedings concerning the taxation of the company;
4. the company will duly pay taxes that may arise from the provision of contracted services;
5. all information and statements provided in advance are complete, accurate in terms of content and currently correct.

.....

(Place)

.....

(Date)

.....

(Name of the consultant)

.....

(Signature(s))

Form ELI - 1.1: Bidder Information Form

[The Bidder shall in this Form in accordance with the instructions indicated below. No alterations to its format shall be permitted and no substitutions shall be accepted.]

Date: *[Insert]*

ICB No.: EU-UNHAS-48511-GOODS1

Page *[Insert]* of *[Insert]* pages

Bidder's name: <i>[Insert Bidder's legal name]</i>
In case of Joint Venture (JV), legal name of each member: <i>[Insert legal name of each member in JV]</i>
Bidder's actual or intended country of registration: <i>[Insert actual or intended country of registration]</i>
Bidder's year of registration: <i>[Insert Bidder's year of registration]</i>
Bidder's address in country of registration: <i>[Insert Bidder's legal address in country of registration]</i>
Bidder's Authorized Representative Information Name: <i>[Insert Authorized Representative's name]</i> Address: <i>[Insert Authorized Representative's address]</i> Telephone/Fax numbers: <i>[Insert Authorized Representative's telephone/fax numbers]</i> E-mail address: <i>[Insert Authorized Representative's email address]</i>
1. Attached are copies of original documents of <i>[Check the box(es) of the attached original documents]</i> <input type="checkbox"/> Articles of Incorporation (or equivalent documents of constitution or association) and/or documents of registration of the legal entity named above, in accordance with ITB 4.5; <input type="checkbox"/> In case of JV, letter of intent to form JV or JV agreement, in accordance with ITB 4.1; <input type="checkbox"/> In case of a state-owned enterprise or institution, in accordance with ITB 4.3 documents establishing: a) Legal and financial autonomy; b) Operation under commercial law; c) Establishing that the Bidder is not dependent agency of the Purchaser. 2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.

Title of the person signing the Bid *[Insert complete title of the person signing the Bid]*

Signature of the person named above *[Signature of the person named above]*

Date signed *[Insert date of signing]* day of *[Insert month]* *[Insert year]*

Form ELI - 1.2: Bidder's JV Information Form

[The Bidder shall fill in this Form in accordance with the instructions indicated below. The following table shall be filled in for the Bidder and for each member of a Joint Venture. No alterations to its format shall be permitted and no substitutions shall be accepted.]

Date: *[Insert]*

ICB No.: EU-UNHAS-48511-GOODS1

Page *[Insert]* of *[Insert]* pages

Bidder's name: <i>[Insert Bidder's legal name]</i>
Bidder's JV Member's name: <i>[Insert JV's Member legal name]</i>
Bidder's JV Member's country of registration: <i>[Insert JV's Member country of registration]</i>
Bidder's JV Member's year of registration: <i>[Insert JV Member's year of registration]</i>
Bidder's JV Member's legal address in country of registration: <i>[Insert JV's Member legal address in country of registration]</i>
Bidder's JV Member's Authorized Representative Information Name: <i>[Insert name of JV's Member Authorized Representative]</i> Address: <i>[Insert address of JV's Member Authorized Representative's]</i> Telephone/Fax numbers: <i>[Insert telephone/fax numbers of JV's Member Authorized Representative]</i> E-mail address: <i>[Insert email address of JV's Member Authorized Representative]</i>
1. Attached are copies of original documents of <i>[Check the box(es) of the attached original documents]</i> <input type="checkbox"/> Articles of Incorporation (or equivalent documents of constitution or association) of the legal and/or documents of registration of the legal entity named above, in accordance with ITB 4.1 and ITB 4.5; <input type="checkbox"/> In case of a state-owned enterprise or institution, in accordance with ITB 4.3 documents establishing: a) Legal and financial autonomy; b) Operation under commercial law; c) Establishing that the Bidder is not dependent agency of the Purchaser. 2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.

Title of the person signing the Bid *[Insert complete title of the person signing the Bid]*

Signature of the person named above *[Signature of the person named above]*

Date signed *[Insert date of signing]* day of *[Insert month]* *[Insert year]*

Form CON - 2: Historical Contract Non-Performance, Pending Litigation and Litigation History

[To be completed by the Bidder and by each member of the Bidder's JV]

Bidder's Name: *[Insert]*

Date: *[Insert]*

JV Member's Name: *[Insert or state "None" if the Bidder is not a Joint Venture]*

ICB No.: EU-UNHAS-48511-GOODS1

Page *[Insert]* of *[Insert]* pages

Non-Performed Contracts in accordance with Section III, Qualification and Evaluation Criteria			
<input type="checkbox"/> Contract non-performance did not occur since 1st January <i>[insert current year number less 5]</i> specified in Section III, Qualification and Evaluation Criteria, Qualification, subclause 2.1.			
Or <i>[Tick as appropriate]</i>			
<input type="checkbox"/> Contract(s) not performed since 1st January <i>[insert current year number less 5]</i> specified in Section III, Qualification and Evaluation Criteria, Qualification, subclause 2.1 are as follows:			
Year	Non- performed Portion of Contract	Contract Identification	Total Contract Amount (current value, currency, exchange rate and €-equivalent)
<i>[Insert year]</i>	<i>[Insert amount and percentage]</i>	Contract Identification: <i>[Indicate complete contract name/ number, and any other identification]</i> Name of Purchaser: <i>[Insert full name]</i> Address of Purchaser: <i>[Insert street/city/country]</i> Reason(s) for non-performance: <i>[Indicate main reason(s)]</i>	<i>[Insert amount and values]</i>

Non-Performed Contracts in accordance with Section III, Qualification and Evaluation Criteria			
Pending Litigation, in accordance with Section III, Qualification and Evaluation Criteria and Requirements			
<input type="checkbox"/> No pending litigation in accordance with Section III, Qualification and Evaluation Criteria and Requirements, Qualification, subclause 2.3. Or [Tick as appropriate] <input type="checkbox"/> Pending litigation in accordance with Section III, Qualification and Evaluation Criteria, Qualification, subclause 2.3 as indicated below:			
Year of dispute	Amount in dispute (currency)	Contract Identification	Total Contract Amount (currency), €-equivalent (exchange rate)
<i>[Insert year]</i>	<i>[Insert amount]</i>	Contract Identification: Name of Purchaser: Address of Purchaser: Matter in dispute: Party who initiated the dispute: Status of dispute:	<i>[Insert amount and values]</i>

Title of the person signing the Bid *[Insert complete title of the person signing the Bid]*

Signature of the person named above *[Signature of the person named above]*

Date signed *[Insert date of signing]* day of *[Insert month]* *[Insert year]*

Form FIN - 3.1: Financial Situation and Performance

[To be completed by the Bidder and by each member of the Bidder's JV]

Bidder's Name: *[Insert]*

Date: *[Insert]*

JV Member's Name: *[Insert or state "None" if the Bidder is not a Joint Venture]*

ICB No.: EU-UNHAS-48511-GOODS1

Page *[Insert]* of *[Insert]* pages

1. Financial Data

Type of Financial Information in <i>[Insert Bidder's home currency]</i>	Historic information for last available three (3) years ¹ (amount in Bidder's home-currency, exchange rate, €-equivalent)		
	<i>[Insert Year 1]</i>	<i>[Insert Year 2]</i>	<i>[Insert Year 3]</i>
Statement of Financial Position (Information from Balance Sheet)			
Total Assets (TA)	<i>[Insert value in Bidder's home currency]</i>	<i>[Insert value in Bidder's home currency]</i>	<i>[Insert value in Bidder's home currency]</i>
	<i>[Insert exchange rate]</i>	<i>[Insert exchange rate]</i>	<i>[Insert exchange rate]</i>
	<i>[Insert €-equivalent]</i>	<i>[Insert €-equivalent]</i>	<i>[Insert €-equivalent]</i>
Total Liabilities (TL)			
Total Equity/Net Worth (NW)			
Current Assets (CA)			
Current Liabilities (CL)			
Working Capital (WC)			
Information from Income Statement			
Total Revenue (TR)			
Profits Before Taxes (PBT)			
Cash Flow Information			
Cash Flow from Operating Activities			

¹ *[In circumstances where it is of utmost importance that Bidders have a longer company history, this requirement may be increased to up to five (5) years; if such a longer period is chosen, please amend the revised number of years throughout this table].*

2. Financial Documents

The Bidder and its parties shall provide copies of financial statements for **the last available three (3) years** pursuant Section III, Qualification and Evaluation Criteria, Qualification, Sub-factor 3.1.

The financial statements shall:

- (a) Reflect the financial situation of the Bidder or in case of JV member, and not an affiliated entity (such as parent company or group member);
 - (b) Be independently audited or certified in accordance with local legislation;
 - (c) Be complete, including all notes to the financial statements;
 - (d) Correspond to accounting periods already completed and audited.
- Attached are copies of financial statements² for the **last available three (3) years** required above and complying with the requirements.

Title of the person signing the Bid *[Insert complete title of the person signing the Bid]*

Signature of the person named above *[Signature of the person named above]*

Date signed *[Insert date of signing]* day of *[Insert month]* *[Insert year]*

² If the most recent set of financial statements is for a period earlier than 12 months from the date of bid, the reason for this should be justified.

Form FIN - 3.2: Average Annual Turnover

[To be completed by the Bidder and by each member of the Bidder's JV]

Bidder's Name: *[Insert]*

Date: *[Insert]*

JV Member's Name: *[Insert or state "None" if the Bidder is not a Joint Venture]*

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Page *[Insert]* of *[Insert]* pages

Annual Turnover Data			
Year	Currency & Amount	Exchange Rate	€-equivalent
Average Annual Turnover ¹			

Title of the person signing the Bid *[Insert complete title of the person signing the Bid]*

Signature of the person named above *[Signature of the person named above]*

Date signed *[Insert date of signing]* day of *[Insert month]* *[Insert year]*

¹ See Section III, Qualification and Evaluation Criteria, Qualification, Sub-Factor 3.2

Form EXP - 4.1: Experience

(To be completed by the Bidder and by each member of the Bidder's JV)

Bidder's Legal Name: *[Insert]*

Date: *[Insert]*

JV Member's Legal Name: *[Insert]*

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Page *[Insert]* of *[Insert]* pages

Similar Contract No. <i>[Insert specific number]</i> of <i>[Total number of contracts]</i> required	Information	
Contract Identification:		
Award date:		
Completion date:		
Role in Contract:		
Total contract amount:		€ equivalent: <i>[Insert]</i>
If member in a JV, specify participation in total contract amount:	<i>[Insert]</i> %	€ equivalent: <i>[Insert]</i>
Purchaser's Name:		
Address:		
Telephone/fax number:		
E-mail:		
Description of the similarity in accordance with Sub-Factor 4.1 or 4.2 of Section III:		
Amount		
Physical size		
Complexity		
Methods/Technology		
Other Characteristics		

Title of the person signing the Bid *[Insert complete title of the person signing the Bid]*

Signature of the person named above *[Signature of the person named above]*

Date signed *[Insert date of signing]* day of *[Insert month]* *[Insert year]*

Form SPA - 5.1: Spare Parts

[To be completed by the Bidder and by at least one member of the Bidder's JV]

Bidder's Legal Name: *[Insert]*

Date: *[Insert]*

JV Member's Legal Name: *[Insert]*

ICB No.: EU-UNHAS-48511-GOODS1

Page *[Insert]* of *[Insert]* pages

We confirm that, if awarded the Contract, spare parts will be available on short notice, through us / our local agent / the manufacturer-appointed official representative *[Select as appropriate]*.

We further confirm that, if awarded the Contract, we (i) will carry sufficient inventories to assure ex-stock supply of consumables and consumable spares, and other spare parts and components will be supplied as promptly as possible but in any case within *[Insert number of days – same as used in the PC attached at the end of this Bidding Document]* days of placement of order; (ii) will be for a period of *[Insert number of years – same as used in the PC attached at the end of this Bidding Document]* years from the date of delivery and commissioning under obligation to supply spare parts, and will, in the event of termination of production of the spare parts, send an advance notification to the Purchaser of the pending termination, in sufficient time to permit the Purchaser to procure needed requirements

Title of the person signing the Bid *[Insert complete title of the person signing the Bid]*

Signature of the person named above *[Signature of the person named above]*

Date signed *[Insert date of signing]* day of *[Insert month]* *[Insert year]*

Bid Submission Form

[The Bidder shall prepare his Bid Submission Form on a Letterhead paper specifying the Bidder's complete name, address and communication details].

[Note: All italicized text is for use in preparing these forms by bidders and shall be deleted from the final document.]

Date: *[Insert date]*

ICB No.: EU-UNHAS-48511-
GOODS1

To: *[Insert complete name of Purchaser]*

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Documents, including Addenda *[Insert Addenda No./Nos., if any]* issued in accordance with Instructions to Bidders (ITB 8);
- (b) We meet the eligibility requirements and have no conflict of interest in accordance with ITB 4;
- (c) We have not been suspended nor declared ineligible by the Purchaser based on execution of a Bid Securing Declaration in the Purchaser's country in accordance with ITB 4.4;
- (d) We offer to supply in conformity with the Bidding Documents and in accordance with the Delivery Schedule(s) specified in the Schedule of Requirements the following Goods: *[Insert a brief description of the Goods and Related Services]*;
- (e) The total price of our Bid, excluding any discounts offered in item (f) below is:
 - i) In case of only one lot, total price of the Bid is: *[Insert total price and currency in words and figures] [Delete if multiple lots are offered]*
 - ii) In case of multiple lots, total price of each lot is: *[Insert a list/table showing the total price and currency in words and figures for each lot offered] [Delete if only one lot is offered]*
 - iii) In case of multiple lots, total price of all lots (sum of all lots) is: *[Insert the total price and currency in words and figures for all lots offered] [Delete if only one lot is offered]*
- (f) The discounts offered and the methodology for their application are:
 - i) The discounts offered are: *[Specify in detail each discount offered; if no discount is offered state "None"]*
 - ii) The exact method of calculations to determine the net price after application of discounts is: *[Specify in detail the method that shall be used to apply the offered discounts; if no discount is offered state "None"]*
- (g) Our bid shall be valid for a period of *[Insert the number of calendar days]* days from the date fixed for the bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;

- (h) If our bid is accepted, we commit to obtain and submit a performance security in accordance with ITB 42 of the Bidding Documents;
- (i) We are not participating, as a Bidder, in more than one bid in this bidding process in accordance with ITB 4.2(e), other than alternative bids submitted in accordance with ITB 13;
- (j) We, along with any of our subcontractors, suppliers, consultants, manufacturers, or service providers for any part of the contract, are not subject to, and not controlled by an entity or individual that is subject to, a temporary suspension or a debarment imposed by a member of the World Bank Group or a debarment imposed by the KfW, the World Bank in accordance with the Agreement of Mutual Enforcement of Debarment Decisions between the World Bank and other development banks, or any other similar funding agency;
- (k) We have paid, or will pay the following commissions, gratuities, or fees with respect to the bidding process or execution of the Contract: *[Insert complete name of each recipient, its full address, the reason for which each commission, gratuity or fee was or will be paid and the amount and currency of each such commission, gratuity or fee]*

Name of Recipient	Address	Reason	Amount

[If none has been paid or is to be paid, insert "none"].

- (l) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed;
- (m) We understand and accept that (i) the Purchaser is not bound to accept the lowest evaluated bid or any other bid that the Purchaser may receive, and (ii) the Purchaser reserves the right to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to Bidders; and
- (n) We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in any type of fraud and corruption.

Name of the Bidder *[Insert the complete name of the bidder; in the case of a Bid submitted by a Joint Venture insert the name of the Joint Venture as Bidder]*

Name of the person duly authorized to sign the Bid on behalf of the Bidder *[Insert complete name of the person duly authorised to sign the Bid; the person signing the Bid shall have the power of attorney given by the Bidder to be attached with the Bid Schedules]*

Title of the person signing the Bid *[Insert complete title of the person signing the Bid]*

Signature of the person named above *[Signature of the person named above]*

Date signed *[Insert date of signing] day of [Insert month] [Insert year]*

Price Schedule Forms

*[The Bidder shall fill in these Price Schedule Forms in accordance with the instructions indicated. The list of line items in column 1 of the **Price Schedules** shall coincide with the List of Goods and Related Services specified by the Purchaser in the Schedule of Requirements; separate **Price Schedules** must be submitted for each lot offered].*

IMPORTANT NOTICE:

Due to the completion of the Works, if the Works have not been taken over by the Employer / the Purchaser, the Suppliers shall deliver the medical equipment to a safe and controlled storage room as provided by the Purchaser in the Hospital Hasanuddin University (UNHAS) Makassar, Indonesia. For BSL 3 equipment, the storage room is located on the 6th floor of Building A. The rest of the equipment shall be stored in a room located on the 4th floor of Building EF.

If the Works have not been taken over by the Employer / the Purchaser and the Suppliers shall deliver the medical equipment to a safe and controlled storage room:

The Supplier's DAP obligations and responsibilities include the delivery of the medical equipment to the storage rooms mentioned above and, as soon as the Works have been completed and taken over and respective Notification to the Supplier, the Transport to Building A (for BSL 3 laboratory) and Building EF (for ICU), followed by its Installation, Testing, Commissioning and User Training in Building A and Building EF.

The Delivery Date or Delivery Period shall be understood as the Date or the Period of Delivery to the storage room as provided by the Purchaser in the Hospital Hasanuddin University (UNHAS) Makassar, Indonesia.

The Bidder shall include the cost of delivery of the medical equipment to the storage rooms in Building A and Building BC and, as soon as the Works have been completed and taken over and respective Notification to the Supplier, the Transport from the storage rooms to Building A (for BSL 3 laboratory) and Building EF (for ICU), followed by its Installation, Testing, Commissioning and User Training, in column 7 of the Price Schedule "Unit Price & Currency Related Services (handling, inland transportation to final destination(s), commissioning, and where applicable installation and training in accordance with ITB 14.8(b)(ii)".

The delivery of the medical equipment to the storage rooms in Building A and Building BC and, as soon as the Works have been completed and taken over and respective Notification to the Supplier, the Transport from the storage rooms to Building A (for BSL 3 laboratory) and Building EF (for ICU), followed by its Installation, Testing, Commissioning and User Training is the responsibility of the Supplier.

In case of damage to the building (e.g. floor, walls, ceiling, staircases, doors, windows etc.) caused by the Supplier's transport activities, the Supplier shall notify and remedy the damage.

Price Schedule: Goods Manufactured Outside the Purchaser's Country, to be Imported

Lot 1: Medical equipment for ICU for severe COVID-19 cases/Infectious disease Currencies in accordance with ITB Sub-Clause 15						Date: <i>[Insert]</i>	
						ICB No.: <i>EU-UNHAS-48511-GOODS1</i>	
						Lot No.: 1	
						Page <i>[Insert]</i> of <i>[Insert]</i>	
1	2	3	4	5	6	7	8
Line Item No.	Description of Goods	Country of Origin	Delivery Time in Days at named place of DAP <i>[Insert destination (port-of-entry)]</i>	Quantity and Physical Unit	Unit Price & Currency DAP <i>[Insert named place of destination]</i> in accordance with ITB 14.8(b)(i)	Unit Price & Currency Related Services (handling, inland transportation to final destination(s), commissioning, and where applicable installation and training in accordance with ITB 14.8(b)(ii))	Total Price & Currency per Line item (Col. (6+7)x5)
<i>[Insert number of the item]</i>	<i>[Insert name of Goods]</i>	<i>[Insert country of origin of the Goods]</i>	<i>[Insert quoted Delivery Time in days]</i>	<i>[Insert number of units to be supplied and name of the physical unit]</i>	<i>[Insert currency & unit price DAP per unit]</i>	<i>[Insert currency & unit price for all required local services]</i>	<i>[Insert currency & total price of the line item]</i>
Total Price (including currency) DAP plus local services (if any) Republic of Indonesia							

Name of Bidder *[Insert complete name of Bidder]* Signature of Bidder *[Signature of person(s) signing the Bid]* Date *[Insert Date]*

Lot 2: Medical equipment for BSL3 laboratory for virology diagnostics							Date: <i>[Insert]</i>
Currencies in accordance with ITB Sub-Clause 15							ICB No.: <i>EU-UNHAS-48511-GOODS1</i>
							Lot No.: 2
							Page <i>[Insert]</i> of <i>[Insert]</i>
1	2	3	4	5	6	7	8
Line Item No.	Description of Goods	Country of Origin	Delivery Time in Days at named place of DAP <i>[Insert destination (port-of-entry)]</i>	Quantity and Physical Unit	Unit Price & Currency DAP <i>[Insert named place of destination]</i> in accordance with ITB 14.8(b)(i)	Unit Price & Currency Related Services (handling, inland transportation to final destination(s), commissioning, and where applicable installation and training in accordance with ITB 14.8(b)(ii))	Total Price & Currency per Line item (Col. (6+7)x5)
<i>[Insert number of the item]</i>	<i>[Insert name of Goods]</i>	<i>[Insert country of origin of the Goods]</i>	<i>[Insert quoted Delivery Time in days]</i>	<i>[Insert number of units to be supplied and name of the physical unit]</i>	<i>[Insert currency & unit price DAP per unit]</i>	<i>[Insert currency & unit price for all required local services]</i>	<i>[Insert currency & total price of the line item]</i>
Total Price (including currency) DAP plus local services (if any) Republic of Indonesia							

Name of Bidder *[Insert complete name of Bidder]* Signature of Bidder *[Signature of person(s) signing the Bid]* Date *[Insert Date]*

Price Schedule: Goods Manufactured Outside the Purchaser's Country, Already Imported

Lot 1: Medical equipment for ICU for severe COVID-19 cases/Infectious disease Currencies in accordance with ITB Sub-Clause 15								Date: <i>[Insert]</i>	
								ICB No.: <i>EU-UNHAS-48511-GOODS1</i>	
								Lot No.: 1	
								Page <i>[Insert]</i> of <i>[Insert]</i>	
1	2	3	4	5	6	7	8	9	10
Line Item No.	Description of Goods	Country of Origin	Delivery Time in Days at named place of DAP destination <i>[Insert final destination(s) in the Purchaser's country]</i>	Quantity and Physical unit	DAP Unit Price & Currency excluding Custom Duties and Import Taxes paid, in accordance with ITB 14.8(c)(i)	Unit Price & Currency Related Services (handling, commissioning, and where applicable installation and training in accordance with ITB 14.8(c)(ii))	Custom Duties and Import Taxes paid & Currency per unit in accordance with ITB 14.8(c)(iii), [to be supported by documents]	Sales and other taxes paid or payable & Currency per item if Contract is awarded, in accordance with ITB 14.8(c)(iv)	Currency & Total Price per line item (Col. (6+7)x5)
<i>[Insert number of the item]</i>	<i>[Insert name of Goods]</i>	<i>[Insert country of origin of the Goods]</i>	<i>[Insert quoted Delivery Time in days]</i>	<i>[Insert number of units to be supplied and name of the physical unit]</i>	<i>[Insert unit price per unit]</i>	<i>[Insert currency & unit price for all required local services]</i>	<i>[Insert custom duties and taxes paid & currency per unit]</i>	<i>[Insert sales and other taxes payable & currency per item if Contract is awarded]</i>	<i>[Insert currency & total price per line item]</i>
Total Price (including currency) DAP plus local services (if any) Republic of Indonesia									

Name of Bidder *[Insert complete name of Bidder]* Signature of Bidder *[Signature of person(s) signing the Bid]* Date *[Insert Date]*

Lot 2: Medical equipment for BSL3 laboratory for virology diagnostics Currencies in accordance with ITB Sub-Clause 15								Date: <i>[Insert]</i>	
								ICB No.: <i>EU-UNHAS-48511-GOODS1</i>	
								Lot No.: 2	
								Page <i>[Insert]</i> of <i>[Insert]</i>	
1	2	3	4	5	6	7	8	9	10
Line Item No.	Description of Goods	Country of Origin	Delivery Time in Days at named place of DAP destination <i>[Insert final destination(s) in the Purchaser's country]</i>	Quantity and Physical unit	DAP Unit Price & Currency excluding Custom Duties and Import Taxes paid, in accordance with ITB 14.8(c)(i)	Unit Price & Currency Related Services (handling, commissioning, and where applicable installation and training in accordance with ITB 14.8(c)(ii))	Custom Duties and Import Taxes paid & Currency per unit in accordance with ITB 14.8(c)(iii), [to be supported by documents]	Sales and other taxes paid or payable & Currency per item if Contract is awarded, in accordance with ITB 14.8(c)(iv)	Currency & Total Price per line item (Col. (6+7)x5)
<i>[Insert number of the item]</i>	<i>[Insert name of Goods]</i>	<i>[Insert country of origin of the Goods]</i>	<i>[Insert quoted Delivery Time in days]</i>	<i>[Insert number of units to be supplied and name of the physical unit]</i>	<i>[Insert unit price per unit]</i>	<i>[Insert currency & unit price for all required local services]</i>	<i>[Insert custom duties and taxes paid & currency per unit]</i>	<i>[Insert sales and other taxes payable & currency per item if Contract is awarded]</i>	<i>[Insert currency & total price per line item]</i>
Total Price (including currency) CIP plus local services (if any) Republic of Indonesia									

Name of Bidder *[Insert complete name of Bidder]* Signature of Bidder *[Signature of person(s) signing the Bid]* Date *[Insert Date]*

Price Schedule: Goods Manufactured in the Purchaser's Country

Lot 1: Medical equipment for ICU for severe COVID-19 cases/Infectious disease							Date: <i>[Insert]</i>	
Currencies in accordance with ITB Sub-Clause 15							ICB No.: <i>EU-UNHAS-48511-GOODS1</i>	
							Lot No.: <i>1</i>	
							Page <i>[Insert]</i> of <i>[Insert]</i>	
1	2	3	4	5	6	7 ¹	8	9
Line Item No.	Description of Goods	Delivery Time in Days at named place of destination	Quantity and Physical unit	Unit Price & Currency DAP	Unit Price & Currency Related Services (handling, commissioning, and where applicable installation and training in accordance with ITB 14.8(a)(ii))	Cost of local labor, raw materials, transportation, insurance and components with origin in the Purchaser's Country % of Col. 5 (not required)	Sales and other taxes payable per line item if Contract is awarded, in accordance with ITB 14.8(a)(iii)	Total Price & Currency per line item (Col. (5+6) x 4)
<i>[Insert number of the item]</i>	<i>[Insert name of Goods]</i>	<i>[Insert quoted Delivery Time in days]</i>	<i>[Insert number of units to be supplied and name of the physical unit]</i>	<i>[Insert DAP unit price & currency]</i>	<i>[Insert currency & unit price for all required local services]</i>	<i>[Insert cost of local labor, raw material, transportation, insurance and components from within the Purchase's country as a % of the DAP price per line item]</i>	<i>[Insert sales and other taxes payable per line item if Contract is awarded]</i>	<i>[Insert total price & currency per item]</i>
Total Price (including currency) DAP plus local services (if any) Republic of Indonesia								

Name of Bidder *[Insert complete name of Bidder]* Signature of Bidder *[Signature of person(s) signing the Bid]* Date *[Insert Date]*

¹ This column is not required if domestic preference is not applicable.

Lot 2: Medical equipment for BSL3 laboratory for virology diagnostics							Date: <i>[Insert]</i>	
Currencies in accordance with ITB Sub-Clause 15							ICB No.: EU-UNHAS-48511-GOODS1	
							Lot No.: 2	
							Page <i>[Insert]</i> of <i>[Insert]</i>	
1	2	3	4	5	6	7 ²	8	9
Line Item No.	Description of Goods	Delivery Time in Days at named place of destination	Quantity and Physical unit	Unit Price & Currency DAP	Unit Price & Currency Related Services (handling, commissioning, and where applicable installation and training in accordance with ITB 14.8(a)(ii))	Cost of local labor, raw materials, transportation, insurance and components with origin in the Purchaser's Country % of Col. 5 (not required)	Sales and other taxes payable per line item if Contract is awarded, in accordance with ITB 14.8(a)(iii)	Total Price & Currency per line item (Col. (5+6) x 4)
<i>[Insert number of the item]</i>	<i>[Insert name of Goods]</i>	<i>[Insert quoted Delivery Time in days]</i>	<i>[Insert number of units to be supplied and name of the physical unit]</i>	<i>[Insert DAP unit price & currency]</i>	<i>[Insert currency & unit price for all required local services]</i>	<i>[Insert cost of local labor, raw material, transportation, insurance and components from within the Purchase's country as a % of the DAP price per line item]</i>	<i>[Insert sales and other taxes payable per line item if Contract is awarded]</i>	<i>[Insert total price & currency per item]</i>
Total Price (including currency) DAP plus local services (if any) Republic of Indonesia								

Name of Bidder *[Insert complete name of Bidder]* Signature of Bidder *[Signature of person(s) signing the Bid]* Date *[Insert Date]*

² This column is not required if domestic preference is not applicable.

[Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.]

Bid Security

Beneficiary: *[Insert name and Address of Purchaser]*

Date: *[Insert date of issue]*

BID GUARANTEE No.: *[Insert guarantee reference number]*

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

We have been informed that *[Insert name and address of the bidder, which in the case of a joint venture shall be the name and address of the joint venture]* (hereinafter called "the Applicant") has submitted or will submit to the Beneficiary its bid (hereinafter called "the Bid") for the supply of *[Insert project, object of the contract/brief description of the goods and related services]* under International Competitive Bidding No. *[Insert ICB number]*.

Waiving all objections and defences, we, as Guarantor, hereby irrevocably and independently undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of *[Insert guarantee amount and currency in words and figures]* upon receipt by us of the Beneficiary's first demand, supported by the Beneficiary's statement, whether in the demand itself or a separate signed document accompanying or identifying the demand, stating that either the Applicant:

- (a) Has withdrawn its Bid during the period of bid validity set forth in the Applicant's Bid Submission Form (the Bid Validity Period"); or
- (b) Having been notified of the acceptance of its Bid by the Beneficiary during the Bid Validity Period, (i) has failed to sign the contract agreement, or (ii) has failed to furnish the performance security, in accordance with the Instructions to Bidders ("ITB") of the Beneficiary's bidding document.

This guarantee shall expire not later than *[Insert expiry date]*¹.

By this date we must have received any claims for payment by letter or encoded telecommunication.

It is understood that you will return this guarantee to us on expiry or after payment of the total amount to be claimed hereunder.

[As preferred option regarding guarantee rules insert²: This guarantee is subject to the Uniform Rule for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758.]

Place, date

Guarantor's authorized signature(s)

¹ Pursuant to ITB Clause 19.3 the guarantee must be valid for at least 42 days beyond the bid validity.

² In the case the issuing bank will not add the preferred option, the following must be added instead: This guarantee is governed by the laws of *[Insert country of jurisdiction]*. Note: the country of jurisdiction shall be the country where the bank's branch issuing the guarantee is physically located.

Manufacturer's Authorization

*[The Bidder shall require the Manufacturer to fill in this Form in accordance with the instructions indicated. This letter of authorization should be on the letterhead of the Manufacturer and should be signed by a person with the proper authority to sign documents that are binding on the Manufacturer. The Bidder shall include it in its bid, if so indicated in the **BDS**, and for Items listed in the **BDS** and/or **Specifications**]*

Note: All italicized text is for use in preparing these forms by bidders and shall be deleted from the final document.

Date: *[Insert date]*

ICB No.: EU-UNHAS-48511-GOODS1

To: *[Insert complete name of Purchaser]*

WHEREAS

We *[Insert complete name of Manufacturer]*, who are official manufacturers of *[Insert type of goods manufactured]*, having factories at *[Insert full address of Manufacturer's factories]*, do hereby authorize *[Insert complete name of Bidder]* to submit a bid the purpose of which is to provide the following Goods, manufactured by us:

[Insert name and or brief description of the Goods],

and to subsequently negotiate and sign the Contract.

We hereby extend our full guarantee and warranty in accordance with Clause 28 of the General Conditions of Contract, with respect to the Goods offered by the above firm.

Signed: *[Insert signature(s) of authorized representative(s) of the Manufacturer]*

Name: *[Insert complete name(s) of authorized representative(s) of the Manufacturer]*

Title: *[Insert title]*

Date signed *[Insert date of signing]* day of *[Insert month]* *[Insert year]*

Section V. Eligibility Criteria

Eligibility in KfW-Financed Procurement

1. Consulting Services, Works, Goods, Plant and Non-Consulting Services are eligible for KfW financing regardless of the country of origin of the Contractors (including Subcontractors and suppliers for the execution of the Contract), except where an international embargo or sanction by the United Nations, the European Union or the German Government applies.
2. Applicants/Bidders (including all members of a Joint Venture and proposed or engaged Subcontractors) shall not be awarded a KfW-financed Contract if, on the date of submission of their Application/Offer or on the intended date of Award of a Contract, they:
 - 2.1 are bankrupt or being wound up or ceasing their activities, are having their activities administered by courts, have entered into receivership, or are in any analogous situation;
 - 2.2 have been
 - (a) convicted by a final judgement or a final administrative decision or subject to financial sanctions by the United Nations, the European Union and/or the German Government for involvement in a criminal organisation, money laundering, terrorist-related offences, child labour or trafficking in human beings; this criterion of exclusion is also applicable to legal Persons, whose majority of shares are held or factually controlled by natural or legal Persons which themselves are subject to such convictions or sanctions;
 - (b) convicted by a final court decision or a final administrative decision by a court, the European Union or national authorities in the Partner Country or in Germany for Sanctionable Practice during any Tender Process or the performance of a Contract or for an irregularity affecting the EU's financial interests, unless they provide supporting information together with their Declaration of Undertaking (Form available as Appendix to the Application/Offer which shows that this conviction is not relevant in the context of this Contract and that adequate compliance measures have been taken in reaction;
 - 2.3 have been subject within the past five years to a Contract termination fully settled against them for significant or persistent failure to comply with their contractual obligations during Contract performance, unless this termination was challenged and the dispute resolution is still pending or has not confirmed a full settlement against them;
 - 2.4 have not fulfilled applicable fiscal obligations regarding payments of taxes either in the country where they are constituted or the PEA's country;
 - 2.5 are subject to an exclusion decision of the World Bank or any other multilateral development bank and are listed in the respective table with debarred and cross-debarred firms and individual available on the World Bank's website **Fehler! Linkreferenz ungültig.** or any other multilateral development bank unless they provide supporting information together with their Declaration of Undertaking which shows that this exclusion is not relevant in the context of this Contract or

- 2.6 have given misrepresentation in documentation requested by the PEA as part of the Tender Process of the relevant Contract.

3. State-owned entities may compete only if they can establish that they (i) are legally and financially autonomous, and (ii) operate under commercial law. To be eligible, a state-owned entity shall establish to KfW's satisfaction, through all relevant documents, including its charter and other information KfW may request, that it: (i) is a legal entity separate from their state (ii) does not currently receive substantial subsidies or budget support; (iii) operates like any commercial enterprise, and, inter alia, is not obliged to pass on its surplus to their state, can acquire rights and liabilities, borrow funds and be liable for repayment of its debts, and can be declared bankrupt.

Section VI. KfW Policy – Sanctionable Practice - Social and Environmental Responsibility

1) Sanctionable Practice

The PEA and the Contractors (including all members of a Joint Venture and proposed or engaged Subcontractors) must observe the highest standard of ethics during the Tender Process and performance of the Contract.

By signing the Declaration of Undertaking the Contractors declare that (i) they did not and will not engage in any Sanctionable Practice likely to influence the Tender Process and the corresponding Award of Contract to the PEA's detriment, and that (ii) in case of being awarded a Contract they will not engage in any Sanctionable Practice.

Moreover, KfW requires to include in the Contracts a provision pursuant to which Contractors must permit KfW and in case of financing by the European Union also to European institutions having competence under European law to inspect the respective accounts, records and documents relating to the Tender Process and the performance of the Contract, and to have them audited by auditors appointed by KfW.

KfW reserves the right to take any action it deems appropriate to check that these ethics rules are observed and reserves, in particular, the rights to:

- (a) reject an Offer for Award of Contract if during the Tender Process the Bidder who is recommended for the Award of Contract has engaged in Sanctionable Practice, directly or by means of an agent in view of being awarded the Contract;
- (b) declare mis procurement and exercise its rights on the ground of the Funding Agreement with the PEA relating to suspension of disbursements, early repayment and termination if, at any time, the PEA, Contractors or their legal representatives or Subcontractors have engaged in Sanctionable Practice during the Tender Process or performance of the Contract without the PEA having taken appropriate action in due time satisfactory to KfW to remedy the situation, including by failing to inform KfW at the time they knew of such practices.

KfW defines, for the purposes of this provision, the terms set forth below as follows:

Coercive Practice	The impairing or harming, or threatening to impair or harm, directly or indirectly, any person or the property of the person with a view to influencing improperly the actions of a person.
Collusive Practice	An arrangement between two or more persons designed to achieve an improper purpose, including influencing improperly the actions of another person.
Corrupt Practice	The promising, offering, giving, making, insisting on, receiving, accepting or soliciting, directly or indirectly, of any illegal payment or undue advantage of any nature, to or by any person, with the

intention of influencing the actions of any person or causing any person to refrain from any action.

Fraudulent Practice Any action or omission, including misrepresentation that knowingly or recklessly misleads, or attempts to mislead, a person to obtain a financial benefit or to avoid an obligation.

Obstructive Practice Means (i) deliberately destroying, falsifying, altering or concealing evidence material to the investigation or the making of false statements to investigators, in order to materially impede an official investigation into allegations of a Corrupt Practice, Fraudulent Practice, Coercive Practice or Collusive Practice, or threatening, harassing or intimidating any Person to prevent them from disclosing their knowledge of matters relevant to the investigation or from pursuing the investigation, or (ii) any act intended to materially impede the exercise of KfW's access to contractually required information in connection with an official investigation into allegations of a Corrupt Practice, Fraudulent Practice, Coercive Practice or Collusive Practice.

Sanctionable Practice Any Coercive Practice, Collusive Practice, Corrupt Practice, Fraudulent Practice or Obstructive Practice (as such terms are defined herein) which is unlawful under the Financing Agreement.

2) **Social and Environmental Responsibility**

Projects financed in whole or partly in the framework of Financial Cooperation have to ensure compliance with international Environmental, Social, Health and Safety (ESHS) standards (including issues of sexual exploitation and abuse and gender-based violence). Contractors in KfW-financed projects shall consequently undertake in the respective Contracts to:

- a) comply with and ensure that all their Subcontractors and major suppliers, i.e. for major supply items comply with international environmental and labour standards, consistent with applicable law and regulations in the country of implementation of the respective Contract and the fundamental conventions of the International Labour Organisation¹ (ILO) and international environmental treaties and;
- b) implement any environmental and social risks mitigation measures, as identified in the environmental and social impact assessment (ESIA) and further detailed in the environmental and social management plan (ESMP) as far as these measures are relevant to the Contract and implement measures for the prevention of sexual exploitation and abuse and gender-based violence.

¹In case ILO conventions have not been fully ratified or implemented in the Employer's country the Applicant/Bidder/Contractor shall, to the satisfaction of the Employer and KfW, propose and implement appropriate measures in the spirit of the said ILO conventions with respect to a) workers grievances on working conditions and terms of employment, b) child labour, c) forced labour, d) worker's organisations and e) non-discrimination.

PART 2 – Supply Requirements

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1. List of Goods and Delivery Schedule

Bill of Quantity (BoQ¹) Lot 1 and Lot 2

IMPORTANT NOTICE:

Due to the completion of the Works, if the Works have not been taken over by the Employer / the Purchaser, the Suppliers shall deliver the medical equipment to a safe and controlled storage room as provided by the Purchaser in the Hospital Hasanuddin University (UNHAS) Makassar, Indonesia. For BSL 3 equipment, the storage room is located on the 6th floor of Building A. The rest of the equipment shall be stored in a room located on the 4th floor of Building EF.

If the Works have not been taken over by the Employer / the Purchaser and the Suppliers shall deliver the medical equipment to a safe and controlled storage room, the Supplier's DAP obligations and responsibilities include the delivery of the medical equipment to the storage rooms mentioned above and, as soon as the Works have been completed and taken over and respective Notification to the Supplier, the Transport to Building A (for BSL 3 laboratory) and Building EF (for ICU), followed by its Installation, Testing, Commissioning and User Training in Building A and Building EF. The Delivery Date or Delivery Period shall be understood as the Date or the Period of Delivery to the storage room as provided by the Purchaser in the Hospital Hasanuddin University (UNHAS) Makassar, Indonesia.

The Bidders shall make themselves familiar with the conditions of the Site, including the storage rooms in Building A, 6th floor and Building BC, 4th floor, and the required transport routes to the storage rooms, as well as from the storage rooms to the final Place of Delivery, Installation, Testing, Commissioning and User Training in Building A (for BSL 3 laboratory) and Building EF (for ICU).

¹ Please also refer to Annex 3

MEDICAL EQUIPMENT FOR ICU FOR SEVERE COVID-19 CASES/INFECTIOUS DISEASE AND THE BSL3 LABORATORY FOR VIROLOGY DIAGNOSTICS

Item Code	Description of Goods	Quantity ²	Physical Unit	Named Place of Destination as specified in BDS	Delivery (as per Incoterms) Date		
					Delivery Date ³ at named place of destination	Latest Delivery Date at named place of destination	Bidder's offered Delivery date at named place of destination [<i>to be provided by the bidder</i>]
all items	all items				120 calendar days from the date of signing of contract	120 calendar days from the date of signing of contract	

Note: any deviations for individual items from the requested delivery schedule has to be indicated by the bidder in this table

² Only required to be filled in case of line items being listed; not required for lots.

³ Earliest delivery date is used in cases where the Purchaser cannot accept delivery before a specific date, e.g. if construction work is still under way; if there is no earliest delivery date required, leave this column blank.

2. List of Related Services and Completion Schedule

Service No.	Description of Service	Quantity ⁴	Physical Unit ¹	Place where Services shall be Performed	Final Completion Date(s) of Services
<i>[Insert Service No]</i>	<i>[Insert description of Related Services]</i>	<i>[Insert quantity of items to be supplied]</i>	<i>[Insert physical unit for the items]</i>	<i>[Insert name(s) of the Place]</i>	<i>[Insert required Completion Date(s)]</i>
	<i>[Inland transportation]⁵</i>				120 days from Contract signature ⁶
	<i>[Installation]²</i>				14 days from Notification of completion of the Works.
	<i>[Commissioning]</i>				21 days from Notification of completion of the Works.
	<i>[Training]²</i>				21 days from Notification of completion of the Works.
	<i>[warranty]²</i>				24 months from Provisional Acceptance
	<i>[List of spare parts]²</i>				120 days from Contract signature
	<i>[List of consumables]²</i>				120 days from Contract signature

⁴ Only use if quantity/physical unit can be clearly attributed.

⁵ Insert requirements for each lot separately if they differ between lots.

⁶ Please refer to the PCC 16, referring to the Payment Schedule, "On Readiness of Shipment":.

Service No.	Description of Service	Quantity⁴	Physical Unit¹	Place where Services shall be Performed	Final Completion Date(s) of Services
	<i>[Servicing and maintenance]⁷</i>				60 months from Provisional Acceptance / 36 months after Final Acceptance.

⁷ Proposal of Draft Maintenance Contract please refer to Annex 4 and cost to be submitted as part of the Bid. The cost of the draft Maintenance Contract shall not be part of the Bid Price.

3. Technical Specifications

Bidder shall note that specifications, standards for workmanship, material and equipment, and open or hidden references to brand names or catalogue numbers, designated by the Purchaser in the Specifications, are intended to be descriptive only and not restrictive. The bidder may substitute other specifications, authoritative standards, brand names and/or catalogue numbers in its Bid, provided that it demonstrates to the Purchaser's satisfaction that the substitutions are equivalent or superior to those designated in the Specifications.

All Goods offered by Bidders and supplied by the successful Bidders must be new and unused, be of the most recent or current models, and must incorporate all recent improvements in design and materials, unless provided otherwise in the Contract.

Bidders shall provide a clause-by-clause commentary (see attached table) on the Purchaser's specifications, demonstrating the Goods' and related Services' responsiveness to those specifications or a statement of deviation and exceptions to the provisions of the Purchaser's specifications. General replies to the Purchaser's specifications, such as 'acceptable', 'comply', 'yes', etc., or simply copying the Purchaser's specifications word-by-word, will be treated without exception as non-responsive during the technical evaluation; bidders are also requested to strictly refrain from self-classification of their replies to the Purchaser's specifications (such as 'better', 'compliant', 'acceptable', etc.); any statement made by the Bidder(s) must be verifiable in the provided catalogues/leaflets/literature ('custom-made' catalogues/leaflets/literature, i.e. literature specifically manufactured for this tender, and e.g. only consisting of a picture and some text, and generally appearing unprofessional, will not be accepted).

Technical Evaluation

The technical evaluation shall be conducted based on a thorough comparison of the Bidder's offered specifications against the Purchaser's required specifications, using the following four (4) evaluation terms: comply (an item complies with, or exceeds, the Purchaser's specifications; the classification 'exceeds specification' shall be used rational and an excessive over specification, e.g. in terms of capacity, size, power, shall not be considered and accepted), acceptable (an item does not fully comply with the Purchaser's specifications, has minor deviations, but fulfils perfectly well the intended purpose), borderline (an item deviates considerably from the Purchaser's specifications, but may just be considered for the purpose intended; this classification is not permitted for major items), and not comply (an item deviates to an extent not suitable for the intended purpose).

Bidder's Technical Capacity

Bidder's must have at least two (2) qualified equipment technicians or engineers, certified by the manufacturer(s) where appropriate for the purpose of installation and training of major equipment, and available to support the local agent for after sales services on short notice. Submit CV's in the technical bid.

Standards and Certifications

All the information provided in the bids should be substantiated by attached original product data sheets **for major items** only, otherwise these will not be considered. If more than one model is quoted, specification forms need to be completed separately for individual models.

All equipment and instruments should be produced by manufacturers with accredited internationally recognised quality assurance schemes. In addition, reference must be

made in the individual specification to the particular standard for the type device (e.g. suction machine, vacuum extractor, pulse oximeters, instruments etc) to which the product should conform in terms of design, materials, performance and safety. This could be one of the "Particular Standards" published by International Standards Organisation (ISO) or one of a national standards published by organisations such as the Bureau of Indian Standards (BIS), British Standards Institute (BSI), American National Standards Institute (ANSI), German Standards Organisation (DIN) etc.

All Surgical Instruments should be made of highest quality materials e.g. stainless steel (S/S) for metal devices. Verification of this will be required from manufacturers/suppliers for products offered; this can be done by submitting official certification that their design and production facilities are accredited to relevant quality assurance (QA) standards such as EN ISO 9001 and 9002, EN 46001 and EN 46002 and /or Annex II of the EU Medical Products Directive 93/42/EEC, which enables manufacturers to meet the conditions required for use of CE mark.

A Certificate of Conformity to the Test Parameters and a Certificate of Origin indicating the country of origin and date of manufacture shall be available to the Purchaser for all the instruments and equipment defined as major equipment in the BoQ upon request.

Spare Parts Requirements

Spare parts must be available on short notice, through the bidder, the bidder's local agent or the manufacturer-appointed official representative of the goods.

After Sales Service (Local Agent)

The bidder's local agent, in the Purchaser's country, must be a qualified firm handling goods' similar to those offered within their business activities, and must have access to two qualified technicians or engineers from the bidder for support if needed. A brief description of the local agent, including registration/licence documents and proof of tax registration as well as references shall also be provided.

Common Specifications & Requirements

All equipment must be supplied with their standard accessories as normally provided by the manufacturers and with those accessories that are specifically mentioned in the item specifications. Cost of these accessories must be included in the tender price. In the bidding documents, bidders should provide a detailed list of these accessories and recommend those additional accessories that are deemed necessary.

All mains electrically powered items must be suitable for operation using the electrical system within Indonesia (220-240 volts 50-60 Hz). Plugs are to be 3-pins fused, up to 16 Amps where applicable.

Cable connections must be at least 3 metres long, measured from outside of the equipment. For electro-sensitive items such as the ultrasound or anaesthesia machine or ventilators UPS protection should be included in the offer.

Purchaser's and Supplier's Responsibilities for Installation and Work on Site

Item	Subject	Assignment	Responsibility
1	Preparation	Each workshop/laboratory/etc. at the Project Site(s), including the necessary outlets for electricity, water supply, drain, etc., installed and functional	Purchaser
		Listing requirements for above	Supplier

Item	Subject	Assignment	Responsibility
2	Transportation	Arranging transportation and insurance DAP place of final destination, and after customs clearance to each Project Site (final destination(s))	Supplier
		Storage on site in an easily accessible storage room at the Purchaser's premises	Purchaser
		Lifting and handling on site	Supplier
		Supervision of above	Supplier
		Unpacking and checking against the contract	Purchaser and Supplier
		Processing of damages and/or insurance claims	Purchaser and Supplier
3	Installation	Foundation works for equipment (including materials) on the basis of the requirements as per the Supplier's written requirements at the moment of the Supplier's Proposal. In case the Supplier does not issue any written requirements with his Proposal, it is understood, that the Supplier's proposed equipment, after making himself familiar with the conditions on the Site, do not require any additional pre-installation works. Any required pre-installation works which may be required and are not mentioned as part of the Supplier's Proposal, are at the cost of the Supplier.	Purchaser
		Listing requirements for above	Supplier
		Supply of utilities for installation on the basis of the requirements as per the Supplier's written requirements at the moment of the Supplier's Proposal. In case the Supplier does not issue any written requirements with his Proposal, it is understood, that the Supplier's proposed equipment, after making himself familiar with the conditions on the Site, do not require any additional pre-installation works. Any required pre-installation works which may be required and are not mentioned as part of the Supplier's Proposal, are at the cost of the Supplier.	Purchaser
		All necessary material to connect various items into functioning systems	Supplier
		Installation	Supplier
	Testing	Systematic testing throughout the production, delivery, installation, user training and further, with reference to Section VII Schedule of Requirements 4. Inspections and Tests	Supplier
	Commissioning	Complete Commissioning and its documentation. On demand of the Purchaser, submission of commissioning reports.	Supplier
4	Electric Wiring	Up to the required sockets at point of installation on the basis of the requirements as per the Supplier's written requirements at the moment of the Supplier's Proposal. In case the Supplier does not issue any written requirements with his Proposal, it is understood, that the Supplier's proposed equipment, after making himself familiar	Purchaser

Item	Subject	Assignment	Responsibility
		with the conditions on the Site, do not require any additional pre-installation works. Any required pre-installation works which may be required and are not mentioned as part of the Supplier's Proposal, are at the cost of the Supplier.	
		Listing requirements for above	Supplier
5	Ancillary Items	Any ancillary items required for the proper operation of each item, unless part of the specifications	Purchaser
6	User Training	For items defined and listed in the specifications	Supplier

Installation for Major Items

See table "List of Related Services and Completion Schedule"

Initial User Training for Major Items

See table "List of Related Services and Completion Schedule"

User Manuals

Each set of major equipment must be supplied with detailed operation and maintenance manuals and technical information in the English language. For all other equipment instructions manuals shall be supplied. General preference is to have operating/instruction manuals in the Indonesian language, but it is recognized that this will not always be possible, in which case manuals should be supplied in English.

Maintenance & Consumable Requirements

Post-sales services and quality assurance mechanisms must be available and provided by the supplier on demand.

Bidders are expected to specify their maintenance arrangements for supplies into Indonesia, including details of the representative or agent, physical address of commercial premises and workshop facilities, including the qualifications of their maintenance engineers.

Wherever applicable, the Bidder shall submit the list of consumables needed for the usage of the equipment. Such equipment shall be supplied with an initial supply of consumables allowing for testing and commissioning for the first six (6) months of operation.

Packing & Marking

Goods should be suitably packed in strong boxes and the contents should be reasonably protected from damage due to water, adverse climatic conditions and rough and improper handling, unforeseen delays and inappropriate storage. All boxes are to be marked with the Name and full address of the Client, and the number of the contract must be mentioned. All boxes must carry a unique identification (e.g. box 7 of 12) that relates to the packing list

Labour & Safety

Suppliers shall comply with and ensure that all their staff, local agents, subcontractors and subconsultants comply during installation/commissioning with core labour standards, consistent with applicable laws and regulations in the Republic of Indonesia, including the fundamental conventions of the International Labour Organisation (ILO). During installation/commissioning the Supplier must ensure that all involved staff is wearing protective gear (hard hats, protective shoes, protective clothing, protective gloves, etc.).

Environment & Health

Suppliers shall comply with and ensure that all their staff, local agents, subcontractors and subconsultants comply during installation/commissioning with international environmental standards, consistent with applicable laws and regulations in the Republic of Indonesia, including international environmental treaties, if applicable.

Technical Specifications Lot 1 and Lot 2

Detailed Specifications and Loaded Architectural Design

The Annex 1 contains the detailed specifications, separated by Lots (1 and 2) for each item. The Bidder is requested to insert the specifications of the item offered and supply additional documentation if needed. The completed files shall be part of the Bidder's offer and shall be evaluated.

The Annex 2 contains Loaded Architectural Designs per floor. These drawings are for the Bidder's information only. The sole intention is to support the Bidders in their preparation of a responsive proposal.

By no means the drawings as per Annex 2 are to be understood as an instruction or a design defined by the Employer.

The Bidder is responsible for review, interpretation and evaluation of the submitted information. The Employer does not take any responsibility for correctness or accurateness of the submitted information.

IMPORTANT NOTICE

The equipment and support equipment to be supplied shall be of simple and reliable design such that the equipment and furniture gives long trouble-free service with low maintenance cost. Particular attention should be paid to facilitate inspection, cleaning, preventive maintenance and repair. All equipment and support equipment supplied shall be designed to meet the technical specification with regard to respond the needs of satisfactory operation under all variations of operation within the purpose of a running hospital in the climatic, professional and cultural context of the Hospital Hasanuddin University (UNHAS) in Makassar. It is understood that the Bidders make themselves familiar with the specific climatic, professional, cultural and physical context of the Hospital Hasanuddin University (UNHAS) in Makassar.

The Bidders responsibility to investigate and scrutinize the site conditions applies explicitly to the potential pre-installation and commissioning requirements to ensure the transport and installation of the required equipment to Site and at the Site (at the Hospital Hasanuddin University (UNHAS) in Makassar). For further support of the Bidders in fulfilling their responsibility to scrutinize the site conditions and to make themselves familiar with the existing site conditions, the Employer/the Purchaser upon written request by the Bidders, makes available the available shop drawings of the Site.

In addition, it is required that all materials shall be new and of the best quality and shall be selected to withstand the stresses imposed by the working and the ambient conditions without distortion or deterioration affecting the efficiency and reliability of the equipment and/or support equipment operation.

All submerged moving parts of the equipment and support equipment shall be of corrosion resistant materials or protected against corrosion (where practicable by an approved insulating material or by a coating of an approved varnish compound). All parts in direct contact with various chemicals or detergents reasonably used in the hospital context to ensure hygienic and infection control shall be completely resistant to corrosion or abrasion by these chemicals.

Each equipment and support equipment, its component or assembly shall have been proven in service in a similar application and under conditions no less arduous than those specified herein.

Before the shipment, all equipment and/or support equipment shall be adequately protected for the whole period of transit, storage and installation against corrosion and accidental damage. The Supplier/the Contractor shall be held responsible for the packing and protection of the equipment and/or support equipment. He has to ensure that the equipment and/or support equipment reaches the Site protected, intact and undamaged. All equipment and/or furniture, as necessary, shall be packed in first quality containers or packing; no second-hand timber shall be used. The Plant shall be packed to withstand rough handling in transit. Moreover, all packages shall be suitable for several stages of handling via sea or air freight, inland transport and movement on Site, and for storage including possible delays in delivery. Packing cases shall be of the fully boarded type. Slated cases will not be allowed.

Precautions are to be taken to protect shafts and equally unprotected surfaces where they rest on wooden or other supports likely to contain moisture, in view of resisting to chafing and indentation due to any movement which is likely to occur in transit. The form of the protective wrappings and impregnation are to be suitable for a minimum period of twelve months. Lids and internal cross battens of all packing cases are to be fixed by screws and not nails. Hoop metal bindings of cases are to be sealed where ends meet. If they are not of corrosion resistant material, they are to be painted.

4. Inspections and Tests

The following inspections and tests shall be performed: N/A

Once the acceptable commodities have been readied for shipment and delivery, at the discretion of the Purchaser, a pre-shipment inspection may be carried out by the inspection agent to verify packaging, labelling requirements and conformity of the commodities with the specifications. In the event of a pre-shipment inspection the Commodities will be shipped only after it has been cleared for shipment by the inspection agent. The Purchaser shall notify the Supplier in writing of the identity of the agent or representative retained for these purposes. All in-house technical and production data related to inspections and tests that may be conducted on the premises, by the manufacturer shall be furnished to the inspectors, appointed by the Purchaser, at no charge to the Purchaser.

Should the supply item fail to meet the requirements of the specifications, the Supplier shall replace the items within the time specified for delivery or extension granted. However, under such circumstances the Supplier will bear the extra costs incurred in connection with additional inspection, failing which the Purchaser shall be entitled to recover all such additional costs from any payments due to the Supplier.

The Purchaser, at its discretion, may not choose to test the commodities prior to its delivery if he believes that the offered commodities fully comply with the requirements of the specifications.

The Purchaser's right to inspect, test and where necessary, reject the Commodities after the arrival in the Purchaser's country, shall in no way be limited or waived by reason of the Commodities having previously been inspected, tested and passed by the Purchaser or its representatives prior to the shipment from the country of origin.

Providing always that replacement is possible, the Supplier shall refund to the Purchaser all amounts paid on account or recovery may be made from the security for performance.

Nothing in this Clause, in any way, releases the Supplier from any warranty or other obligations under this Contract. Purchaser's failure to inspect and accept or reject supplies shall not relieve the Supplier from responsibility nor impose liability on Purchaser, for non-conforming supplies.

All costs of installation, operation, demonstration, technical assistance, inspections and tests shall be borne by the bidder, excepting those incurred for the salary and the travel costs of the Purchaser's technical team.

5. Incidental Services

The Supplier shall carry out all incidental services related to the Goods, as:

- Transport to final destination: Transport of equipment will be done to the following sites in co-ordination with the Purchaser;

UNHAS Makassar

- **On-site Installation:** Performance or supervision of on-site assembly and start-up of the supplied equipment;
- **Pre-installation Drawings:** Provision of all required workshop drawings for equipment which needs to be installed and for which the Supplier has to provide building and engineering services;
- **Pre-installation and commissioning Requirements:** Investigate and scrutinizing the site conditions concerning potential pre-installation and commissioning requirements to ensure the transport and installation of the required equipment to the Site and at the Site (at the Hospital Hasanuddin University (UNHAS) in Makassar). **Provision of detailed pre-installation and commissioning requirements incl. a concise technical and financial proposal incl., but not limited to drawings, BoQs and a cost proposal are to be issued within 7 calendar days at the moment of Notification of Award.**
- **Provision of Tools:** Furnishing of tools required for assembly and/or maintenance of the supplied equipment;
- **Manuals:** Furnishing of a detailed operation and maintenance manual (in English language) in duplicate for each appropriate unit of the supplied Goods;
- **User Training:** Training of the hospital staff: Introduction to the major equipment and the manual; Introduction in the function, handling, maintenance and troubleshooting of the equipment to a reasonable number of medical and technical staff;
- **After-sales Services:** Service and maintenance, including all wear and tear and spare parts for the warranty period of twenty-four (24) months, has to be included in the price quotation of all equipment. Additionally, for 3 years beyond the normal warranty period the Supplier shall as an option offer a maintenance contract for the major equipment as indicated in Table-2, Schedule IV "Schedule of requirement". All such cost except the cost of the optional maintenance contract shall be included in the price quotation. Planned preventive maintenance (PPM) will be carried out in accordance with the recommendation of the manufacturer of the equipment on a six-monthly interval as per agreed schedule. Corrective and/or preventive maintenance (CM) for software driven major equipment will be carried out promptly so that the equipment down time does not exceed 48 hours. The replacement of defective parts for major equipment must be completed within 2 working days. For all other equipment the replacement of parts shall be without unreasonable delay with 5 working days.

PART 3 - Contract

Section VIII. General Conditions of Contract

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Section VIII. General Conditions of Contract¹

1. Definitions

- 1.1 The following words and expressions shall have the meanings hereby assigned to them:
- (a) “KfW” means the KfW Entwicklungsbank;
 - (b) “Contract” means the Contract Agreement entered into between the Purchaser and the Supplier, together with the Contract Documents referred to therein, including all attachments, appendices, and all documents incorporated by reference therein;
 - (c) “Contract Documents” means the documents listed in the Contract Agreement, including any amendments thereto;
 - (d) “Contract Price” means the price payable to the Supplier as specified in the Contract Agreement, subject to such additions and adjustments thereto or deductions therefrom, as may be made pursuant to the Contract;
 - (e) “Day” means calendar day;
 - (f) “Completion” means the fulfilment of the Related Services by the Supplier in accordance with the terms and conditions set forth in the Contract;
 - (g) “GC” means the General Conditions of Contract;
 - (h) “Goods” means all of the commodities, raw material, machinery and equipment, and/or other materials that the Supplier is required to supply to the Purchaser under the Contract;
 - (i) “Purchaser’s Country” is the country **specified in the Particular Conditions of Contract (PC)**;
 - (j) “Purchaser” means the entity purchasing the Goods and Related Services, as **specified in the PC**;
 - (k) “Related Services” means the services incidental to the supply of the goods, such as insurance, installation, training and initial maintenance and other such obligations of the Supplier under the Contract;
 - (l) “PC” means the Particular Conditions of Contract;
 - (m) “Subcontractor” means any natural person, private or state entity, or a combination of the above, to whom any part of the Goods to be supplied or execution of any part of the Related Services is subcontracted by the Supplier;
 - (n) “Supplier” means the natural person, private or state entity, or a combination of the above, whose bid to perform the Contract has been accepted by

¹ [Text in this Section shall not be modified.]

- the Purchaser and is named as such in the Contract Agreement;
- (o) "The Named Place of Destination" / "Project Site," where applicable, means the place(s) **named in the PC**.
- 2. Contract Documents**
- 2.1 Subject to the order of precedence set forth in the Contract Agreement, all documents forming the Contract (and all parts thereof) are intended to be correlative, complementary, and mutually explanatory. The Contract Agreement shall be read as a whole.
- 3. Fraud and Corruption**
- 3.1 The KfW requires compliance with its policy in regard to corrupt and fraudulent practices as set forth in Appendix 1 to the PC.
- 4. Interpretation**
- 4.1 If the context so requires it, singular means plural and vice versa.
- 4.2 Incoterms
- (a) Unless inconsistent with any provision of the Contract, the meaning of any trade term and the rights and obligations of parties thereunder shall be as prescribed by Incoterms;
- (b) The terms CIP and other similar terms, when used, shall be governed by the rules prescribed in the current edition of Incoterms **specified in the PC** and published by the International Chamber of Commerce in Paris, France.
- 4.3 Entire Agreement
- The Contract constitutes the entire agreement between the Purchaser and the Supplier and supersedes all communications, negotiations and agreements (whether written or oral) of the parties with respect thereto made prior to the date of Contract.
- 4.4 Amendment
- No amendment or other variation of the Contract shall be valid unless it is in writing, is dated, expressly refers to the Contract, and is signed by a duly authorized representative of each party thereto.
- 4.5 Nonwaiver
- (a) Subject to GC Sub-Clause 4.5(b) below, no relaxation, forbearance, delay, or indulgence by either party in enforcing any of the terms and conditions of the Contract or the granting of time by either party to the other shall prejudice, affect, or restrict the rights of that party under the Contract, neither shall any waiver by either party of any breach of Contract operate as waiver of any subsequent or continuing breach of Contract;
- (b) Any waiver of a party's rights, powers, or remedies under the Contract must be in writing, dated, and signed by an authorized representative of the party granting such waiver,

and must specify the right and the extent to which it is being waived.

- 4.6 Severability
- If any provision or condition of the Contract is prohibited or rendered invalid or unenforceable, such prohibition, invalidity or unenforceability shall not affect the validity or enforceability of any other provisions and conditions of the Contract.
- 5. Language**
- 5.1 The Contract as well as all correspondence and documents relating to the Contract exchanged by the Supplier and the Purchaser, shall be written in the language **specified in the PC**. Supporting documents and printed literature that are part of the Contract may be in another language provided they are accompanied by an accurate translation of the relevant passages in the language specified, in which case, for purposes of interpretation of the Contract, this translation shall govern.
- 5.2 The Supplier shall bear all costs of translation to the governing language and all risks of the accuracy of such translation, for documents provided by the Supplier.
- 6. Joint Venture, Consortium or Association**
- 6.1 If the Supplier is a joint venture, consortium, or association, all of the parties shall be jointly and severally liable to the Purchaser for the fulfillment of the provisions of the Contract and shall designate one party to act as a leader with authority to bind the joint venture, consortium, or association. The composition or the constitution of the joint venture, consortium, or association shall not be altered without the prior consent of the Purchaser. The designated party to act as lead firm with full authority shall be **specified in the PC**.
- 7. Eligibility**
- 7.1 All Goods and Related Services to be supplied under the Contract and financed by the KfW shall have their origin in any eligible source as **specified in the PC**. For the purpose of this Clause, origin means the country where the goods have been grown, mined, cultivated, produced, manufactured, or processed; or through manufacture, processing, or assembly, another commercially recognized article results that differs substantially in its basic characteristics from its components.
- 8. Notices**
- 8.1 Any notice given by one party to the other pursuant to the Contract shall be in writing to the address **specified in the PC**. The term "in writing" means communicated in written form with proof of receipt.
- 8.2 A notice shall be effective when delivered or on the notice's effective date, whichever is later.
- 9. Governing Law**
- 9.1 The Contract shall be governed by and interpreted in accordance with the laws of the Purchaser's Country, unless otherwise **specified in the PC**.

- 10. Settlement of Disputes**
- 10.1 The Purchaser and the Supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.
- 10.2 If, after twenty-eight (28) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the Purchaser or the Supplier may give notice to the other party of its intention to commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given. Any dispute or difference in respect of which a notice of intention to commence arbitration has been given in accordance with this Clause shall be finally settled by arbitration. Arbitration may be commenced prior to or after delivery of the Goods under the Contract. Arbitration proceedings shall be conducted in accordance with the rules of procedure **specified in the PC**.
- 10.3 Notwithstanding any reference to arbitration herein,
- (a) The parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and
- (b) The Purchaser shall pay the Supplier any monies due the Supplier.
- 11. Inspections and Audit by the KfW**
- 11.1 The Supplier shall keep, and shall make all reasonable efforts to cause its Subcontractors to keep accurate and systematic accounts and records, in respect of the Goods in such form and details as will clearly identify relevant time changes and costs.
- 11.2 The Supplier shall permit, and shall cause its Subcontractors and consultants to permit, the KfW and/or persons appointed by the KfW to inspect the Supplier's offices and all accounts and records relating to the performance of the Contract and the submission of the bid, and to have such accounts and records audited by auditors appointed by the KfW if requested by the KfW.
- 12. Scope of Supply**
- 12.1 The Goods and Related Services to be supplied shall be as specified in the Schedule of Requirements.
- 13. Delivery and Documents**
- 13.1 Subject to GC Sub-Clause 33.1, the Delivery of the Goods and Completion of the Related Services shall be in accordance with the Delivery and Completion Schedule specified in the Schedule of Requirements. The details of shipping and other documents to be furnished by the Supplier are **specified in the PC**.
- 14. Supplier's Responsibilities**
- 14.1 The Supplier shall supply all the Goods and Related Services included in the Scope of Supply in accordance with GC Clause 12, and the Delivery and Completion Schedule, as per GC Clause 13.
- 15. Contract Price**
- 15.1 Prices charged by the Supplier for the Goods supplied and the Related Services performed under the Contract shall not vary from the prices quoted by the Supplier in

- its bid, with the exception of any price adjustments **authorized in the PC.**
- 16. Terms of Payment and Reimbursement**
- 16.1 The Contract Price, including any Advance Payments, if applicable, shall be paid as **specified in the PC.**
- 16.2 The Supplier's request for payment shall be made to the Purchaser in writing, accompanied by invoices describing, as appropriate, the Goods delivered and Related Services performed, and by the documents submitted pursuant to GC Clause 13 and upon fulfilment of all other obligations stipulated in the Contract.
- 16.3 Payments shall be made promptly by the Purchaser, but in no case later than sixty (60) days after submission of an invoice or request for payment by the Supplier, and after the Purchaser has accepted it.
- 16.4 The currencies in which payments shall be made to the Supplier under this Contract shall be those in which the bid price is expressed.
- 16.5 In the event that the Purchaser fails to pay the Supplier any payment by its due date or within the period **set forth in the PC**, the Purchaser shall pay to the Supplier interest on the amount of such delayed payment at the rate **shown in the PC**, for the period of delay until payment has been made in full, whether before or after judgment or arbitrage award.
- 16.6 In the event of any reimbursement, guarantee or similar claimable payments and any insurance payments under this Contract, payment shall be affected as **specified in the PC.**
- 17. Taxes and Duties**
- 17.1 For goods manufactured outside the Purchaser's Country, the Supplier shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside the Purchaser's Country.
- 17.2 For goods manufactured within the Purchaser's country, the Supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted Goods to the Purchaser.
- 17.3 If any tax exemptions, reductions, allowances or privileges may be available to the Supplier in the Purchaser's Country as **specified in the PC**, the Purchaser shall use its best efforts to enable the Supplier to benefit from any such tax savings to the maximum allowable extent.
- 18. Performance Security**
- 18.1 The Supplier shall, within twenty-eight (28) days of the notification of contract award, provide a performance security for the performance of the Contract in the amount **specified in the PC.**
- 18.2 The proceeds of the Performance Security shall be payable to the Purchaser pursuant to GC 16.6 (reimbursement) as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.

- 18.3 The Performance Security shall be denominated in the currency(ies) of the Contract, and shall be in one of the formats **stipulated by the Purchaser in the PC**, or in another format acceptable to the Purchaser.
- 18.4 The Performance Security shall be discharged by the Purchaser and returned to the Supplier not later than twenty-eight (28) days following the date of Completion of the Supplier's performance obligations under the Contract, including any warranty obligations, unless **specified otherwise in the PC**.
- 19. Copyright**
- 19.1 The copyright in all drawings, documents, and other materials containing data and information furnished to the Purchaser by the Supplier herein shall remain vested in the Supplier, or, if they are furnished to the Purchaser directly or through the Supplier by any third party, including suppliers of materials, the copyright in such materials shall remain vested in such third party.
- 20. Confidential Information**
- 20.1 The Purchaser and the Supplier shall keep confidential and shall not, without the written consent of the other party hereto, divulge to any third party any documents, data, or other information furnished directly or indirectly by the other party hereto in connection with the Contract, whether such information has been furnished prior to, during or following completion or termination of the Contract. Notwithstanding the above, the Supplier may furnish to its Subcontractor such documents, data, and other information it receives from the Purchaser to the extent required for the Subcontractor to perform its work under the Contract, in which event the Supplier shall obtain from such Subcontractor an undertaking of confidentiality similar to that imposed on the Supplier under GC Clause 20.
- 20.2 The Purchaser shall not use such documents, data, and other information received from the Supplier for any purposes unrelated to the contract. Similarly, the Supplier shall not use such documents, data, and other information received from the Purchaser for any purpose other than the performance of the Contract.
- 20.3 The obligation of a party under GC Sub-Clauses 20.1 and 20.2 above, however, shall not apply to information that:
- (a) The Purchaser or Supplier need to share with the AFD or other institutions participating in the financing of the Contract;
 - (b) Now or hereafter enters the public domain through no fault of that party;
 - (c) Can be proven to have been possessed by that party at the time of disclosure and which was not previously obtained, directly or indirectly, from the other party; or

- (d) Otherwise lawfully becomes available to that party from a third party that has no obligation of confidentiality.
- 20.4 The above provisions of GC Clause 20 shall not in any way modify any undertaking of confidentiality given by either of the parties hereto prior to the date of the Contract in respect of the Supply or any part thereof.
- 20.5 The provisions of GC Clause 20 shall survive completion or termination, for whatever reason, of the Contract.
- 21. Subcontracting**
 - 21.1 The Supplier shall notify the Purchaser in writing of all subcontracts awarded under the Contract if not already specified in the bid. Such notification, in the original bid or later shall not relieve the Supplier from any of its obligations, duties, responsibilities, or liability under the Contract.
 - 21.2 Subcontracts shall comply with the provisions of GC Clauses 3 and 7.
- 22. Specifications, Standards and Spare Parts**
 - 22.1 Technical Specifications and Drawings
 - (a) The Goods and Related Services supplied under this Contract shall conform to the technical specifications and standards mentioned in Section VII, Schedule of Requirements and, when no applicable standard is mentioned, the standard shall be equivalent or superior to the official standards whose application is appropriate to the Goods' country of origin.
 - (b) The Supplier shall be entitled to disclaim responsibility for any design, data, drawing, specification or other document, or any modification thereof provided or designed by or on behalf of the Purchaser, by giving a notice of such disclaimer to the Purchaser.
 - (c) Wherever references are made in the Contract to codes and standards in accordance with which it shall be executed, the edition or the revised version of such codes and standards shall be those specified in the Schedule of Requirements. During Contract execution, any changes in any such codes and standards shall be applied only after approval by the Purchaser and shall be treated in accordance with GC Clause 33.
 - 22.2 Spare Parts
 - (a) The Supplier shall carry sufficient inventories to assure ex-stock supply of consumables and consumable spares. Other spare parts and components shall be supplied as promptly as possible but in any case, within the number of days **specified in the PC** of placement of order.
 - (b) The Supplier shall be for a period of years **specified in the PC** from the date of delivery and commissioning under obligation to supply spare

- parts. However, the Supplier shall, in the event of termination of production of the spare parts:
- (i) Send an advance notification to the Purchaser of the pending termination, in sufficient time to permit the Purchaser to procure needed requirements; and
 - (ii) Furnish, following such termination, at no cost to the Purchaser, the blueprints, drawings and specifications of the spare parts, if and when requested.
- 23. Packing and Documents**
- 23.1 The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their named place of destination, as indicated in the Contract. During transit, the packing shall be sufficient to withstand, without limitation, rough handling and exposure to extreme temperatures, salt and precipitation, and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the goods' named place of destination and the absence of heavy handling facilities at all points in transit.
- 23.2 The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract, including additional requirements, if any, **specified in the PC**, and in any other instructions ordered by the Purchaser.
- 24. Insurance**
- 24.1 Unless otherwise **specified in the PC**, the Goods supplied under the Contract shall be fully insured - in the currency(ies) of the Contract from an eligible country - against loss or damage incidental to manufacture or acquisition, transportation, storage, and delivery, in accordance with the applicable Incoterms or in the manner **specified in the PC**.
- 25. Transportation**
- 25.1 Unless otherwise **specified in the PC**, responsibility for arranging transportation of the Goods shall be in accordance with the specified Incoterms.
- 25.2 The Supplier may be required to provide any or all of the following services, including additional services, if any, **specified in PC**:
- (a) Performance or supervision of on-site assembly and/or start-up of the supplied Goods;
 - (b) Furnishing of tools required for assembly and/or maintenance of the supplied Goods;
 - (c) Furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied Goods;
 - (d) Performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract; and

26. Inspections and Tests

- (e) Training of the Purchaser's personnel, at the Supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied Goods.
- 25.3 Prices charged by the Supplier for incidental services, if not included in the Contract Price for the Goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services.
- 26.1 The Supplier shall at its own expense and at no cost to the Purchaser carry out all such tests and/or inspections of the Goods and Related Services as are **specified in the PC**.
- 26.2 The inspections and tests may be conducted on the premises of the Supplier or its Subcontractor, and/or at the Goods' named place of destination, or in another place in the Purchaser's Country as **specified in the PC**. Subject to GC Sub-Clause 26.3, if conducted on the premises of the Supplier or its Subcontractor, all reasonable facilities and assistance, including access to drawings and production data, shall be furnished to the inspectors at no charge to the Purchaser.
- 26.3 The Purchaser or its designated representative shall be entitled to attend the tests and/or inspections referred to in GC Sub-Clause 26.2, provided that the Purchaser bear all of its own costs and expenses incurred in connection with such attendance including, but not limited to, all traveling and board and lodging expenses.
- 26.4 Whenever the Supplier is ready to carry out any such test and inspection, it shall give a reasonable advance notice, including the place and time, to the Purchaser. The Supplier shall obtain from any relevant third party or manufacturer any necessary permission or consent to enable the Purchaser or its designated representative to attend the test and/or inspection.
- 26.5 The Purchaser may require the Supplier to carry out any test and/or inspection not required by the Contract but deemed necessary to verify that the characteristics and performance of the Goods comply with the technical specifications, codes and standards under the Contract, provided that the Supplier's reasonable costs and expenses incurred in the carrying out of such test and/or inspection shall be added to the Contract Price. Further, if such test and/or inspection impedes the progress of manufacturing and/or the Supplier's performance of its other obligations under the Contract, due allowance will be made in respect of the Delivery Dates and Completion Dates and the other obligations so affected.
- 26.6 The Supplier shall provide the Purchaser with a report of the results of any such test and/or inspection.
- 26.7 The Purchaser may reject any Goods or any part thereof that fail to pass any test and/or inspection or do not conform to the specifications. The Supplier shall

either rectify or replace such rejected Goods or parts thereof or make alterations necessary to meet the specifications at no cost to the Purchaser, and shall repeat the test and/or inspection, at no cost to the Purchaser, upon giving a notice pursuant to GC Sub-Clause 26.4.

- 26.8 The Supplier agrees that neither the execution of a test and/or inspection of the Goods or any part thereof, nor the attendance by the Purchaser or its representative, nor the issue of any report pursuant to GC Sub-Clause 26.6, shall release the Supplier from any warranties or other obligations under the Contract.
- 27. Liquidated Damages**
- 27.1 Except as provided under GC Clause 32, if the Supplier fails to deliver any or all of the Goods by the Date(s) of delivery or perform the Related Services within the period specified in the Contract, the Purchaser may without prejudice to all its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage **specified in the PC** of the delivered price of the delayed Goods or unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the percentage **specified in those PC**. Once the maximum is reached, the Purchaser may terminate the Contract pursuant to GC Clause 35.
- 28. Warranty**
- 28.1 The Supplier warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the Contract.
- 28.2 Subject to GC Sub-Clause 22.1(b), the Supplier further warrants that the Goods shall be free from defects arising from any act or omission of the Supplier or arising from design, materials, and workmanship, under normal use in the conditions prevailing in the country of named place of destination.
- 28.3 Unless otherwise **specified in the PC**, the warranty shall remain valid for twelve (12) months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the named place of destination **indicated in the PC**, or for eighteen (18) months after the date of shipment from the port or place of loading in the country of origin, whichever period concludes earlier.
- 28.4 The Purchaser shall give notice to the Supplier stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof. The Purchaser shall afford all reasonable opportunity for the Supplier to inspect such defects.
- 28.5 Upon receipt of such notice, the Supplier shall, within the period **specified in the PC**, expeditiously repair or

replace the defective Goods or parts thereof, at no cost to the Purchaser.

28.6 If having been notified, the Supplier fails to remedy the defect within the period specified in the **PC**, the Purchaser may proceed to take within a reasonable period such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.

29. Patent Indemnity

29.1 The Supplier shall, subject to the Purchaser's compliance with GC Sub-Clause 29.2, indemnify and hold harmless the Purchaser and its employees and officers from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Purchaser may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract by reason of:

- (a) The installation of the Goods by the Supplier or the use of the Goods in the country where the Site is located; and
- (b) The sale in any country of the products produced by the Goods.

Such indemnity shall not cover any use of the Goods or any part thereof other than for the purpose indicated by or to be reasonably inferred from the Contract, neither any infringement resulting from the use of the Goods or any part thereof, or any products produced thereby in association or combination with any other equipment, plant, or materials not supplied by the Supplier, pursuant to the Contract.

29.2 If any proceedings are brought or any claim is made against the Purchaser arising out of the matters referred to in GC Sub-Clause 29.1, the Purchaser shall promptly give the Supplier a notice thereof, and the Supplier may at its own expense and in the Purchaser's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claim.

29.3 If the Supplier fails to notify the Purchaser within twenty-eight (28) days after receipt of such notice that it intends to conduct any such proceedings or claim, then the Purchaser shall be free to conduct the same on its own behalf.

29.4 The Purchaser shall, at the Supplier's request, afford all available assistance to the Supplier in conducting such proceedings or claim, and shall be reimbursed by the Supplier for all reasonable expenses incurred in so doing.

- 29.5 The Purchaser shall indemnify and hold harmless the Supplier and its employees, officers, and Subcontractors from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Supplier may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract arising out of or in connection with any design, data, drawing, specification, or other documents or materials provided or designed by or on behalf of the Purchaser.
- 30. Limitation of Liability**
- 30.1 Except in cases of criminal negligence or wilful misconduct,
- (a) The Supplier shall not be liable to the Purchaser, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the Supplier to pay liquidated damages to the Purchaser; and
- (b) The aggregate liability of the Supplier to the Purchaser, whether under the Contract, in tort or otherwise, shall not exceed the total Contract Price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment, or to any obligation of the supplier to indemnify the purchaser with respect to patent infringement
- 31. Change in Laws and Regulations**
- 31.1 Unless otherwise specified in the Contract, if after the date of twenty-eight (28) days prior to date of Bid submission, any law, regulation, ordinance, order or bylaw having the force of law is enacted, promulgated, abrogated, or changed in the place of the Purchaser's country where the Site is located (which shall be deemed to include any change in interpretation or application by the competent authorities) that subsequently affects the Delivery Date and/or the Contract Price, then such Delivery Date and/or Contract Price shall be correspondingly increased or decreased, to the extent that the Supplier has thereby been affected in the performance of any of its obligations under the Contract. Notwithstanding the foregoing, such additional or reduced cost shall not be separately paid or credited if the same has already been accounted for in the price adjustment provisions where applicable, in accordance with GC Clause 15.
- 32. Force Majeure**
- 32.1 The Supplier shall not be liable for forfeiture of its Performance Security, liquidated damages, or termination for default if and to the extent that its delay in performance or other failure to perform its obligations

- under the Contract is the result of an event of Force Majeure.
- 32.2 For purposes of this Clause, "Force Majeure" means an event or situation beyond the control of the Supplier that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the Supplier. Such events may include, but not be limited to, acts of the Purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.
- 32.3 If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.
- 33. Change Orders and Contract Amendments**
- 33.1 The Purchaser may at any time order the Supplier through notice in accordance GC Clause 8, to make changes within the general scope of the Contract in any one or more of the following:
- (a) Drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Purchaser;
 - (b) The method of shipment or packing;
 - (c) The place of delivery; and
 - (d) The Related Services to be provided by the Supplier.
- 33.2 If any such change causes an increase or decrease in the cost of, or the time required for, the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or in the Delivery/Completion Schedule, or both, and the Contract shall accordingly be amended. Any claims by the Supplier for adjustment under this Clause must be asserted within twenty-eight (28) days from the date of the Supplier's receipt of the Purchaser's change order.
- 33.3 Prices to be charged by the Supplier for any Related Services that might be needed but which were not included in the Contract shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services.
- 33.4 Subject to the above, no variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.
- 34. Extensions of Time**
- 34.1 If at any time during performance of the Contract, the Supplier or its subcontractors should encounter conditions impeding timely delivery of the Goods or completion of Related Services pursuant to GC Clause

13, the Supplier shall promptly notify the Purchaser in writing of the delay, its likely duration, and its cause. As soon as practicable after receipt of the Supplier's notice, the Purchaser shall evaluate the situation and may at its discretion extend the Supplier's time for performance, in which case the extension shall be ratified by the parties by amendment of the Contract.

34.2 Except in case of Force Majeure, as provided under GC Clause 32, a delay by the Supplier in the performance of its Delivery and Completion obligations shall render the Supplier liable to the imposition of liquidated damages pursuant to GC Clause 27, unless an extension of time is agreed upon, pursuant to GC Sub-Clause 34.1.

35. Termination

35.1 Termination for Default

(a) The Purchaser, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Supplier, may terminate the Contract in whole or in part:

(i) If the Supplier fails to deliver any or all of the Goods within the period specified in the Contract, or within any extension thereof granted by the Purchaser pursuant to GC Clause 34;

(ii) If the Supplier fails to perform any other obligation under the Contract; or

(iii) If the Supplier, in the judgment of the Purchaser has engaged in fraud and corruption, as defined in GC Clause 3, in competing for or in executing the Contract.

(b) In the event the Purchaser terminates the Contract in whole or in part, pursuant to GC Clause 35.1(a), the Purchaser may procure, upon such terms and in such manner as it deems appropriate, Goods or Related Services similar to those undelivered or not performed, and the Supplier shall be liable to the Purchaser for any additional costs for such similar Goods or Related Services. However, the Supplier shall continue performance of the Contract to the extent not terminated.

35.2 Termination for Insolvency

(a) The Purchaser may at any time terminate the Contract by giving notice to the Supplier if the Supplier becomes bankrupt or otherwise insolvent. In such event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy that has accrued or will accrue thereafter to the Purchaser.

35.3 Termination for Convenience

- (a) The Purchaser, by notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Purchaser's convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective;
 - (b) The Goods that are complete and ready for shipment within twenty-eight (28) days after the Supplier's receipt of notice of termination shall be accepted by the Purchaser at the Contract terms and prices. For the remaining Goods, the Purchaser may elect:
 - (i) To have any portion completed and delivered at the Contract terms and prices; and/or
 - (ii) To cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and Related Services and for materials and parts previously procured by the Supplier.
- 36. Assignment** 36.1 Neither the Purchaser nor the Supplier shall assign, in whole or in part, their obligations under this Contract, except with prior written consent of the other party.
- 37. Export Restriction** 37.1 Notwithstanding any obligation under the Contract to complete all export formalities, any export restrictions attributable to the Purchaser, to the country of the Purchaser, or to the use of the products/goods, systems or services to be supplied, which arise from trade regulations from a country supplying those products/goods, systems or services, and which substantially impede the Supplier from meeting its obligations under the Contract, shall release the Supplier from the obligation to provide deliveries or services, always provided, however, that the Supplier can demonstrate to the satisfaction of the Purchaser and of the KfW that it has completed all formalities in a timely manner, including applying for permits, authorizations and licenses necessary for the export of the products/goods, systems or services under the terms of the Contract. Termination of the Contract on this basis shall be for the Purchaser's convenience pursuant to Sub-Clause 35.3.

Section IX. Particular Conditions of Contract

The following Particular Conditions of Contract (PC) shall supplement and / or amend the General Conditions of Contract (GC). Whenever there is a conflict, the provisions herein shall prevail over those in the GC.

GC 1.1(i)	The Purchaser's country is: Republic of Indonesia
GC 1.1(j)	The Purchaser is: Ministry of Higher Education, Science, and Technology of the Republic of Indonesia
GC 1.1 (o)	The Named Place of Destination(s) is/are: Hospital UNHAS Makassar, Indonesia
GC 4.2	The version edition of Incoterms shall be Incoterms 2010. However, the definition of the place and date associated with "delivery" is modified as follows: (a) Under DAP Incoterms defines "delivery" as the place and date where risk transfers from the seller to the Purchaser, which is the final destination. (b) In these Bidding Documents, when using DAP and not referring to the transfer of risk, the term "delivery" shall be interpreted as the date and place where the Goods and Related Services arrive at the named place of destination, and this date shall be reflected in the Delivery and Completion Schedule.
GC 5.1	The governing and communication language shall be English.
GC 6.1	The designated party to act as lead firm with full authority is: <i>[Insert complete legal name of the lead firm]</i>
GC 7.1	Goods and services from countries under embargo from Germany, the European Union or the United Nations are not eligible. Goods and services from countries which are legally barred in the country of the contracting agency.
GC 8.1	For notices , the Purchaser's address shall be: Attention: Dr. dr. Andi Indahwaty Sidin, MHSM Hospital Hasanuddin University (UNHAS) Makassar Address: Building EF, Hasanuddin University Hospital, JL Perintis Kemerdekaan Km 11, Pintu II Unhas, Kecamatan Tamalanrea, Kota Makassar

	<p>City: Makassar, South Sulawesi Country: Republic of Indonesia Email: grant_rsu@rs.unhas.ac.id For notices, the Supplier's address shall be: Attention: Street Address: City: ZIP Code: Country: Telephone: Electronic mail address:</p>
GC 9.1	The governing law shall be the law of: Republic of Indonesia
GC 10.2	<p>The rules of procedure for arbitration proceedings pursuant to GC Clause 10.2 shall be as follows:</p> <p>(a) Contract with foreign Supplier: GC 10.2—Any dispute, controversy or claim arising out of or relating to this Contract, or breach, termination or invalidity thereof, shall be settled by arbitration in accordance with the UNCITRAL Arbitration Rules as at present in force.</p> <p>(b) Contract with Supplier national of the Purchaser's country: In the case of a dispute between the Purchaser and a Supplier who is a national of the Purchaser's country, the dispute shall be referred to adjudication or arbitration in accordance with the laws of the Republic of Indonesia.</p>
GC 13.1	<p>For Goods supplied from abroad:</p> <p>Upon shipment, the Supplier shall notify the Purchaser and the Insurance Company by cable or by electronic way previously agreed between the parties the full details of the shipment, including contract number, description of Goods, quantity, the mode of transport, the bill of lading number and date, place of loading, date of shipment, place of discharge, etc. The Supplier shall mail the following documents to the Purchaser, with a copy to the Insurance Company:</p> <p>(i) Original and 3 copies of the Supplier's invoice¹ showing Goods' and Related Services' description, quantity, unit price, total amount, number of packages, names of the exporter and the consignee; Goods and Related Services must be carefully described (accurate, specific, and complete description of merchandise);</p>

¹ If required for due process (e.g. customs clearance in the Purchaser's country), the invoice can be split into two invoices, one showing CIP values and the other local services (inland transportation, installation, training, etc.).

	<p>(ii) If applicable, original negotiable and 3 non-negotiable copies (stamped and dated according to the original) of the clean, on-board bill of lading marked "freight prepaid" or equivalent (air waybill, road waybill, FCR, CMR), showing gross and net weights, volume of measurement, marks and identification, name and address of importer of consignee;</p> <p>(iii) Original and 3 copies of the packing list identifying contents of each package; packing and weighing list shall describe accurately and in detail the contents of each package / case included in the shipment and give the net and gross weights;</p> <p>(iv) Original insurance certificate;</p> <p>(v) Original Manufacturer's or Supplier's warranty certificate;</p> <p>(vi) Original Supplier's factory inspection report;</p> <p>(vii) Any other document that may be required in specific cases.</p> <p>The above documents shall be received by the Purchaser at least one week before arrival of the Goods at the place of arrival and, if not received, the Supplier will be responsible for any consequent expenses.</p> <p>For Goods from within the Purchaser's country:</p> <p>Upon delivery of the Goods EXW or to the transporter, the Supplier shall notify the Purchaser and submit the following documents to the Purchaser:</p> <p>(i) Original and 3 copies of the Supplier's invoice showing Goods' and Related services' description, quantity, unit price, and total amount;</p> <p>(ii) If applicable, original delivery note, railway receipt, or truck receipt;</p> <p>(iii) Original insurance certificate;</p> <p>(iv) Original Manufacturer's or Supplier's warranty certificate;</p> <p>(v) Original Supplier's factory inspection report;</p> <p>(vi) Any other document that may be required in specific cases.</p> <p>The above documents shall be received by the Purchaser before shipping of the Goods and, if not received, the Supplier will be responsible for any consequent expenses.</p>
GC 15.1	The prices charged for the Goods supplied and the related Services performed shall not be adjustable.

<p>GC 16.1</p>	<p>GC 16.1—The method and conditions of payment to be made to the Supplier under this Contract shall be as follows:</p> <p>Methods of Payment:</p> <p>Payments shall be made using the KfW's Simplified Direct Disbursement procedure.</p> <p>Payment for Goods supplied from abroad:</p> <p>Payment of foreign currency portion shall be made in EUR in the following manner:</p> <p>(i) Advance Payment: Twenty (20) percent of the Contract Price will be paid within thirty (30) days of signing of the Contract against the Supplier's invoice, the valid Performance Guarantee in accordance with GC 18 and the valid Advance Payment Guarantee, in form of a bank guarantee for the equivalent amount in the format as per Section X.</p> <p>(ii) On Readiness for Shipment: Forty-five (45) percent of the Contract Price of the Goods ready for Shipment shall be paid through the payment method stipulated above within thirty (30) days upon 1. submission of electronic copies of documents specified in GC Clause 13 (iv) Original insurance certificate, (v) Original Manufacturer's or Supplier's warranty certificate (vi) Original Supplier's factory inspection report (vii) Certified certificate of origin: original and 3 copies; origin to be certified by the Chamber of Commerce in the supplier's country; and 2. subject to a satisfactory Performance Guarantee;</p> <p>(iii) On Delivery: Fifteen (15) percent of the Contract Price of the Goods delivered (if the Works have not been taken over by the Employer / the Purchaser, the Goods shall be temporarily delivered to the storage room in the Hospital Hasanuddin University (UNHAS) Makassar: for BSL 3 equipment, the storage room is located on the 6th floor of Building A and the rest of the equipment shall be stored in a room located on the 4th floor of Building EF. This payment will be executed upon temporary delivery to the storage room, while the Purchaser's DAP obligations, including, but not limited to insurance of equipment, are only fulfilled upon successful commissioning leading to Provisional Acceptance) shall be paid through the payment method stipulated above within thirty (30) days from inspection of the Goods by the Purchaser (typically done after release of the goods from customs), upon (i) submission of remaining documents specified in GC Clause 13 and (ii) subject to a satisfactory Performance Guarantee; together with this payment the Advance Payment Guarantee shall be released; and</p> <p>(iv) On Provisional Acceptance: Twenty (20) percent of the Contract Price of Goods and Related Services received shall be paid through the payment method stipulated above within thirty (30) days of receipt of the Goods and completion of the Related Services at the final destination(s) upon submission of claim supported by the provisional acceptance certificate issued by</p>
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	the Purchaser [which shall be issued by the Purchaser within fifteen (15) days from the successful distribution/installation/commission/training (whichever is the latter)], and subject to a satisfactory Performance Guarantee covering the warranty period.
GC 16.1	Payment to the Supplier of the amounts due in each currency shall be made into the following bank accounts: <i>[Insert bank account details at the time of contract signing]</i> Bank charges are for the account of the Supplier, except for the bank charges of KfW as transferring bank only.
GC 16.5	GC 16.5 does not apply to this Contract, and no interest payments will be made.
GC 16.6	Reimbursement payments shall be made to KfW to the following bank account: Account holder: Rektor Unhas QQ PIU Euro Grant Rumah Sakit Account number: 2024424429 Bank: Bank BNI Branch: Tamalanrea Branch SWIFT: BNINIDJA Payment to be made for the account of the Ministry of Higher Education, Science, and Technology of the Republic of Indonesia
GC 17.3	The following taxes, duties and fees exemptions apply to the Contract: None
GC 18.1	The amount of the Performance Security shall be: 10% of the Bid Price
GC 18.3	The Performance Security shall be in the form of: Please refer to Section X. The Performance Security shall be denominated in Euros (EUR)
GC 18.4	Discharge of the Performance Security shall take place: At final acceptance of equipment after the 2-years warranty period
GC 22.2(a)	Not applicable
GC 22.2 (b)	Spare parts shall be available at least 10 years for Major Equipment and for the rest of the items at least 5 years.
GC 23.2	The packing, marking and documentation within and outside the packages shall be: <i>(to be agreed between Purchaser and Supplier before shipment of Goods.)</i>

GC 24.1	<p>The insurance coverage shall be as follows:</p> <p>The insurance shall be at the option of the Supplier and in an amount equal to 110 percent of the DAP value of the Goods from “warehouse” to “the project site” on “All Risks” basis, including war risks and strikes.</p> <p>Any payments of the insurer are to be made to KfW for the account of Indonesia to the extent that the risk has already come to lie with the Purchaser. The insurance certificate/policy must include the following Clause:</p> <p>“In the event of any claim under this insurance policy, payment shall be effected to Rektor Unhas QQ PIU Euro Grant Rumah Sakit, Bank BNI, Tamalanrea Branch, Indonesia (SWIFT: BNINIDJA), account no. 2024424429”.</p>
GC 25.1	<p>Responsibility for transportation of the Goods shall be as specified in the Incoterms 2010 DAP.</p> <p>The Supplier is required under the Contract to ship the Goods DAP to a specified named place of destination ready for unloading from the arriving conveyance within the Purchaser’s country,</p> <p>Risk transfers from seller to Purchaser when the goods are available for unloading; so, unloading is at the Purchaser’s risk.</p> <p>The Purchaser is responsible for import clearance and any applicable local taxes or import duties.</p>
GC 25.2	<p>Incidental services to be provided are:</p> <p>These services are included in the Contract Price and apply for selected equipment as to the BoQ.</p>
GC 26.1	<p>The inspections and tests shall be:</p> <p>As specified in Section IV -Schedule of Requirements</p>
GC 26.2	<p>The inspections and tests shall be conducted at:</p> <p>UNHAS Hospital Makassar</p>
GC 27.1	<p>The liquidated damage shall be:</p> <p>0.05% of the value of delayed or undelivered goods for each day of delay until actual delivery or performance.</p>
GC 27.1	<p>The maximum amount of liquidated damages shall be 10% of the contract price.</p>
GC 28.3	<p>The period of validity of the Warranty shall be: 24 months from acceptance of the Goods</p> <p>For purposes of the Warranty, the named place(s) of destination(s) shall be:</p> <p>Hospital Hasanuddin University (UNHAS) Makassar</p>

GC 28.5 and GC 28.6	The period for repair, replacement or corrective or preventive maintenance shall be: two (2) days for all major equipment. For other equipment the period shall not exceed five (5) working days.
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Attachment 1 to Particular Conditions of Contract

KfW Policy – Sanctionable Practice – Social and Environmental Responsibility

1) Sanctionable Practice

The PEA and the Contractors (including all members of a Joint Venture and proposed or engaged Subcontractors) must observe the highest standard of ethics during the Tender Process and performance of the Contract.

By signing the Declaration of Undertaking the Contractors declare that (i) they did not and will not engage in any Sanctionable Practice likely to influence the Tender Process and the corresponding Award of Contract to the PEA's detriment, and that (ii) in case of being awarded a Contract they will not engage in any Sanctionable Practice.

Moreover, KfW requires to include in the Contracts a provision pursuant to which Contractors must permit KfW and in case of financing by the European Union also to European institutions having competence under European law to inspect the respective accounts, records and documents relating to the Tender Process and the performance of the Contract, and to have them audited by auditors appointed by KfW.

KfW reserves the right to take any action it deems appropriate to check that these ethics rules are observed and reserves, in particular, the rights to:

- (a) reject an Offer for Award of Contract if during the Tender Process the Bidder who is recommended for the Award of Contract has engaged in Sanctionable Practice, directly or by means of an agent in view of being awarded the Contract;
- (b) declare misprocurement and exercise its rights on the ground of the Funding Agreement with the PEA relating to suspension of disbursements, early repayment and termination if, at any time, the PEA, Contractors or their legal representatives or Subcontractors have engaged in Sanctionable Practice during the Tender Process or performance of the Contract without the PEA having taken appropriate action in due time satisfactory to KfW to remedy the situation, including by failing to inform KfW at the time they knew of such practices.

KfW defines, for the purposes of this provision, the terms set forth below as follows:

Coercive Practice	The impairing or harming, or threatening to impair or harm, directly or indirectly, any person or the property of the person with a view to influencing improperly the actions of a person.
Collusive Practice	An arrangement between two or more persons designed to achieve an improper purpose, including influencing improperly the actions of another person.
Corrupt Practice	The promising, offering, giving, making, insisting on, receiving, accepting or soliciting, directly or indirectly, of any illegal payment or undue advantage of any nature, to or by any person, with the intention of influencing the actions of any person or causing any person to refrain from any action.

- Fraudulent Practice** Any action or omission, including misrepresentation that knowingly or recklessly misleads, or attempts to mislead, a person to obtain a financial benefit or to avoid an obligation.
- Obstructive Practice** Means (i) deliberately destroying, falsifying, altering or concealing evidence material to the investigation or the making of false statements to investigators, in order to materially impede an official investigation into allegations of a Corrupt Practice, Fraudulent Practice, Coercive Practice or Collusive Practice, or threatening, harassing or intimidating any Person to prevent them from disclosing their knowledge of matters relevant to the investigation or from pursuing the investigation, or (ii) any act intended to materially impede the exercise of KfW's access to contractually required information in connection with an official investigation into allegations of a Corrupt Practice, Fraudulent Practice, Coercive Practice or Collusive Practice.
- Sanctionable Practice** Any Coercive Practice, Collusive Practice, Corrupt Practice, Fraudulent Practice or Obstructive Practice (as such terms are defined herein) which is unlawful under the Financing Agreement.

2) **Social and Environmental Responsibility**

Projects financed in whole or partly in the framework of Financial Cooperation have to ensure compliance with international Environmental, Social, Health and Safety (ESHS) standards (including issues of sexual exploitation and abuse and gender-based violence). Contractors in KfW-financed projects shall consequently undertake in the respective Contracts to:

- (a) comply with and ensure that all their Subcontractors and major suppliers, i.e. for major supply items comply with international environmental and labour standards, consistent with applicable law and regulations in the country of implementation of the respective Contract and the fundamental conventions of the International Labour Organisation² (ILO) and international environmental treaties and;
- (b) implement any environmental and social risks mitigation measures, as identified in the environmental and social impact assessment (ESIA) and further detailed in the environmental and social management plan (ESMP) as far as these measures are relevant to the Contract and implement measures for the prevention of sexual exploitation and abuse and gender-based violence.

²In case ILO conventions have not been fully ratified or implemented in the Employer's country the Applicant/Bidder/Contractor shall, to the satisfaction of the Employer and KfW, propose and implement appropriate measures in the spirit of the said ILO conventions with respect to a) workers grievances on working conditions and terms of employment, b) child labour, c) forced labour, d) worker's organisations and e) non-discrimination.

Section X. Contract Forms

This Section contains forms which, once completed, will form part of the Contract. The forms for Performance Security and Advance Payment Security, when required, shall only be completed by the successful Bidder after contract award.

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Performance Security	Fehler! Textmarke nicht definiert.18
Advance Payment Security	Fehler! Textmarke nicht definiert.0

Letter of Acceptance

[Use letterhead paper of the Purchaser]

[Insert date]

To: *[Insert name and address of the Supplier]*

Subject: **Notification of Award Contract No. *[Insert contract number]***

This is to notify you that your Bid dated *[Insert date]* for execution of the *[Insert name of the contract and identification number, as given in the PC]* for the Accepted Contract Amount of *[Insert contract price in numbers and words including code and name of currency]*, as corrected and modified in accordance with the Instructions to Bidders is hereby accepted by the undersigned Purchaser.

You are requested to furnish the Performance Security within twenty-eight (28) days in accordance with the Conditions of Contract, using for that purpose the Performance Security Form included in Section X, Contract Forms, of the Bidding Documents.

Authorized Signature: _____

Name and Title of Signatory: _____

Name of Institution: _____

Attachment: Contract Agreement¹

¹ If the Purchaser cannot send the contract agreement together with the letter of acceptance, it must be sent electronically to the Supplier within a reasonable period of time not exceeding ten days; for the purpose of issuing the required Performance Guarantee, the supplier must be advised of the Contract date.

Contract Agreement

THIS AGREEMENT made

the *[Insert number]* day of *[Insert: month]*, *[Insert: year]*.

BETWEEN

- (1) *[Insert complete name of Purchaser]*, a/an *[Insert description of type of legal entity, for example, an agency of the Ministry of of the State of {Insert name of Country of Purchaser}, or corporation incorporated under the laws of {Insert name of Country of Purchaser}]* and having its principal place of business at *[Insert address of Purchaser]* (hereinafter called "the Purchaser"), and
- (2) *[Insert name of Supplier]*, a corporation incorporated under the laws of *[Insert: country of Supplier]* and having its principal place of business at *[Insert address of Supplier]* (hereinafter called "the Supplier").

WHEREAS the Purchaser invited bids for certain Goods and ancillary services, viz., *[Insert brief description of Goods and Services]* and has accepted a Bid by the Supplier for the supply of those Goods and Services in the sum of *[Insert Contract Price in words and figures, expressed in the Contract currency(ies)]* (hereinafter called "the Contract Price").

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Contract documents referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement. This Agreement shall prevail over all other contract documents.
 - (a) The Letter of Acceptance;
 - (b) The Bid Submission Form and Appendix to Bid Submission Form (including the signed Declaration of Undertaking);
 - (c) The Addenda Nos. _____ (if any);
 - (d) Particular Conditions of Contract, including Annex 1;
 - (e) General Conditions of Contract;
 - (f) The Specification (including Schedule of Requirements and Technical Specifications);
 - (g) The completed Bidding Forms (including Price Schedules); and
 - (h) Any other document listed in GC as forming part of the Contract.
3. In the event of any discrepancy or inconsistency within the Contract documents, then the documents shall prevail in the order listed above.
4. In consideration of the payments to be made by the Purchaser to the Supplier as specified in this Agreement, the Supplier hereby covenants with the Purchaser to provide the Goods and Services and to remedy defects therein in conformity in all respects with the provisions of the Contract.
5. The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the Goods and Services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of *[Insert the name of the Contract governing law country]* on the day, month and year indicated above.

For and on behalf of the Purchaser²:

Signed: *[Insert signature]*

In the capacity of *[Insert title or other appropriate designation]*

In the presence of *[Insert identification of official witness]*

For and on behalf of the Supplier:

Signed: *[Insert signature of authorized representative(s) of the Supplier]*

In the capacity of *[Insert title or other appropriate designation]*

In the presence of *[Insert identification of official witness]*

² In cases where the Purchaser is different from the Beneficiaries of the Contract, it may be advisable to have authorized representatives from the Beneficiary Institutions sign as witnesses, accepting the Goods to be supplied.

[Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.]

Performance Security

Beneficiary: *[Insert name and Address of Purchaser]*

Date: *[Insert date of issue]*

PERFORMANCE GUARANTEE No.: *[Insert guarantee reference number]*

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

We have been informed that *[Insert name and address of supplier, which in the case of a joint venture shall be the name and address of the joint venture]* (hereinafter called "the Applicant") has entered into Contract No. *[Insert reference number of the contract]* dated *[Insert contract date]* with the Beneficiary, for the supply of *[Insert object of the contract and brief description of Goods and related Services]* (hereinafter called "the Contract"). Furthermore we understand that, according to the conditions of the Contract, a performance guarantee is required for *[Insert percentage in words and figures]* % of the contract price.

Waiving all objections and defences, we, as Guarantor, hereby irrevocably and independently undertake to pay the Beneficiary, any sum or sums not exceeding in total an amount of *[Insert guarantee amount and currency in words and figures]*³ upon receipt by us of the Beneficiary's first demand, supported by the Beneficiary's statement, whether in the demand itself or a separate signed document accompanying or identifying the demand, stating that the Applicant is in breach of its obligation(s) under the Contract, without the Beneficiary needing to prove or to show grounds for the demand or the sum specified therein.

In the event of any claim under this guarantee, payment shall be effected to [Either insert the account on which payments are to be made with prior approval from KfW or, if no particular account is provided, insert instead:] Rektor Unhas QQ PIU Euro Grant Rumah Sakit, Bank BNI, Tamalanrea Branch, Indonesia (SWIFT: BNINIDJA), account no. 2024424429.

This guarantee shall expire not later than *[Insert expiry date]*⁴.

By this date we must have received any claims for payment by letter or encoded telecommunication.

It is understood that you will return this guarantee to us on expiry or after payment of the total amount to be claimed hereunder.

³ This guarantee shall be issued in the contract currency only.

⁴ Pursuant to GC Clause 18.4 the guarantee shall be valid for at least 28 days from the date of contractual contract completion (including warranty obligations).

[As preferred option regarding guarantee rules insert⁵: This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.]

Place, date

Guarantor's authorized signature(s)

⁵ In the case the issuing bank will not add the preferred option, the following must be added instead: This guarantee is governed by the laws of *[Insert country of jurisdiction]*. Note: the country of jurisdiction shall be the country where the bank's branch issuing the guarantee is physically located.

[Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.]

Advance Payment Security

Beneficiary: *[Insert name and Address of Purchaser]*

Date: *[Insert date of issue]*

ADVANCE PAYMENT GUARANTEE No.: *[Insert guarantee reference number]*

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

We have been informed that *[Insert name and address of supplier, which in the case of a joint venture shall be the name and address of the joint venture]* (hereinafter called "the Applicant") has entered into Contract No. *[Insert reference number of the contract]* dated *[Insert contract date]* with the Beneficiary, for the supply of *[Insert object of the contract and brief description of Goods and related Services]* (hereinafter called "the Contract"). Furthermore we understand that, according to the conditions of the Contract, an advance payment in the sum of *[Insert amount and currency in words and figures]*⁶, representing *[Insert percentage in words and figures]* % of the contract price, is to be made against an advance payment guarantee.

Waiving all objections and defences, we, as Guarantor, hereby irrevocably and independently undertake to pay the Beneficiary, any sum or sums not exceeding in total an amount of *[Insert guarantee amount and currency in words and figures]* upon receipt by us of the Beneficiary's first demand, supported by the Beneficiary's statement, whether in the demand itself or a separate signed document accompanying or identifying the demand, stating that the Applicant is in breach of its obligation(s) under the Contract, without the Beneficiary needing to prove or to show grounds for the demand or the sum specified therein.

The advance payment guarantee shall come into force and effect as soon as the advance payment has been credited to the Applicant on its account. Minor deductions of the above mentioned amount notably due to bank fees shall have no effect on the entry into force.

In the event of any claim under this guarantee, payment shall be effected to Rektor Unhas QQ PIU Euro Grant Rumah Sakit , Bank BNI, Tamalanrea Branch, Indonesia (SWIFT: BNINIDJA), account no. 2024424429.

This guarantee shall expire not later than *[Insert expiry date]*.

By this date we must have received any claims for payment by letter or encoded telecommunication.

It is understood that you will return this guarantee to us on expiry or after payment of the total amount to be claimed hereunder.

⁶ This guarantee must be issued in the contract currency only.

[As preferred option regarding guarantee rules insert⁷: This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.]

Place, date

Guarantor's authorized signature(s)

⁷ In the case the issuing bank will not add the preferred option, the following must be added instead: This guarantee is governed by the laws of *[Insert country of jurisdiction]*. Note: the country of jurisdiction shall be the country where the bank's branch issuing the guarantee is physically located.

ANNEX 1: Technical Specification

**Lot 1: Equipment - ICU for severe COVID-19
cases/Infectious disease**

TECHNICAL SPECIFICATION FORM (TSF)							
1	2		3				4
No.	ITEM CODE & DESCRIPTION		BIDDER'S OFFER	MANUFACTURER	BRAND	MODEL	Ref. page no of Supporting Documents
	INST038						
	Basic set Cardiac Surgery						
	Manufacturer:						
	Brand:						
	Type/Model:						
	Country of Origin:						
A	FUNCTIONAL DESCRIPTION						
1	Instrument set for cardiac surgeries						
B1	DESCRIPTION OF BASIC COMPONENTS						
1	Instrument set for cardiac surgeries						
B2	TECHNICAL SPECIFICATIONS						
1	All instruments offered shall also be complying with the relevant quality standards for surgical instrument manufacturing and certified by the relevant certification institutions: TUV, TE certification, ISO/DIN standards, CE/FDA. Document evidence shall be attached with this TSF.						
2	All surgical instruments and items offered shall carry clear marking of the manufacturer's name/ brand and the part number/ model number on the surface of each piece of instruments and items. Bidder shall attached its compliance statement to this requirements here						
3	A suitable sterile container matching the size of the sterilizing instrument tray shall be included. The container shall have a good locking device which a seal could be used for quality control. Bidder shall indicated dimension (H x W x D mm) here.	1 set					
4	Sterilizing instrument trays perforated stainless steel sheet sufficient to keep all items specified below. Bidder shall indicated dimension (H x W x D mm) here.	1 set					
5	Consumable materials for the container shall be included but not limited to the following:						
	a) Bacterial filters for the container, 20 sets (1 set shall mean the number of filters required for one complete replacement)	20 sets					
	b) Container's identification labels, 100 pieces	100 pcs					
	c) Container's seals, 100 pieces	100 pcs					
6	Mayo Hegar Needle Holder 8* TC	1 pc					
7	Mayo Hegar Needle Holder 6* TC	1 pc					
8	Jamison NH 9 1/2*TC	1 pc					
9	Pilling Intracardinal NH 9*TC	1 pc					
10	Debakey TIS FCPS STR 7 3/4*AG	2 pc					
11	Debakey TIS FCPS 7 3/4*AG	2 pc					
12	Wheller Vessel FCPS 8 3/4* AG	2 pc					
13	Mayo TIS FCPS 9*	2 pc					
14	Ultimate Cut Scissor Mayo 6.75* CURVED	1 pc					
15	Ultimate Cut Scissor METZ 7* CURVED	1 pc					
16	Ultimate Cut Scissor METZ 9* CURVED	1 pc					
17	Retr Volkman Rake 4 PRONG BLUNT 8-5/8*	2 pc					
18	US ARMY RETRACTORS 2/SET	1 pc					
19	SENN RETRACTORS BLUNT	1 pc					
20	DAVIS RETR BDL-END 6*	1 pc					
21	DESMARRES LID RETRACTOR SIZE 2	4 pc					
22	WEITLANER RETRACTOR BL 1/2*	4 pc					
23	RETR WEITLANER 2X3 TTH BLUNT 4*	1 pc					
24	DEBAKEY RT ANG FCPS 5/8*	1 pc					
25	CLAMP DEBAKEY D CURVE 7,5* AG	1 pc					
26	KANTROWITZ CLAMP RT ANG 7 1/2*	1 pc					
27	CLAMP SAROT ARTERY LGR 9*	1 pc					
28	DARLING TAPE PASSING CLAMPA AG	1 pc					
29	DEBAKEY SEMB LIGAT CARRIER AG	1 pc					
30	FAVA-SEMB LIG CARR HALF CSD AG	1 pc					
31	HARRINGTON CLAMP LIGHT 12*	1 pc					
32	HALSTEAD MOSQ HEMOSTAT STR 5*	1 pc					
33	HALSTEAD MOSQ HEMOSTAT CVD 5*	1 pc					
34	GREGORY STAY CLMP CVD, 3 3/4*	1 pc					
35	ROCH-PEAN HEMOSTAT STR 5 1/2*	1 pc					
36	ROCH-PEAN HEMOSTAT CVD 5 1/2*	1 pc					
37	MAYO PEAN CVD 8,0*	1 pc					
38	ROCH-OCHISNER HEM CVD 6 1/4*	1 pc					
39	ROCH-OCHISNER HEM STR 6 1/4*	1 pc					
40	HOLDER MORSE TUBING SIZE 5/16* AND 3/8*	3 pc					
41	HOLDER MORSE TUBING SIZE 7/16* AND 1/2*	1 pc					
42	HOLDER MORSE TUBING SIZE 3/16* AND 1/4*	1 pc					
43	VORSE TUBING CLAMP 6*	1 pc					
44	VORSE TUBING CLAMP 7 1/2*	1 pc					
45	VORSE TUBING CLAMP 8*	1 pc					
46	NICHOLAS TUBING HOLDER	1 pc					
47	WECJ STYLE RUMEL STYLET	1 pc					
48	SYLET CHILD SIZE	1 pc					
49	DANSY NERVE HOOK STRAIGHT 9*	1 pc					
50	STAINLESS WIRE CUTTER	1 pc					
51	BERRY TM STERNAL BH 7 3/4* TC	7 pc					
52	RUBIO WIRE TWISTER 5* TC	1 pc					
53	YANKAUER SUCTION TUBE	1 pc					
54	SUC TUBE YANKAUER TIP ONLY FOR 162300	1 pc					
55	LAMERT ANASTOMOSIS CLAMP AG	1 pc					

TECHNICAL SPECIFICATION FORM (TSF)							
1	2		3				4
No.	ITEM CODE & DESCRIPTION		BIDDER'S OFFER	MANUFACTURER	BRAND	MODEL	Ref. page no of Supporting Documents
	INST038						
	Basic set Cardiac Surgery						
	Manufacturer:						
	Brand:						
	Type/Model:						
	Country of Origin:						
56	GLOVER ATRIAL APPEND CLAMP AG	1 pc					
57	MITCHELL AORTOTOMY CLAMP AG	1 pc					
58	MORRIS ASCENDING AORTA CLMP AG	1 pc					
59	BEALL MORRIS AORTA CLAMP AG	1 pc					
60	STERNAL RECTRACTOR	1 pc					
61	STERNAL SAW	1 pc					
C	ACCESSORIES & CONSUMABLES						
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)						
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.						
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.						
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF						

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BBED006		
	Bedside Cabinet Standard		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	For storage of patient's personal belongings		
	Note: The requested quality of the equipment must be equally good as for the manufacturers [Paramount / Millenium] or any equivalent manufacturer producing high quality and durable hospital beds		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Cabinet bedside locker		
B2	TECHNICAL SPECIFICATIONS		
1	Shall be constructed of cold rolled steel / electro galvanised sheet (20G) with hard epoxy powder coating.		
2	Shall have a dimension of approximately 480mmW x 450mmD x 800mmH		
3	Shall have a Laminated polywood top		
4	Unit shall have 1 no. of 2 shelves closed cupboard and a drawer.		
5	Shall have easy to clean surface.		
6	Shall have moulded rubber edging.		
7	Shall have a towel rail at side or back of cabinet .		
8	Shall come with 4 x 50mm swivel castors.		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)							
1	2		3				4
No.	ITEM CODE & DESCRIPTION		BIDDER'S OFFER	MANUFACTURER	BRAND	MODEL	Ref. page no of Supporting Documents
	INST039						
	Basic Instrument set for CABG						
	Manufacturer:						
	Brand:						
	Type/Model:						
	Country of Origin:						
A	FUNCTIONAL DESCRIPTION						
1	CABG set Instrument Standard						
B1	DESCRIPTION OF BASIC COMPONENTS						
1	Instrument Standard set for CABG						
B2	TECHNICAL SPECIFICATIONS						
1	All instruments offered shall also be complying with the relevant quality standards for surgical instrument manufacturing and certified by the relevant certification institutions: TUV, TE certification, ISO/DIN standards, CE/FDA. Document evidence shall be attached with this TSF.						
2	All surgical instruments and items offered shall carry clear marking of the manufacturer's name/ brand and the part number/ model number on the surface of each piece of instruments and items. Bidder shall attached its compliance statement to this requirements here						
3	A suitable sterile container matching the size of the sterilizing instrument tray shall be included. The container shall have a good locking device which a seal could be used for quality control. Bidder shall indicated dimension (H x W x D mm) here.	1 set					
4	Sterilizing instrument trays perforated stainless steel sheet sufficient to keep all items specified below. Bidder shall indicated dimension (H x W x D mm) here.	1 set					
5	Consumable materials for the container shall be included but not limited to the following:						
	a) Bacterial filters for the container, 20 sets (1 set shall mean the number of filters required for one complete replacement'	20 sets					
	b) Container's identification labels, 100 pieces	100 pcs					
	c) Container's seals, 100 pieces	100 pcs					
6	TRAY MICRO INSTRUMENT	1 pc					
7	DIETHRICH CLAMP RT ANG 7*	1 pc					
8	LEMOLE-STRONG CLAMP ANGELD AG	1 pc					
9	LAMBERT-KAY ANAST CLAMP LGE AG	1 pc					
10	GREGORY STAY CLMP, 4*, STR	1 pc					
11	DILATYOR GARRET VAS 1.mm TIP 8.25*	1 pc					
12	GARRETT DILATOR 2 MM 22CM	1 pc					
13	DIETHRICH BULLDOG AND 20 MM	3 pc					
14	DIETHRICH BULLDOG AND 12 MM	3 pc					
15	DEBAKEY HEPARIN NEEDLE SMALL	3 pc					
16	IMA HEPARIN NEEDLE 23 GA	1 pc					
17	FCPS MICRO LRG RING TIP 1,5 MM 7*DG	1 pc					
18	FCPS MICRO LRG RING TIP 0,5 MM 8*DG	1 pc					
19	ADAM TISSUE FORCEPS 8*	3 pc					
20	GERALD TISSUE FORCEPS 7* SER	3 pc					
21	MICRO NH 8* SMOOTH JAW TC	1 pc					
22	MICRO NH STR 8* ROUND HNDL TC	1 pc					
23	NH MICRO VASCULAR 9* DG	1 pc					
24	BEALL CORONARY ART SCIS 25 DEG	1 pc					
25	BEALL CORONARY ART SCIS 45 DEG	1 pc					
26	BEALL CORONARY ART SCIS 60 DEG	1 pc					
27	BEALL CORONARY ART SCIS 90 DEG	1 pc					
28	BEALL CORONARY ART SCIS 120 DEG	1 pc					
29	ULTIMATE CUT SCISSOR METZ 7* CURVED	1 pc					
30	RYDER NH 1 MM JAW 8* TC	1 pc					
C	ACCESSORIES & CONSUMABLES						
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)						
2	Bidders shall specify, in a separate Excel worksheet the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer						
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.						
4	Bidders shall specify, in a separate Excel worksheet the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF						

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BMON001		
	Central monitoring system		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	Used to monitor physiological function of a patient		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Display		
2	Communication/interface		
3	Alarms		
4	Monitoring parameters		
5	Data storage		
6	Battery		
B2	TECHNICAL SPECIFICATIONS		
1	Patient monitor bedside 8 channel color with ECG/Resp, SpO2, NIBP, IBP, sidestream EtCOs, Temperature monitoring		
2	To monitor physiological parameters of patients in the patient wards and/or critical care units for bedside monitoring		
3	High resolution color flat panel touch screen: not less than 17". display size for at least 8 channel waveforms display		
4	Display of up to 8 Physiological Parameter Modules without the need for external devices for patient Monitors		
5	With networking capability to interface with the 12 patient monitor station		
6	Clinical interaction via integrated touch screen, mouse keyboard or touch pen for all monitors		
7	At least 24 Hours of trend data in one minute resolution for all monitored parameters to be displayed graphically or in tabular form for all monitors		
8	Data resolution shall minimum of 30 second sampling		
9	Shall be able to display trend tables and trend formats in different formats		
10	Shall come with the capability of lethal arrhythmia detection and dose calculation		
11	All monitors shall be networkable with the capability of bed to bed communication when they are linked up. This is to ensure that the users can view any information of any patient from any patient monitor. <i>(Bidder to specify the software information and include in the base offer)</i>		
12	System architecture shall be designed such that deactivation or failure of any bedside or central station device on the network shall not disable, inhibit or degrade communication functions among any other devices in the system.		
13	System communication for all data and signals preferably be accomplished via a well documented computer industry standard local area network.		
14	Despite the technical requirements of the networking capability, the networking works shall not be included in this offer.		
15	All modules shall work in all monitors within the network and shall be easily interchangeable by the user. There shall be no restriction on the combination of them.		
16	The monitor offered shall be able to perform ST analysis, either as a standard or an optional function. If it is an optional function, it shall not be included in the offer, but bidder shall quote it as an option as specified in part C below.		
	Monitoring Parameter(s) required:		
17	Come with ECG/Respiration with 5 or 3 leads system with cable (1 set) and complete reusable ECG electrodes for Adult & pediatric, 1 set each		
18	ECG cable and patient cable 5 leads or 3 leads for disposable electrodes, 1 set		
19	Disposable electrodes for adult and child, 200 pcs each		
20	Pulse oximetry SpO2 with adult and child finger transducer, 1 each.		
21	Non-invasive blood pressure, NIBP with reusable NIBP Starter Kit		
22	NIBP connection hose, 1 set		
23	NIBP cuff & tubing for both adult & child (At least 2 different sizes for adult and 4 different sizes for child/ infant/ neonate)		
24	Temperature: Come with 10 pcs each of reusable adult & pediatric esophageal/ rectal temperature probe and 10 pcs each of reusable adult and pediatric skin temperature probe. Probe type: YSI 400 or 700 series or equivalent.		
25	IBP transducer x 1 set, compliant to IEC 60601-2-34, with IBP range: -50 to 360 mmHg & accuracy of ± 1 mmHg or ± 2 %, whichever is greater, & resolution of 1mmHg.		
26	Sidestream EtCO2 x 1 set, compliant to ISO 80601-2-55. CO2 sample flow rate range from 70 ml/min to 150 ml/min CO2 sample flow rate accuracy shall be ± 15 ml/min or ± 15 %, whichever is greater CO2 pressure range from 0 to 99 mmHg		
27	Includes internal rechargeable Lithium battery complete with power plug cable for charging.		
28	Monitor shall be operated on battery for at least 3 hours.		
29	Alarm may have at least four level (Crisis, Warning, Advisory, Message)		
30	Real time waveform recording, realtime alarm recording, ICG hemodynamic parameter, SvO2/ScvO2 Oxygenation parameters.		
31	RS232 port/RJ45 or USB port to interface to CIS <i>(Bidder to specify the type of network interfacing capability available in the offered model)</i>		
32	Data management capability compatible to Health Information Protocol (eg. HL7)		
33	Built-in Thermal Printer that support 4 channel printing complete with 20 packs of printing papers		

34	Shall come complete with a stand for table top works.		
35	Built in in the computer Operatig system : Windows i7, speakers, Ethernet 802.3/10/100 mbps		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		
5	Standard accessories and consumables shall include:		
	a) Thermal printing paper x 20 packs		
	b) Shall come with complete set of bracket for desk working top		
	c) Internal rechargeable Lithium battery for at least 3 hours complete with charger x 1 set		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BXRY012		
	Computed Radiography and monitor console (DR) Flat Panel sensor detector		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	Digital Radiography Flat panel sensor Detector , and console/ Mobile		
	Note: The requested quality of the equipment must be equally good		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Main Unit Flat panel sensor (Detector image storage) Included : Battery and charger . PC Work station (stationary) + Monitor Laptop Console Advance UPS		
B2	TECHNICAL SPECIFICATIONS		
1	Designed to be lightweight, max 2.6 kg (with battery) Storage up to 100 images in internal memory Easy battery replacement, and ready to image within 30 seconds of the replacement Water proofing (IPX6)		
2	Scintillator : Cesium Iodide		
3	Dimension : 384 x 460 x 15 mm		
4	Detectot area : 13.8 x 16.8 inch		
5	Pixel matrix : 2336 x 2836 pixel		
6	Antibacterial		
7	Communication : wired / wireless		
8	PC Work station and monitor Computer work station Processor : intel Core i7-117700 Memory : 8 (1x8Gb) DDR4, Storage : 2TB 7200 rpm (Hard disk : SATA) Operasion system : Windows 11 Pro LED Monitor 32 inch		
9	Laptop console Advanced Processor : intel Core i7 Screen: touch screen , 14 inch Memory : 8 (1x8Gb) DDR4, Storage : 2TB 7200 rpm (Hard disk : SATA) Operasion system : Windows 11 Pro		
C	ACCESSORIES & CONSUMABLES		
1	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BMON016		
	Defibrillator AED portable		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	To analyse the heart's rhythm and restore a normal heartbeat by delivering an electric shock to the heart whenever necessary in emergency situations		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Defibrillator		
2	Control panel		
B2	TECHNICAL SPECIFICATIONS		
	Defibrillator		
1	Shall be able to function on semi- and fully-automatic mode		
2	Shall be able to perform biphasic defibrillation		
3	Shall be easy to operate		
4	Shall come with features that allow adjustment of defibrillating energy levels so that appropriate doses are delivered to adults and children (e.g. Able to be automatically switched to paediatric mode when paediatric pads are connected or come with button dedicated for activation of paediatric mode) <i>(Bidder to specify)</i>		
5	Shall have discharge power ranging between 50 - 200J <i>(Bidder to specify the discharge power range for adult and paediatric)</i>		
6	Shall have pre-connected electrodes which allow faster application (optional)		
7	Charging time shall be <10 secs at max energy level (200J) <i>(Bidder to specify)</i>		
8	Shall be light in weight and easily carried around		
9	Shall have detailed voice prompts and visual instructions to guide user through the resuscitation protocol		
10	Shall be battery-operated (rechargeable/ non-rechargeable). With battery test function <i>(Bidder to specify the battery capacity)</i>		
11	Shall be able to carry out automatic self test/check to ensure device readiness <i>(Bidder to specify frequency of self test and type of testing carried out during self test)</i>		
12	Shall have audible alert to indicate low battery and need for maintenance		
13	HR limit and shockable rhythms alarms shall be provided		
14	Shall come with features that provide real-time feedback on chest compression rate and depth		
15	Shall have the ability to capture and store patient data, events (including waveforms & annotations) & continuous ECG monitoring in internal memory (min: first 15 minutes of ECG, entire incident's events and analysis decisions) <i>(Bidder to specify)</i>		
16	Shall have communication output either by RS-232, IR, or data storage card <i>(Bidder to specify)</i>		
17	Shall have features that allow Wi-Fi connection for efficient management of the device (optional)		
	Control Panel		
18	Shall have LCD display		
19	Shall have energy dischargeable button		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		
5	Standard accessories and consumables shall include: <ul style="list-style-type: none"> a) Disposable self-adhesive AED pads for adult (min shelf life: 5 years) b) Disposable self-adhesive AED pads for child (min shelf life: 5 years) c) Carrying case x 1 		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BXRY004		
	Digital Ultrasonograph Doppler		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	Shall be used to visualize blood flow through a blood vessel, organs, or other structures; Shall be a digital technology to generate imaging of the movement of tissues and body fluids (usually blood) and their relative velocity to the probe.		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Echocardiography Pediatric		
2	Transducer(s)		
3	Printer(s)		
4	Cart /Trolley		
B2	TECHNICAL SPECIFICATIONS		
	Main Unit		
1	Shall come with 3 active Probe Ports		
2	Integrated HD of approximately 500 GB		
3	Comes with 3 USB Ports for External Peripherals		
4	Comes with 2 USB Ports for On-board Peripherals		
5	Comes with RJ45 LAN Port, 1 HDMI Out Port and 1 Audio Out Port		
6	DICOM function available		
	Monitor		
7	At least 15" High Resolution Flat Panel Screen		
8	Resolution: at least 1280 x 1024		
9	Image size: (Bidder to specify)		
10	High brightness with 220 cd/m ² typical or better		
11	Manual brightness and contrast adjustment		
	Keyboard		
12	Ergonomic hard key layout		
13	Back-lighting shall be available		
14	Programmable print/store/export keys for printing		
15	Archiving and exporting shall be available		
	Scanning Methods		
16	Convex		
17	Linear		
18	Sector		
19	Mechanical Volume Sweep		
	Transducer types		
20	Convex Array		
21	Linear Array		
22	Phased Array		
23	Volume probes 4D:		
	i. Convex Array		
	ii. Microconvex Array		
	Scanning Modes		
24	B-Mode (2D)		
25	M-Mode (conventional M-Mode)		
26	AMM (Anatomical M-Mode)		
27	PW Doppler with high PRF (PW)		
28	High PRF Doppler Mode		
29	Color Flow Doppler Mode (CFM)		
30	Power Doppler Mode (PD)		
31	HD-Flow* Doppler Mode (HD-Flow) [Preferable]		
32	M-Mode Flow Modes (M/CF, M/HD-Flow)		
33	Volume Mode (3D/4D):		
34	Extended View (XTD View)		
35	Upgradeable software feature is preferable		
	Cart / Trolley		
36	Shall be a sturdy mobile cart / trolley with anti-corrosion material		

37	Comes with castors of at least 75mm and brakes		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		
5	Standard accessories shall include, but not limited to the following:		
	a) Printer color and black & white		
	b) Printing paper (one month operation)		
	c) Gel		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BMON020		
	ECMO Machine		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	ECMO Machine		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	a life-support device used in critical care to provide prolonged cardiac and respiratory support		
B2	TECHNICAL SPECIFICATIONS		
	Features		
1	Maximum blood flow up to 5,000 ml/min		
2	Static priming volume 150 ml (oxygenator module plus heat exchanger)		
3	Membrane surface area 1.2 square meters		
4	Heat exchanger surface area 0.14 square meters, made of stainless steel		
5	Pump features:		
5,1	Diameter of pump raceway: 150 mm (RP 150) or 85 mm (Double Roller Pump - DRP 85)		
5,2	Speed range: 0-250 rpm (clockwise/counterclockwise)		
5,3	Accuracy: ±1% at 250 rpm		
5,4	System panel: High-contrast TFT touch screen for 3 to 6 display/control modules		
6	Key Monitors:		
6,1	Pressure control range -200 mmHg to +800 mmHg; resolution 1 mmHg		
6,2	Temperature monitor measures 0°C to +50°C; resolution 0.1°C		
6,3	Level control alerts and stops arterial pump if reservoir levels are critical		
6,4	Bubble Detector: Detects air bubbles (thresholds 4 mm, 5 mm, 6.5 mm Ø)		
7	Temperature: +10°C to +40°C (operating), 0°C to +40°C (storage)		
8	Relative humidity: 30% to 75%		
9	Input voltage: 100-240 V~, 50/60 Hz		
10	Power consumption: 1,000 W (maximum for standard equipment)		
11	Uninterruptible power supply (UPS) runtime: 20 minutes at 400 W, 90 minutes at 160 W. Recharge time: 12-15 hours		
12	Consumables		
12,1	Sensor Module Bubble Detector: 2 pcs		
12,2	Bubble sensor: 1 pc		
12,3	SRD Single Roller Pump 150: 1 pc		
12,4	SRD S5 Double Roller Pump 85: 1 pc		
12,5	SRD S5 Mast Roller Pump 150: 1 pc		
12,6	Venous Line Clamp W/Remote: 1 pc		
12,7	S5 Cardioplegia Sensor Module: 1 pc		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BMON019-1		
	Electrocardiograph (ECG) 12 channel		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	To measure and display ECG and heart rate parameters.		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Electrocardiograph recorder		
1	Trolley		
B2	TECHNICAL SPECIFICATIONS		
	Electrocardiograph recorder		
1	To record the standard 12 leads and shall be have 12 channel display		
2	At least 4" display screen of high-resolution <i>(Bidder to specify the dimensions of display screen)</i>		
3	Capable of simultaneously acquiring all 12 leads display		
4	Should be able to produce an auto report in standard format.		
5	Lead fault indicators with audible tone		
6	An audible QRS indicator		
7	Gain adjustable in 4 steps of 0.5, 1.0, 2.0 and 4.0cm/mV		
8	1 mV calibration signal.		
9	Shall be able to store ECG waveforms and shall be able to retrieve the same.		
10	Shall be equipped with integrated thermal printer		
11	Shall offer full print preview directly on the display		
12	Shall be provided with input amplifiers protected against defibrillator pulses.		
13	Capable of operating on either battery or line power. Minimum of 3-4 hours of operation on battery power. <i>(Bidder to specify the battery back-up operating hours)</i>		
14	Bidder to specify the max. number of ECG printouts that can be generated on one battery charge		
15	Full size alphanumeric keyboard, keyboard indicator		
16	Able to print at least 12 channels of simultaneous ECG data		
17	Able to print at least 3 leads of ECG waveform continuously with manual switching between leads.		
18	Unit shall be provided with a complete interpretation software.		
19	Leakage current compliant with IEC 601-1-1 or NFPA 99-193		
20	RS 232 port or other suitable digital interface (eg. USB) to permit communications between the unit and other electrocardiographs, computers, or data management systems.		
21	Shall enable patient data to be called from the worklist		
22	Come with anatomically designed cables to minimise tangling and lead reversal		
23	Shall allow the operator for very quick prep time (approx. 7-10 seconds start up time)		
	Trolley		
24	Shall come complete with a mobile trolley with at least 1 storage drawer and a sturdy IV pole for hanging the ECG cable.		
25	Shall be heavy duty with sturdy construction made of steel with epoxy powder coating		
26	Mobile, with lockable castors		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		
5	Standard accessories and consumables shall include: a) 10-lead patient cable x 1 unit b) Power cable x 1 unit c) Suction electrodes, bulbs x 6 nos d) Limb-lead electrodes, clamp x 4 nos e) Printer Paper x 10 packs f) Tube electrode gel / cream x 2 tube		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BOTM041		
	Endoscopy column with bronchoscopes		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	suited for endoscopy and bronchoscopy procedures, offering advanced imaging, maneuverability, and easy reprocessing features		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Light Source Videoendoscopy (compatible with HD system) (Broncho Videoscope) and (Pleura Videoscope)		
2	High Definition Processor Videoendoscopy		
3	HD Monitor		
4	Digital Recording System		
5	Printer		
6	Leakage Tester		
7	Manual Disinfectant		
8	Suction Unit		
9	Trolley video endoscopy		
10	Flexible Video Endoscopes		
11	Cabinet Storage Endoscopy		
12	UPS Unit		
B2	TECHNICAL SPECIFICATIONS		
	LIGHT SOURCE VIDEOENDOSCOPY		
1	To be compatible with HD system.		
2	XENON lamp of 300 W.		
3	Automatic and manual adjustment of the illumination		
4	Color temperature of approx. 6000K. Temperature should remain constant during the operation life of the lamp.		
5	Operation of the lamp for at least 300 hours. Life meter display.		
6	Easy replacement of the lamp without the use of instruments.		
7	The source should be compatible with endoscopes of various manufacturers		
8	Easy clean front control panel to meet all hygienic requirements.		
9	All the active functions should be illuminated		
10	Complete with suitable light cable		
11	Shall include Narrow Band Imaging (NBI)		
	CAMERA		
12	Central unit for high definition digital image processing		
13	Color CCD chip high resolution.		
14	Simultaneous freeze function (a frozen image to be displayed simultaneously with the live image).		
15	Built-in system with special modes for optical enhancements to assist early detection of lesions, better identification and pit pattern classification.		
16	Built-in chromo-endoscopy system.		
17	Enhancement adjustments. White balance adjustment.		
18	Suitable for all kinds of GI, Colonoscope and Bronchoscopic applications		
19	The endoscopic image to fill the entire monitor		
20	HD Digital and analog outputs		
21	Capability for storage of the adjustments of different users		
22	To be delivered complete with all the necessary accessories (keyboard for patient data entry and cables)		
	HD MONITOR		
23	Full HD format, high resolution (<i>Bidder to specify the resolution</i>)		
24	At least 19" or higher medical grade monitor		
25	Image resolution of at least 1920 x 1080 pixels		
26	Menu of functions should be appeared on the screen		
27	The monitor should have input-output for analog and digital signals. Suitable for HD signals.		
28	Connection with digital recorder and video printer should be possible		
29	Viewing angle approx. 89°/89°/89°/89° (up/down/left/right)		
30	Capability for zoom, underscan and Picture in Picture		
	DIGITAL RECORDING SYSTEM		
31	Medical grade system for the recording of video endoscopy procedures and images in digital media, according to the resolution of the camera (DVD or CD or USB e.t.c.).		
32	Suitable for the preparation of medical records with simple entry of all patient's data.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BOTM041		
	Endoscopy column with bronchoscopes		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
33	Easy communication with hospital network		
34	Capability of accepting images from other imaging modalities		
35	Capacity at least 500 Gbytes		
36	Control via camera head buttons or footswitch		
	PRINTER		
37	Digital Color printer		
38	Compatible with the endoscopy system		
39	Thermal Printing		
40	USB interface		
41	Supplied with CD-ROM, Printer Driver, Paper Tray , Stopper, Cleaning Cartridge, USB Cable		
	LEAKAGE TESTER		
42	Automated or Manual		
43	Less than 2 minutes for testing		
44	Compact size		
45	Number of scopes tested: 1 or 2 or more (Bidder to specify)		
46	Comes with self check function		
	MANUAL DISINFECTOR		
47	Manual disinfection for cleaning of flexible endoscopes		
48	Comes with instrument tray		
49	Comes with containers with lid		
50	Includes a trolley with castor wheels		
	SUCTION PUMP		
51	Designed for endoscopic aspiration		
52	Three pre-set speed settings (40l/min, 50l/min and 60l/min)		
53	Adjustable vacuum control		
54	Pressure gauge shall be available		
55	Supplied with suction jar of at least 2L capacity (reusable collection system starter kit)		
56	Quiet operation (less than 45dBA)		
	TROLLEY VIDEO ENDOSCOPY		
57	Trolley suitable to hold all the above mentioned apparatus for endoscopic procedures		
58	Made of alluminum or non corrosive materials.		
59	Integrated cable management system and built in power points		
60	Main power On-Off switch		
61	Should have castors with brakes		
	FLEXIBLE VIDEO ENDOSCOPES		
62	Video gastroscope therapeutic adult x 1		
63	Video colonoscope therapeutic adult x 1		
64	Video duodenoscope therapeutic adult x 1		
	CABINET STORAGE ENDOSCOPY		
65	Storage cabinet for endoscopes		
66	Shall have ventilation ports to assist drying		
67	Storage for at least 5 scopes		
68	Cabinet should come together:		
69	Scope Hangers		
70	Racks for forceps		
71	Drawers		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BOTM041		
	Endoscopy column with bronchoscopes		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		
5	Standard accessories shall include the following, but not limited to:		
	a) Reporting management system		
	b) Standard fenestrated type		
	c) Cabinet storage Endoscopy		
	d) Fenestrated elipsoid type with needle		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BMON018		
	Haemodynamic monitor		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	Used to monitor physiological function of a patient		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Monitor		
2	Standard Accessories		
B2	TECHNICAL SPECIFICATIONS		
	Monitoring Parameter(s) required:		
1	Flow, Dirotic pressure: 70 - 105 mmhg		
2	Cardiac Output: 4 - 8 L / min		
3	Stroke Volume: 60 - 100 mL		
4	Systemic Vascular Resistance: 800 - 1400 dyne.sec/cm5		
5	DO2 Oxygen Delivery : 90 - 1000 mL/min		
6	DO2I Oxygen Delivery Index : 500 - 600 mL/min/m2		
7	dP/dtmax : 0.9 - 1.3 mmHg/msec		
8	Cardiac Cycle Efficiency : Minus 0.2 - 0.3 uits		
9	Cardiac Power : 0.8 - 1.2 watt		
10	Cardiac Power Index : 0.5 - 0.7 w/m2		
11	Arterial Elastance (Ea) : 1.10 - 1.40		
12	Includes internal rechargeable Lithium battery complete with power plug cable for charging.		
13	Monitor shall be operated on battery for at least 3 hours.		
14	Alarm may have atlas four level (Crisis, Warning, Advisory, Message)		
15	Alarm notification shall be given by Audible and Visual		
16	RS232 port/RJ45 or USB , HDMI, EXP, LAN/Wifi , port to interface to CIS (Bidder to specify the type of network interfacing capability available in the offered model)		
17	Data management capability compatible to Health Information Protocol (eg. HL7)		
18	Built-in Thermal Printer that support 4 channel printing complete with 20 packs of printing papers		
19	Shall come complete with a mobile stand with 5 castors and a basket to store accessories		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		
5	Standard accessories and consumables shall include: a) ECG cable and patient cable 5 leads or 3 leads for disposable electrodes x 1 set b) Disposable ECG electrodes for adult x 200 pcs c) Disposable ECG electrodes for child x 200 pcs d) Pulse oximetry SpO2 with adult finger transducer x 1 unit e) Pulse oximetry SpO2 with child finger transducer x 1 unit f) Non-invasive blood pressure, NIBP with reusable NIBP Starter Kit x 1 set g) NIBP connection hose x 1 set h) NIBP cuff & tubing for adult x 2 different sizes (bidder to specify) i) NIBP cuff & tubing for child x 4 different sizes (bidder to specify) j) Adult reusable temperature probe (skin surface) x 10 pcs k) Paediatric reusable temperature probe (skin surface) x 10 pcs l) Reusable adult esophageal/ rectal temperature probe x 10 pcs m) Reusable pediatric esophageal/ rectal temperature probe x 10 pcs n) IBP pressure transducer x 1 set o) EtCO2 sidestream x 1 set p) Thermal printing paper x 20 packs q) Mobile stand with 5 castors complete with basket x 1 complete unit r) Internal rechargeable Lithium battery for at least 3 hours complete with charger x 1 set		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BMON021		
	Heater/cooler 3T		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	Independent 3 circuit heating / cooling system which is suitable for continuous use		
	<u>Note:</u> The requested quality of the equipment must be equally good		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Main unit : Heater Cooler		
2	Accessories:		
	Cable for connection to the S5 System		
	Heating Cooling blanket		
	Connector		
B2	TECHNICAL SPECIFICATIONS		
1	The heater-cooler has three circuits that you control from the control display panel : * Cardioplegia circuit , whose temperature can be controlled from independent tanks * Patient 1 circuit and patient 2 circuit. , two circuits can be controlled from one heating		
2	Heating Element Performance (3 x 1.350 watt/220-240 volt)		
3	Cooling performance > 1.500 watt at an ambient and tank tempt: 20 degree C		
4	Operating temperature: 10 degree to 30 degree Celcius		
5	Normal Range Patient Circuits: From 2°C through 41°C + 0.5°C		
6	Normal Range Cardioplegia-Cooling Circuits: From 2°C through 10°C + 2°C		
7	Normal Range Cardioplegia-Heating Circuits: From 15°C through 41°C + 1°C		
C	ACCESSORIES & CONSUMABLES		
1	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BBED003		
	ICU Bed electric with integrated digital scale		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	Bed patient ICU electric complete with integrated weighing scale, mattress & pillow Note: The requested quality of the equipment must be equally good as for the manufacturers [Paramount / Millenium] or any equivalent manufacturer producing high quality and durable hospital beds		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Bed patient ICU electric complete with integrated weighing scale, mattress & pillow		
B2	TECHNICAL SPECIFICATIONS		
	ICU Patient Bed with integrated Weighing Scale		
1	The unit is a critical care bed shall be completed with powered air, weight-based pressure redistribution surface, Antimicrobial.		
2	Electrically operated backrest, height, knee-break and tilt adjustments.		
3	Shall be height adjustable, providing low height for easy patient load and unload		
4	The bed frame to be manufactured in powdered coated steel or equivalent with high durable finishes.		
5	Tuck Away side rails with one step siderail release.		
6	Radiofluorecent sleep deck		
7	Shall have full chair function with chair egress with stand assist.		
8	Mattress shall provide prevention of pressure ulcers in patients who are at moderate to high risk for skin breakdown.		
9	Mattress and frame shall be designed to meet FDA or equivalent Hospital Bed Safety guidelines.		
10	Electric Trendelenburg		
11	Emergency CPR and Trendelenburg capability.		
12	Removable head and foot ends		
13	Patient weight max. capacity approx. 180-200kg.		
14	Shall allow for c-arm and x-ray cassette sleeve.		
15	Patient bed controls.		
16	Shall have lock controls to prevent unnecessary movements.		
17	Shall have ergonomic handles to transport the patient with ease.		
18	Shall have bumper system to prevent scratching and impacts.		
19	Mobile on at least four swivel casters, with strong and reliable brake system.		
20	Bed brake mechanisms shall be located away from patient ingress and egress points.		
21	Capable fo performing x-ray and fluoroscopy without moving the patient (head to groin x-		
22	Central and directional locking system operated by foot pedals.		
23	Minimum 5 " thick Radiotranslucent, non-conductive and flame retardant mattress / pad.		
24	Built-in digital scale to weigh patient in the bed		
25	The unit shall have the following technical specifications (values indicated are approximation, bidder may propose equivalent or better): i. Overall bed length (with roller bumpers): a. Fully extended 2100-2300 mm ii. Overall bed width: a. Siderails stowed 930mm b. Siderails up 1020mm iii. Overall bed height: a. Low position (Top of Seat Section to Floor) shall be approximately: 400 mm b. High position (Top of Seat Section to Floor) shall be approximately: 900 mm iv. Trendelenburg and reverse Trendelenburg: 20°/20° v. Max Head elevation: 75° vi. Approx. Caster diameter 125 mm		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		

4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		
5	Standard accessories and consumables shall include:		
	a) Oxygen Tank Holder to be provided based on the type of cylinder purchased by the hospital		
	b) IV Pole on both side of the bed		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BWAD016		
	Trolley instrument		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	For storage and transportation of instruments		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Trolley instruments stainless steel 2 tier		
B2	TECHNICAL SPECIFICATIONS		
1	Trolley should be constructed with tubular stainless steel grade 304		
2	Shall be 2 tier in design with 2 shelves		
3	Upper shelf shall be provided with guard rails on 3 sides		
4	Should be completed with 2 non-detachable shelves sized approximately 760L x460W mm		
5	Bottom shelf to floor - height shall be at least 400 mm		
6	Overall dimensions approximately: 760L x 460W x 900H mm		
7	Should be mobile on 4x75mm swivel castors with non-marking grey rubber tyres		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BIAP004		
	Intra aortic ballon pump		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	is a mechanical device that increases myocardial oxygen perfusion and indirectly increases cardiac output through afterload reduction		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Main Unit Intra Aortic Ballon Pump		
B2	TECHNICAL SPECIFICATIONS		
	Main Unit		
1	Modular system consisting of display/control module and pneumatic drive unit		
2	Microprocessor based system		
3	AutoPilot mode of operation : Automatically select ECG/AP signal		
	Pneumatics		
4	Drive system: Stepper otor-driven bellow		
5	Drive gas : USP grade Helium		
6	Helium tank : Disposable canister / cylinder		
7	Puming volume : 0.5 cc to 50 cc (adjustable)		
8	Counterpulsation rate : 40 to 200 pulsations/minute		
	Features		
9	Monitor: Control module with monitor: 10 inch		
10	Trigger Modes: ECG; Peak; AFIB; Pacer (Vpace, Apace); AP Trigger		
11	Filtering: Diathermy, 30 Hz low pass		
12	Internal: - default to 80 bpm, adjustable 40 - 120 bpm		
13	Control module weight = 2.3 kg		
14	Total weight = 44,7 kg		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BWAD017		
	Trolley Mayo		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	For carrying instruments in operating room		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Trolley Mayo table height adjustable		
B2	TECHNICAL SPECIFICATIONS		
	Trolley Mayo table height adjustable		
1	High grade stainless steel 304		
2	Raised edges on all sides of the tray to prevent falling off of objects		
3	Comes with one tray for carrying instruments		
4	Indicative dimensions: (L600xW400xH750~1200)mm		
5	Maximum Load: ~15kg		
6	The pole shall also be made of stainless steel and adjustable with pin lock		
7	Four antistatic castors with two brake		
8	Castor wheels: ~75mm diameter		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BBED011		
	Overbed table		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	For patients to eat and write securely and safely whilst in their beds. Note: The requested quality of the equipment must be equally good as for the manufacturers [Paramount / Millenium] or any equivalent manufacturer producing high quality and durable hospital beds		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Overbed table		
B2	TECHNICAL SPECIFICATIONS		
1	Unit shall have a fixed table top		
2	Table top dimension approx. 400W x 850L mm solid hardwood of thickness not less than 20 mm		
3	Heat and stain resistant hard wearing plastic top surface laminate, non-gloss wood grained type of thickness 1.2 mm or more		
4	Melamine/urea formaldehyde type of wood adhesive should be used for lamination		
5	The steelwork frame that supports the table top to be finished in nylon polyester or equivalent which is highly resistant to knocks and abrasions		
6	The table should be able to adjust with slight upwards pressure raises the table top which automatically locks into position providing a very stable table height ideally suited for use with variable height beds. (Tenderer to specify mechanism used)		
7	Adjustable height of approx. from 700 mm to 1000 mm from the floor		
8	Good quality 4 x 40 mm diameter free swivelling castors		
9	Load capacity of not less than 25 kg evenly distributed		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BWAD030		
	Oxygen Cylinder with Regulator Mobile and Transport		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	Oxygen Cylinder with Regulator for medis		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Oxygen cylinder capacity 40 L		
	High Pressure Regulator 5/8 inch		
2	Transport Trolley		
B2	TECHNICAL SPECIFICATIONS		
	Oxygen cylinder capacity 40 L		
1	Volume : approximately 40L		
2	Made by high strength aluminium alloy, pressure 200 Bar		
3	Cylinder connection : female 5/8 inch		
4	Shall come with Certificate		
5	Neck diameter : ~210mm (<i>Bidder to specify</i>)		
6	Dimension : Diameter 15 cm x 100 cm		
7	Liquid Oxygen evaporation (<i>Bidder to specify</i>)		
	Trolley		
8	Shall come with a transport trolley equipped with anti-static castors		
9	Trolley shall be corrosion-resistant and come with a chain for securing the tank		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BWAD056		
	Oxygen flowmeter with humidifier for connection to centralised Oxygen system (C&U/JIS) standard wall mounting Oxygen medical Gas Outlet		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	To be use as Oxygen flowmeter with humidifier for connection to centralised vacuum system autoclavable humidifier jar and wall mounting Outlet (C&U/JIS)		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Oxyegn Flowmeter With C&U/ JIS (Japan International Standard) Connector		
2	Autoclavable Humidifier jar		
B2	TECHNICAL SPECIFICATIONS		
	Oxygen Regulator		
1	Provide an adjustable, continuous Oxygen flow level 1-15L/ minute; at pressure 2-3 Bar		
2	Shall allow for quick connection C&U/ JIS (Japan International) Standard		
3	Continuous Oxygen flow controller		
4	Construction of material shall prevent from corrosion (<i>Bidder to specify</i>)		
5	Comes with Oxygen flow meter adjustable control		
6	Easy and safe operation (shall come with NIST threads) (<i>Bidder to specify</i>)		
7	Lightweight plastic construction		
8	Colour coded body for safety		
9	Comes with Oxygen flow gauge		
10	Come with mounting accessories/kit		
11	Equipped with overflow safety trap		
	Humidifier Jar		
12	Shall be autoclavable		
13	Capacity: (<i>Bidder to specify</i>)		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (<i>bidder to specify</i>)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BWAD055		
	Oxygen flowmeter with humidifier for connection to centralised Oxygen system (Ohmeda standard wall mounting Oxygen medical Gas Outlet		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	To be use as Oxygen flowmeter with humidifier for connection to centralised vacuum system autoclavable humidifier jar and wall mounting Outlet (Ohmeda)		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Oxyegn Flowmeter		
2	Autoclavable Humidifier jar		
B2	TECHNICAL SPECIFICATIONS		
	Oxygen Regulator		
1	Provide an adjustable, continuous Oxygen flow level 1-15L/ minute; at pressure 2-3 Bar		
2	Shall allow for quick connection wall outlet Ohmeda Standard		
3	Continuous Oxygen flow controller		
4	Construction of material shall prevent from corrosion (<i>Bidder to specify</i>)		
5	Comes with Oxygen flow meter adjustable control		
6	Easy and safe operation (shall come with NIST threads) (<i>Bidder to specify</i>)		
7	Lightweight plastic construction		
8	Colour coded body for safety		
9	Comes with Oxygen flow gauge		
10	Come with mounting accessories/kit		
11	Equipped with overflow safety trap		
	Humidifier Jar		
12	Shall be autoclavable		
13	Capacity: (<i>Bidder to specify</i>)		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (<i>bidder to specify</i>)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BMON007		
	Patient monitor ICU/PICU		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	Used to monitor physiological function of a patient		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Display		
2	Communication/interface		
3	Alarms		
4	Monitoring parameters		
5	Data storage		
6	Battery		
B2	TECHNICAL SPECIFICATIONS		
1	Patient monitor bedside 8 channel color with ECG/Resp, SpO2, NIBP, IBP, sidestream EtCOs, Temperature monitoring		
2	To monitor physiological parameters of patients in the patient wards and/or critical care units for bedside monitoring		
3	High resolution color flat panel non-reflective screen: not less than 10" or 25cm display size for at least 8 channel waveforms display		
4	Display of up to 8 Physiological Parameter Modules without the need for external devices for patient Monitors		
5	With networking capability to interface with the central monitor station		
6	Clinical interaction via integrated touch screen, mouse keyboard or touch pen for all monitors		
7	At least 24 Hours of trend data in one minute resolution for all monitored parameters to be displayed graphically or in tabular form for all monitors		
8	Data resolution shall minimum of 30 second sampling		
9	Shall be able to display trend tables and trend formats in different formats		
10	Shall come with the capability of lethal arrhythmia detection and dose calculation		
11	All monitors shall be networkable with the capability of bed to bed communication when they are linked up. This is to ensure that the users can view any information of any patient from any patient monitor. <i>(Bidder to specify the software information and include in the base offer,</i>		
12	System architecture shall be designed such that deactivation or failure of any bedside or central station device on the network shall not disable, inhibit or degrade communication functions among any other devices in the system.		
13	System communication for all data and signals preferably be accomplished via a well documented computer industry standard local area network.		
14	Despite the technical requirements of the networking capability, the networking works shall not be included in this offer.		
15	All modules shall work in all monitors within the network and shall be easily interchangeable by the user. There shall be no restriction on the combination of them.		
16	The monitor offered shall be able to perform ST analysis, either as a standard or an optional function. If it is an optional function, it shall not be included in the offer, but bidder shall quote it as an option as specified in part C below.		
	Monitoring Parameter(s) required:		
17	Come with ECG/Respiration with 5 or 3 leads system with cable (1 set) and complete reusable ECG electrodes for Adult & pediatric, 1 set each		
18	ECG cable and patient cable 5 leads or 3 leads for disposable electrodes, 1 set		
19	Disposable electrodes for adult and child, 200 pcs each		
20	Pulse oximetry SpO2 with adult and child finger transducer, 1 each.		
21	Non-invasive blood pressure, NIBP with reusable NIBP Starter Kit		
22	NIBP connection hose, 1 set		
23	NIBP cuff & tubing for both adult & child (At least 2 different sizes for adult and 4 different sizes for child/ infant/ neonate)		
24	Temperature: Come with 10 pcs each of reusable adult & pediatric esophageal/ rectal temperature probe and 10 pcs each of reusable adult and pediatric skin temperature probe. Probe type: YSI 400 or 700 series or equivalent.		
25	IBP transducer x 1 set, compliant to IEC 60601-2-34, with IBP range: -50 to 360 mmHg & accuracy of ± 1 mmHg or ± 2 %, whichever is greater, & resolution of 1mmHg.		
26	Sidestream EtCO2 x 1 set, compliant to ISO 80601-2-55. CO2 sample flow rate range from 70 ml/min to 150 ml/min CO2 sample flow rate accuracy shall be ± 15 ml/min or ± 15 %, whichever is greater CO2 pressure range from 0 to 99 mmHg		
27	Includes internal rechargeable Lithium battery complete with power plug cable for charging.		
28	Monitor shall be operated on battery for at least 3 hours.		
29	Alarm may have at least four level (Crisis, Warning, Advisory, Message)		
30	Alarm notification shall be given by Audible and Visual		
31	RS232 port/RJ45 or USB port to interface to CIS <i>(Bidder to specify the type of network interfacing capability available in the offered model)</i>		
32	Data management capability compatible to Health Information Protocol (eg. HL7)		
33	Built-in Thermal Printer that support 4 channel printing complete with 20 packs of printing papers		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BWAD004		
	Pump infusion volumetric		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	To be used for IV drug administration on patients		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Volumetric Infusion Pump Unit		
B2	TECHNICAL SPECIFICATIONS		
	Volumetric Infusion Pump Unit		
1	Infusion Rate Range : 0.1 to approx.1000 ml/hr or higher <i>(Bidder to specify)</i>		
2	Volume limit range : 0.1 to 9999 ml <i>(Bidder to specify)</i>		
3	Infusion Rate Setting : 0.1 to 999.9 ml/hr, in 0.1 ml/hr increments / 100 to maximum infusion rate, in 1.0 ml/hr increments <i>(Bidder to specify)</i>		
4	Alarm system for delivery error (pressure, volume, occlusion, air-in-line, low battery, door open, infusion complete, empty container, operator error and other device malfunctions) and volume adjustment. <i>(Bidder to specify type of alarm system for each situation, ie. audible / visual)</i>		
5	Unit shall have purge / bolus delivery function Bolus / purge rate: <i>(Bidder to specify if it is automatic or manual function)</i>		
6	Unit shall have data storage function for infusion rate, total volume and volume limit before switching off		
7	Unit shall have drop sensor		
8	Shall have clear display information of infusion parameters (Flow rate, Flow volume, alarms & etc)		
9	Shall have not less than 3-4 hours of operation in battery mode (fully charged) <i>(Bidder to specify the maximum battery operation time)</i>		
10	Able to connect to the nursing station		
11	For critical care areas and operation theatres, the unit shall be able to be connected to the Fluid Management System.		
12	Shall have KVO function <i>(Bidder to specify the KVO rate)</i>		
13	Software shall be upgradable, able to do calculation of dosage and delivery rate, selection of drug, storage of preset values, prevention of data to be tampered with.		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		
5	Standard accessories and consumables shall include: a) Infusion sets x 100 pieces		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BWAD005		
	Suction Pump Single Jar on mobile stand		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	Shall be an electric suction unit for the aspiration of body liquids, oral, nasal and tracheal aspiration in person or children		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Electrical mobile Suction pump		
2	2 pcs Bottle - Jar		
3	Trolley		
B2	TECHNICAL SPECIFICATIONS		
	Suction pump		
1	Liquid Collection Jar 2500 mL /pc, x 2pcs		
2	Shall be of oilless and maintenance-free piston-type vacuum pump		
3	Adjustable Vacuum rate shall be from 0 to 800 mmHg <i>(Bidder to specify the range)</i>		
4	Max air flow : 30+/- 2 L/ Min (without Jar) & 26 L (with Jar)		
5	Shall come with aspiration regulator and vacuum indicator on the unit		
6	Noise level shall be not more than 55 dBA (at 1m distance)		
	Jar		
7	The jar shall be made of polycarbonate, polysulfonate or polyethylene		
8	Shall have not less than 2500 mL x 2 L volume of the jar with markings on unit to indicate fluid volume. <i>(Bidder to specify the volume of the jars)</i>		
9	Shall have safety valve mechanism to prevent overflow		
10	Shall have a bacteria filter		
11	Shall be autoclavable. <i>(Bidder to specify the maximum sterilization/autoclavable temperature that the jars can withstand)</i>		
	Mobile Trolley		
12	Mobile trolley with 4 x anti-static castors in which at least 2 of the castors shall come with brakes		
	Electric : 220volt/1 ph/50 Hz		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		
5	Standard accessories and consumables shall include:		
	a) Polycarbonate autoclavable jar capacity 1 litres complete with overflow lid x 1 no.		
	b) Bacterial filter x 20 pcs		
	c) Connection tubing x 2 sets		
	d) Unit shall come with a change-over valve x 2 sets		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BWAD003		
	Syringe pump		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	To be used for IV drug administration by means of syringe		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Syringe Infusion Pump Unit		
2	Syringe		
B2	TECHNICAL SPECIFICATIONS		
	Syringe Infusion Pump Unit		
1	Flow Rate Range: shall be approximately in the range of 0.1 to 1000 ml/hr or higher		
2	Infusion Volume Range : shall be 0.1 to approx. 9999ml <i>(Bidder to specify the increment in ml per step)</i>		
3	Shall be equipped with alarm system for delivery error such as pressure, volume, occlusion, low battery, syringe detachment and volume adjustment. <i>(Bidder to specify type of alarm system for each situation, ie. audible / visual)</i>		
4	Purge rate according to syringe capacity <i>(Bidder to specify)</i>		
5	Shall be equipped with auto detection of syringe size / automatic syringe fixation		
6	Shall have purge / bolus delivery function Bolus / purge rate: <i>(Bidder to specify)</i>		
7	Preferably to have clear display of infusion parameters (Flow rate, flow volume, alarms & infusion time, battery capacity etc)		
8	Shall have not less than 3-4 hours of operation in battery mode (fully charged) <i>(Bidder to specify the maximum battery operation time)</i>		
9	Shall be able to connect to the nurse station		
10	Shall have KVO function		
11	Shall come with Internal battery for power failure back-up		
	Syringe		
12	Syringe sizes 10,20, 30 and 50ml compatible to pump		
13	Compatible syringe brands		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		
5	Standard accessories and consumables shall include: a) Syringe 50 ml x 50 pieces b) Syringe 30 ml x 50 pieces c) Syringe 20 ml x 50 pieces d) Syringe 10 ml x 50 pieces e) IV sets x 200 pieces		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BXRY007		
	Digital Ultrasonograph 4D (with HD Flow-High Definition Power Doppler)		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	Shall be used to visualize blood flow through a blood vessel, organs, or other structures; Shall be a digital technology to generate imaging of the movement of tissues and body fluids (usually blood) and their relative velocity to the probe.		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Main unit with 23-inch LED Screen Monitor		
2	4D Convex Volume Transducer		
3	2D Convex Transducer		
4	4D Transvaginal Transducer		
5	B/W printer		
6	Color Printer		
7	Cart Trolley		
B2	TECHNICAL SPECIFICATIONS		
	Main Unit		
1	Shall come with 3 active Probe Ports		
2	Integrated HD of approximately 500 GB		
3	Comes with 3 USB Ports for External Peripherals		
4	Comes with 2 USB Ports for On-board Peripherals		
5	Comes with RJ45 LAN Port, 1 HDMI Out Port and 1 Audio Out Port		
6	DICOM function available		
7	Power supply shall be 220 V, 50.60 Hz		
	Monitor		
8	At least 15" High resolution touchscreen		
9	Resolution: at least 1280 x 1024		
10	Image size: (Bidder to specify)		
11	High brightness with 220 cd/m2 typical or better		
12	Manual brightness and contrast adjustment		
	Keyboard		
13	Ergonomic hard key layout		
14	Back-lighting shall be available		
15	Programmable print/store/export keys for printing		
16	Archiving and exporting shall be available		
	Scanning Methods		
17	Convex		
18	Linear		
19	Sector		
20	Mechanical Volume Sweep		
	Transducer types		
21	Convex Array with frequency 1-5 MHz and deep penetration		
22	Linear Array with frequency 4-12 MHz and shallow penetration		
23	Phased Array with frequency 2-5 MHz and deep penetration		
24	Volume probes 4D: <ul style="list-style-type: none"> i. Convex Array with 4-8 MHz and shallow penetration ii. Microconvex Array with 4-9 MHz and shallow penetration 		
	Scanning Modes		
25	B-Mode (2D)		
26	M-Mode (conventional M-Mode)		
27	AMM (Anatomical M-Mode)		
28	PW Doppler with high PRF (PW)		
29	High PRF Doppler Mode		
30	Color Flow Doppler Mode (CFM)		
31	Power Doppler Mode (PD)		
32	HD-Flow* Doppler Mode (HD-Flow) [Preferable]		
33	M-Mode Flow Modes (M/CF, M/HD-Flow)		
34	Volume Mode (3D/4D)		
35	Extended View (XTD View)		
36	Upgradeable software feature is preferable		

	Cart / Trolley		
37	Shall be a sturdy mobile cart / trolley with anti-corrosion material		
38	Comes with castors of at least 75mm and brakes		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		
5	Standard accessories shall include, but not limited to the following:		
	a) Printer color and black & white		
	b) Printing paper (one month operation)		
	c) Gel		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BXRY006		
	Digital Ultrasonograph 2 D		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	Shall be used to Nerve Block, Musculoskeletal, Vascular, Abdomen, Obstetric, Gynaecology; Urology, Pediatric and Neonatal. Shall be a digital technology to generate imaging of the movement of tissues and body fluids and their relative velocity to the probe.		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Digital Ultrasonograph 2D unit		
2	Transducer(s)		
3	Printer(s)		
4	Cart /Trolley		
B2	TECHNICAL SPECIFICATIONS		
	Main Unit		
1	Shall come with 3 active Probe Ports		
2	Integrated HD of approximately 500 GB		
3	Comes with 3 USB Ports for External Peripherals		
4	Comes with 2 USB Ports for On-board Peripherals		
5	Comes with RJ45 LAN Port, 1 HDMI Out Port and 1 Audio Out Port		
6	DICOM function available		
7	Power supply: 220 V, 50/60 Hz		
	Monitor		
8	At least 15" High Resolution Flat Panel Screen		
9	Resolution: at least 1280 x 1024		
10	Image size: (Bidder to specify)		
11	High brightness with 220 cd/m2 typical or better		
12	Manual brightness and contrast adjustment		
13	Auto-gain, dynamic range adjustment, and the ability to freeze/measure/annotate shall be available		
	Keyboard		
14	Ergonomic hard key layout		
15	Back-lighting shall be available		
16	Programmable print/store/export keys for printing		
17	Archiving and exporting shall be available		
	Scanning Methods		
18	Convex		
19	Linear		
20	Sector Array		
21	Endovaginal		
	Transducer types		
22	Convex Array with frequency 1-5 MHz with wide view angle and deep penetration		
23	Linear Array with frequency 4-12 MHz with narrow view angle and shallow penetration		
24	Phased and Sector Array with frequency 2-5 MHz with narrow view angle and deep penetration		
25	Doppler		
	Scanning Modes		
26	B-Mode (2D)		
27	M-Mode (conventional M-Mode)		
28	AMM (Anatomical M-Mode)		
29	PW Doppler with high PRF (PW)		
30	High PRF Doppler Mode		
31	Color Flow Doppler Mode (CFM)		
32	Power Doppler Mode (PD)		
33	HD-Flow* Doppler Mode (HD-Flow) [Preferable]		
34	M-Mode Flow Modes (M/CF, M/HD-Flow)		
35	Volume Mode (3D/4D):		
36	Extended View (XTD View)		
37	Upgradeable software feature is preferable		

	Cart / Trolley		
38	Shall be a sturdy mobile cart / trolley with anti-corrosion material		
39	Comes with castors of at least 75mm and brakes		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		
5	Standard accessories shall include, but not limited to the following:		
	a) Printer color		
	b) Printing paper (one month operation)		
	c) Gel		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BEME1010		
	Vein Detector (locator scanner) for Adult		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	To accurately locate a patient's vein		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Vein locator (Portable)		
B2	TECHNICAL SPECIFICATIONS		
1	Type of vein imaging technology: (e.g. infrared, near-infrared, ultrasound) <i>(Bidder to specify)</i>		
2	Maximum projection depth: <i>135 cm (53.4 Inch)</i>		
3	Shall allow visualization of fine detail (e.g. small veins)		
4	Focal/imaging distance shall be at least 30cm as per Association of Surgical Technologies (AST) recommendations for safe distance from a sterile field		
5	Shall not cause any heat and radiation issues which may harm the patient		
6	Shall be mounted on a mobile stand with lockable castors		
7	Shall have extendable arm to allow full body assessment <i>(Bidder to specify the maximum extendable length of the arm)</i>		
8	Image brightness shall be adjustable		
9	Shall have multiple color adjustment options (e.g. green, yellow and white) <i>(Bidder to specify)</i>		
10	Shall come with image capturing system for static images <i>(Bidder to specify)</i>		
11	Shall come with rechargeable Lithium Ion battery which can automatically support the operation of device if main power is cut off		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		
5	Standard accessories and consumables shall include: a) Rechargeable battery		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BVEN001-1		
	Ventilator intensive adult & child		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	An advanced, reliable adult and pediatric ventilator with various ventilation modes to fulfill all requirement of intensive patient care units for adults and children		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Ventilator		
2	Internal Battery Back-up Power Supply		
B2	TECHNICAL SPECIFICATIONS		
	Ventilator intensive adult & child		
1	Invasive Ventilation Modes: All Ventilation Modes		
2	Non-Invasive Ventilation Modes: All Ventilation Modes		
	Parameters Setting :		
	i. Ventilation Frequency (RR): approx. 2/minute to 80/minute		
	ii. Inspiration Time (Ti): approx. 0.2 second to 10 second		
	iii. Tidal Volume: approx. 20 ml to 2000 ml		
	iv. Flow Acceleration: approx. 5 to 200 cmH2O/second		
3	v. Inspiratory Pressure: approx. 1 cmH2O to 99 cmH2O, absolute (include PEEP, not above PEEP)		
	vi. PEEP (Intermittent PEEP): approx. 0 to 50 cmH2O		
	vii. Pressure Support: approx. 0 to 50 cmH2O (above PEEP)		
	viii. O2 Concentration: 21% to 100%		
	ix. Inspiratory Trigger Sensitivity: approx. 1 L/minute to 15 L/minute		
	x. Termination Criteria (Expiratory Trigger): approx. 5% to 75% of Peak Inspiratory Flow		
4	Performance:		
	i. Maximum (continuous) inspiratory flow: approx. 250 L/min		
5	Control principle: Time cycled, volume controlled, pressure limited		
6	Safety Valve Opening on Over Pressure: 120 cmH2O		
7	Safety Valve: Open if Medical Oxygen and Air supply is not sufficient, enables spontaneous breathing with ambient air.		
8	Medicament Nebulisation: Yes or No		
9	Bronchial Suction Maneuver: Yes or No		
10	O2 Sensor/Measurement: Yes or No		
11	etCO2 Measurement: Yes or No		
13	Comes with Medical Air Compressor		
14	Diagonal screen size: At least 12" TFT Color Touch Screen		
15	Medical gas probes supplied shall be compliant with DIN Standards		
	ALARMS:		
16	Should have visual or audible alarms for the following:		
	i. Low PIP		
	ii. High PIP		
	iii. Ventilation frequency (low and high)		
	iv. MAP		
	v. Low CPAP/PEEP		
	vi. Low and high Volume (inspiratory and expiratory)		
	vii. FIO ₂		
	viii. Fail to cycle		
	ix. Gas supply loss		
	x. Power failure		
	xi. Breathing circuit disconnect		
	xii. Low battery		
	xiii. Air filter to be replaced		
	Battery Power Supply		
17	Internal Battery Backup: At least 2 hours (also for Internal Compressor), integrated on trolley		
18	Should able to automatically switch to AC power or internal battery in certain condition for continuous operation of ventilator.		
19	Ventilation should not be interrupted when the ventilator switches between power sources.		

20	Should visually indicate the power source in use.		
21	Internal battery power source should be capable of running the ventilator for at least 2 hours under normal loading.		
22	Internal battery should charge automatically whenever the ventilator is connected to AC power		
23	A visual indicator should identify when the ventilator is charging		
24	Should have a periodic audible advisory while operating on its internal battery to remind the user that the ventilator is operating on its emergency backup power supply.		
C ACCESSORIES & CONSUMABLES			
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		
5	Standard accessories and consumables shall include:		
	a) Disposable Breathing circuits: double-limb with standard outlet/inlet connectors with 22 mm of outside diameter, adult x 30 sets per ventilator (3 different sizes)		
	b) Disposable Breathing circuits: double-limb with standard outlet/inlet connectors with 22 mm of outside diameter, paediatric x 30 sets per ventilator (3 different sizes)		
	c) Complete reusable breathing circuits and related accessories x 6 sets per ventilator (3 x adult & 3 x paediatric)		
	d) Breathing mask, non-invasive ventilation (3 different sizes)		
	e) Bacteria intake filters x 30 pcs per ventilator		
	f) Quantity as required to operate: O2 supply hose with Standard DISS connectors to air and oxygen wall pipelines.		
	g) Catheter mount and airway connectors		
	h) Test Lung x 1 set		
	i) Kit for leak test x 1		

**Lot 2: Equipment - BSL3 laboratory for virology
diagnostics**

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB056		
	ANALYTICAL BALANCE		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	is an advanced analytical weighing device		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Electronic Analytical Balance, internal Calibration Balances. Table top model		
2	Weighing pan		
3	Bottom cover, fabric dust cover		
B2	TECHNICAL SPECIFICATIONS		
	Analytical balance		
1	Capacity (g) : 110/120/200/220 g.		
2	Readability (g) : 0.01mg/ 0.1 mg		
3	Min load : 1 mg		
4	Pan Size : diameter 70 mm		
5	Stabilization time : 6/3.5 seconds		
6	Touch screen of 5 inch diagonal stands for comfort of operation		
7	Built-in Levelsensing System, sensors measure tilt and display graphic massage		
8	Internal adjustment system		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB101		
	AUTOCLAVE		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	UNIT FOR STERILIZATION OF GOODS		
	Note: The requested quality of the equipment must be equally good		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Main units : Autoclave , Vertical model floor type		
	Baskets stainless steel dia. 345 x 181 mm		
	Electrical cord		
	Hose for main drain		
B2	TECHNICAL SPECIFICATIONS		
1	Vertical model floor type, Top Open Lid, Open/close by single hand and foot		
2	Chamber : Stainless steel sus 304; Dia 370 x 774 mm(H), capacity 79 Litre		
3	3 sterilizing course selections :		
	1. Liquid sterilizing		
	2. Normal sterilizing		
	3. Rapid air cooling		
4	Sterilizing program: sterilizing- warming - heating and cooling		
5	Built-in steam (Electrical heater) exhaust bottle (with bottle detection mechanism)		
6	Built-in over temperature protection		
7	Safety device: water level control; lid interlock		
8	Time display, temperature and Pressure gauge		
9	Power supply consumption: 3 kW/220 volt/1 phase/50Hz		
C	ACCESSORIES & CONSUMABLES		
1	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB101.1		
	AUTOCLAVE		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	UNIT FOR STERILIZATION OF GOODS		
	Note: The requested quality of the equipment must be equally good		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Main units: Autoclave, Vertical model floor type		
	Baskets stainless steel dia. 345 x 181 mm		
	Electrical cord		
	Hose for main drain		
B2	TECHNICAL SPECIFICATIONS		
1	Vertical model floor type, Top Open Lid, Open/close by single hand and foot		
2	Chamber: Stainless steel sus 304; Dia 370 x 774 mm(H) , capacity 79 Litre		
3	3 sterilizing course selections: 1. Liquid sterilizing		
	2. Normal sterilizing		
	3. Rapid air cooling		
4	Sterilizing program: sterilizing- warming - heating and cooling		
5	Built in steam (Electrical heater) exhaust bottle (with bottle detection mechanism).		
6	Built in over temperature protection		
7	Safety device: water level control; lid interlock		
8	Time display, temperature and Pressure gauge		
9	Power supply consumption : 3 kW/220 Volt/1 phase/50 Hz		
C	ACCESSORIES & CONSUMABLES		
1	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB054		
	AUTOMATED IDENTIFICATION AND SUSPECTIBILITY TEST		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	Identification of bacteria and yeast as well as antibiotic and antifungal sensitivity testing		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Automated main unit		
2	Cards		
3	PC unit		
B2	TECHNICAL SPECIFICATIONS		
1	Temperature: 35.5°C ± 1°C		
2	Capacity: 60 Cards per instrument		
3	Connection: 2 instruments can be connected to the same PC		
4	Instrument can provide accurate and validated ID/AST results in at least 5 – 18 hours		
5	Automatically report and print results when testing is complete		
6	Able to test antibiotic and antifungal sensitivity		
7	Automatic validation of results to detect unusual		
8	Integrated software		
9	The Color indicators (green, yellow, red, purple) for the test results		
10	Can be connected to the LIS bidirectionally (RJ45 Connector)		
11	The culture bottle is compatible		
12	Power supply: 220 V, 50/60 Hz		
13	Heat Dissipation: 1025 BTU/hr (nominal)		
14	Power Cord: Detachable 3-wire with ground, per IEC 320		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		
5	Standard accessories and consumables shall include:		
	- Cards		
	- Software		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB042		
	BIOLOGICAL SAFETY CABINET AEROB		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	is an enclosed, ventilated laboratory workspace for safely working with materials contaminated, Aerob system		
	Note: The requested quality of the equipment must be equally good		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Cabinet		
2	Exhaust Fan		
3	UV Light		
4	Electric socket		
B2	TECHNICAL SPECIFICATIONS		
1	Biological Safety Cabinet AEROB		
2	Shall have a microprocessor control system		
3	Display shall be LCD touchscreen		
4	Shall have real-time display of airflow speeds (inflow and downflow)		
5	Integrated audible and visual alarms for: - Low or high inflow/downflow velocities. - Door opening beyond the safety threshold. - Exhaust or supply filter replacement. - Fan failure or other operational faults		
6	Dimension: 1420 x 852 x 1540 mm		
7	Tested and working opening: 173 mm		
8	Filter: ULPA - efficiency 99.995% at 0.1 to 0.3 micron		
9	Average Airflow Velocity: Inflow 0.53(m/s) and Down Flow 0.35 (m/s) at initial setpoint		
10	Minimum internal illumination of 1000–1200 lux		
11	Cabinet construction : * Body Material: Electro-galvanized steel with powder coated * Chamber Material: Stainless steel, Type AISI 304 * Front and side walls window: Laminated safety glass		
15	Exhaust Fan: Exhaust Blower on Top, with ducting set (5 meter length)		
16	Certification: EN 12469; NSF/ANSI 49, supported by NSF Certified Engineer		
17	Power supply 220 V, 50/60 Hz		
C	ACCESSORIES & CONSUMABLES		
1	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	Standard Accessories: UV Light, 2 pcs Electrical outlet kit, and 1 pc support stand and 1 unit Exhaust fan for air circulation, ULPA filter efficiency: 99.99%		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB040		
	BIOLOGICAL SAFETY CABINET Class II, A2		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	is an enclosed, ventilated laboratory workspace for safely working with materials contaminated with pathogens requiring a defined biosafety cabinet		
	Note: The requested quality of the equipment must be equally good		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Cabinet		
2	Exhaust Fan		
3	UV Light		
4	Electric socket		
B2	TECHNICAL SPECIFICATIONS		
1	Biological Safety Cabinet Class II, A2		
2	Microprocessor based controller		
3	LCD touchscreen display		
4	Soft-touch control buttons for power, light, fan speed, and UV operation		
	Audible and Visual Alarms:		
	- Low or high airflow velocity (inflow or downflow).		
5	- Improper sash height.		
	- Filter replacement alerts.		
	- Power or fan failure		
6	LED or fluorescent lights providing illumination of >1200 lux for the work area		
7	Dimension: 1420 x 852 x 1540 mm		
8	Tested and working opening: 173 mm		
9	Filter: ULPA efficiency 99.99% at 0.1 to 0.3 micron		
10	Average Airflow Velocity: Inflow 0.53(m/s) and Down Flow 0.35 (m/s) at initial setpoint		
11	Filter replacement alerts		
	Cabinet construction:		
12	Body Material: Electro-galvanized steel with powder coated		
	Chamber Material: Stainless steel , Type Aisi 304		
13	Exhaust Fan: Exhaust Blower on Top, with ducting set (5 meter length)		
14	Power supply 220 V, 50/60 Hz		
15	Certification: EN 12469; NSF/ANSI 49, supported by NSF Certified Engineer		
C	ACCESSORIES & CONSUMABLES		
1	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	Standard Accessories: UV Light, 2 pcs Electrical outlet kit, and 1 pc support stand and 1 unit Exhaust fan for air circulation, ULPA filter efficiency: 99.99%		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB041		
	BIOLOGICAL SAFETY CABINET Class II, B2		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	is an enclosed, ventilated laboratory workspace for safely working with materials contaminated with pathogens requiring a defined biosafety cabinet		
	Note: The requested quality of the equipment must be equally good		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Cabinet		
2	Exhaust Fan		
3	UV Light		
4	Electric socket		
B2	TECHNICAL SPECIFICATIONS		
1	Biological Safety Cabinet Class II, B2		
2	Microprocessor based controller		
3	LCD touchscreen display		
4	Soft-touch control buttons for power, light, fan speed, and UV operation		
	Audible and Visual Alarms:		
5	- Low or high airflow velocity (inflow or downflow). - Improper sash height. - Filter replacement alerts. - Power or fan failure		
6	LED or fluorescent lights providing illumination of >1200 lux for the work area		
7	Dimension: 1340 x 811 x 1460 mm		
8	Tested and working opening: 173 mm		
9	Filter: ULPA efficiency 99.99% at 0.1 to 0.3 micron		
10	Exhaust: Hepa Filter Typical Efficiency 99.99% at 0.3 microns		
11	Pressure Differensial Gauge		
12	Average Airflow Velocity: Inflow 0.53(m/s) and Down Flow 0.33 (m/s) at initial setpoint		
	Cabinet construction:		
13	Body Material: Electro-galvanized steel with powder coated Chamber Material: Stainless steel, Type AISI 304		
14	Exhaust Fan: Exhaust Blower on Top with ducting set (5 meter length)		
15	Power supply 220 V, 50/60 Hz		
16	Certification: EN 12469; NSF/ANSI 49, supported by NSF Certified Engineer		
C	ACCESSORIES & CONSUMABLES		
1	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	Standard Accessories: UV Light, 2 pcs Electrical outlet kit, and 1 pc support stand and 1 unit Exhaust fan for air circulation , HEPA filter efficiency : 90%		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB078		
	BLOCK HEATER DRY BOX		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	The block heater is ideal for melting and boiling point determination, enzyme reactions, incubation and activation of cultures Note: The requested quality of the equipment must be equally good		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Main unit : Block Heater		
B2	TECHNICAL SPECIFICATIONS		
1	Include: UNIVERSAL BLOCK side 1 holds 24 X 1.5 ml / 2.0 ml & 14 X 0.5 ml; side 2 holds 6 X PCR strips, 48 X 0.2 ml or 1 PCR plate		
2	Temp. Range: Ambient +5° to 105°C		
3	Min. Programmable: Off or 1 min. to 99 hr 59 min.		
4	Temperature: 0°C		
5	Temp.Accuracy: +0.3°C		
6	Temp. Increments: 0.1°C		
7	Temp. Uniformity: ± 0.2°C		
8	Dimension: 6.3 x 145 x 5 in. / 16 x 36.5 x 13 cm		
9	Weight: 10 lbs / 4.5kg; 8 lbs / 4kg		
10	Electrical: 100-240 V		
C	ACCESSORIES & CONSUMABLES		
1	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB011		
	Centrifuge		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	Shall be a general purpose laboratory centrifuge with rotor driven technology designed to separate liquid samples at high rates of speeds		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Centrifuge bench top		
B2	TECHNICAL SPECIFICATIONS		
	Centrifuge bench top		
1	Max rcf: approximately 3,000 x g <i>(Bidder to specify)</i>		
2	Max rpm: approximately 100-4,400 <i>(Bidder to specify)</i>		
3	Max Capacity: 4 x ~ 85 ml or 30 x ~15 ml <i>(Bidder to specify)</i>		
4	Acceleration time to max. Rpm: < 25 s <i>(Bidder to specify)</i>		
5	Braking time from max. Rpm: < 25 s <i>(Bidder to specify)</i>		
6	Shall come with brake function		
7	Equipped with Timer: 0-99 min, with hold mode		
8	Noise level with rotor shall not exceed 55 dB (A) <i>(Bidder to specify)</i>		
9	The centrifuge shall be included with swing rotor of 4 x ~85 ml round buckets <i>(Bidder to specify the tube capacity)</i>		
10	All necessary adapter and tubes for standard use with vacutainer & tubes (approx. 2.6-7ml) & 85ml round buckets shall be provided		
11	Holes: <i>(Bidder to specify)</i>		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB057		
	Cupboard for Acid and Bleach		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	Cupboard with twin doors and 3 points latch grip handles		
	Note: The requested quality of the equipment must be equally good		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Cabinet fire safety , double doors and lockable		
B2	TECHNICAL SPECIFICATIONS		
1	Fire safety Cabinet size : 1090 x 450 x 1650 mm		
2	Baked epoxy finish, Double layer fire proof steel plate structure		
3	Insulation : 38 mm between th two steel lates, which can effectively isolate the heat source.		
4	Material : High quality steel tickness minimum 1.2 mm		
5	Epoxy resin electrostatic spray on th inside and outside to minimize of corrosion and moisture		
6	In strict accordance with OSHA specifications, the cabinet shall be provided with an electrostatic grounding conductive port, which is convenient to connect the electrostatic grounding		
C	ACCESSORIES & CONSUMABLES		
1	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB052		
	ddPCR (DROPLET DIGITAL PCR)		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	Provides ultrasensitive nucleic acid detection and absolute quantification		
	Note: The requested quality of the equipment must be equally good		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Droplet generator		
	Droplet reader		
	Thermal cyclcer		
	ddPCR Plates		
	Buffer control kit		
	UPS 2.200		
B2	TECHNICAL SPECIFICATIONS		
1	Display: LED		
2	Capacity: 1-8 samples / cartridge		
3	Droplets per 20ul sample: 20.000		
4	Droplet Generator dim 28 x 36 x 13 cm		
5	Droplet reader		
6	PCR Plate sealer		
7	Thermal cyclcer		
8	Gasket		
9	ddPCR plates 96		
10	Pierceable foil heat		
C	ACCESSORIES & CONSUMABLES		
1	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB055		
	DENSI CHECK		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	Fully automated short-term incubation cycle antimicrobial susceptibility system		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	DENSICHECK PLUS CALIBRATION STANDARD		
B2	TECHNICAL SPECIFICATIONS		
1	Operated by Battery DC 12 volt		
2	Portable handheld unit model		
3	Dimensions Characteristics Parameter: Height 155 cm X Width 61 cm X Depth 3.5 m		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB080		
	DIGITAL PH METER PORTABLE		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	To measure the pH of solutions in pharmaceutical, chemical, and biotechnology industries		
	Note: The requested quality of the equipment must be equally good		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Digital pH meter		
B2	TECHNICAL SPECIFICATIONS		
1	The pH value scale ranges from 0 = extremely acid (e.g. hydrochloric acid) to 14 (extremely alkaline, such as sodium hydroxide).		
2	Handheld portable model		
3	Digital display		
C	ACCESSORIES & CONSUMABLES		
1	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB053		
	DNA CONCENTRATOR (Nano Drop)		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	to measure the concentration of DNA, RNA and protein		
	Note: The requested quality of the equipment must be equally good		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	PORTABLE UNIT WITH MONITOR TOUCH SCREEN 7 inch Bluetooth keyboard, mouse, and barcode reader Thermal label printer		
B2	TECHNICAL SPECIFICATIONS		
1	Unit is Portable model		
2	Concentration ds DNA: Pedestal 27,500 ng/ul		
3	Pedestal 820 (400 mg) mg/ml Pedestal : 2.0 mg/ul, Cuvette 0.0006 (0.003) mg/ml Protein Bradford, Protein BCA, Protein lowry		
4	Connection : 3 USB; Ethernet; Bluetooth; Wifi		
5	Certification/Compliance all instruments are approved to CE and UL/CSA.		
C	ACCESSORIES & CONSUMABLES		
1	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB005.1		
	ELECTROPHORESIS SET		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	Used for separation of big molecules, such as proteins and analysis of their fragments		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Power supply		
2	Chamber		
3	Imaging system (Gel Documentation)		
B2	TECHNICAL SPECIFICATIONS		
B2-1	Power Supply [Bidder to specify]		
1	Sample throughput: approximately 1-120		
2	Shall have a programmable timer: 1-999 minutes		
3	Shall provide adjustable constant voltage (0 - 500V) or constant current (0 - 150mA) for a 1 - 99 mins run		
4	Shall come with power testers to be used for routine power checks		
B2-2	Chamber [Bidder to specify]		
1	Tank buffer volume: min/max (indicative: ~1 L)		
2	Gel size: (L x W): (Indicative: 18 x 40cm)		
3	Gel thickness: ~10mm		
4	Shall have a safety interlock for the chamber lid		
5	Shall have electrodes that are made of platinum or other equivalent alternatives		
6	Shall come with gel trays that are compatible with the gel imaging system		
7	Power shall be shut off automatically when the chamber lid is removed		
8	Shall come with precast gel core with approximately 25 to 50 wells		
9	Shall have design which allows easy and fast installation during use		
10	Safety features: No-load detection		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		
5	Standard accessories and consumables shall include:		
	a) Buffer solution		
	b) Precast gel core		
	c) Connecting cables		
	d) Printing paper		
	e) Combs with different number of well		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB005		
	Electrophoration system		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	Used for Insertion of DNA to Plasmid		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Main Unit Diension : 31 x 30 x 14 cm (W x D x H)		
2	CE Module Dimension : 31 x 28 x 9 cm (W x D x H)		
3	PC Module Dimension : 31 x 28 x 5 cm (W x D x H)		
B2	TECHNICAL SPECIFICATIONS		
1	General		
1,1	Power : Max 240 W (during short charging periods)		
1,2	Input voltage : 220-240 VAC, 50Hz		
1,3	Temperature 0-35 degrees, humidity 0-95% (noncondensing)		
1,4	Regulatory : Safety EN 61010, EMC EN61326 Class A		
2	Total System		
2,1	Outputs : Waveform : Exponential decay or square		
2,2	wave voltage : 10-3.000 V		
2,3	Capacitance : 10-500 V, 25-3,275 μ F in 25 μ F increments 500-3.000V, 10, 25, 50 μ F		
2,4	Square-wave timing : 10-500V : 0,05-10ms duration in 0,05ms increments, 10-100ms		
2,5	duration in 1ms increments, 1-10 pulses, 0,1-10 sec interval 500-3,000V: 0,05-5ms		
3	Eukaryotic System :		
3,1	Includes : Main unit, CE Module		
3,2	Outputs : Waveform : Exponential decay or square wave; Voltage : 10-3.000 V		
3,3	Capacitance : 10-500 V, 25-3,275 μ F in 25 μ F increments 500-3.000V, 10, 25, 50 μ F		
3,4	Square-wave timing : 10-500V : 0,05-10ms duration in 0,05ms increments, 10-100ms		
3,5	duration in 1ms increments, 1-10 pulses, 0,1-10 sec interval 500-3,000V: 0,05-5ms		
4	Microbial System		
4,1	Includes : Main unit, CE Module		
4,2	Outputs : Waveform : Exponential decay or square-wave		
4,3	Voltage : 10-3.000 V		
4,4	Capacitance : 10, 25, 50 μ F		
4,5	Resistance (parallel) : 50-1.000 ohm in 50 ohm increments, plus infinity		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		
5	Standard accessories and consumables shall include: <ul style="list-style-type: none"> a) Buffer solution b) Precast gel core c) Connecting cables d) Printing paper e) Combs with different number of well 		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB025		
	ELISA MULTIPLEXING SYSTEM		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	A measurements protein level		
	Note: The requested quality of the equipment must be equally good		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Plex magnetic Assay and reader		
2	Photo detector		
3	UPS 2.200 KV		
B2	TECHNICAL SPECIFICATIONS		
1	Multiplex Immuno assay system		
2	MCV plate IV, reservoir, sheath fluid		
3	Operating temperature: 15 - 30 C degree ,		
4	Operating Humidity: Non Condensing 20 - 80%		
5	Classification laser: 635 mm, 10mV		
6	Cuvette: 200um square flow channel		
7	Capacity: up to 100 biomolecules in a single sample		
	1. Plate capacity: 96 well microtiter plate 0.75		
	2. Measurements channel: 8		
	3. Measurement range: 0-4.3 OD		
	4. Resolution: 0.001 OD		
8	Supplied with		
	1. Calibration and Validation Kit		
	2. Software: Manager 6.0		
	3. Microplate platform		
	4. External Power supply: AC 220 volt; DC 12 Volt		
	5. Handheld magnetic washer with adjustment		
	Dimension: 44 x 61 x 8 (H) cm		
C	ACCESSORIES & CONSUMABLES		
1	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB024		
	ELISA ALL CHANNEL		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	MEASURING THE RESULTS OF PROTEIN LEVEL		
	Note: The requested quality of the equipment must be equally good		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Reader unit		
2	Photo detector		
3	UPS 2.200 watt		
B2	TECHNICAL SPECIFICATIONS		
1	Table top model; Elisa reader		
2	Qualitative assay includes up to 8 controls		
3	Quantitative assay includes up to 20 standards		
4	Best fit function for selecting the best calibration curve		
5	Capacity:		
	1. Measurements channel: 8		
	3. Measurement range: 0-4.3 OD		
	4. Resolution: 0.001 OD		
6	Photo detector: 8 Silicon Photodiodes		
7	Qualitative assay includes up to 8 controls		
8	Supplied with		
	1. Standard note book		
	2. Voltage regulator / UPS		
	3. Filters: 595 nm, 562 nm, 570 nm, 650 nm.		
	4. External Power supply: AC 220 Volt; DC 12 volt		
C	ACCESSORIES & CONSUMABLES		
1	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB058		
	EMERGENCY SHOWER & EYEWAS STATION		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	EMERGENCY SHOWER & EYEWAS STATION		
	Note: The requested quality of the equipment must be equally good		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	STANDING SHOWER AND EYEWASH SET UNIT		
2	SHOWER SPRAY HEAD		
3	SHOWER HANDLE & SPRAY MATERIAL		
B2	TECHNICAL SPECIFICATIONS		
1	Standard free standing Emergency shower and eyewasher		
2	Outlet pipe size: 1 - 1/4 inch (NPT)		
3	Height adjustable: Maximum 235 mm		
4	Eyewash bowl material: staniless steel		
5	Shower spray head diameter: 10 inch		
6	Shower head material: Plastic		
7	Eyewash activation: Manual, By shower handle (Length 29 inch)		
8	Eyewash activation: Manual, By Foot pedal		
9	Pipe and push plate: Stainless steel		
10	Color: Orange		
11	Connection wall supply clean water		
C	ACCESSORIES & CONSUMABLES		
1	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB044		
	FUME CABINET		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	General Purpose Fume Hood is a type of chemical cabinet used for general applications in laboratories, recommended for radioactive materials and perchloric acid.		
	Note: The requested quality of the equipment must be equally good		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Cabinet		
2	Exhaust Fan		
3	UV Light		
4	Electric socket		
B2	TECHNICAL SPECIFICATIONS		
1	Airflow Monitoring System, with air flow: 810 Cfm and a speed of 100 fpm		
2	Dimension approx.: 1200 x 911 x 2260 mm		
3	Tested and working opening: 173 mm		
4	Filter: ULPA efficiency 99.99% at 0.1 to 0.3 micron		
5	Exhaust: Hepa Filter Typical Efficiency 99.99% at 0.3 microns		
6	Pressure Differensial Gauge		
7	Average Airflow Velocity: Inflow 0.53(m/s) and Down Flow 0.33 (m/s) at initial setpoint		
8	Cabinet construction:		
8,1	Body Material: Electro-galvanized steel with powder coated		
8,2	Chamber Material: Stainless steel, Type Aisi 304		
9	Exhaust Fan: Exhaust Blower on Top, with ducting set (5 meter length)		
10	Certification: EN 12469; NSF/ANSI 49, supported by NSF Certified Engineer		
C	ACCESSORIES & CONSUMABLES		
1	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	Standard Accessories: UV Light, 2 pcs Electrical outlet kit, and 1 pc support stand and 1 unit Exhaust fan for air circulation, HEPA filter efficiency: 90%		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB006		
	Freezer medical -20°C		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	The unit is General Laboratory freezer for preserving temperature sensitive products as vaccines, medicines, reagents, specimens etc.		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Freezer medical -20°C (approx. 650L to 700L) lockable complete with alarm & chart recorder/data logger		
B2	TECHNICAL SPECIFICATIONS		
	Freezer		
1	Freestanding unit		
2	The freezer capacity shall be approximately 650 to 700 Liters		
3	Temperature shall be factory-preset at -20°C		
4	The freezer shall have a seven-day temperature chart recorder		
5	Interior fan should shut down when door is opened		
6	At least three (preferably four) stainless steel shelves shall be included		
7	Solid single door		
8	Self-closing door system (to include standard key lock)		
9	Upright cabinet		
10	Interior cabinet bottoms formed to contain spills for easy clean up		
11	Interior light		
12	Security lock		
13	Automatic defroster		
	Display		
14	A temperature monitor shall be included and integrated at top of freezer		
15	The temperature display shall be independent of the control circuitry so that malfunctioning control temperature sensing circuits can be detected		
16	The display shall be visible in bright, dim, or sunlight, and the alarms shall be audible over background noise		
	Alarms		
17	Factory-set high/low alarms that can be reprogrammed. High and low limits should be displayed (at least while they are being set)		
18	The freezer shall have an audible and visual alarm to alert for power loss and/or temperature deviation beyond set limits		
19	The freezer shall incorporate a method to test alarms		
20	Audible alarm should not be defeat-able, but rather temporarily silenced. A corresponding visual indicator should be ON during temporary alarm silencing period		
21	The freezer shall have provisions to interface with the Building Management System (BMS)		
	Refrigeration System		
22	Hermetically sealed, air-cooled compressor		
23	Non-CFC refrigerant		
24	Forced air circulation to maintain chamber uniformity of +/- 1° C and provide quick recovery		
25	Automatic condensate evaporation system		
26	To incorporate four casters, at least two of which should be lockable		
27	Interior Dimensions (H x D x W): <i>(Bidder to specify)</i>		
28	Exterior Dimensions(H x D x W): <i>(Bidder to specify)</i>		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB008		
	Freezer medical -20°C to -40°C		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	The unit is General Laboratory freezer for preserving temperature sensitive products as vaccines, medicines, reagents, specimens, etc.		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Freezer medical -20°C (approx. 276 Litres) lockable complete with alarm & chart recorder / data logger		
B2	TECHNICAL SPECIFICATIONS		
	Freezer		
1	Freestanding unit		
2	The freezer capacity shall be approximately 276 Liters		
3	Temperature shall be factory-preset at -20°C to -40°C		
4	The freezer shall have a seven-day temperature chart recorder		
5	Interior fan should shut down when door is opened		
6	At least three (preferably four) stainless steel shelves shall be included		
7	Solid single door		
8	Self-closing door system (to include standard key lock)		
9	Upright cabinet; 4 drawers and 2 flip flop compartment		
10	Interior cabinet bottoms formed to contain spills for easy clean up		
11	Interior light		
12	Security lock		
13	Automatic defroster		
	Display		
14	A temperature monitor shall be included and integrated at top of freezer		
15	The temperature display shall be independent of the control circuitry so that malfunctioning control temperature sensing circuits can be detected		
16	The display shall be visible in bright, dim, or sunlight, and the alarms shall be audible over background noise		
	Alarms		
17	Factory-set high/low alarms that can be reprogrammed. High and low limits should be displayed (at least while they are being set)		
18	The freezer shall have an audible and visual alarm to alert for power loss and/or temperature deviation beyond set limits		
19	The freezer shall incorporate a method to test alarms		
20	Audible alarm should not be defeat-able, but rather temporarily silenced. A corresponding visual indicator should be ON during temporary alarm silencing period		
21	The freezer shall have provisions to interface with the Building Management System (BMS)		
	Refrigeration System		
22	Hermetically sealed, air-cooled compressor		
23	Non-CFC refrigerant		
24	Forced air circulation to maintain chamber uniformity of +/- 1° C and provide quick recovery		
25	Automatic condensate evaporation system		
26	To incorporate four casters, at least two of which should be lockable		
27	Interior Dimensions (H x D x W): <i>(Bidder to specify)</i>		
28	Exterior Dimensions (H x D x W): <i>(Bidder to specify)</i>		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB007		
	Freezer medical ultra low temperature -80°C		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	The unit is General Laboratory Ultra Low Temperature freezer for preserving temperature sensitive products as vaccines, medicines, reagents, specimens etc.		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Freezer medical ultra low temperature -80°C (approx. 650L) lockable complete with alarm & chart recorder / data logger		
B2	TECHNICAL SPECIFICATIONS		
	Freezer		
1	Freestanding unit		
2	To incorporate four casters, at least two of which should be lockable		
3	The freezer capacity shall be approximately 650 Liters or the freezer capacity is able to accommodate at least 40,000 units of 2 ml vial samples		
4	Temperature shall be factory-preset at -80°C		
5	The freezer shall have a seven-day temperature chart recorder or digital data logger		
6	Interior fan should shut down when door is opened		
7	At least three (preferably four) stainless steel shelves shall be included		
8	Solid single door		
9	Self-closing door system (to include standard key lock)		
10	Upright cabinet		
11	Interior cabinet bottoms formed to contain spills for easy clean up		
12	Interior light		
13	Security lock		
14	Automatic defrosting		
	Display		
15	A temperature monitor shall be included and integrated at top of freezer		
16	The temperature display shall be independent of the control circuitry so that malfunctioning control temperature sensing circuits can be detected		
17	The display shall be touch screen LCD, visible in bright, dim, or sunlight, and the alarms shall be audible over background noise		
	Alarms		
18	Factory-set high/low alarms that can be reprogrammed. High and low limits should be displayed (at least while they are being set)		
19	The freezer shall have an audible and visual alarm to alert for power loss and/or temperature deviation beyond set limits		
20	The freezer shall incorporate a method to test alarms		
21	Audible alarm should not be defeat-able, but rather temporarily silenced. A corresponding visual indicator should be ON during temporary alarm silencing period		
22	The freezer shall have provisions to interface with the Building Management System (BMS)		
	Refrigeration System		
23	Hermetically sealed, air-cooled compressor		
24	Non-CFC refrigerant		
25	Forced air circulation to maintain chamber uniformity of +/- 1° C and provide quick recovery		
26	Automatic condensate evaporation system		
27	OPTIONAL: Shall have back-up systems using either CO2 or LN2		
28	Interior Dimensions (H x D x W): <i>(Bidder to specify)</i>		
29	Exterior Dimensions(H x D x W): <i>(Bidder to specify)</i>		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB003		
	Gel Documentation System (with Digital Imaging)		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	Used for Imaging system for DNA and Protein		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Dark room, and UV Lamp		
2	Camera		
3	Gel documentation and Imaging system		
B2	TECHNICAL SPECIFICATIONS		
	Gel documentation Imaging system		
1	Automation Capabilities		
2	Automatically recognize application-specific tray and adjust imaging parameters and software options accordingly		
3	Auto-focus: Precalibrated focus for any zoom setting or sample height		
4	Auto-exposure: Two auto-exposure algorithms (rapid or optimal)		
5	CCD high-resolution or better (e.g. CMOS), high-sensitivity detection technology and modular options to accommodate a wide range of samples and support multiple detection methods including fluorescence and colorimetric detection		
6	Illumination control 3 modes (trans-UV, trans white, epi-white)		
7	Touch-screen functionality: Multi-touch capable		
8	Display: approximately 9 inch		
9	Maximum image area (Wx H): 21 x 14 cm		
10	Image resolution: 4 megapixels		
11	Detector: CCD or CMOS		
12	Pixel size: Bidder to specify		
13	Dynamic range: > 3.5 orders of magnitude		
14	Excitation source: Trans-UVB (standard) Epi-white (standard) Trans-white Trans-blue (optional)		
15	Standard Emission filter: approximately 535 - 645 nm		
16	Data output: SCN, TIFF, JPEG image files		
17	Computer: Dell or equivalent reputable brand		
18	Optional: Tray specific for "transblue excitation source"		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		
5	Standard accessories and consumables shall include: a) Buffer solution b) Precast gel core c) Connecting cables d) Printing paper e) Combs with different number of well		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB074		
	GRADIENT THERMAL CYCLER PCR		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	Amplifies target nucleic acid sequences into millions of copies via polymerase chain reaction		
	Note: The requested quality of the equipment must be equally good		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Thermal Cycler unit		
2	PCR Licenses		
3	USB Flash Drive		
B2	TECHNICAL SPECIFICATIONS		
1	Sample capacity : 96 x 0.2 ml tubes, 0.2 ml tube strips, or 1 x 96-well plate		
2	Maximum ramp rate, 4°C/sec		
3	Average ramp rate, 2.5°C/sec		
4	Temperature range : 4–100°C		
5	Temperature accuracy :±0.5°C of programmed target		
6	Temperature uniformity : ±0.5°C well-to-well within 30 sec of arrival at target temperature		
7	Gradient range : 30–100°C		
8	Temperature differential range : 1–25°C		
9	Display : 5.7" VGA color touch screen		
10	Port : 1 USB A		
11	Memory : 500 typical programs; unlimited with USB flash drive expansion		
C	ACCESSORIES & CONSUMABLES		
1	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB008		
	ICE MAKER MACHINE		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	The ultimate ice machine for crystal-clear, taste-free and odorless ice		
	Note: The requested quality of the equipment must be equally good		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	ICE MAKER MACHINE with ice bin		
2	Filter portable cartridge		
3	Capacity: 50 kg Stainless steel ice storage		
B2	TECHNICAL SPECIFICATIONS		
1	Production capacity: 300 kg / Day		
2	Air Cooled Self Contained Ice Machine produces gourmet crystal clear ice cubes		
3	The exterior is made from durable stainless steel		
4	Front panel in and out airflow for easy installation		
5	The condenser air filter can be accessed right from the front of the unit		
6	It comes with a vapor-based microbial control system		
7	It comes with PWD system for remote water drain		
C	ACCESSORIES & CONSUMABLES		
1	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB076		
	GEL IMAGER FOR PROTEIN & DNA		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
	to capture high-quality images of gels and membranes for various types of analyses		
	Note: The requested quality of the equipment must be equally good		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	PC unit included with the system with 5,4 MP Image resolution		
2	Touch screen monitor 13.3 inch		
3	Software to Capture and Software for Analysis		
B2	TECHNICAL SPECIFICATIONS		
1	5.4 MP Camera		
2	EPI-blue and EPI White & dual band UV imaging		
3	Orange tray for visible applications		
5	Wavelength range: 302 and 365 nm		
6	Network: RJ45 and USB port		
8	Power: 220 Volt/ 1ph/ 50 Hz		
C	ACCESSORIES & CONSUMABLES		
1	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB009		
	Incubator CO2		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	The CO2 Incubator will be used in a laboratory setting, provide the ideal in-vitro environment of clean, reliable and ease of use function		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	CO2 Incubator		
2	1 x CO ₂ gas tank with connection kit & regulator CO2 (local supplied)		
B2	TECHNICAL SPECIFICATIONS		
	CO2 Incubator		
1	Volume: ~150 liters <i>(Bidder please specify in the space on the right)</i>		
2	Equipped with air jacket temperature control <i>(Bidder please specify in the space on the right)</i>		
3	Temperature range: +3 °C above ambient up to 55 °C <i>(Bidder please specify in the space on the right)</i>		
4	Temperature deviation, time ² /spatial ² (± K): ± 0.1/± 0.5		
5	CO2 range (Vol.-% CO2): 0 - 20		
6	Setting accuracy (Vol.-% CO2): 0.1		
7	Constant humidity (%rH): 95 ± 3		
8	CO2 sensor: TC (Thermal conductivity)		
9	Shall come with access ports for allowing cables, plugs and tubing to be easily inserted into or out of the chamber		
10	No. of shelves standard/maximum: 3/10		
11	Max. load per shelf/total load (kg): 10/30		
12	Water level sensor		
13	Faster recovery rates		
14	Display type: Colour touchscreen (preferred) <i>(Bidder please specify in the space on the right)</i>		
15	High performance humidity control <i>(Bidder please specify in the space on the right)</i>		
16	High heat decontamination function <i>(Bidder please specify in the space on the right)</i>		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		
5	Standard accessories and consumables shall include: a) 1 x CO ₂ gas tank with connection kit & regulator CO2 (local supplied) b) Any others		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB009.1		
	Incubator O2		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	The O2 Incubator will be used in a laboratory setting, provide the ideal in-vitro environment of clean, reliable and ease of use function		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	O2 Incubator		
2	1 x O ₂ gastank with connection kit & regulator O2 (local supplied)		
B2	TECHNICAL SPECIFICATIONS		
	O2 Incubator		
1	Volume: ~70 liters <i>(Bidder please specify in the space on the right)</i>		
2	Equipped with air jacket temperature control <i>(Bidder please specify in the space on the right)</i>		
3	Temperature range +3 °C above ambient up to 55 °C <i>(Bidder please specify in the space on the right)</i>		
4	Temperature deviation, time2/spatial2 (± K): ± 0.1/± 0.5		
5	O2 range (Vol.-%): 0 - 20		
6	Setting accuracy (O2): 0.1°C		
7	Constant humidity (%rH) : 95 ± 3		
8	CO2 sensor: TC (Thermal conductivity)		
9	Shall come with access ports for allowing cables, plugs and tubing to be easily inserted into or out of the chamber		
10	No. of shelves standard/maximum : not less than 3		
11	Max. load per shelf/total load (kg) : not less than 20		
12	Water level sensor		
13	Faster recovery rates		
14	Display type: Colour touchscreen (preferred) <i>(Bidder please specify in the space on the right)</i>		
15	High performance humidity control <i>(Bidder please specify in the space on the right)</i>		
16	High heat decontamination function <i>(Bidder please specify in the space on the right)</i>		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		
5	Standard accessories and consumables shall include: a) 1 x CO ₂ gastank with connection kit & regulator CO2 (local supplied) b) Any others		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB081		
	JAR ANAEROBIC		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	Petri Plate Carrier Jar (Anaerobic), for 10 Petri Plates		
	Note: The requested quality of the equipment must be equally good		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Transparent Unbreakable Polycarbonate Jar		
2	Safety Valve		
3	Two way pressure gauge		
B2	TECHNICAL SPECIFICATIONS		
1	The system has built-in safety features, pressure valve with safety valve and two way pressure gauge		
2	Transparent Unbreakable Polycarbonate Jar		
3	Jar Capacity: 3.5 L		
4	Lid: Steady alluminium lid clamp and sealing ring		
C	ACCESSORIES & CONSUMABLES		
1	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB077		
	Liquid Nitrogen Tank		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	Specialised type of tank used for storing liquid nitrogen in laboratories		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Liquid nitrogen tank		
2	Transport Trolley		
B2	TECHNICAL SPECIFICATIONS		
	Liquid nitrogen tank		
1	Volume: approximately 35L		
2	Made by high strength aluminium alloy		
3	High vacuum multi-layer heat insulation design, no less than 5 years vacuum qualify		
4	Suitable for Gas: Cryopreservation		
5	Neck diameter: ~210mm (<i>Bidder to specify</i>)		
6	Liquid nitrogen storage time: at least 60 days (<i>Bidder to specify</i>)		
7	Liquid nitrogen evaporation (<i>Bidder to specify</i>)		
	Trolley		
8	Shall come with a transport trolley equipped with anti-static castors		
9	Trolley shall be corrosion-resistant and come with a chain for securing the tank		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (<i>bidder to specify</i>)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB057		
	MICROBIOLOGY AIR SAMPLE		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	Active microbial air monitoring		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Main unit		
2	Hard carrying case		
3	Battery & Charger		
4	300-hole perforated lid		
5	USB port and USB cable		
B2	TECHNICAL SPECIFICATIONS		
1	Airflow rate accuracy: 2.5%		
2	System within the instrument can stabilize the incoming airflow rate to 100 liters per minute (SLPM)		
3	Pressure and temperature of the air sample can be adjusted, ensuring uniform characteristics for each sample.		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB018		
	MICROCENTRIFUGE REFRIGERATED		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	Microcentrifuge Refrigerated intended to be used in molecular biology, biochemistry, and cell biology. Applications shall include the separation of small particles such as viruses, viral particles, proteins and/or protein complexes, lipoproteins, RNA, and plasmid DNA.		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Microcentrifuge floor stand		
B2	TECHNICAL SPECIFICATIONS		
	Centrifuge		
1	Maximum RCF (x g): 21,100 g or more		
2	Speed Control: ±2 rpm of set speed		
3	Set Temperature: 0 to 40°C in 1°C increments		
4	Temperature Control: ± 0.5°C of set temperature		
5	Temperature display: Actual rotor temperature in 0.1°C increments		
6	Large touch-screen display with adjustable positions		
7	Drive type: Imbalance tolerant direct drive, eye balance to within 5 mm		
8	Refrigeration system: Thermo electric temperature control system and noncoolant based.		
9	Vacuum system: Moisture purging / Moisture removal system		
10	Temperature range: set from -9°C to 40°C per 1°C increment.		
11	Acceleration / Decelerations profile: 10/12 second or more		
12	System should come with color large LCD touch screen operation for RPM/ RCF / Temp. / Time (Run / Hold) / Vacuum display with error alarms.		
13	Simulation software feature must be there which can provide Sedimentation Coefficient & Protocol Optimization before the experiment run		
	Rotor Specific Requirements		
	Rotor with ClickSeal biocontainment lid		
14	Rotor Capacity: 24 tubes x 1.5/2.0 mL		
15	Max. speed: 21,100 x g (15,000 rpm)		
16	Should include 300 nos of 1.5 mL tubes		
17	Should include 300 nos of 2.0 mL tubes		
18	Applications: General microcentrifuge applications, safe handling of biohazardous materials		
	Dual row rotor with screw-on lid		
19	Rotor Capacity: 18 tubes x 2.0/0.5 mL		
20	Max. speed: 21,100 x g (15,000 rpm)		
21	Should include 300 nos of 0.5 mL tubes		
22	Should include 300 nos of 2.0 mL tubes		
23	Applications: High-speed applications for mixed tube sizes without adapters		
	Screw-on lid rotor		
24	Rotor Capacity: 36 tubes x 0.5 mL		
25	Max. speed: 21,100 x g (15,000 rpm)		
26	Should include 300 nos of 0.5 mL tubes		
27	Applications: Low-volume sample processing, such as DNA/RNA extractions or protein purification		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		
5	Standard accessories and consumables shall include: a) The type and quantity of tubes to be provided as per the rotor type specifications		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB012.1		
	Micropipette set		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	Micropipette set (2-20 uL, 20-200 uL, 100-1000 uL, 500-5000 uL) complete with pipettes holder		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Micropipette set (2-20 uL, 20-200 uL, 100-1000 uL, 500-5000 uL) complete with pipettes holder		
2	Pipette stand/holder shall be sturdy and can hold 6 micropipettes securely		
B2	TECHNICAL SPECIFICATIONS		
	Micropipette set complete with pipettes holder and tips		
1	Shall be provided with the following fixed volume micropipettes:		
	a) 2 - 20 uL.....1 pc.		
	b) 20 - 200 uL.....1 pc.		
	c) 100 - 1000 uL....1 pc.		
	d) 500 - 5000 uL....1 pc.		
2	Maximum allowed imprecision: +/- 1.5% for minimum volume & +/- 0.2% for maximum volume		
3	Maximum allowed inaccuracy: +/- 1.3% for minimum volume & +/- 0.3% for maximum volume		
4	Shall be calibrated in accordance ISO/DIS 8655		
5	Each pipettor shall pass quality control/calibration test and shall be supplied with a certificate		
6	Lightweight and ergonomic design		
7	Fully autoclavable at 121°C		
8	Autoclavable tip-cone		
9	Clear digital or analogue display		
10	Shall be able to use with 'universal' pipette tips		
11	Shall be provided with Pipettor Stand or Holder		
12	Pipette stand/holder shall be sturdy and can hold 6 micropipettes securely		
13	Shall come with a box of compatible micropipette tips of 1000 pcs.		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB012.5		
	Micropipette set		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	Micropipette set (0.2-2 uL, 0.5-10 uL, 2-20 uL, 20-200 uL, 10-100 uL,100-1000 uL) complete with pipettes holder		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Micropipette set (0.2-2 uL, 0.5-10 uL, 2-20 uL, 20-200 uL, 10-100 uL,100-1000 uL) complete with pipettes holder		
2	Pipette stand/holder shall be sturdy and can hold 6 micropipettes securely		
B2	TECHNICAL SPECIFICATIONS		
	Micropipette set complete with pipettes holder and tips		
1	Shall be provided with the following fixed volume micropipettes:		
	a) 0.2 - 2 uL.....2 pcs		
	b) 0.5 - 10 uL.....1 pc.		
	c) 20 - 200 uL.....2 pcs		
	d) 2 - 20 uL.....1 pc.		
	e) 10 - 100 uL..... 1 pc.		
	f) 100 - 1000 uL.....2 pcs		
2	Maximum allowed imprecision: +/- 1.5% for minimum volume & +/- 0.2% for maximum volume		
3	Maximum allowed inaccuracy: +/- 1.3% for minimum volume & +/- 0.3% for maximum volume		
4	Shall be calibrated in accordance ISO/DIS 8655		
5	Each pipettor shall pass quality control/calibration test and shall be supplied with a certificate		
6	Lightweight and ergonomic design		
7	Fully autoclavable at 121°C		
8	Autoclavable tip-cone		
9	Clear digital or analogue display		
10	Shall be able to use with 'universal' pipette tips		
11	Shall be provided with Pipettor Stand or Holder		
12	Pipette stand/holder shall be sturdy and can hold 6 micropipettes securely.		
13	Shall come with a box of compatible micropipette tips of 1000 pcs.		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB012		
	Micropipette set		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	Micropipette set (0.1-2 uL, 0.5-10 uL, 2-20 uL, 20-200 uL, 10-100 uL,100-1000 uL) complete with pipettes holder		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Micropipette set (0.1-2 uL, 0.5-10 uL, 2-20 uL, 20-200 uL, 10-100 uL,100-1000 uL) complete with pipettes holder		
2	Pipette stand/holder shall be sturdy and can hold 6 micropipettes securely		
B2	TECHNICAL SPECIFICATIONS		
	Micropipette set complete with pipettes holder and tips		
1	Shall be provided with the following fixed volume micropipettes:		
	a) 0.1 - 2 uL.....4 pcs		
	b) 0.5 - 10 uL.....4 pcs		
	c) 20 - 200 uL.....4 pcs		
	d) 2 - 20 uL.....4 pcs		
	e) 10 - 100 uL..... 4 pcs		
	f) 100 - 1000 uL.....4 pcs		
2	Maximum allowed imprecision: +/- 1.5% for minimum volume & +/- 0.2% for maximum volume		
3	Maximum allowed inaccuracy: +/- 1.3% for minimum volume & +/- 0.3% for maximum volume		
4	Shall be calibrated in accordance ISO/DIS 8655		
5	Each pipettor shall pass quality control/calibration test and shall be supplied with a certificate		
6	Lightweight and ergonomic design		
7	Fully autoclavable at 121°C		
8	Autoclavable tip-cone		
9	Clear digital or analogue display		
10	Shall be able to use with 'universal' pipette tips		
11	Shall be provided with Pipette carousel stand		
12	Pipette stand/holder shall be sturdy and can hold 6 micropipettes securely.		
13	Shall come with a box of compatible micropipette tips of 1000 pcs.		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB014.1		
	MICROPLATE INCUBATOR		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	Microplate with functional, automatic stop and setting and indication of the current operation time.		
	Note: The requested quality of the equipment must be equally good		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	INCUBATOR		
2	MICROPLATE SHAKER		
3	MICROPLATE THERMO SHAKER		
B2	TECHNICAL SPECIFICATIONS		
1	Display; LCD, Simultaneous display of set and actual Temperature, time and speed		
2	Multi-system principle which allows using it as 3 independent devices: A) Incubator for lasting incubation without shaking of microquantities in immunoplates B) Microplate shaker for operation in the cold room or other condition C) Microplate thermo-shaker for immunochemistry and molecular diagnostic		
3	Two sided heating of microtest plates that allows achieving exact correspondent		
4	Platform dimension: 210 x 290 mm		
5	No. of microtest plates: not less than 4 pcs.		
6	Temperature regulation range: +25° C to + 60° C		
7	Nominal regulation accuracy: + 0.1° C		
8	Temperature uniformity over the platform 0.2° C		
9	Orbit Size: 2 mm		
10	Speed regulation: 250 - 1200 RPM (increment 10 RPM)		
C	ACCESSORIES & CONSUMABLES		
1	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB018.2		
	Microscope Binocular with Light		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	The microscope shall be designed for applications in biological, medical and clinical laboratories; from routine tasks to research		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Microscope		
B2	TECHNICAL SPECIFICATIONS		
	Microscope		
1	Contrast Methods: Transmitted light: brightfield, darkfield, phase contrast, polarization		
2	Incident light: Fluorescence		
3	Filtering system shall be available		
4	Variable and Prefixed Koehler illumination		
5	Shall have integrated LED illumination for Transmission Light Axis		
6	Manual Adjustment function for: i. Light Intensity ii. Aperture diaphragm iii. Field diaphragm		
7	Incident Light Axis (optional)		
8	Tube i. Fixed or variable viewing angle ii. Up to 3 switching positions iii. one or two camera ports iv. height-adjustable eye level and camera por		
9	Magnification Changer i. Manual and automated ii. Magnification steps: 1x; 1.5x; 2x		
10	Objective Turret i. Manual ii. 5-fold		
11	X/Y Stage i. With condenser holder ii. Coaxial pinion, optional telescopable iii. Controls mountable left or right		
12	Condenser i. Universal oil condenser with interchangeable condenser head and condenser disk with 6 positions		
13	Focusing i. Focus knob for coarse and fine focusing ii. Height adjustment		
14	LED of at least 50,000 hours lifespan		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB018.3		
	Microscope Trinocular w/PC, Monitor (Research Centre)		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	The microscope unit shall incorporate advanced technology and optics components for use in research laboratory and general medical laboratory application.		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Microscope LED research upright brightfield		
B2	TECHNICAL SPECIFICATIONS		
B2-1	Microscope		
1	Fluorescence microscopy, Brightfield and polarization application		
2	Infinity-corrected optical system		
3	Widefield tilting, telescopic and lifting binocular tube		
4	Eyepiece suitable for use with or without eyeglasses		
5	Ceramic-coated coaxial stage with left or right-hand low drive control		
6	Rotating mechanism and torque adjustment mechanism		
7	Built-in Koehler transmitted illuminator		
8	Comes with 100W halogen bulb, Light preset switch, Light intensity LED indicator		
9	With light intensity control		
10	Built-in filters		
11	Interchangeable reversed quintuple/coded quintuple/sextuple/septuple/coded septuple nosepiece.		
12	Coaxial coarse and fine focus with stage up and down mechanism		
13	Prefocusing limit stopper and torque adjustment on coarse focus		
14	Ergonomics design and meets all international safety standards		
15	Swing-out achromatic condenser (N.A. 0.9), for 1.25x-100x (swing-out: 1.25x-4x)		
16	Achromatic aplanatic condenser (N.A. 1.4), for 10x-100x		
17	Phase contrast, darkfield condenser (N.A. 1.1), [phase contrast: for 10x-100 x,		
18	Universal condenser (N.A. 0.9), for 1.25x-100x		
19	High-resolution digital camera with Adapter for digital camera connection		
20	6 position revolving nosepiece		
B2-2	Multi-viewing microscope		
1	Multi-viewing microscope that allows observation of the microscope by up to 5 persons at the same time		
2	The Head shall be 5 piece head - a trinocular head is to be included in the main unit; the secondary units are to be binocular or trinocular		
3	Nose piece shall be Quadruple or quintuple		
4	Comes as a double layer mechanical stage, with hard coated surface for scratch resistance.		
5	Eyepiece shall be 10X with large field of view (18mm or larger)		
6	Light Source shall be either Halogen lamp or LED		
7	Objectives Magnification: i. to provide objectives with the following magnifications or closest available: 40x and 100x (oil immersion, air) ii. to provide two or more objectives of the following magnifications or closest available: 4x, 10x, 20x		
8	Objectives Type: Plan (bright field) objectives; providing excellent resolution and contrast Objectives : 4X, 10X, 40X, 100X.		
9	Durable construction		
10	30° or 45° inclined head (in secondary units)		
11	Allows coarse and fine focus adjustment; Fine Division 0.001mm		
12	Shall be made up of anti-rust materials		
13	LED Pointer, Dual Color Pointer shall be included		
B2-3	Camera Internal 3 MP		
1	Image Sensor: CMOS technology or better (<i>Bidder to specify</i>)		
2	Resolution: 2048 x 1536 or better (<i>Bidder to specify</i>)		
3	Illumination: Colour and B/W (<i>Bidder to specify the minimum lux level</i>)		
4	Day & Night: Auto function		
5	White LED Range: Up to approximately 30m		
6	Focal Length: (<i>Bidder to specify</i>)		
7	Angle of View: (<i>Bidder to specify</i>)		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB018.3		
	Microscope Trinocular w/PC, Monitor (Research Centre)		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
8	White Balance: Yes or No		
9	Noise Reduction: Yes or No		
10	Supports Region of Interest, Mirroring and Privacy Masking		
11	Video Analysis: <i>(Bidder to specify)</i>		
12	Audio: Built-in mic		
13	Storage: at least upto 256GB <i>(Bidder to specify storage format and capacity)</i>		
14	Ingress Protection: IP66 or better		
15	Able to save images in BMP, TIFF, JPG, PICT, PTL or other formats		
B2-4	PC Workstation with Monitor		
1	High performance CPU (latest technology operating system)		
2	Processor: 2 Ghz or Above		
3	USB 2.0 (Minimum Requirement)		
4	USB 3.0 (preferable)		
5	Software: Operating system compatibility: Windows XP, Vista, 7, 8, 10 (32 & 64-bit) or higher		
6	Monitor shall be at least 21"		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		
5	Accessories - Dust cover - Immersion Oil 8 cc		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB073		
	Digital cell Imager		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	Confluency analysis and cell counting of adherent cells		
	Note: The requested quality of the equipment must be equally good		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Portable Digital Cell Imager		
B2	TECHNICAL SPECIFICATIONS		
1	Portable with body material Plastic ABS		
2	Display: 7 inch Digital touch screen with Anti-glare		
3	Confluency Analysis and estimated cell counter		
4	Hymocytometer for total cell		
5	Image capture at 10x; 20 x with no Analysis		
6	View Image, Memory storage: 32 GB		
7	Network: Bluetooth; 1 MB, up to 25 m line of sight		
8	USB Connection port		
9	Chemical compactibility		
10	Power: 220 Volt/ 1 ph/ 50Hz		
C	ACCESSORIES & CONSUMABLES		
1	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB079		
	PROTEIN TRANSFER MEMBRANE (SDS page)		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	The Protein transfer membrane is intended for transferring proteins from the gel to the membrane, enabling subsequent detection and analysis of specific proteins in Western blotting and related techniques.		
	Note: The requested quality of the equipment must be equally good		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Tank, Lid with power cable		
2	Electrode assembly		
3	Short plates and spacer plates with integrated 1.0 mm space		
B2	TECHNICAL SPECIFICATIONS		
1	Number of Gels: 1 - 4		
2	Total buffer Vol for 2 gels: 800 ml		
3	Total buffer Vol for 4 gels: 1000 ml		
4	Output range (Programmable): 4 - 400 mA steps 75w max		
5	Output terminals: 4 recessed sets in parallel		
6	Output Type: Constant voltage/ constant current/ auto crossover		
7	Timer: 1- 999 minutes		
8	Display: LED		
9	Built in over temperature protection		
10	Safety device: water level control; lid interlock		
11	Time display, temperature and Pressure gauge		
12	PowerPac Basic Power supply		
C	ACCESSORIES & CONSUMABLES		
1	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	Standard accessories :		
	-Tank, lid with power cables, electrode assembly		
	-2-casting stands with 4 casting frames		
	-5 short plates and 5 spacer plates with integrated 1.0 mm spacers		
	-Five 10-well combs		
	-Five gel releasers (165-3320)		
	-PowerPac Basic Power Supply (164-5050)		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB071		
	PURIFIED WATER SYSTEM		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	Type RO and ultra pure water		
	Note: The requested quality of the equipment must be equally good		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Pretreatment unit		
2	Reverse Osmosis Unit		
3	Subsequent unit		
4	Main body (1 set of purification column + 2 built-in 15 Lt tank + Accessories)		
B2	TECHNICAL SPECIFICATIONS		
1	*UV type with UV lamp, Double wavelength (185 and 254 nm), sterilizer and reduce TOC, expand the usage range		
2	UF type with UF filter, Eliminate the endotoxin efficient		
3	Water input: Tap water (TDS 200 ppm).		
4	Water Output: Type RO and ultra Pure water		
5	Purifying Procedure: PF+AC+RO +AC+DI+TF PF+AC+RO+AC +DI+UF+TF PF+AC+RO+AC +UV+DI+TF PF+AC+RO+AC +UV+DI+UF+TF		
6	Flow Rate: 3 Lt/ Min.		
7	Power consumption: 220 Volt / 3 phase / 50 Hz; 240 watt		
C	ACCESSORIES & CONSUMABLES		
1	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB051		
	REAL TIME THERMAL CYCLER		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	PCR-machines are used for replication of DNA, detecting DNA sequences		
	Note: The requested quality of the equipment must be equally good		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Thermal Cycler PCR		
2	PCR license: Yes		
3	PC compatibility: Windows XP or higher		
4	Programming options: Step-based graphical and automatic		
B2	TECHNICAL SPECIFICATIONS		
1	Thermal cycling system: Peltier based block		
2	Capacity : 96 well block		
3	Reaction volume : 0.1 ml Block : 10 -30uL		
4	Sample format : fast 96 well plate		
5	Maximum block heating rate: 6,5 °C		
6	Average sample rate: 3,66 °C		
7	Optical detection: 6 decoupled filters		
8	Temperature accuracy: ±0.2,5°C of set point/ display		
9	Temperature uniformity: ±0.4°C		
11	quantities in singleplex reaction		
13	Run time: less in 30 minutes		
14	Excellent reproducibility and 10-log dynamic range		
C	ACCESSORIES & CONSUMABLES		
1	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB083		
	REFRIGERATOR FOR LABORATORY 2°C to 8°C		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	The unit is General Laboratory refrigerator for preserving temperature sensitive products as vaccines, medicines, reagents.		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Free standing Refrigerator medical 2°C to 8°C (approx. 1000 Litres) lockable complete with alarm & chart recorder / data logger		
B2	TECHNICAL SPECIFICATIONS		
	Refrigerator		
1	Freestanding unit		
2	The capacity shall be approximately 1000 Liters		
3	Temperature shall be factory-preset at 2°C - 8°C		
5	Interior fan should shut down when door is opened		
6	At least 12 (preferably four) shelves, and 2 flip flop compartment shall be included		
7	Dual Panel glass door		
8	Self-closing door system (to include standard key lock)		
10	Interior cabinet bottoms formed to contain spills for easy clean up		
11	Interior light		
12	Security lock		
13	Automatic defroster		
	Display		
14	A temperature monitor shall be included and integrated at top of freezer		
15	The temperature display shall be independent of the control circuitry so that malfunctioning control temperature sensing circuits can be detected		
16	The display shall be visible in bright, dim, or sunlight, and the alarms shall be audible over background noise		
	Alarms		
17	Factory-set high/low alarms that can be reprogrammed. High and low limits should be displayed (at least while they are being set)		
18	The Refrigerator shall have an audible and visual alarm to alert for power loss and/or temperature deviation beyond set limits		
19	The freezer shall incorporate a method to test alarms		
	Refrigeration System		
22	Hermetically sealed, air-cooled compressor		
23	Non-CFC refrigerant		
24	Forced air circulation to maintain chamber uniformity of +/- 1° C and provide quick recovery		
25	Automatic condensate evaporation system		
26	To incorporate four casters, at least two of which should be lockable		
27	Interior Dimensions (H x D x W): <i>(Bidder to specify)</i>		
28	Exterior Dimensions(H x D x W): <i>(Bidder to specify)</i>		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB072		
	Handheld Automated Cell Counting		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	Digital Automated cell counter that's portable and handheld machine		
	Note: The requested quality of the equipment must be equally good		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Handheld Automated cell counter		
2	Portable charger		
B2	TECHNICAL SPECIFICATIONS		
1	Hand held model with body Material ABS body		
2	Digital screen (display)		
3	Silicone control buttons		
4	Aspiration volume: 50 µL		
5	Handheld Instrument: Internal rechargeable 3.7 V Lithium ion battery		
6	Microfabricated, precision-engineered sensor		
7	Network: Bluetooth; 1 MB, up to 25 m line of sight		
8	USB Connection port		
C	ACCESSORIES & CONSUMABLES		
1	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

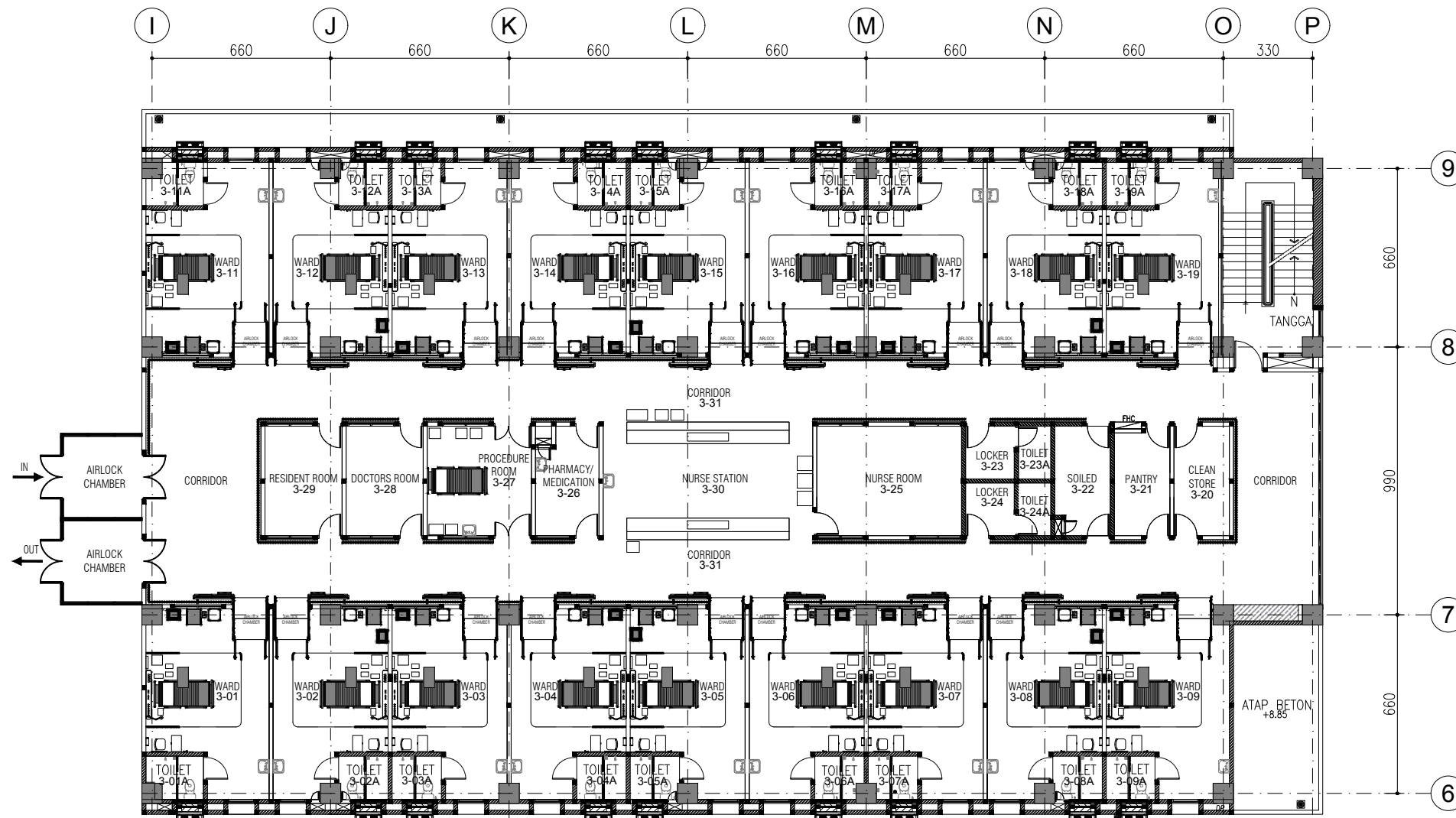
TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB021		
	Shaking Incubator		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	Ultra-low speed start, adjustable start speed, monitoring timer, parameter memory, upper and lower limits of overtemperature acousto-optic alarm, while opening the door automatically stop, monitoring temperature and environmental temperature for correction.		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Shaking platform		
2	Heating system		
3	Shaking mechanism		
B2	TECHNICAL SPECIFICATIONS		
1	High quality servo motor.		
2	Multi-steps rotate speed, temperature and time control systems.		
3	Automatic defrosting function.		
4	High-precision speed control.		
5	High-precision temperature control.		
6	Open door protection.		
7	LCD display with bright illumination.		
8	Capacity : 50 ml x 4 tubes; 100 ml x 4 tubes; 250 ml x3 tubes; 500 ml x 3 tubes		
9	Shaking plate size: approx. 450 x 410 mm		
10	Timing range: 0 - 9999 h/ min		
11	Vibration: 26 mm		
12	Material: Internal & External = Stainless steel		
13	Shaking Mode: Rotary shaking		
C	ACCESSORIES & CONSUMABLES		
1	All standard accessories required for the proposed model (including maintenance tools where applicable) as normally provided by the manufacturers (bidder to specify)		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB097		
	Mini Multi-mode digital microplate reader		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	Multi-mode microplate reader portable		
	Note: The requested quality of the equipment must be equally good		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Unit Multi mode microplate Reader		
2	Software and monitor		
3	Microplate washer		
B2	TECHNICAL SPECIFICATIONS		
1	Portable with body Material Plastic ABS		
2	Monitor display: 25 inch LED		
3	Mode: Absorbance, Flouresence and Luminescence.		
4	Wafelength range: 250 - 850 mm		
5	Comes Included one standard filter cube		
6	Network and USB port		
7	Power: 220 Volt/ 1phase/ 50Hz		
C	ACCESSORIES & CONSUMABLES		
1	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB050		
	THERMAL CYCLER PCR Partial Running		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	Amplifies target nucleic acid sequences into millions of copies via polymerase chain reaction		
	Note: The requested quality of the equipment must be equally good		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Thermal Cycler unit		
2	PCR Licenses		
3	USB Flash Drive		
B2	TECHNICAL SPECIFICATIONS		
1	Display: LCD 8.5 inch, Simultaneous display of set and actual Temperature, time and speed		
2	Multi-system principle which allows using it as 3 independent devices		
3	Dual 48/48-Well Fast		
4	Sample capacity: 2 x 48 x 0,2 ml tubes or 2x 48 well plates		
5	Maximum ramp rate: 4°C/sec		
6	Average ramp rate: 3°C/sec		
7	Temperature range: 0-100°C		
8	Temperature accuracy: ±0.2°C of programmed target at 90°C		
9	Temperature uniformity: ±0.4°C well-to-well within 10 sec of arrival at 90°C		
10	Gradient capability: Yes		
11	Temperature differential range: 1-24°C		
12	Gradient range: 30 - 100°C		
C	ACCESSORIES & CONSUMABLES		
1	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

TECHNICAL SPECIFICATION FORM (TSF)			
1	2	3	4
No.	ITEM CODE & DESCRIPTION	BIDDER'S OFFER	Ref. page no of Supporting Documents
	BLAB054		
	VORTEX		
	Manufacturer:		
	Brand:		
	Type/Model:		
	Country of Origin:		
A	FUNCTIONAL DESCRIPTION		
1	Performing various DNA operations		
2	Deproteinisation of DNA/ protein complexes		
3	Purification of low-molecular DNA/RNA fragments in PCR-diagnostic		
	Note: The requested quality of the equipment must be equally good		
B1	DESCRIPTION OF BASIC COMPONENTS		
1	Main unit		
B2	TECHNICAL SPECIFICATIONS		
1	Continuous operation		
2	Impulse operation: V32, PV32 , PV 6/10 ; PV 48		
3	Speed control range: 500 - 3000 Rpm		
4	AcceselARATION: 3 seconds		
5	Eccentric mixing principle +		
C	ACCESSORIES & CONSUMABLES		
1	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
2	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any other essential items which have not been specified in this TSF, and to be included in the offer.		
3	All standard maintenance tools and cleaning /lubrication materials where applicable shall be included.		
4	Bidders shall specify, in a separate Excel worksheet , the quantity and details of any items included in this offer, which are normally provided by the manufacturer but not specified in this TSF.		

ANNEX 2: Loaded Architectural Design



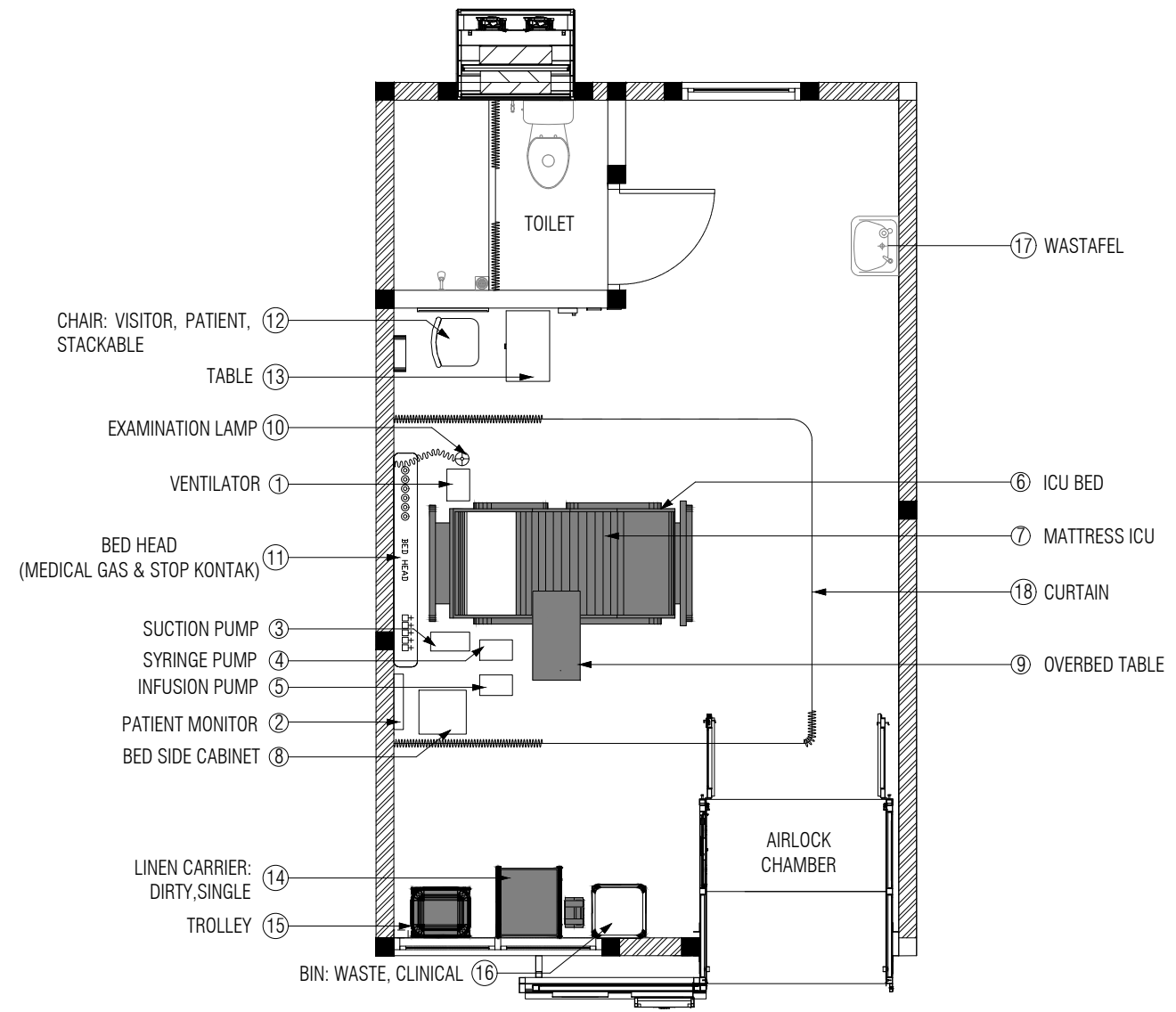
ROOM SPECIFICATION

ROOM NUMBER	ROOM NAME	AREA (M ²)
3-01	WARD	27.87
3-01A	TOILET	3.04
3-02	WARD	25.87
3-02A	TOILET	2.87
3-03	WARD	26.32
3-03A	TOILET	2.92
3-04	WARD	26.29
3-04A	TOILET	2.92
3-05	WARD	25.87
3-05A	TOILET	2.87
3-06	WARD	26.46
3-06A	TOILET	2.74
3-07	WARD	26.46
3-07A	TOILET	2.74
3-08	WARD	25.87
3-08A	TOILET	2.87
3-09	WARD	28.08
3-09A	TOILET	2.88
3-11	WARD	27.87
3-11A	TOILET	3.04
3-12	WARD	25.87
3-12A	TOILET	2.87
3-13	WARD	26.32
3-13A	TOILET	2.88
3-14	WARD	26.32
3-14A	TOILET	2.88
3-15	WARD	25.87
3-15A	TOILET	2.87
3-16	WARD	26.46
3-16A	TOILET	2.74
3-17	WARD	26.46
3-17A	TOILET	2.74
3-18	WARD	25.87
3-18A	TOILET	2.87
3-19	WARD	25.74
3-19A	TOILET	2.88
3-20	CLEAN STORE	8.30
3-21	PANTRY	8.01
3-22	SOILED	8.00
3-23	LOCKER	3.62
3-23A	TOILET	2.34
3-24	LOCKER	3.62
3-24A	TOILET	2.34
3-25	NURSE ROOM	21.66
3-26	PHARMACY/MEDICATION	8.88
3-27	PROCEDURE ROOM	15.59
3-28	DOCTORS ROOM	11.54
3-29	RESIDENT ROOM	11.54
3-30	NURSE STATION	33.71
3-31	CORRIDOR	274

ROOM SPECIFICATION

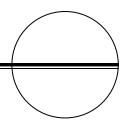
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3-01	WARD	27.87
3-02	WARD	25.87
3-03	WARD	26.32
3-04	WARD	26.29
3-05	WARD	25.87
3-06	WARD	26.46
3-07	WARD	26.46
3-08	WARD	25.87
3-09	WARD	28.08
3-11	WARD	27.87
3-12	WARD	25.87
3-13	WARD	26.32
3-14	WARD	26.32
3-15	WARD	25.87
3-16	WARD	26.46
3-17	WARD	26.46
3-18	WARD	25.87
3-19	WARD	25.74
3-27	PROCEDURE ROOM	15.59
3-30	NURSE STATION	33.71

3RD FLOOR PLAN - LAYOUT EQUIPMENT
NTS



ROOM SPECIFICATION

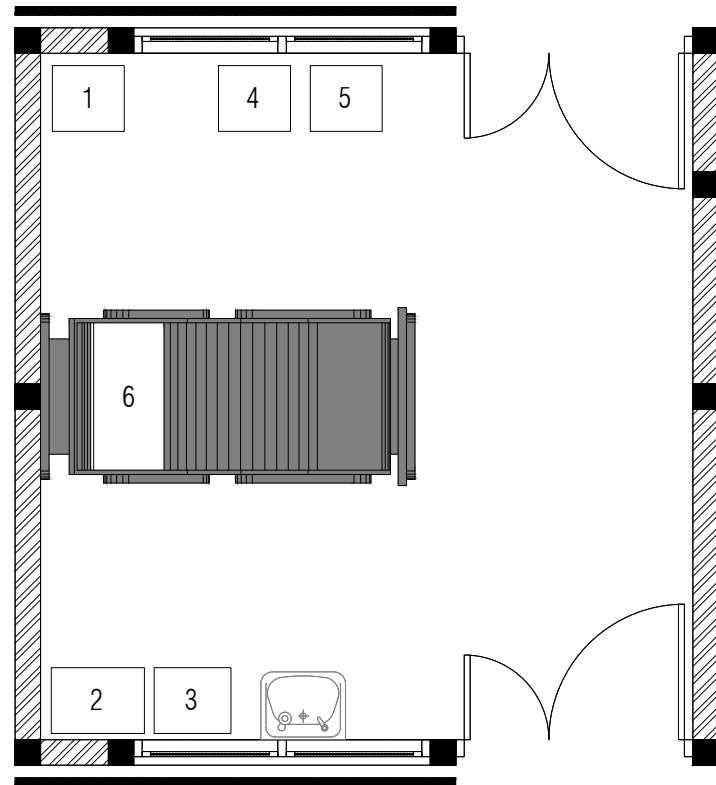
ROOM NUMBER	ROOM NAME	EQUIPMENT
3-01	WARD	1. VENTILATOR
3-02	WARD	2. PATIENT MONITOR
3-03	WARD	3. SUCTION PUMP
3-04	WARD	4. SYRINGE PUMP
3-05	WARD	5. INFUSION PUMP
3-06	WARD	6. ICU BED
3-07	WARD	7. MATTRESS ICU
3-08	WARD	8. BED SIDE CABINET
3-09	WARD	9. OVERBED TABLE
3-11	WARD	10. EXAMINATION LAMP
3-12	WARD	11. BED HEAD
3-13	WARD	12. CHAIR : VISITOR, PATIENT, STACKABLE
3-14	WARD	13. TABLE
3-15	WARD	14. LINEN CARRIER : DIRTY, SINGLE
3-16	WARD	15. TROLLEY
3-17	WARD	16. BIN : WASTE, CLINICAL
3-18	WARD	17. WATAFEL
3-19	WARD	18. CURTAIN

3RD FLOOR PLAN - ICU WARD 

NTS

REV	DATE	DESCRIPTION	DRAWN	CHECKED

DRAWING TITLE: 3RD FLOOR PLAN - ICU WARD				
CAD FILE:				
SCALE: NTS	PAPER SIZE: A3	DWG NO:	REV:	DATE:

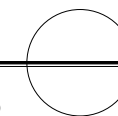


ROOM SPECIFICATION

ROOM NUMBER	ROOM NAME	EQUIPMENT
3-27	PROCEDURE ROOM	1. USG 4D 2. ECMO 3. CABG 4. ENDOSCOPIC COLUMN WITH BRONCHOSCOPE 5. ECHOCARDIOGRAPH 6. EXAMINATION BED

3RD FLOOR PLAN - PROCEDURE ROOM

NTS



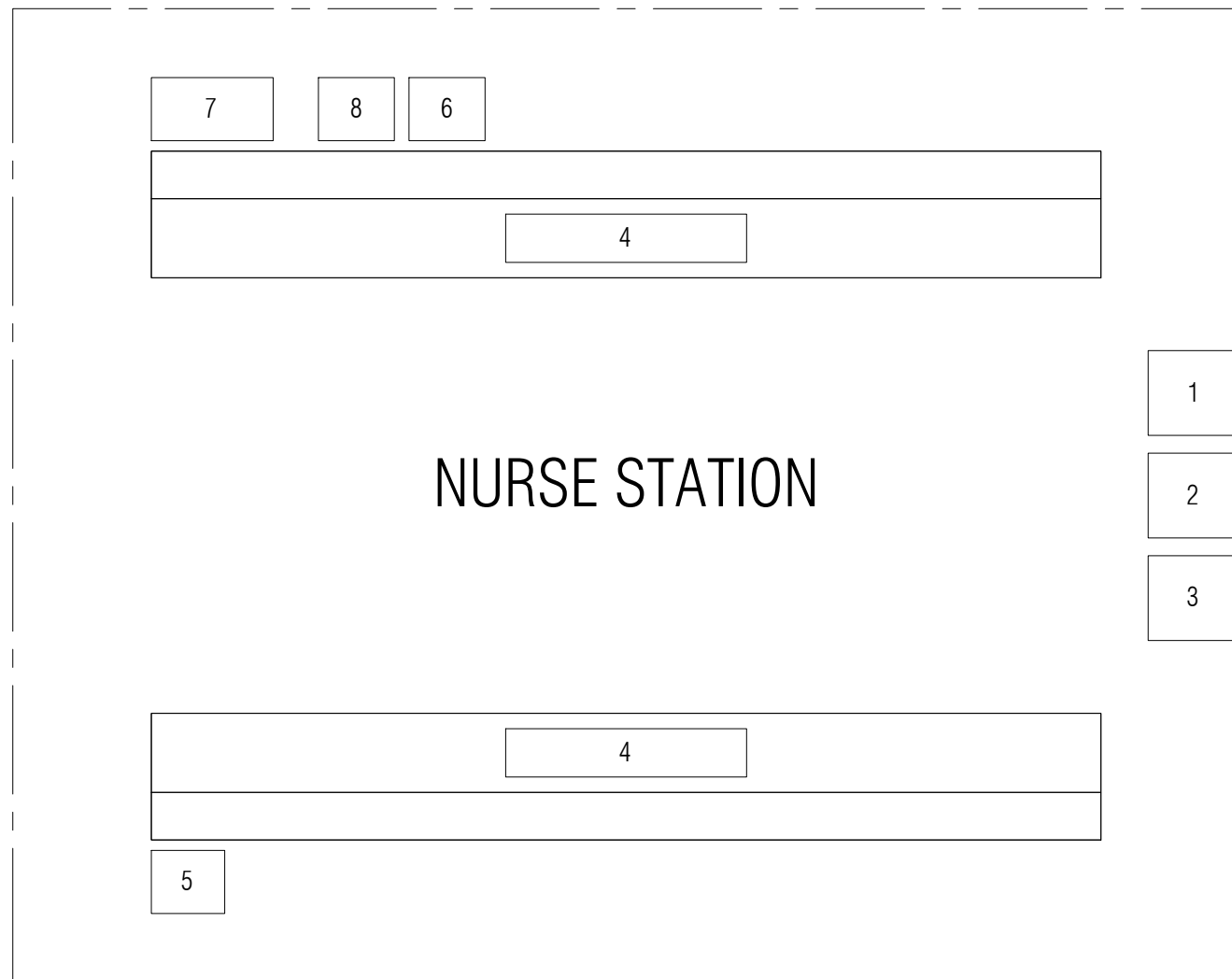
ARCHITECT:



PROJECT:
Hospital Hasanuddin University (UNHAS) Makassar Strengthen
University Teaching Hospital in the Fight against COVID-19
and Pandemic Preparedness Republic of Indonesia

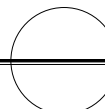
REV	DATE	DESCRIPTION	DRAWN	CHECKED

DRAWING TITLE: 3RD FLOOR PLAN - PROCEDURE ROOM				
CAD FILE:				
SCALE: NTS	PAPER SIZE: A3	DWG NO:	REV:	DATE:



ROOM SPECIFICATION

ROOM NUMBER	ROOM NAME	EQUIPMENT
3-30	NURSE STATION	1. BLOOD GAS & ELECTROLYTE ANALYZER MACHINE 2. CONTINUOUS RENAL REPLACEMENT THERAPY (CRRT) 3. INTRA AORTIC BALLON PUMP 4. CENTRAL MONITORING SYSTEM 5. DEFIBRILLATOR 6. EKG 12 LED 7. TROLLY EMERGENCY 8. VEIN DETECTOR

3RD FLOOR PLAN - NURSE STATION 
 NTS

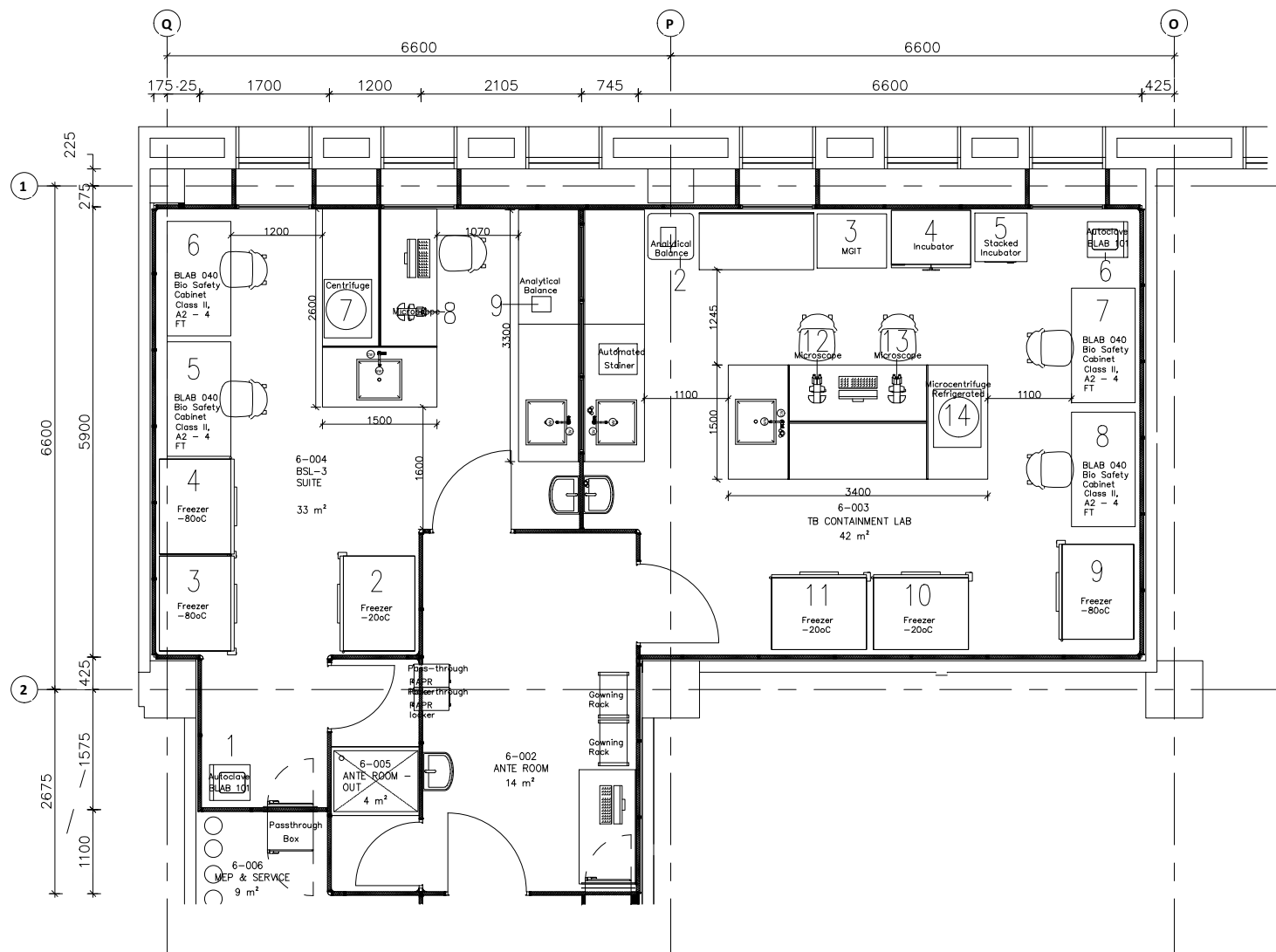
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PROJECT:
 Hospital Hasanuddin University (UNHAS) Makassar Strengthen
 University Teaching Hospital in the Fight against COVID-19
 and Pandemic Preparedness Republic of Indonesia

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EQUIPMENT LAYOUT BSL 3
NTS

EQUIPMENT TB CONTAINMENT LAB (COVID 19 LAB) - (6-003)

POSITION AS PER AS LAYOUT	CODE	DESCRIPTION	QTY	LAYOUT BARU	LAYOUT LAMA
1		AUTOMATED STAINER (TIDAK ADA DALAM LIST)	1	1	
2	BLAB056	ANALYTICAL BALANCE	1	1	2
3		MGIT (TIDAK ADA DALAM LIST)	1	1	
4	BLAB009	INCUBATOR CO2	1	1	
5		STACKED INCUBATOR (TIDAK ADA DALAM LIST)	1	1	
6	BLAB101	AUTOCLAVE	2	1	2
7	BLAB040	BIO SAFETY CABINET CLASS II, A2	1	1	1
8	BLAB040	BIO SAFETY CABINET CLASS II, A2	1	1	
9	BLAB007	FREEZER THERMAL LOW - 80o C	1	1	1
10	BLAB006	FREEZER - 20o C	1	1	
11	BLAB006	FREEZER - 20o C	1	1	
12	BLAB18.2	MICROSCOPE BINOCULAR	1	1	1
13	BLAB18.3	MICROSCOPE TRINOCULAR + PC MONITOR	1	1	2
14	BLAB018	MICROCENTRIFUGE REFRIGERATED	2	1	
15	BLAB042	BIO SAFETY CABINET AEROB	1	1	
16	BLAB042	BIO SAFETY CABINET AEROB	1	1	
17	BLAB055	DENSI CHECK	1	1	
18	BLAB080	DIGITAL PH METER	1	1	
19	BLAB058	EMERGENCY SHOWER & EYEWASH STATION	3	1	
20	BLAB008	FREEZER - 20o C s/d 40o C	1	1	
21	BLAB044	FHUME CABINET	1	1	
22	BLAB009.1	INCUBATOR O2	2	2	
23	BLAB051	REAL TIME THERMAL CYCLER	1	1	
24	BLAB083	REFRIGERATOR SHOW CASE	2	1	
25	BLAB050	THERMAL CYCLER	1	1	
26	BLAB0081	JAR ANAEROBIC	2	1	
27	BLAB012.1	MICROPIPETTE AUTOMATED UNTUK KULTUR	1	1	
28	BLAB012.2	MICROPIPETTE AUTOMATED UNTUK KULTUR	1	1	
29	BLAB012.3	MICROPIPETTE AUTOMATED UNTUK KULTUR	1	1	
30	BLAB012.4	MICROPIPETTE AUTOMATED UNTUK KULTUR	1	1	
31	BLAB054	AUTOMATED IDENTIFICATION AND SUSCEPTIBILITY TESTING SYSTEM	1	1	

EQUIPMENT FOR RESEARCH LABORATORY

NO.	CODE	DESCRIPTION	QTY
1	BLAB057	CUPBOARD FOR ACID AND BLEACH	1
2	BLAB005.1	ELECTROPHORESIS SET	1
3	BLAB005	ELECTROPORATION SYSTEM	1
4	BLAB025	ELISA MULTIPLEXING SYSTEM	1
5	BLAB024	ELISA READER ALL CHANNEL	1
6	KLAB008	ICE MAKER	1
7	BLAB076	IMAGING SYSTEM	1
8	BLAB057	MICROBIOLOGY AIR SAMPLE	1
9	BLAB012.5	MICROPIPETTE AUTOMATED UNTUK BIOMOL	2
10	BLAB012.6	MICROPIPETTE AUTOMATED UNTUK BIOMOL	1
11	BLAB012.2	MICROPIPETTE AUTOMATED UNTUK BIOMOL	2
12	BLAB012.3	MICROPIPETTE AUTOMATED UNTUK BIOMOL	1
13	BLAB012.7	MICROPIPETTE AUTOMATED UNTUK BIOMOL	1
14	BLAB012.4	MICROPIPETTE AUTOMATED UNTUK BIOMOL	2
15	BLAB012	MICROPIPETTE	4
16	BLAB014.1	MICROPLATE INCUBATOR	1
17	BLAB073	MILLICELL DIGITAL CELL IMAGER	1
18	BLAB079	PROTEIN TRANSFER MEMBRANE (SDS PAGE)	1
19	BLAB071	PURIFIED WATER SYSTEM	1
20	BLAB072	SCEPTER HANDHELD AUTOMATED CELL COUNTING	1
21	BLAB009.1	SHAKING INCUBATOR	1
22	BLAB097	SPECTRAMAX MINI AFL MULTI MODE	1
23		PCR PARTIAL RUNNING	

EQUIPMENT BSL 3 SUITE LAB (6-004)

POSITION AS PER AS LAYOUT	CODE	DESCRIPTION	QTY	LAYOUT BARU	LAYOUT LAMA
1	BLAB101	AUTOCLAVE	2	1	2
2	BLAB006	FREEZER - 20o C	0	1	
3	BLAB007	FREEZER THERMAL LOW - 80o C	1	1	3
4	BLAB007	FREEZER THERMAL LOW - 80o C	1	1	
5	BLAB040	BIO SAFETY CABINET CLASS II, A2	0	1	
6	BLAB040	BIO SAFETY CABINET CLASS II, A2	0	1	
7	BLAB011	CENTRIFUGE	1	1	1
8	BLAB18.3	MICROSCOPE TRINOCULAR + PC MONITOR	1	1	
9	BLAB056	ANALYTICAL BALANCE	1	1	
10	BLAB041	BIO SAFETY CABINET CLASS II, B2	1	1	1
11	BLAB052	ddPCR (DROPLET DIGITAL PCR)	1	1	
12	BLAB074	GRADIENT THERMAL CYCLER	1	1	
13	BLAB003	GEL DOCUMENTATION SYSTEM	1	1	1
14	BLAB054	VORTEX	2	1	
15	BLAB078	BLOCK HEATER	1	1	
16	BLAB053	DNA CONCENTRATOR	1	1	
17	BLAB077	LIQUID NITROGEN TANK	1	1	

ANNEX 3: Equipment List

**Lot 1: Equipment - ICU for severe COVID-19
cases/Infectious disease**

Item Code	Item Description	Location	Total Qty	Brand	Model	Major Item (yes/no)	Pre-installation (yes/no)	Delivery, Installation and commissioning required (yes/no)	Technician and User training required (yes/no)	Maintenance Services required during 2 yrs warranty required (yes/no)
INST038	Basic Set Cardiac Surgery	Procedure room	1			Yes	No	Yes	Yes	Yes
BBED006	Bedside Cabinet Standard	ICU Ward	18			No	No	Yes	Yes	Yes
INST039	CABG (Coronary Artery Bypass Grafting) Set Instrument Standard	Procedure room	1			Yes	Yes	Yes	Yes	Yes
BMON001	Central Monitoring System	Nurse station	2			Yes	Yes	Yes	Yes	Yes
BXRY012	Computed Radiographic and Monitor Console (DR)/DIGITAL Radiography Mobile (DR)	Radiology	1			Yes	Yes	Yes	Yes	Yes
BMON016	Defibrillator AED Portables	Nurse station	1			Yes	No	Yes	Yes	Yes
BXRY004	Echocardiograph/Digital Ultrasonography Doppler (USG Jantung)	Nurse station	1			Yes	No	Yes	Yes	Yes
BMON020	ECMO (Upgrade to HLM) (CP5 to S5)	Procedure room	1			Yes	Yes	Yes	Yes	Yes
BMON019-1	Electrocardiograph (ECG) 12 Channel	Nurse station	2			Yes	No	Yes	Yes	Yes
BOTM041	Endoscopic Column with Bronchoscope	Procedure room	1			Yes	Yes	Yes	Yes	Yes
BMON018	Haemodynamic Monitor	ICU Ward	1			No	No	Yes	Yes	Yes
BMON021	Heater Cooler System 3T	Procedure room	1			Yes	No	Yes	Yes	Yes
BBED003	ICU Bed Electric with integrated digital Scale	ICU Ward	18			Yes	No	Yes	Yes	Yes
BWAD016	Instrument Trolley	ICU Ward	25			No	No	No	No	Yes
BIAP004	Intra Aortic Ballon Pump	Nurse station	1			No	No	Yes	No	Yes
BWAD017	Mayo Trolley	ICU Ward	30			No	No	No	No	Yes
BBED011	Overbed Table with spring adjustment	ICU Ward	18			No	No	Yes	Yes	Yes
BWAD030	Oxygen cylinder with Regulator Mobile/Transport	ICU Ward	12			No	No	No	No	Yes
BWAD056	Oxygen flowmeter with Humidifier wall mounted (Connector C&U)	ICU Ward	60			No	No	Yes	No	Yes
BWAD055	Oxygen flowmeter with Humidifier wall mounted (Connector Ohmeda)	ICU Ward	90			No	No	Yes	No	Yes
BMON007	Patient Monitor ICU/ PICU	ICU Ward	18			Yes	Yes	Yes	Yes	Yes
BWAD004	Infusion Pump Volumetric	ICU Ward	60			No	No	Yes	Yes	Yes
BWAD005	Suction Pump Single Jar on mobile stand	ICU Ward	12			No	No	Yes	Yes	Yes
BWAD003	Syringe pump	ICU Ward	50			No	No	Yes	Yes	Yes
BXRY007	Ultrasonograph Digital (USG) - 4 D	ICU Ward	1			Yes	No	Yes	Yes	Yes
BXRY006	Ultrasonograph Digital (USG)- 2D	ICU Ward	2			Yes	No	Yes	Yes	Yes
BEME1010	Vein Detector	Nurse station	3			No	No	Yes	Yes	Yes
BVEN001-1	Ventilator intensive Adult & Child	ICU Ward	5			Yes	Yes	Yes	Yes	Yes

**Lot 2: Equipment - BSL3 laboratory for virology
diagnostics**

Item Code	Item Description	Location	Total Qty	Brand	Model	Major Item (yes/no)	Pre-installation (yes/no)	Delivery, Installation and commissioning required (yes/no)	Technician and User training required (yes/no)	Maintenance Services required during 2 yrs warranty required (yes/no)
BLAB056	Analytical Balance	Laboratory BSL 3, Building A 6fl	2			No	NO	No	Yes	Yes
BLAB101	Autoclave	Laboratory BSL 3, Building A 6fl	2			Yes	Yes	Yes	Yes	Yes
BLAB101.1	Autoclave Microlab	Laboratory Microbiology	2			Yes	No	Yes	Yes	Yes
BLAB054	Automated Identification and Susceptibility Testing System	Laboratory BSL 3, Building A 6fl	1			Yes	Yes	Yes	Yes	Yes
BLAB042	Biosafety Cabinet AEROB	Laboratory BSL 3, Building A 6fl	2			Yes	Yes	Yes	Yes	Yes
BLAB040	Biosafety Cabinet Class II, A2	Laboratory BSL 3, Building A 6fl	2			Yes	Yes	Yes	Yes	Yes
BLAB041	Biosafety Cabinet Class II, B2	Laboratory BSL 3, Building A 6fl	1			Yes	Yes	Yes	Yes	Yes
BLAB078	Block Heater	Laboratory BSL 3, Building A 6fl	1			No	No	Yes	Yes	Yes
BLAB011	Centrifuge (for Blood Bank/ In-vitro)	Laboratory BSL 3, Building A 6fl	1			Yes	No	Yes	Yes	Yes
BLAB057	Cupboard for acid and bleach	Laboratory BSL 3, Building A 6fl	1			No	Yes	Yes	Yes	Yes
BLAB052	ddPCR (droplet digital PCR)	Laboratory BSL 3, Building A 6fl	1			Yes	Yes	Yes	Yes	Yes
BLAB055	Densi Check	Laboratory BSL 3, Building A 6fl	1			No	No	No	Yes	Yes
BLAB080	Digital Ph Meter portable	Laboratory BSL 3, Building A 6fl	1			No	No	No	Yes	Yes
BLAB053	DNA Concentrator (nano drop)	Laboratory BSL 3, Building A 6fl	1			Yes	Yes	Yes	Yes	Yes
BLAB005.1	Electrophoresis set	Laboratory BSL 3, Building A 6fl	1			No	No	Yes	Yes	Yes
BLAB005	Electroporation System	Laboratory BSL 3, Building A 6fl	1			Yes	No	Yes	Yes	Yes
BLAB025	Elisa Multiplexing system	Laboratory BSL 3, Building A 6fl	1			Yes	No	Yes	Yes	Yes
BLAB024	Elisa Reader all channel	Laboratory BSL 3, Building A 6fl	1			No	No	Yes	Yes	Yes
BLAB058	Emergency Shower & Eyewash Station	Laboratory BSL 3, Building A 6fl	3			No	Yes	Yes	Yes	Yes
BLAB044	Fume Cabinet	Laboratory BSL 3, Building A 6fl	1			Yes	Yes	Yes	Yes	Yes
BLAB006	Freezer -20°C	Laboratory BSL 3, Building A 6fl	2			No	Yes	Yes	Yes	Yes
BLAB008	FREEZER -20°C to -40°C	Laboratory BSL 3, Building A 6fl	1			Yes	Yes	Yes	Yes	Yes
BLAB007	Freezer Thermal Low -80	Laboratory BSL 3, Building A 6fl	3			Yes	Yes	Yes	Yes	Yes
BLAB003	Gel Documentation System	Laboratory BSL 3, Building A 6fl	1			Yes	No	Yes	Yes	Yes
BLAB074	Gradient thermal cyler	Laboratory BSL 3, Building A 6fl	1			No	No	Yes	Yes	Yes
BLAB008	Ice Maker	Laboratory BSL 3, Building A 6fl	1			No	Yes	Yes	Yes	No
BLAB076	Imaging System	Laboratory BSL 3, Building A 6fl	1			Yes	Yes	Yes	Yes	Yes
BLAB009	Incubator CO2	Laboratory BSL 3, Building A 6fl	1			Yes	Yes	Yes	Yes	Yes
BLAB009.1	Incubator O2	Laboratory BSL 3, Building A 6fl	2			Yes	Yes	Yes	Yes	Yes
BLAB081	Jar Anaerobic	Laboratory BSL 3, Building A 6fl	2			No	No	No	No	No
BLAB077	Liquid Nitrogen Tank	Laboratory BSL 3, Building A 6fl	1			Yes	No	Yes	Yes	Yes
BLAB057	Microbiology Air Sample	Laboratory BSL 3, Building A 6fl	1			No	No	No	Yes	Yes
BLAB018	Microcentrifuge refrigerated	Laboratory BSL 3, Building A 6fl	2			No	No	Yes	Yes	Yes

Item Code	Item Description	Location	Total Qty	Brand	Model	Major Item (yes/no)	Pre-installation (yes/no)	Delivery, Installation and commissioning required (yes/no)	Technician and User training required (yes/no)	Maintenance Services required during 2 yrs warranty required (yes/no)
BLAB012.1	Micropipette Automated (For Culture Lab)	Laboratory Microbiology	1			Yes	No	No	Yes	Yes
BLAB012.2		Laboratory Microbiology	1			Yes	No	No	Yes	Yes
BLAB012.3		Laboratory Microbiology	1			Yes	No	No	Yes	Yes
BLAB012.4		Laboratory Microbiology	1			Yes	No	No	Yes	Yes
BLAB012.5	Micropipette Automated (For Biomoleculer Lab)	Laboratory Microbiology	2			Yes	No	No	Yes	Yes
BLAB012.6		Laboratory Microbiology	1			Yes	No	No	Yes	Yes
BLAB012.3		Laboratory Microbiology	2			Yes	No	No	Yes	Yes
BLAB012.2		Laboratory Microbiology	1			Yes	No	No	Yes	Yes
BLAB012.7		Laboratory Microbiology	1			Yes	No	No	Yes	Yes
BLAB012.4	Laboratory Microbiology	2			Yes	No	No	Yes	Yes	
BLAB012	Micropipette automated	Laboratory BSL 3, Building A 6fl	4			No	No	Yes	Yes	Yes
		Laboratory BSL 3, Building A 6fl								
		Laboratory BSL 3, Building A 6fl								
		Laboratory BSL 3, Building A 6fl								
		Laboratory BSL 3, Building A 6fl								
		Laboratory BSL 3, Building A 6fl								
		Laboratory BSL 3, Building A 6fl								
BLAB014.1	Microplate Incubator	Laboratory BSL 3, Building A 6fl	1			Yes	No	Yes	Yes	Yes
BLAB018.2	Microscope Binocular	Laboratory BSL 3, Building A 6fl	1			Yes	No	Yes	Yes	Yes
BLAB018.3	Microscope Trinocular + PC Monitor	Laboratory BSL 3, Building A 6fl	2			Yes	Yes	Yes	Yes	Yes
BLAB073	Millicell Digital Cell Imager	Laboratory BSL 3, Building A 6fl	1			No	No	Yes	Yes	Yes
BLAB079	Protein Transfer Membrane (SDS page)	Laboratory BSL 3, Building A 6fl	1			Yes	Yes	Yes	Yes	Yes
BLAB071	Purified Water System	Laboratory BSL 3, Building A 6fl	1			Yes	Yes	Yes	Yes	Yes
BLAB051	Real time Thermal Cycler	Laboratory BSL 3, Building A 6fl	1			Yes	No	Yes	Yes	Yes
BLAB083	REFRIGERATOR SHOW CASE (FOR LAB 2-8)	Laboratory BSL 3, Building A 6fl	2			No	No	Yes	Yes	Yes
BLAB072	Handheld Automated Cell Counting	Laboratory BSL 3, Building A 6fl	1			No	No	Yes	Yes	Yes
BLAB021	Shaking Incubator	Laboratory BSL 3, Building A 6fl	1			No	No	Yes	Yes	Yes
BLAB097	Mini Multi-mode microplate reader	Laboratory BSL 3, Building A 6fl	1			Yes	Yes	Yes	Yes	Yes
BLAB050	Thermal cycler PCR partial running	Laboratory BSL 3, Building A 6fl	1			Yes	Yes	Yes	Yes	Yes
BLAB054	Vortex	Laboratory BSL 3, Building A 6fl	2			No	Yes	Yes	Yes	Yes

ANNEX 4: Draft Maintenance Contract

Comprehensive Maintenance and Service Contract Form

No.-CS

Comprehensive Maintenance and service contract hereinafter referred to as "Contract" dated,,

Between

.....

hereinafter referred to as "THE SUPPLIER", on the one part, and

[Purchaser's name]

[Contact information]

_____ having its principal place of business at _____ (hereinafter "the Purchaser"), represented by _____, acting on the basis of the Charter.

hereinafter referred to as "PURCHASER" on the other part.

WHEREAS Purchaser is desirous to have maintained equipment as specified in the Tender Documents The Supplier has agreed to render such maintenance services for 2 years (24 months) after the warranty period of the complete equipment and instruments for a guaranteed Uptime of minimum 98%.

NOW THEREFORE IT IS AGREED BY AND BETWEEN THE PARTIES HERETO AS FOLLOWS:

1. SCOPE

1.1 Planned Maintenance Service.

The supplier will provide the Purchaser a planned maintenance schedule for the complete equipment and instruments. The Supplier will provide such planned maintenance during the Service Coverage hours (as defined in the agreement) at a time that is mutually agreed upon. The Purchaser will make the Covered System available in accordance with this schedule. The Supplier or its subcontractors will provide planned maintenance on the Covered System at scheduled intervals. If the Supplier cannot access the Covered System, or the Covered System was not made available for planned maintenance when scheduled, the Supplier will notify the Purchaser that the Purchaser has 90 days to make the Covered System available for planned maintenance.

1.2 Repair Service.

Commencing on the Effective Date and subject to the repair limitation below, the Supplier or Supplier's subcontractors will provide repair services for the Covered System. The Supplier will provide all replacement parts, which may be refurbished, and labor necessary to repair the Covered System, unless excluded. All components used are subject to Supplier inspection and quality control procedures, and shall be warranted to the same extent that a non-refurbished component is warranted. Parts removed for replacement become the property of the Supplier and the Supplier shall remove parts from the System Site. The Supplier may increase its contract prices if the System is upgraded or reconfigured.

1.3 Software Updates.

The Supplier will install operating system software updates provided by the Original Equipment Manufacturer (OEM) for the Covered System. Software updates mean revisions to OEM proprietary operating system software that enhance existing System functions and operation without hardware changes, but will not install operating system software upgrades to new software platforms or software options offered separately for sale by the OEM.

2. INCLUSIONS

The Services do include providing or paying the cost of:

- 2.1 Third-party products, if part of the equipment and instruments supplied;

- 2.2 Spare parts and consumables for the maintenance services such as Chemicals (detergents, disinfectants, test strips etc.), consumables for pre-cleaning and reprocessing, incl. the potential shipping cost and customs clearance.

3. EXCLUSIONS

Unless specifically included in this Agreement, the Services do not include providing or paying the cost of:

- 3.1 Any rigging or structural alteration incident to the Services;
- 3.2 General consumable items and supplies (not applicable for maintenance services), film, batteries, cassettes;
- 3.3 Cosmetic repairs;
- 3.4 Factory reconditioning, rebuilds, or overhauls if repairs cannot maintain the equipment in satisfactory operating condition;
- 3.5 Disposing hazardous, infectious, or biomedical waste or materials;
- 3.6 Damages caused by fire, accident, misuse, abuse, negligence (other than Suppliers' negligence), improper application or alteration or by any other incident outside the Suppliers' control or by the Purchaser's failure to operate the equipment in accordance with the manufacturer's instructions or to maintain the recommended operating environment and line conditions;
- 3.7 Defects due to unauthorized attempts to repair, relocate, maintain, service, add to or modify the equipment by the Purchaser or any third party or due to the attachment and/or use of non-supplier supplied parts, equipment or software without Suppliers' prior written approval;
- 3.8 Which failed due to causes from within non-supplier supplied equipment, parts or software including but not limited to problems with the Purchaser's network;
- 3.9 Waiting periods the Supplier is not responsible for; or
- 3.10 Defects due to any repair or service of the equipment by the Purchaser or any third party prior to the commencement of the term of this Agreement.

4. PERIOD OF MAINTENANCE

- 4.1 It is understood that this agreement is the extension of the warranty period (24 months), i.e. the total minimum time of warranty and comprehensive maintenance thereafter together will cover 48 months with a guaranteed uptime of at least 98%;
- 4.2 After the check of the system by authorized representative of the Supplier, Services will be provided and the full functionality of the system will be confirmed by the Supplier;
- 4.3 The Contract shall last for a period of two (2) years from the date the warranty expires and shall be subject to the timely fulfillment by the Purchaser of his obligations under the Contract, in particular the payment obligations specified in the delivery contract;
- 4.4 The Supplier shall render its services with due diligence.

5. RESPONSIBILITIES OF THE SUPPLIER

5.1 Uptime Guarantee

The Supplier shall provide to the Purchaser the uptime guarantee specified below on the equipment and instruments as having uptime as an entitlement ("Uptime System"). Uptime System does not include peripherals, such as external printers, archiving devices, external display monitors, or attached cameras.

If an item of Uptime System fails to achieve the Uptime Percentage (as defined below) set forth in the schedule below, then the Purchaser, as its sole and exclusive remedy, will receive a discount of future Agreement payment(s), as described below.

5.2 Definitions:

- a. Measurement Period: The measurement period for determining Uptime Percentage is 12 months beginning on the effective date of the Agreement and thereafter on the annual anniversary date of the effective date.
- b. Base Hours means the hours/day and days/week over which Uptime Hours and Downtime will be calculated during the Measurement Period. The Base Hours will be the contracted hours of coverage provided for under the Agreement for each particular piece of Uptime System.

- c. Downtime means the time that the Uptime System is unable to produce diagnostic images during the Base Hours of any given Measurement Period solely due to Supplier design, manufacturing, materials, or Service performance failure. Measurement of Downtime commences when the Purchaser notifies the Supplier Purchaser service centre that the Uptime System is unable to produce diagnostic images. Downtime does not include time due to planned maintenance service, cryogen replenishment, installation of upgrades and updates, x-ray tube replacement, or an occurrence or condition excluded under the Agreement. The Supplier may verify Downtime and adjust calculations accordingly.
- d. Uptime Hours are determined by subtracting the total Downtime from the Base Hours for a particular piece of Uptime System [Uptime Hours = Base Hours - Downtime].
- e. Uptime Percentage is determined by dividing the Uptime Hours by the Base Hours, and multiplying the result by 100 [Uptime Percentage = (Uptime Hours/Base Hours) x 100].

5.3 Adjustment schedule:

If the Uptime Percentage specified in Schedule is not achieved for Uptime System then the specified discount will be applied to all payments due during the next Uptime Measurement Period for the Uptime System that did not achieve the Uptime Percentage Schedule: Agreement Payment Adjustment Schedule for Uptime System.

99% Uptime Guarantee		97% Uptime Guarantee		95% Uptime Guarantee	
Uptime Percentage	Discount	Uptime Percentage	Discount	Uptime Percentage	Discount
99% - 100%	none	97% - 100%	none	95% - 100%	none
96% - 98,9%	5%	94% - 96,9%	5%	92% - 94,9%	5%
93% - 95,9%	10%	91% - 93,9%	10%	89% - 88,9%	10%
<92,9%	15%	<90,9%	15%	<88,9%	15%

5.4 Uptime Percentage determination:

The Uptime Percentage is determined according to the following formula: Uptime Percentage = (Uptime Hours/Base Hours) x 100. Below are examples of how Uptime Percentage is determined:

Measurement Example 1

Base Hours = 8 AM to 5 PM Monday through Friday over the 12 month Measurement Period.

9 hours x 5 days x 52 weeks = 2,340 Base Hours

2,340 Base Hours - 60 Downtime hours = 2,280 Uptime Hours

$(2280 / 2340) * 100 = 97.4\%$ Uptime Percentage

Measurement Example 2

Base Hours = 8 AM to 9 PM Monday through Friday over the 12 month Measurement Period.

13 hours x 5 days x 52 weeks = 3,380 Base Hours

3,380 Base Hours - 60 Downtime hours = 3,320 Uptime Hours

$(3320 / 3380) * 100 = 98.2\%$ Uptime Percentage

5.5 Time not counted as downtime and which therefore does not constitute a violation of the uptime guarantee:

- a. Preventive Maintenance defined as any service recommended for the equipment as per the relevant manufacturer's specifications;
- b. Installation of hardware and software updates;
- c. Implementation of any equipment updates;
- d. Preventive replacement and replacement of defective wearing parts, such as tubes, shock tubes, cables, batteries, coolants, gases and fluids;
- e. Scheduled remedy of partial failures and impairments, facilitating restricted use of the system;
- f. Elimination of malfunctions and damage resulting from incorrect operation;
- g. Extraordinary contamination;

- h. Waiting time for customs clearing;
- i. Exclusions under clause Exclusions;
- j. If the equipment is down due to, associated with, or caused by
 - (i) misuse, negligence, or operator error,
 - (ii) inadequate environmental conditions (not conforming with the environmental specifications provided by the Supplier), including temperature and humidity, line power exceeding the suppliers requirements of voltage, frequency, impulses or transients.

6. REPORTING

- 6.1 Uptime Percentage performance reports will be provided at the Purchaser's request for any Measurement Period while the Uptime Guarantee remains in effect. To receive any applicable discount, the Purchaser must notify the Supplier in writing that the Uptime Percentage was not achieved for a particular system within 60 days after the end of a Measurement Period.
- 6.2 A maintenance report has also to be issued for all corrective maintenance carried out between the normal planned maintenance visits. This report has to be signed by the medical workshop staff of the hospital.
- 6.3 The Supplier is required to keep a logbook for the chronological documentation of equipment-related events such as validation and qualification work, calibration, equipment cleaning, preventive maintenance and repairs and unexpected events/deviations for equipment and utilities.

7. THE WARRANTY DISCLAIMER

- 7.1 The Supplier's full Uptime Guarantee obligations to the Purchaser are described in this Exhibit. The Supplier provides no warranties under this Uptime Guarantee.

8. THE SUPPLIER'S LIABILITY

- 8.1 The Supplier's total liability, if any, and the Purchaser's exclusive remedy with respect to the Uptime Guarantee and Supplier performance hereunder is limited to the remedies stated herein.
- 8.2 The Supplier's entire liability and the Purchaser's exclusive remedy for any direct damages incurred by the Purchaser from any cause whatsoever, and regardless of the form of action, whether liability in contract or in tort, arising under this Agreement or related hereto, shall be per year limited to the value of fees payable under this Agreement over a period of one year.
- 8.3 The foregoing limitation of liability shall not apply to claims by the Purchaser or third parties for bodily injury or damage to real property or tangible personal property caused solely and directly by the gross negligence or willful misconduct of the Supplier.
- 8.4 In addition, the Supplier shall have no liability hereunder to the Purchaser to the extent that the Purchaser's or any third party's acts or omissions contributed in any way to any loss it sustained or to the extent that the loss or damage is due to a force majeure occurrence or any other cause beyond the reasonable control of the Supplier.
- 8.5 In no event will the Supplier be liable for any loss of profit, loss of savings, loss of revenues, loss of data or for any indirect, punitive or consequential damages whether based on contract or tort (including negligence), strict liability or any other theory of law.

9. OBLIGATIONS OF PURCHASER

- 9.1 The Purchaser will provide the Supplier with both on-site and remote access to the equipment.
- 9.2 For onsite access, Supplier service personnel will be given full and free access to the equipment to perform inspections and service/maintenance on the Purchaser's premises, and will make specific appointments for such maintenance. If the equipment is not made available at the appointed time, waiting time beyond a reasonable time will be charged at the Suppliers' per-call rates and terms then in effect.
- 9.3 The Purchaser agrees to allow connection to the Supplier's remote service diagnostic equipment, where available, for the equipment covered by this Agreement. Supplier Remote Service is required for RS-capable systems.
- 9.4 The Purchaser shall take care for the "routine operator maintenance" of the system in accordance with the operation manuals and instructions given by the Supplier. The Purchaser shall ensure that its staff is properly trained to use the system and shall handle and operate the system carefully and guard against damage, especially by climatological influences, humidity, dust etc.

- 9.5 The Purchaser shall immediately report any breakdown or unsatisfactory operation of the equipment to the Supplier and shall not make any additions or modifications to the system without written approval from the Supplier.

10. CONTRACT PRICE

- 10.1 The remuneration for the first two (2) years after pre-commissioning is covered through the Supply Contract.
- 10.2 For the following two (2) years, _____ will be paid according to the Payment terms stated in Clause 11.
- 10.3 The Contract price is net and exclusive of any taxes, duties or charges which might be levied in the Republic of Indonesia in connection with the signing and carrying out of this contract.

11. PAYMENT

- 11.1 The Comprehensive Maintenance Contract starts with the end of the warranty period and has a duration of two (2) years.
- 11.2 Full payment for the maintenance period (after warranty) will be made after submission of the pre-commissioning certificate against the advance payment bond and the submission of the document issued by all relevant manufacturers involved in supplying the equipment in this bid; confirming that "back-to-back" contracts have been established between the Supplier (the supplier) and all relevant manufacturers.
- 11.3 The advance payment bond will be reduced by 50% at the end of the first year of the maintenance period. At the end of the second year maintenance period and after submitting the signed confirmation checklists, the supplier gets his maintenance bond back.

12. TITLE TO SOFTWARE, SERVICE MANUALS AND CONFIDENTIALITY

- 12.1 Software and service manuals made available under the Contract shall not become the property of the Purchaser, however, the Purchaser shall be granted the non-exclusive right of use of the software and service manuals respectively.
- 12.2 The Purchaser is not authorized to reproduce, modify or supplement the software and service manuals, unless for own software back-up purposes in direct connection with the system for which the software was made available.
- 12.3 The Purchaser shall not divulge or make available in any manner such software or service manuals to any third party without the Supplier's previous written consent.

13. FORCE MAJEURE

- 13.1 In the event of the occurrence of force majeure the party affected by such force majeure shall be entitled to suspend the execution of the Contract for the duration of the prevention or delay caused by such force majeure without being held responsible for any damages resulting therefrom.
- 13.2 Said party shall inform the other party as soon as possible of the occurrence of such force majeure circumstances.
- 13.3 In the event of the period of prevention or delay caused by force majeure having lasted for a period exceeding three consecutive months, the Supplier shall be entitled to terminate the Contract without being held responsible to any indemnity whatsoever nature towards the Purchaser, other than reimbursement of a reasonable part of the Contract Price.
- 13.4 Barring the event of termination as per sub-clause 13.3 above, when the state of force majeure has ended the Supplier shall at the request of the Purchaser appraise the condition of the system and execute any maintenance or repair work necessary at the Purchaser's expense, after which the Contract will restore (recommence).
- 13.5 The expression "force majeure" shall mean and include any happening or event beyond any party's reasonable control in consequence of which such party cannot execute or cannot reasonably be required to execute its obligations.
- 13.6 Such circumstances include but are not restricted to: natural disasters, civil war, insurrection, fires, floods, strikes, epidemics, government regulations, freight embargoes, non-availability of permits, licenses and/or authorizations required, non-availability of transit.

14. OPERATION, LAW AND ARBITRATION

- 14.1 The Contract shall enter into force on the date of signature thereof and shall remain in force until the end of the period of maintenance services as specified in Clause 4 (Period of Maintenance) of the Contract.
- 14.2 If either party fails to fulfill its obligations pursuant to the Contract and such breach has not been remedied within 60 days from the written notice of such breach, the other party may forth with terminate the Contract by notice in writing or by telegram without being held responsible to any indemnity whatsoever nature towards the party in breach.
- 14.3 Such termination shall be without prejudice to any rights or claims of each party for payment due pursuant to the provisions of the Contract or for damages.
- 14.4 Unless otherwise specified in the Contract, the Contract shall be governed and constructed in accordance with laws being in force in the Republic of Indonesia.
- 14.5 Place of jurisdiction shall be Jakarta, Republic of Indonesia.

15. ENTIRE CONTRACT

- 15.1 This Contract constitutes the sole and entire agreement between the parties hereto relating to the subject matter hereof, and cancels all previous Contracts, negotiations, commitments and/or representations made between the parties hereto either oral or in writing.
- 15.2 No amendments or modifications to this Contract shall be valid or binding up on the parties unless made in writing and signed on behalf of each of the parties by its respective duly authorized representative. This applies also to the waiver of this condition.

For the Purchaser

Signed _____

XXX

For the Supplier

Signed _____

XXX