

#### PROCUREMENT OF: SUPPLY, DELIVERY, INSTALLATION, COMMISSIONING, TESTING AND TRAINING, ON USE AND MAINTENANCE OF BIOMEDICAL EQUIPMENT

#### OCBI/LCB No: MOH/EAKIP/ICB/001/2021-2022 Project: EAST AFRICA'S CENTERS OF EXCELLENCE FOR SKILLS AND TERTIARY EDUCATION IN BIOMEDICAL SCIENCES Purchaser: MINISTRY OF HEALTH Country: KENYA Issued on: 19TH APRIL, 2022

**TENDER CLARIFICATIONS** 

# **CLARIFICATION 1:**

# ITB 19.1 Bid Security

Kindly confirm that this bond will be accepted in the equivalent amount in a freely convertible currency like Euro or US Dollar.

# <u>RESPONSE</u>

#### Refer to ITB 19.1 in the Bid data sheet (BDS).

#### **CLARIFICATION 2:**

Kindly confirm that in conformity with point 17.3 of the Conditions of contract, the purchaser will provide exemption from Customs Duty and Import/sales taxes (VAT, etc.) and the Supplier will be responsible only for the costs associated with Customs Clearance.

#### <u>RESPONSE</u>

#### The project is exempt of all duties and taxes.

#### **CLARIFICATION 3:**

| Δc | ner ITR 7 1 | of Tender | document we | seek tender | clarification | as follows. |
|----|-------------|-----------|-------------|-------------|---------------|-------------|
| AS |             | or render | docoment we | seek lender | claincanon    | us ionows.  |

| Tender Reference  | Tender<br>Specification  | Requested<br>Clarification<br>Request  | CLARIFICATION<br>BY MOH  |
|---|--|--|--|
| LOT 1-1 MAGNETIC RESON<br>(MRI) 1.5 T Complete with                               | IANCE IMAGING<br>n injector pump.  |  |  |
| Technical specifications<br>- MAGNET SYSTEM                                       | 1. Should state<br>the magnet<br>length preferred<br>Ultrashort 1.4 M  | To allow all vendors<br>to participate in<br>this tender the<br>Ultrashort should be<br>at least 1.8M                  | The preferred<br>magnet length<br>is1.4M.  |
| Technical specifications<br>- <b>RF SYSTEM</b>                                    | 1. System should<br>be fully digital<br>with transmit<br>power of at least<br>18 Kw                            | To allow all vendors<br>to participate on<br>the tender the RF<br>system transmit<br>power should be at<br>least 15 Kw | The required RF<br>system should be<br>approximately<br>18Kw.                                |
| Technical specifications -<br><b>RF Coils (How many coils</b><br><b>are part)</b> | 7. Phased Array<br>Body coil,<br>capable of<br>doing abdomen,<br>pelvic, MRCP<br>and peripheral<br>imaging. It | For system you<br>have requested<br>that is 70 cm bore<br>size , head and<br>neck should be at<br>least 20 elements    | The required MRI<br>is largely for<br>abdomen and<br>pelvic<br>examinations as<br>a minimum. |

|   | should have at<br>least 12 elements<br>and 45 cm FOV<br>should be<br>achievable.  |  |  |
|---|---|--|--|
| Technical specifications -<br>RF Coils (How many coils<br>are part)   | 8. Flexible Coil -<br>Large for<br>imaging of large<br>regions such as<br>shoulder, hip<br>and knee etc.<br>9.Flexible Coil -<br>small for imaging<br>of small regions<br>such as<br>shoulders, wrist,<br>elbow and ankle<br>15. Bilateral<br>Breast Coil,<br>specify type and<br>channel | <ul> <li>8. For the system<br/>you have</li> <li>requested 70 cm</li> <li>bore size head and</li> <li>neck should be at</li> <li>least 12 elements</li> <li>9. The element is</li> <li>not specific, we</li> <li>advise you at least</li> <li>16 elements</li> <li>15. The element it is</li> <li>not specific, it</li> <li>should be at least 8</li> <li>element</li> </ul> | The required MRI<br>is largely for<br>abdomen and<br>pelvic<br>examinations as<br>a minimum. |
| Technical<br>Specifications- Host<br>Computer /Main Console<br>and Image Processor<br>(Consideration for RIS and<br>PACS) | 1. Computer<br>system should be<br>latest in the<br>industry, fast and<br>efficient. It<br>should have at<br>least 16GB RAM.  | Our experience<br>shows that 16GB<br>RAM will not<br>function efficiently<br>so it is best to use<br>at least 64 GB RAM  | 16GB RAM is the minimum.   |
| Technical<br>Specifications- Host<br>Computer /Main Console<br>and Image Processor<br>(Consideration for RIS and<br>PACS) | 4. The<br>reconstruction<br>speed should be<br>at least 800<br>images per sec<br>or more for a full<br>FOV 256 matrix<br>and the image<br>processor should<br>have high RAM<br>capacity of at<br>least 16 GB for<br>faster processing   | From our<br>experience 800<br>image per sec is<br>not sufficient, this<br>should be at least<br>40,000 image per<br>sec  | The specs stated<br>are minimum.   |

| Technical<br>specifications- Workstation<br>and documentation | 7. Processing of<br>Real Time BOLD<br>imaging data<br>sets for color<br>overlay of<br>functional and<br>anatomic data,<br>if not available<br>on the console<br>should<br>be quoted<br>here. It should<br>be possible to<br>have Real Time<br>BOLD image<br>processing for<br>the complete<br>brain.                                 | This specification is<br>misplaced<br>because Real time<br>FMRI should be<br>performed on 3 T<br>MRI.  | The specs will be<br>deleted.  |
|---|--|--|--|
| LOT 1-8 DIGITAL X-RAY SYST<br>FLOUROSCOPY                     | EM WITH  |  |  |
|   | For X-ray with<br>fluoroscopy:   | Fluoroscopy system<br>is floor mounted<br>yet the<br>specifications are<br>for a ceiling<br>mounted and for a<br>general x-ray<br>system.      | Please indicate<br>that in the<br>responses to the<br>specifications<br>with a<br>justification. |
| LOT-1-6 FULLY LOADED 256 COMPLETE WITH INJECTOR P             | CT SCANNER<br>UMP  | ,  |  |
| Technical<br>specifications- <b>GANTRY</b>                    | 4. At least 40 mm<br>detector with<br>256 or more<br>acquisitions<br>should be<br>available. The<br>system should be<br>in position to<br>perform 256<br>acquisition<br>Slices/ Rotation<br>for general,<br>cardiac/vascular<br>applications.<br>(Specify the<br>submillimeter<br>slice thickness<br>0.3 mm) pending<br>confirmation | Submillimeter slice<br>thickness of 0.3mm<br>is manufacturer<br>specific and should<br>be changed to at<br>least a slice<br>thickness 0.625mm. | The submillimeter<br>should be<br>approximately<br>0.3mm.  |

# **CLARIFICATION 4:**

1. LOT 2 Item 1. Bedhead Units (4 No.13A socket outlets, Medical Gases- oxygen, Vacuum, (Examination lights)

The tender document reads as follows.

"LOT 2- 1 Bedhead Unit Units (BHU) (O $_2$ , MA, VAC, N $_2$ O in different and respective rooms as listed."

However, there are no listed rooms. There appears to be missing information on the quantities of services in each of the items for Lot 2, namely, the amount of medical gas outlets, and electrical sockets, for example,

Without the quantities of length of the Bed head trunking, or medical gas outlets, electrical sockets, nurse call cut outlets it is difficult to come up with an offer.

# **RESPONSE**

#### LOT 2 has been canceled from the list.

#### **CLARIFICATION 5:**

Further, we are requesting 7 days' extension of the tender closing date as we wait for your response.

# **RESPONSE**

# The tender closing date is 2<sup>nd</sup> June 2022 as stated in the advert, and there will be no extension

#### **CLARIFICATION 6:**

No manufacturer can provide a single platform to run all the assays. They are requesting to quote three different platforms.

#### **RESPONSE**

| OE                                     | SERVATION MADE  | CLIENT CLARIFICATION   |
|--|---|--|
| Thi<br>ap<br>pro-<br>are<br>plo<br>the | is is to let you know that the assays as they<br>opear in the tender, no manufacturer can<br>ovide a single platform to run all the assays. We<br>e therefore requesting to quote three different<br>atforms that will do all the assays requested in<br>e tender as shown below. | The client requires a<br>workflow that provides a<br>seamless end-to-end<br>solution. Therefore, bidders<br>should offer a solution that<br>is in line with the client's |
| PL.                                    |   | requirements   |
| PL.                                    | ATFORM B  |  |

# **CLARIFICATION 7:**

For Lot 2, with regard to the Pendant, on all the drawings it says 'ceiling to slab dimension to be confirmed'. We really need to know if the ceiling height is high enough for a standard pendant or if it is a low ceiling. Otherwise, we would have to assume that it is a 'normal' ceiling height. What are the dimensions?

#### **RESPONSE**

The height from the floor to the ceiling is 3.9M and slab to slab is 4.95M.

#### **CLARIFICATION 8:**

What is the quantity needed for the Microtome?

#### **RESPONSE**

The quantity required is one (1).

#### **CLARIFICATION 9:**

LOT 5-3 Clarify if whether its capillary electrophoresis unit or gel electrophoresis unit?

#### **RESPONSE**

In protein electrophoretic machine the required is the capillary electrophoresis unit not the gel electrophoresis unit.

#### **CLARIFICATION 10:**

LOT 5- (13,14,15,16,17,18) For T100 compact thermocycler, is it the thermocycler to be supplied or a similar model?

#### **RESPONSE**

To supply to the equivalent.

#### **CLARIFICATION 11:**

LOT 3 (3-17) Histopathology workflow ITEM 7- Hybrid system processor the quantity has not been given and has not been listed under item in LOT 7.

#### **RESPONSE**

The hybrid system processor quantity is zero thus not listed.

#### **CLARIFICATION 12:**

ITB 14.6

i) Prices shall be quoted for each lot (contract) item by item and shall correspond at least to a One Hundred [100%] percent of the items specified for each lot (contract).

ii) Prices quoted for each item of a lot shall correspond at least to One Hundred [100%] percent of the quantities specified for the respective item of a lot.

The lots in the bid comprise of different products, some which are not within our portfolio hence restricting us from participating in the process. We kindly request if this can be reviewed and prices quoted for each item and **NOT** Lot.

# **RESPONSE**

The bids are in LOTs which will require bidding for 100% of the items in the LOT. Refer to ITB 14.6 in the Bid Data Sheet (BDS)

# **CLARIFICATION 13:**

LOT 5-7, Kindly provide us with BOQs and the room size for the cold room and also clarify if there will be need for shelving and the sizes.

# RESPONSE

# The Coldroom is to be supplied and installed as per the specifications below.

| Item Code No. |  | Departmen<br>t | Section   | Item<br>Description |  |  |
|---------------|--|----------------|---|---------------------|--|--|
| LOT 5-7       | ,  | Diagnostic     | Clinical Chemistry and                                    | Cold Room           |  |  |
|               |  | Laboratories   | Immunology  |                     |  |  |
| 1. Gene       | eral Description                           |                |   |                     |  |  |
|               |  |                |   |                     |  |  |
|               | Cooler                                     |                |   |                     |  |  |
| Clause        | Description                                | Sub clause     | Technical Particulars                                     |                     |  |  |
|               |  | 1.1.           | Walk-in Cold rooms are required to store for              |                     |  |  |
|               | Description of<br>Function and<br>capacity |                | a long-term duration of a lar                             | ge quantity of      |  |  |
| 1             |  |                | reagents at a temperature between $+2 \text{ deg to } +8$ |                     |  |  |
| 1.            |  |                | deg C.  |                     |  |  |
|               |  | 1.2.           | Typical gross internal volume should be 15                |                     |  |  |
|               |  |                | cum   |                     |  |  |
|               |  | 2.1.           | To be constructed of prefabricated, modular               |                     |  |  |
|               |  |                | complete with floor and ceiling panels,                   |                     |  |  |
|               |  |                | mounted on a flat, solid concret                          | e base.             |  |  |
| 2             | Operational                                | 2.2.           | The cold room should be equip                             | pped with two       |  |  |
| Ζ.            | Requirements                               |                | completely independent refrige                            | ration systems.     |  |  |
|               |  |                | One of these will remain as star                          | ndby.               |  |  |
|               |  | 2.3.           | Each refrigeration system must                            | be provided with    |  |  |
|               |  |                | it respective separate:                                   |                     |  |  |

LOT 5-7 Cold Room

| Item Co                     | de No.       | Departmen                                    | Section  | Item               |  |
|-----------------------------|--------------|--|--|--------------------|--|
|                             |              | t<br>Diagnostic                              | Clinical Chemistry and   | Cold Room          |  |
| LOT 5-7                     |              | Laboratories                                 | Immunology   | Cold Room          |  |
|                             |              |  | a) condensing unit.  |                    |  |
|                             |              |  | b) evaporator unit.  |                    |  |
|                             |              |  | c) refrigeration unit,   |                    |  |
|                             |              |  | d) electronic controls,  |                    |  |
|                             |              |  | e) pipe work and   |                    |  |
|                             |              |  | f) other necessary control                                       | instrumentation,   |  |
|                             |              |  | to ensure proper operation of ea                                 | ich respective     |  |
|                             |              |  | Refrigeration system.  |                    |  |
|                             |              | 2.4.   | Provide additional control whic                                  | h permits          |  |
|                             |              |  | simultaneous operation of both                                   | refrigeration      |  |
|                             |              | 2.5  | systems in case of emergency.                                    |                    |  |
|                             |              | 2.5.   | I here should be manual & auto                                   | omatic switchover  |  |
|                             |              |  | electrical control   | ostatic or         |  |
|                             |              | 2.6.   | There should be programmable                                     | automatic          |  |
|                             |              |  | operational duty cycle for the switch over to th                 |                    |  |
|                             |              |  | standby refrigeration system.                                    |                    |  |
|                             |              | 2.7. Depending upon the internal room layout |  | om layout and      |  |
|                             |              |  | the room location, refrigeration units may be                    |                    |  |
|                             |              |  | one of the following types:                                      |                    |  |
|                             |              |  | • Wall-mounted with the condenser unit                           |                    |  |
|                             |              |  | discharging inside the building that houses                      |                    |  |
|                             |              |  | • Wall mounted with weatherproof                                 |                    |  |
|                             |              |  | • Wall-mounted with weat   | herproof           |  |
|                             |              |  | condenser units located e  | xternally as close |  |
|                             |              |  | (weatherproof split system                                       | m).                |  |
|                             |              |  | Wall-mounted with cond   | enser units        |  |
|                             |              |  | located in a separate ven  | tilated enclosure  |  |
|                             |              |  | mounted as close as poss   | ible to the        |  |
|                             |              |  | evaporator units (split sys                                      | stem).             |  |
| 3. Technical Specifications |              |  |  |                    |  |
| 3.1.1                       |              | 3.1.1.                                       | +2 deg to +8 deg C adjustable                                    |                    |  |
| _                           | Internal     |  | (i) during 43 deg C continu                                      | ous ambient        |  |
| 3.1.                        | Temperature: |  | (ii) 32 deg continuous ambi                                      | ent                |  |
|                             |              |  | (iii)45/05 deg C day/night c                                     | ycling             |  |
|                             |              | 2.0.1  | temperatures   | a mada from        |  |
|                             |              | 3.2.1.                                       | wall and roof panel skins can be<br>staipless steel of Grade 204 | e made from        |  |
| 3.2.                        | Panels:      | 3 2 2  | Outer and inner Panels:  |                    |  |
|                             |              | 5.2.2.                                       |  |                    |  |

| Item Co | de No.     | Departmen    | Section  | Item                |  |
|---------|------------|--------------|--|---------------------|--|
|         |            | Diagnostic   | Clinical Chemistry and   | Cold Room           |  |
| LOT 5-7 |            | Laboratories | Immunology   | Cold Room           |  |
|         |            |              | Powder coated, made of galvanized steel panel  |                     |  |
|         |            |              | double wall having minimum t   | hickness            |  |
|         |            |              | 22 SWG each.   |                     |  |
|         |            | 3.2.3.       | Panels must be fully insulated a   | and without         |  |
|         |            |              | internal structural members or s   | stiffeners          |  |
|         |            |              | between the skins.   |                     |  |
|         |            | 3.2.4.       | Tongued and grooved joints between panels mu<br>be designed to minimize cold bridging. |                     |  |
|         |            |              | be designed to minimize cold b   | ridging.            |  |
|         |            | 3.2.5.       | Gaskets must be resistant to dar   | mage from oil,      |  |
|         |            |              | fats, water, and detergents.   |                     |  |
|         |            | 3.2.6.       | After assembly, all joints must  | be mastic sealed    |  |
|         |            |              | on the interior side to ensure an  | r- tightness.       |  |
|         |            | 3.2.7.       | Roof panels with an overall len  | gth of 6 metres or  |  |
|         |            | 220          | less must be self-supporting.  |                     |  |
|         |            | 3.2.8.       | Modular panel-Easily assemble  | d and dissembled.   |  |
|         |            | 3.2.9.       | Double action cam-lock assembly/panel  |                     |  |
|         |            |              | interlocking, for perfect seal.  |                     |  |
|         |            | 3.2.10.      | No screws or panel cover strips.   |                     |  |
|         |            | 3.2.11.      | Have airtight seals between cor  | densing unit and    |  |
|         |            |              | wall.  | -                   |  |
|         |            | 3.2.12.      | Have airtight seals around all p   | ipe and cable       |  |
|         |            |              | penetrations through wall and/o  | or roof panels.     |  |
|         |            | 3.3.1.       | CFC-Free Urethane foam or  | extruded            |  |
|         |            |              | polystyrene foam core bonded   | sandwiched          |  |
|         |            |              | between two galvanized steel sl  | neets.              |  |
|         | Inculation | 3.3.2.       | Minimum thickness: 100 mm  |                     |  |
| 33      |            | 3.3.3.       | Density: not less than 40 kg/m <sup>3</sup>  | 8                   |  |
| 5.5.    | mountin    | 3.3.4.       | Thermal conductivity of 0.17 w   | m/m2k or better for |  |
|         |            |              | hot zone climate.  |                     |  |
|         |            | 3.3.5.       | Thermal insulation foaming ag  | ents: Any gas       |  |
|         |            |              | complying with limitations and   | l deadlines set by  |  |
|         |            |              | the Montreal Protocol on the el  | imination of        |  |
|         |            | 2.4.1        | ozone-depleting chemicals.   |                     |  |
|         |            | 3.4.1.       | Base - 1st layer: 75 mm thick c  | ement concrete      |  |
|         |            |              | (dimensions suitable to the size   | of cold room);      |  |
|         | Flooring:  | 3.4.2.       | 2 <sup>nd</sup> layer of specified insulation  | as specified in     |  |
| 3.4.    |            |              | para 3.3   |                     |  |
|         |            |              | - Extruded polystyrene slabs   | laid with the       |  |
|         |            |              | joints staggered to achieve  | a 'U' value of      |  |
|         |            |              | 0.17 W/m.K or better.  |                     |  |
|         |            |              | - 250-micron polythene vapo  | r barrier.          |  |

| Item Code No. |                     | Departmen    | Section   | Item               |
|---------------|---------------------|--------------|---|--------------------|
|               |                     | t            |   | Description        |
| LOT 5-7       |                     | Diagnostic   | Immunology  | Cold Room          |
|               |                     | Laboratories | - Reinforced granolithic concrete topping                         |                    |
|               |                     |              | trowel led smooth.  | iete topping       |
|               |                     | 3.4.3.       | 3rd layer of 6mm (minimum) n                                      | on-slip finish     |
|               |                     |              | Aluminium checker plate.  | 1                  |
|               |                     | 3.4.4.       | The floor should be capable to $1500 \text{ kg/m2}$ .             | support load of    |
|               |                     | 3.4.5.       | Concrete floors must be designed and                              |                    |
|               |                     |              | constructed to allow Shallow ramped acce                          |                    |
|               |                     | 2.5.1        | entry to the cold room or freeze                                  | er room.           |
|               |                     | 3.5.1.       | The door should have:   | hla with 1000/     |
|               |                     |              | (1) Heavy duty lock - locka<br>fail safe provision for o          | ble with 100%      |
|               |                     |              | inside  | pennig nom         |
|               |                     |              | (ii) The door should be self                                      | -closing type      |
|               |                     | 3.5.2.       | Plastic curtains on the doorway.                                  |                    |
|               |                     | 3.5.3.       | Door should be flush type with kick plate at                      |                    |
|               |                     | 254          | bottom and fitted with door clo                                   | ser.               |
| 2.5           | -                   | 5.5.4.       | Examination window (view po                                       | )nt).              |
| 3.5.          | Door                | 3.5.5.       | Seal closer mechanism which c                                     | ushions the        |
|               |                     |              | closing   | <u> </u>           |
|               |                     |              | Movement of the door, shuts the                                   | e door silently    |
|               |                     |              | and keeps it seal-closed preven                                   | ting loss of       |
|               |                     | 3.5.6        | An incandescent vapour-proof                                      | ight mounted on    |
|               |                     | 5.5.01       | the interior of the vaccine cham                                  | iber.              |
|               |                     | 3.5.7.       | Dimensions: 34" to 40" (W) x72" to 80" (H).                       |                    |
|               |                     | 3.5.8.       | Additional alarm switch to be f                                   | itted inside the   |
|               |                     |              | cold room close to the door latch.                                |                    |
|               |                     | 3.6.1.       | Internal ceiling-mounted low en                                   | nergy fluorescent  |
|               |                     |              | or LED luminaries with  | 1.4                |
|               |                     |              | an external switch with pilot lig                                 | gnt.               |
|               |                     | 3.6.2.       | The external light and light sw                                   | vitch must be      |
| 3.6.          | Lighting            |              | fixed to the wall of the cold re                                  | oom enclosure      |
|               |                     |              | near to the entrance door.  |                    |
|               |                     | 3.6.3.       | The minimum illumination level<br>face of the lowest shelves must | el on the vertical |
|               |                     | 364          | The lighting should be evenly d                                   | listributed inside |
|               |                     | 5.0. F.      | the cold room.  |                    |
|               | Refrigeration       | 3.7.1.       | Dual Refrigeration system (100                                    | % standby)         |
| 3.7.          | System:             | 3.7.2.       | The refrigeration system should                                   | have 3.5 to 4      |
|               | ~ , ~ • • • • • • • |              | KW compressor for 15 cum Wa                                       | alk-in-cooler.     |

| Item Code No. |            | Departmen      | Section  | Item                                 |  |
|---------------|------------|----------------|--|--------------------------------------|--|
|               |            | t<br>Discretio | Clinical Chamiotan and   | Description                          |  |
| LOT 5-7       |            | L'aboratories  | Immunology   | Cold Room                            |  |
|               |            | 373            | Cooled refrigeration units prefe   | erably Mono-                         |  |
|               |            | 5.7.5.         | block type   | ciably wono-                         |  |
|               |            | 3.7.4.         | Automating defrosting (electric  | or hot gas)                          |  |
|               |            | 3.7.5.         | CFC-free refrigerant.  |                                      |  |
|               |            | 3.7.6.         | Tropicalized units suitable for ambient<br>temperature up to 45 deg C.           |                                      |  |
|               |            | 3.7.7          | . In case of a split system, the condensing Unit                                 |                                      |  |
|               |            | 5.7.7.         | should be mounted in a whethe  | er proof enclosure                   |  |
|               |            |                | with proper canopy so as to g  | et protection                        |  |
|               |            |                | from rain and hard weather ar  | nd prevent any                       |  |
|               |            |                | vandalism or injury to people u  | pon accidental                       |  |
|               |            |                | access.  | 1                                    |  |
|               |            | 3.7.8.         | Condensing unit (s) to comprise  | e compressor                         |  |
|               |            |                | with:  | 1                                    |  |
|               |            |                | a) Forced air condenser,   |                                      |  |
|               |            |                | b) Oil level glass,  |                                      |  |
|               |            |                | c) Oil separator,  |                                      |  |
|               |            |                | d) liquid receiver to carry full charge,   |                                      |  |
|               |            |                | e) Filter/dryer with flare connections,  |                                      |  |
|               |            |                | f) Isolating stop valves.  |                                      |  |
|               |            |                | <ul><li>g) Fixed high and low pres</li><li>h) Fitted with high and low</li></ul> | sure dial gauges.<br>v pressure cut- |  |
|               |            |                | i) Time operated electric of   | lafrast control                      |  |
|               |            |                | i) It should have run hour   | motor                                |  |
|               |            |                | b) Where cold climate free   | neter.                               |  |
|               |            |                | specified provide a low  | temperature                          |  |
|               |            |                | protection system to pre   | vent the                             |  |
|               |            |                | temperature protection s   | event the prevent                    |  |
|               |            |                | the temperature of the co  | old room                             |  |
|               |            |                | dropping below +20C u  | nder low ambient                     |  |
|               |            |                | conditions.  |                                      |  |
|               |            | 3.8.1.         | Evaporators to be forced air. w  | all or - ceiling-                    |  |
|               |            |                | mounted units with a condense  | r unit discharging                   |  |
|               |            |                | inside the building that houses t  | the cold room.                       |  |
|               |            | 3.8.2.         | There must be a timer operated   | electric                             |  |
|               |            |                | defrosting system and a conden   | sate drip tray and                   |  |
| 3.8           | Evaporator |                | drain connection.  |                                      |  |
| 5.0.          |            | 3.8.3.         | Size and position the evaporato  | r units so that the                  |  |
|               |            |                | plume of discharged air at a te  | emperature below                     |  |
|               |            |                | $+2^{\circ}C$ does not reach areas v   | where vaccine is                     |  |
|               |            |                | stored. If necessary provide a   | removable mesh                       |  |
|               |            |                | cage or deflectorshield around   | the evaporator so                    |  |
|               |            |                | as to maintain the safe storage  | zone.                                |  |

| Item Code No. |                         | Departmen<br>t | Section  | Item<br>Description |  |
|---------------|-------------------------|----------------|--|---------------------|--|
| LOT 5-7       |                         | Diagnostic     | Clinical Chemistry and   | Cold Room           |  |
|               |                         | Laboratories   | Immunology   |                     |  |
|               |                         |                |  |                     |  |
| 4. Temj       | perature Control        | , monitoring & | & Recording:   |                     |  |
|               |                         | 4.1.1.         | Room temperature must be con                                   | trolled by a        |  |
|               |                         | 4.1.2          | thermostat within the tolerances                               | s specified.        |  |
|               |                         | 4.1.2.         | The thermostat must be calibrated to $118-90$ and              |                     |  |
|               |                         | 413            | All parts of the room design                                   | ated for vaccine    |  |
|               |                         | 4.1.5.         | storage must remain between                                    | 20C to 80C when     |  |
|               |                         |                | measured under any loading c                                   | ondition between    |  |
| 4.1.          | T                       |                | empty and full and over t                                      | he full ambient     |  |
|               | 1 emperature<br>Control |                | temperature range of the requ                                  | ired temperature    |  |
|               | Control                 |                | zone.  | -                   |  |
|               |                         | 4.1.4.         | The control supply relay carry                                 | ing the             |  |
|               |                         |                | compressor running current should be rated                     |                     |  |
|               |                         |                | twice<br>the running current or provide additional             |                     |  |
|               |                         |                | contactor to be provided in the                                | control circuit to  |  |
|               |                         |                | sustain the running current, without causing                   |                     |  |
|               |                         |                | overheating of the control boards.                             |                     |  |
|               |                         | 4.2.1.         | Provide a digital temperature re                               | ecording system     |  |
|               |                         |                | with display controlling indicat                               | ing logging         |  |
|               |                         |                | facility: for example: A programmable                          |                     |  |
|               |                         |                | electronic temperature and event data logger                   |                     |  |
|               | Temperature             |                | capacity auto-dialler complying with POS                       |                     |  |
| 4.2.          | Monitoring              |                | E006/TR03 linked to the alarm                                  | system.             |  |
|               | and recording           | 4.2.2.         | Wall mounted seven days graph                                  | nic temperature     |  |
|               |                         |                | recorder not using thermal pape                                | er.                 |  |
|               |                         | 4.2.3.         | Provide a backup gas or vapou                                  | r pressure dial     |  |
|               |                         |                | E006/TH02 mounted on the we                                    | US                  |  |
|               |                         |                | room in an accessible position                                 |                     |  |
|               |                         | 4.3.1.         | Provide a mains-operated au                                    | lible and visible   |  |
|               |                         |                | loud alarm with battery backu                                  | ip and automatic    |  |
|               |                         |                | recharge, which is triggered in t                              | he event of mains   |  |
|               |                         |                | failure or when the cold room                                  | temperatures are    |  |
| 4.2           | Alarm &                 | 420            | outside set limits.  | a accustic slare    |  |
| 4.3.          | Buzzer                  | 4.3.2.         | in case of a unggered event, the unit must comply as per speci | fication            |  |
|               |                         |                | WHO/PQS/E06/AL01-01 or wi                                      | th E006/TR03        |  |
|               |                         | 4.3.3.         | Alarm sounders are to be locate                                | d adjacent to the   |  |
|               |                         | <u> </u>       | cold room.   |                     |  |
|               |                         | 4.3.4.         |  |                     |  |

| Item Co | de No.        | Departmen    | Section  | Item              |
|---------|---------------|--------------|--|-------------------|
|         |               | Diagnostic   | Clinical Chemistry and   | Cold Room         |
| LOT 5-7 |               | Laboratories | Immunology   | Cold Room         |
|         |               | 24001401105  | Buzzer system: Visual indicate                                   | or along with     |
|         |               |              | buzzer alarm system should be                                    | provided to alert |
|         |               |              | the user in the following events                                 | s:                |
|         |               |              | a) Power failure alarm   |                   |
|         |               |              | b) High pressure (dirty con                                      | idenser) alarm    |
|         |               |              | c) Open door alarm   |                   |
|         |               |              | d) Probe failure alarm   |                   |
|         |               | 4.3.5.       | It should have back-up battery panel                             | for control its   |
| Storage |               | 5.1.         | Storage conditions to be main                                    | tained at + 5     |
| 5.      | Condition     |              | deg C ±3 deg C continuously,                                     | , control by      |
|         | Condition     |              | thermostat on each cold room.                                    |                   |
|         |               | 6.1.         | Cold room(s) to be fitted with l                                 | locally           |
| 6.      | Shelves       |              | made/manufactured, running he                                    | ight adjustable   |
|         |               |              | perforated shelves (slotted shelv                                | ves will be       |
|         |               |              | preferred)   |                   |
|         |               |              |  |                   |
|         |               | 6.2.         | 600 mm wide at 600 mm spacin                                     | 1g;               |
|         |               | 6.3.         | Four shelves above the ground                                    | all around the    |
|         |               |              | wall and intermediate shelves                                    | should be placed  |
|         |               |              | suitably.  |                   |
|         |               | 6.4.         | The total area covered by shelv<br>least 42% of the ground area. | es should be at   |
|         |               | 6.5.         | There should be enough distant                                   | nce in between    |
|         |               |              | two intermediate racks, to fac                                   | ilitate the       |
|         |               |              | movement of men and material                                     |                   |
|         |               | 6.6.         | The final drawing of the room                                    | with shelves will |
|         |               |              | have to be got approved from the                                 | he authorities    |
|         |               | 67           | The material of the shelves sho                                  | uld be non        |
|         |               | 0.7.         | corrosive 304 grade stainless st                                 | eel to take load  |
|         |               |              | of at least 0.075kg/ $m^2$                                       | cer to take foud  |
|         |               | 6.8          | The top face of the lowest shelf                                 | must be mounted   |
|         |               | 0.0.         | 200 mm above the floor.  | must be mounted   |
|         |               | 6.9.         | Shelving must be washable.                                       |                   |
|         |               | 7.1.         | The unit shall be capable of or                                  | berating          |
| 7       | Environmental |              | continuously in ambient tempe                                    | rature of 5 to    |
| 7.      | factors       |              | 45°C   |                   |
|         |               |              | and relative humidity of 95%                                     |                   |
|         |               | 8.1.         | Complete installation, testing a                                 | ınd               |
| 8.      | Installation: |              | commissioning is to be done b                                    | y the supplier    |
|         |               |              | inclusive of:  |                   |

| Item Code No. |                                      | Departmen    | Section   | Item                    |
|---------------|--------------------------------------|--------------|---|-------------------------|
|               |                                      | t            |   | Description             |
| LOT 5-7       |                                      | Diagnostic   | Clinical Chemistry and  | Cold Room               |
|               |                                      | Laboratories | Immunology  |                         |
|               |                                      |              | a) Installation of stabilizer   | ,                       |
|               |                                      |              | b) Drainage system  |                         |
|               |                                      |              | c) Assembly of the panels   |                         |
|               |                                      |              | <ul><li>d) Refrigerator units,</li><li>e) Data logger</li></ul>           |                         |
|               |                                      |              |   |                         |
|               |                                      |              | f) Adequate smoke evacuation system,                                      |                         |
|               |                                      |              | Generator as per CPCB.  |                         |
|               |                                      |              | g) All other related work required for<br>installation as per WHO PQS and |                         |
|               |                                      |              |   |                         |
|               |                                      |              | guidelines.   |                         |
|               |                                      |              | n) Separate earthing must   | be provided             |
|               |                                      |              | The installation and commissi   | and with                |
|               |                                      |              | done by supplier  | oning should be         |
|               |                                      | 91           | Power input: 220-240V/ 50 Hz  | AC Single phase         |
|               | Power Supply                         | <i></i>      | or 380-400V AC 50 Hz, three r   | hases.                  |
|               |                                      | 9.2          | Fitted with BS fittings and sockets                                       |                         |
|               |                                      | >            | The with D5 fittings and sockets.   |                         |
| 9.            |                                      | 9.3.         | Suitable automatic voltage reg  | gulator/stabilizer      |
|               |                                      |              | meeting IS 9815, IEC 60335-   | 1 & IEC                 |
|               |                                      |              | 60364-1 specifications should   | be supplied.            |
|               |                                      | 9.4.         | Voltage regulator should have   | capacity to take        |
|               |                                      |              | load of both refrigeration units  | s (main as well as      |
|               |                                      | 10.1         | standby).   | 4 1.4                   |
|               | Standards,<br>Safety and<br>Training | 10.1.        | Electrical and reirigeration com  | ponents and the         |
|               |                                      | 10.2         | National or international approx  | vala lika III IEC       |
|               |                                      | 10.2.        | 60335 - 1 2006  | vais like UL, ILC       |
|               |                                      | 10.3         | Safety of household & similar   | lectrical               |
|               |                                      | 10.5.        | appliances / IEC 60364-1 / ISC  | ) 20282 - 1.2006        |
|               |                                      | 10.4.        | Ease of operation of everyday i   | products. /             |
| 10.           |                                      | 1000         | Electrical safety rating: meet IF   | EC <b>60335</b> -1. IEC |
| 10.           |                                      |              | 60364-1- Voltage, frequency &   | & phasing: single       |
|               |                                      |              | phase, three-phase - voltage st   | abilizers and           |
|               |                                      |              | surge protections.  |                         |
|               |                                      | 10.5.        | All operational and maintenand  | ce training by          |
|               |                                      |              | trained personal of manufactur  | er to the end           |
|               |                                      |              | users after successful installation                                       | on and                  |
|               |                                      |              | commissioning.  |                         |
| 11.           | Warrantee:                           | 11.1.        | Provide Warranty for at least   | 2 years and             |
|               |                                      |              | Comprehensive Maintenance C   | Contract for 5          |
|               |                                      |              | years, ensure provision of cons   | umables                 |
|               |                                      |              | including   | 1 .                     |
|               |                                      |              | spares and accessories within f   | ine warranty            |
|               |                                      | 1            | period excluding batteries (was   | ranty as per            |

| Item Code No. |   | Departmen    | Section  | Item                |
|---------------|---|--------------|--|---------------------|
|               |   |              | Clinical Chamisters and  | Description         |
| LOT 5-7       |   | Laboratories | Immunology   | Cold Room           |
|               |   | Luboratories | manufacture norm minimum of two years) and   |                     |
|               |   |              | diesel for DG set.<br>Provide commitment and quote for<br>Comprehensive Maintenance Contract (CMC) |                     |
|               |   | 11.2.        |  |                     |
|               |   |              |  |                     |
|               |   |              | for 5 years after the 5 years  |                     |
|               |   | 11.3.        | Guarantee for availability of spa  | ares for 10 years   |
|               |   | 10.1         | after warrantee.   | <u> </u>            |
|               | After Sales<br>Service:                       | 12.1.        | facility.  |                     |
|               |   | 12.2.        | The service provider should have the necessary   |                     |
| 12.           |   |              | equipment and spares recommended by the  |                     |
|               |   |              | manufacturer to carry out preventive   |                     |
|               |   |              | maintenance and repair as per guidelines   |                     |
|               |   | 12.1         | provided in the service/maintenance manual.  |                     |
|               | On-site<br>maintenanc<br>e:                   | 13.1.        | All minor repairs should be attended to and  |                     |
|               |   | 13.2         | Any major break down (a g compressor   |                     |
|               |   | 13.2.        | failure gas leakage control pa   | aned burn-out)      |
| 10            |   |              | must be attended to and put back into  |                     |
| 13.           |   |              | functional condition within seven days   |                     |
|               |   |              | following first intimation.  | -                   |
|               |   | 13.3.        | If both refrigeration system have failed, at least   |                     |
|               |   |              | one refrigeration system must be repaired or   |                     |
|               |   | 1.4.1        | replaced within 24 hrs.  | 111                 |
|               |   | 14.1.        | Test certificate of inspection sh  | ould be             |
|               | Documentation<br>Certification<br>and Manuals |              | along with:  | pe inspection       |
|               |   |              | a) Cool down time  |                     |
|               |   |              | b) Running test, as per WHO quality  |                     |
|               |   |              | Assurance Protocol WHO/PQS/E001/CR-  |                     |
|               |   |              | FR01- VP2 of any capacity from an  |                     |
|               |   |              | independent laboratory approved /recognized  |                     |
|               |   |              | by WHO/UNICEF/National   | l Accreditation     |
| 14.           |   |              | board/ILAC/SIQC lab is es  | ssential, should be |
|               |   | 14.2         | Submitted at the time of pro   | tion for tendered   |
|               |   | 14.2.        | item from an independ  | lent laboratory     |
|               |   |              | approved/recognized  | by                  |
|               |   |              | WHO/UNICEF/National Accr   | reditation Board/   |
|               |   |              | ILAC/ STQC Labs or third-  | party inspection    |
|               |   |              | agency is essential and is required to be  |                     |
|               |   |              | submitted at the time of delivery.   |                     |
|               |   | 14.3.        | List of important spare parts, and accessories   |                     |
|               |   |              | with their part number and cost  | ing.                |

| Item Code No. |  | Departmen<br>t | Section   | Item<br>Description |
|---------------|--|----------------|---|---------------------|
| LOT 5-7       |  | Diagnostic     | Clinical Chemistry and  | Cold Room           |
|               |  | 15.1.          | Provide a comprehensive, illus                                | trated (including   |
| 15.           | Installation<br>instruction<br>s:        |                | all wiring diagrams) with step-by-step                        |                     |
|               |  |                | installation manual suitable for use by the                   |                     |
|               |  |                | installer, covering the unpacking, assembly,                  |                     |
|               |  |                | testing and commissioning of all the system                   |                     |
|               |  |                | components, including safe working procedures to be observed. |                     |
|               |  | 15.2.          | The manual must be supplied in triplicate - one               |                     |
|               |  |                | copy for the employer, one for the installer and              |                     |
|               |  |                | one for the maintenance contractor.                           |                     |
|               | Service<br>instructions:                 | 16.1.          | Provide a comprehensive, illustrated service                  |                     |
|               |  |                | and workshop manual, suitable for use by the                  |                     |
|               |  |                | maintenance contractor, covering all the system               |                     |
| 16.           |  |                | components, including sale working                            |                     |
|               |  | 16.2           | The manual must be supplied in duplicate -                    |                     |
|               |  | 10.2.          | one copy for the employer and one for the                     |                     |
|               |  |                | maintenance contractor.                                       |                     |
|               | User<br>instructions:                    | 17.1.          | Provide a comprehensive, illustrated                          |                     |
|               |  |                | maintenance manual suitable for the user and                  |                     |
|               |  |                | covering all aspects of safe ope                              | eration and         |
|               |  |                | routine non-specialist maintena                               | nce of the cold     |
| 17.           |  |                | room.   |                     |
| 17.           |  | 17.2.          | The manual must be supplied                                   | n duplicate -       |
|               |  |                | one copy for the employer and                                 | one for the         |
|               |  | 17.2           | maintenance contractor.                                       | :1                  |
|               |  | 17.5.          | monthly and quarterly mainten                                 | ance checklist      |
| 18.           |  | 18.1           | Test certificate of inspection for                            | or all test as per  |
|               | Post<br>commissioning<br>certifications: | 10.1.          | WHO quality Assurate  | nce Protocol        |
|               |  |                | WHO/POS/E001/CR-FR01-VP                                       | 2 of installed      |
|               |  |                | cold room from an indepen                                     | ndent laboratory    |
|               |  |                | approved /recognized  | ed by               |
|               |  |                | WHO/UNICEF/National Acc                                       | reditation board/   |
|               |  |                | ILAC/STQC lab or third-party i                                | nspection agency    |
|               |  |                | after installation and commis                                 | sioning of cold     |
|               |  |                | room to be submitted alo                                      | ong with Final      |
|               |  |                | Acceptance Certificate.                                       |                     |

# **CLARIFICATION 14:**

Incoterm- Please specify the incoterm the bidders to offer

# <u>RESPONSE</u>

Refer to ITB 14.8 in the Bid Data Sheet(BDS)

# **CLARIFICATION 15:**

# Delivery time

It is stated in the tender document that you want bidders to deliver between 1 and 3 months. The products you request are usually produced just in time and on demand. For this reason and due to the consequences of the global Covid-19 pandemic, the lack of raw material and the difficulties that the transport sector is facing, we kindly ask you to extend the requested delivery time up to 6 months.

# RESPONSE

The delivery time remains as stated in the bid document.

# **CLARIFICATION 16:**

Please specify warranty period for LOT 2

# RESPONSE

# LOT 2 has been cancelled from the list.

# **CLARIFICATION 17:**

List of Goods and Delivery Schedule – P.103 of the tender document Please explain the quantities mentioned in the list. Please note that in the column "physical unit" there are also numbers mentioned. Please explain.

# RESPONSE

The number of items in the LOTs is as listed but the total quantities are the physical units.