



COMSATS Institute of Information Technology  
Lahore Campus, Defence Road, Off Raiwind Road, Lahore

Tender No. CIIT-TN-13-17-957  
Case # 2180

Title:

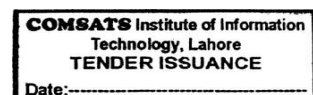
**Lab Equipment for Pharmacy Department**

**TERMS AND CONDITIONS**

**[All pages (BoQs & Terms & Conditions) are mandatory to be signed / stamped, failing which the bid may be rejected.]**

1. *Any addition, deletion or modification of any clause of the procurement terms & conditions/ BoQs of CIIT by any vendor will not be acceptable and may lead to rejection of the bid.*
2. *Only registered Suppliers, who are on Active Taxpayers List (ATL) of FBR, are eligible to participate in tender.*
3. The contract will be executed and handed over in satisfactory conditions up to the entire satisfaction of COMSATS Institute of Information Technology, Lahore Campus.
4. Documents along with Pay Order / Demand Draft amounting to **Rs. 1000/-** as a tender documents fee (Non-Refundable) shall be submitted in favor of COMSATS Institute of Information Technology, Lahore to the address given below. No bid will be accepted without tender documents' fee.
5. Part / Advance payments is not allowed.
6. The exact completion/delivery time from the date of the purchase / work order will be **60 days**. The handing over / completion time for this contract is of critical importance.
7. Your bid proposal should be inclusive of freight and all other taxes and to be delivered at COMSATS Institute of Information Technology, Lahore Campus's premises.
8. After opening of bids, COMSATS Institute of Information Technology, Lahore Campus will examine the bids for completeness as per tender document.
9. Purchase order (s) will be awarded to the successful bidder as per the evaluation criteria on the basis of item wise / subtotal wise / grand total wise as mentioned in BoQs.
10. The bid should be submitted in a sealed envelope up to **October 19, 2017** on or before **1400hrs** and will be opened on the same date **at 1430hrs** in the presence of available bidders.
11. COMSATS Institute of Information Technology, Lahore Campus, will follow the PPRA rule of **single stage two envelope procedure**;
  - i. The bid shall comprise a single package containing **two separate envelopes**. Each envelope shall contain separately the **financial proposal** and the **technical proposal**;
  - ii. The envelopes shall be marked as "**FINANCIAL PROPOSAL**" and "**TECHNICAL PROPOSAL**" in bold and legible letters to avoid confusion;
  - iii. Initially, only the envelope marked "**TECHNICAL PROPOSAL**" shall be opened;

**Signature & Stamp of Bidder**



- iv. The envelope marked as **“FINANCIAL PROPOSAL”** shall be retained in the custody of the procuring agency without being opened;
  - v. The procuring agency shall evaluate the technical proposal in a manner prescribed in advance, without reference to the price and reject any proposal which does not conform to the specified requirements;
  - vi. During the technical evaluation no **amendments** in the technical proposal shall be permitted;
  - vii. The financial proposals of bids shall be opened publicly at a time, date and venue announced and communicated to the bidders in advance;
  - viii. After the evaluation and approval of the technical proposal the procuring agency, shall at a time within the bid validity period, publicly open the financial proposals of the technically accepted bids only. The financial proposal of bids found technically nonresponsive shall be returned un-opened to the respective bidders;
  - ix. and
  - x. The bid found to be the lowest evaluated bid shall be accepted.
12. The envelope should be marked as under;

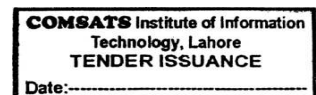
**Secretary, Purchase Committee**  
**COMSATS Institute of Information Technology, Lahore Campus**  
Defence Road, Off Raiwind Road, Lahore.  
Tel: 042-111-001-007, Ext: 875

13. The envelope shall also bear the word **“CONFIDENTIAL”** and following identification quotation of **“Lab Equipment for Pharmacy Department”**.
14. The bid form (BoQs) must be duly filled in, stamped and signed by the authorized representative of the bidder.
- 15. If the vendor fails to deliver the goods / services to CIIT-Lahore in time then the penalty will be charged as under:-**
- a. 1% per day of the invoice price for 5 working days.
  - b. 2% per day of the invoice price for further 5 working days.
  - c. If the vendor fails to deliver the goods / services during the extended period then the purchase / work order may be cancelled, earnest money and payment may be forfeited.
16. If the delivered goods / services are not according to the required quality standards / specifications, the same shall be liable to be rejected after inspection. The vendor would be required to supply as per requirements mentioned in our BoQs, otherwise the purchase / work order will be cancelled after due date with confiscation of earnest money.
17. Deduction of Income Tax and any other tax will be deducted at source according to Government prevailing rules.
18. Payment will be made on submission of Invoice in the name of “COMSATS Institute of Information Technology, Lahore Campus” with a copy of delivery challan (s) after the complete order has been supplied, inspected and accepted which includes delivery / installation, and COMSATS acceptance / inspection thereof.

- 19. All prices should be quoted on F.O.R (Pak Rupees).
- 20. All prices should be valid for at least **90 days**. Withdrawal or any modification of the original offer within the validity period shall entitle CIIT to forfeit the earnest money in favor of the CIIT and / or put a ban on such vendor participation in CIIT tenders / works.
- 21. It is the sole responsibility of the agent / supplier / manufacturer to comply with the applicable laws, be national or international.
- 22. In case of any dispute or grievance, the matter shall be addressed as per PPRA rules.
- 23. The CIIT reserves the right to modify the quantities of goods / services at any time before the award of purchase / work order.
- 24. **05% of the total value of the \_will be retained as security by COMSATS Institute of Information Technology, Lahore Campus, and will be released after Expiry of Warranty Period i.e. One Year for Sr. # 1-24, which will be counted from the date of delivery / completion of work / supply.**
- 25. **The bidder is required to furnish in form of Bank deposit / CDR / Pay order equivalent to 2% of the total Bid price as Earnest Money crossed in favor of “COMSATS Institute of Information Technology, Lahore Campus”. Any bid not accompanied by Earnest Money shall be rejected without any right of appeal.**
- 26. COMSATS Institute of Information Technology, Lahore Campus reserves the rights to accept or reject the bid if;
  - i. Received without earnest money
  - ii. Received later than the date and time fixed for tender submission
  - iii. The tender is unsigned/ unstamped
  - iv. The offer is ambiguous
  - v. The offer is conditional
  - vi. Offer is made by the unauthorized agent/ supplier of the original equipment manufacturer.
  - vii. The offer is from a firm, which is black listed by any Govt. Office.
  - viii. The offer is received by telephone/telex/fax/telegram.
  - ix. Any unsigned / ambiguous erasing, cutting / overwriting etc. is made.
- 27. The bidder should furnish a certificate as worded below in token of acceptance of all the terms and conditions of the tender otherwise the tender will not be considered under any circumstances.
- 28. The undersigned affirm that the terms and conditions as contained in this document have been read and accepted and that in the event of selection of my/our rate the agreement in the prescribed form will be entered into:

- **Company / Vendor Name:.....**
- **Postal Address:.....**
- **Tel. / Mobile:.....Email:.....**
- **NTN# :.....GST#:.....**
- **Signature: .....**

Signature & Stamp of Bidder



- Please also attach the Certificate supporting being Active Taxpayer as per requirement of FBR.

## BoQs of Lab Equipment for Pharmacy Department

### Technical Portion (Please mention the quoted model/ brand in technical portion with no mention of price otherwise the bid will be rejected)

| No change in the BoQs (Specs and Qty.) of CIIT, as detailed below, is allowed. Any addition information may be mentioned in the blank columns (i.e. model / brand and Price). Any modification in CIIT's BoQ may lead to rejection of bid (fully or partially). |   |          | Quoted Model Brand with meeting the all specifications |  |
|---|---|----------|--|--|
| Sr. #   | Name  | Quantity |  |  |
| 1   | <b>Water bath</b><br>(Ambient +5° to 100°C ±0.1°C)<br>Digital<br>14 Liter<br>307×216×266 mm<br>Microprocessor PID control / Automatic tuning / Calibration.<br>Powerful circulation system using our patented agitator<br>Digital LED displays with quick adjustable dial knob. (0.1°C resolution)<br>Low-profile design with sloped control panel for easier access and better safety. | 10       | Nos.   |  |
| 2   | <b>Magnetic stirrers with hot plates and magnetic bars</b><br>Glass Ceramic<br>Stirring Capacity 2 L<br>Work Plate 184 x 184 mm<br>Digital Display<br>Temperature : RT-550 Degree with increment 1 degree<br>Speed Range: 60-1500 RPM<br>Temperature Accuracy : ±0.1°C<br>Power consumption 550W  | 8        | Nos.   |  |
| 3   | <b>Multistation Magnetic stirrers with heating or equivalent</b><br>Stirring Position: 4<br>Stirring Capacity: 3L x 4<br>Speed Range : 0-1500 RPM<br>Heating Power: 4 x 600W<br>Temp: RT-150 Degree<br>Material: Aluminum<br>220V , 50 Hz   | 4        | Nos.   |  |

Signature & Stamp of Bidder

|    |   |    |      |  |
|----|---|----|------|--|
| 4  | <b>Weighing Balance (top loading):</b><br>Maximum weighing capacity 3100 g; Readability 0.01 g<br>Built in RS 232 output interface direct connection to Computer or printer or equivalent   | 12 | Nos. |  |
| 5  | <b>Analytical Balance</b><br>Capacity-220gm,Readability-0.1mg<br>Minimum load-10mg, Minimum sample WT. as per USP-200mg<br>Operating temperature-18°C to 30°C. or equivalent  | 1  | No.  |  |
| 6  | <b>Oven</b><br>(170L, natural convection, Temperature range 5°C above ambient up to +300°C)<br>Temp Precision: 0.1 Degree<br>Temp Fluctuation : ±0.5°C<br>Timing Range: 1 ~ 9999 min<br>Shelves : 2   | 10 | Nos. |  |
| 7  | <b>Lab Refrigerator</b><br>(Capacity 20 cubic feet. temperature 2°C)  | 2  | Nos. |  |
| 8  | <b>Lab Freezer</b><br>-2°C to -40°C   | 1  | No.  |  |
| 9  | <b>Furnace</b><br>14L capacity, maximum temp. 1200°C<br>Chamber Material: High Thermal Density Ceramic Fiber<br>PLC Temperature Control System<br>Aludirome Heater Strip<br>Temp Precision: ±1°C<br>690 x 520 x 780 mm or equivalent  | 1  | No.  |  |
| 10 | <b>De-ionization plant or equivalent</b><br>(Lab Water System)making water capacity-10L/H.power-30V,source voltage-AC 220V/110V   | 1  | No   |  |
| 11 | <b>Incubator</b><br>(Air circulation Economy Forced, Temp Range, Ambient +5°C to 80°C, Temp Control)<br>Temp Fluctuation: ±0.2°C<br>Timer: 1~9999 mins<br>Capacity: 65 Liter<br>Consumption: 500W<br>LED Large Display<br>Over Temperature Protection<br>Toughened Glass inner door or equivalent<br>Size: 550 x 550 x 840 mm | 3  | Nos. |  |
| 12 | <b>Sonicator</b><br>(25L capacity, Heated ambient +5°C to 70°C)   | 1  | No.  |  |

|    |  |   |      |  |
|----|--|---|------|--|
| 13 | <b>Uv-vis spectrophotometer</b><br>Measurement wavelength range : 190nm to 1100nm<br>Spectral Band Width: 2nm<br>Wave Length Accuracy: $\pm 0.5$ nm<br>Single Beam: Grating 1200 lines/ mm<br>Light Source: Deuterium Lamp, Tungsten Lamp<br>Detector: Silicon Photodiode<br>Display: 480 x 272 65 Thousand true colour TFT LCD  | 1 | No.  |  |
| 14 | <b>Polarimeter,</b><br>0.01° Arc Optical Rotation<br>Preheating is not needed<br>Dark-Colored sample can be measured<br>Light Source: LED Lamp<br>Measuring Range: $\pm 45^\circ$ (Optical Rotation) / $\pm 120^\circ$ Z (Sugar)<br>Wave Length: 580 nm<br>Readable 0.001 ° (Optical Rotation)<br>Temperature accuracy: $\pm 0.5^\circ\text{C}$<br>Interface: USB & RS232<br>Display : LCD<br>Power Supply: AC 220Volts<br>Or equivalent | 2 | Nos. |  |
| 15 | <b>Digital Melting Point Apparatus,</b><br>0.1°C resolution, complete with pack of 100 melting point tubes<br>PID & PWM Controller<br>LCD Touch Screen<br>USB & RS232 interface<br>The melting curve can be recorded automatically<br>Measuring Range: RT~ 400°C<br>Data Storage: 1000 sets<br>Repeatability: 0.3 °C<br>Or equivalent  | 4 | Nos. |  |
| 16 | <b>Refractrometer,</b><br>CCD technology. accuracy $\pm 0.2\%$ , read sample as small as 0.4ml<br>7" LCD Touch Screen<br>2 USB Ports, RS 232 Port and internet port for connecting printer or internet<br>Auto temperature control system<br>Refractive Index Measuring Range: 1.30000 ~ 1.70000nD<br>Measuring Resolution: $\pm 0.0001$ nD<br>Measuring Resolution (Brix): 0.1 %<br>Peltier temperature control or equivalent           | 1 | No.  |  |

|                       |   |                   |      |  |               |         |  |                       |   |  |                  |      |  |            |     |  |              |                     |  |               |                   |  |   |     |  |
|-----------------------|---|-------------------|------|--|---------------|---------|--|-----------------------|---|--|------------------|------|--|------------|-----|--|--------------|---------------------|--|---------------|-------------------|--|---|-----|--|
| 17                    | <p><b>pH meter</b><br/>(Bench top, <math>\pm 0.01</math>pH, <math>\pm 0.1^\circ\text{C}</math>)<br/>Range: -2.00 ~ 19.99PH Accuracy: <math>\pm 0.01</math> PH<br/>Digital LED Display<br/>With electrode</p>  | 4                 | Nos. |  |               |         |  |                       |   |  |                  |      |  |            |     |  |              |                     |  |               |                   |  |   |     |  |
| 18                    | <p><b>Autoclave</b><br/>75L capacity<br/>Chamber Size: 386 x 682 mm<br/>Working Temperature : 105 ~ 136 °C<br/>Temperature Accuracy : <math>\pm 0.1^\circ\text{C}</math>, Timing Range: 0 ~999 min, Working Pressure : 0.175 MPA<br/>Safety Feature: Over Pressure, Over Temperature, Door Sensor, Anti dry out Function , Over Current, Door Cover, LED Screen Display<br/>Water inlet Filter to keep high water quality<br/>Power Supply: AC 220 Volts</p>  | 1                 | No.  |  |               |         |  |                       |   |  |                  |      |  |            |     |  |              |                     |  |               |                   |  |   |     |  |
| 19                    | <p><b>Wire loops(sterile plastic or nichrome)<br/>Or equivalent</b></p>   | 1                 | No.  |  |               |         |  |                       |   |  |                  |      |  |            |     |  |              |                     |  |               |                   |  |   |     |  |
| 20                    | <p><b>Digital Colony counter</b><br/>CMOS integrated circuit and LED digital display.<br/>The special probe counts sensitively and accurately<br/>It is composed by counter, probe and count pond, etc.<br/>The magnification is variable by adjusting the flectional arm.</p> <table border="1"> <tr> <td>Phonetic counting</td> <td>Yes</td> <td></td> </tr> <tr> <td>Counter range</td> <td colspan="2">0 ~ 999</td> </tr> <tr> <td>Suitable petri dishes</td> <td colspan="2"><math>\Phi 50\text{mm}</math>, <math>\Phi 90\text{mm}</math></td> </tr> <tr> <td>Character height</td> <td colspan="2">13mm</td> </tr> <tr> <td>Lamp power</td> <td colspan="2">16W</td> </tr> <tr> <td>Power supply</td> <td colspan="2">220/ 110V, 50/60 Hz</td> </tr> <tr> <td>External size</td> <td colspan="2">255 * 180 * 110mm</td> </tr> </table> <p>Or equivalent</p> | Phonetic counting | Yes  |  | Counter range | 0 ~ 999 |  | Suitable petri dishes | $\Phi 50\text{mm}$ , $\Phi 90\text{mm}$ |  | Character height | 13mm |  | Lamp power | 16W |  | Power supply | 220/ 110V, 50/60 Hz |  | External size | 255 * 180 * 110mm |  | 1 | No. |  |
| Phonetic counting     | Yes   |                   |      |  |               |         |  |                       |   |  |                  |      |  |            |     |  |              |                     |  |               |                   |  |   |     |  |
| Counter range         | 0 ~ 999   |                   |      |  |               |         |  |                       |   |  |                  |      |  |            |     |  |              |                     |  |               |                   |  |   |     |  |
| Suitable petri dishes | $\Phi 50\text{mm}$ , $\Phi 90\text{mm}$   |                   |      |  |               |         |  |                       |   |  |                  |      |  |            |     |  |              |                     |  |               |                   |  |   |     |  |
| Character height      | 13mm  |                   |      |  |               |         |  |                       |   |  |                  |      |  |            |     |  |              |                     |  |               |                   |  |   |     |  |
| Lamp power            | 16W   |                   |      |  |               |         |  |                       |   |  |                  |      |  |            |     |  |              |                     |  |               |                   |  |   |     |  |
| Power supply          | 220/ 110V, 50/60 Hz   |                   |      |  |               |         |  |                       |   |  |                  |      |  |            |     |  |              |                     |  |               |                   |  |   |     |  |
| External size         | 255 * 180 * 110mm   |                   |      |  |               |         |  |                       |   |  |                  |      |  |            |     |  |              |                     |  |               |                   |  |   |     |  |
| 21                    | <p><b>Centrifuge machine</b><br/>with three angle rotors for tube sizes of 10mL, 15mL, and 1.5/2.0mL)<br/>Maximum Speed: 16500 RPM<br/>Max RCF: 18780 x g<br/>Timing Range: 0 ~ 99h 59 min<br/>LCD Display<br/>Stainless Steel Chamber<br/>Can store 20 Procedures or equivalent</p>  | 1                 | No.  |  |               |         |  |                       |   |  |                  |      |  |            |     |  |              |                     |  |               |                   |  |   |     |  |

|    |   |    |      |  |
|----|---|----|------|--|
| 22 | <b>Filtration assembly</b><br>(vacuum, 1L capacity)<br>Funnel 300 ml<br>Pyrex glass<br>Membrane : 47 mm<br>Triangle fluid bottle<br>Clamp, hose linker, Rubber Hose, Dust cover,<br>Core filter Head, Filter Bowl   | 1  | No.  |  |
| 23 | <b>Microwave Oven, 30L</b>  | 1  | No.  |  |
| 24 | <b>Heating Mental</b><br>500ml & 1L with Magnetic Stirrer<br>Maximum Temperature : 380 Degree<br>Speed Range: 1200 RPM<br>LED Display<br>Capacity: 500 ml & 1000 ml<br>(02 each)                                    | 4  | Nos. |  |
| 25 | <b>Dissection box</b> (Rust free Stainless steel)- Large,<br>Scalpel Blades, Kelly Hemostat, Iris Scissors,<br>Dissecting Scissors, Dissecting Needle, Forceps,<br>Stainless Steel Punch, Suture Hook or equivalent | 6  | Sets |  |
| 26 | <b>Neubauer Chambers or equivalent</b>  | 11 | Nos. |  |
| 27 | <b>Sahli's hemoglobinometer or equivalent</b>   | 8  | Nos. |  |
| 28 | <b>Snellen's Eye Chart-</b><br>illuminated, plastic, near/distant vision or<br>equivalent   | 2  | Nos. |  |
| 29 | <b>Binocular Microscope, Halogen lamp with</b><br>brightness adjustment, coarse & fine<br>adjustment, 10X, 40X(S), 100X(S, Oil), or<br>equivalent   | 16 | Nos. |  |
| 30 | <b>Kymograph .Aluminium, 230V, 50Hz, speed</b><br>selection 1.00, 1.25 mm/sec<br>Or equivalent  | 6  | Nos. |  |
| 31 | <b>Tissue organ bath ,</b><br>manual, tank 5L, chambers 5mL, stainless steel,<br>Or equivalent  | 6  | Nos. |  |
| 32 | <b>Height measurement scale, adjustable, upto</b><br>2 meters height, material MS<br>Or equivalent  | 5  | Nos. |  |
| 33 | <b>ESR apparatus-</b><br>stainless steel, coated, 6 pipettes<br>Or equivalent   | 10 | Nos. |  |



|    |  |    |      |  |
|----|--|----|------|--|
| 34 | <b>Human Eye model –normal, multiple parts,adjustable focal length,model lenzs<br/>Or equivalent</b>   | 3  | Nos. |  |
| 35 | <b>Human skeleton model,life size,plain,non flexible,on mounted base—mini size-,painted with muscle,flexible,on hanging stand<br/>Or equivalent</b>  | 2  | Nos. |  |
| 36 | <b>Human heart model-normal,life size,<br/>Or equivalent</b>   | 2  | Nos. |  |
| 37 | <b>Female reproductive model,--normal<br/>Or equivalent</b>  | 2  | Nos. |  |
| 38 | <b>Male reproductive model---normal<br/>Or equivalent</b>  | 2  | Nos. |  |
| 39 | <b>Human lungs model—normal,segmented with bronchial trees<br/>Or equivalent</b>   | 2  | Nos. |  |
| 40 | <b>Human digestive model –normal,multiple parts<br/>Or equivalent</b>  | 2  | Nos. |  |
| 41 | <b>Perimeter-lab use, central field</b>  | 3  | Nos. |  |
| 42 | <b>Spirometer-portable,accuracy± 3%,temperature0 to 40C</b>  | 3  | Nos. |  |
| 43 | <b>Sphygmomanometer—manual</b>   | 12 | Nos. |  |
| 44 | <b>Stethoscope-</b>  | 14 | Nos. |  |
| 45 | <b>Specimen histology Slides—basic human medical histological set</b>  | 50 | Nos. |  |
| 46 | <b>WBC Pipette-with latex<br/>Or equivalent</b>  | 10 | Nos. |  |
| 47 | <b>RBC Pipette-with latex<br/>Or equivalent</b>  | 8  | Nos. |  |
| 48 | <b>Fume hoods<br/>Fume hood for the evaporation of solvent<br/>Dimensions:<br/>External Size: 48 (W) x 54 (H) x 26(D) Inches<br/>Approximately<br/>Internal Size: 42 (W) x 36 (H) x 25 (D) Inches<br/>Approximately<br/>Vapor proof fluorescent lights<br/>Powerful motor and blower system capable to</b> | 4  | Nos. |  |

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|---|--|--|--|
| <p>generate high velocity at working surface.<br/>         Chemical resistant flat working surface glass fiber sheet temperature Range 400 Degree<br/>         Base cabinet having 30" height and same width as fume hood<br/>         Wash Basin<br/>         Gas Connections<br/>         5 mm tempered glass<br/>         Make : Local</p> |  |  |  |
|---|--|--|--|

**Financial Portion (Price and Brand/Model to be mention only in Financial Proposal in a separate sealed envelope)**

| No change in the BoQs (Specs and Qty.) of CIIT, as detailed below, is allowed. Any addition information may be mentioned in the blank columns (i.e. model / brand and Price). Any modification in CIIT's BoQ may lead to rejection of bid (fully or partially). |  |          |      | Rate to be quoted Inclusive of all (applicable) Taxes |                  |                   |
|---|--|----------|------|---|------------------|-------------------|
| Sr. #   | Name   | Quantity |      | Quoted Model / Brand / Make                           | Unit Price (Rs.) | Total Price (Rs.) |
| 1   | <p><b>Water bath</b><br/>           (Ambient +5° to 100°C ±0.1°C)<br/>           Digital<br/>           14 Liter<br/>           307×216×266 mm<br/>           Microprocessor PID control / Automatic tuning / Calibration.<br/>           Powerful circulation system using our patented agitator<br/>           Digital LED displays with quick adjustable dial knob. (0.1°C resolution)<br/>           Low-profile design with sloped control panel for easier access and better safety.</p> | 10       | Nos. |   |                  |                   |
| 2   | <p><b>Magnetic stirrers with hot plates and magnetic bars</b><br/>           Glass Ceramic<br/>           Stirring Capacity 2 L<br/>           Work Plate 184 x 184 mm<br/>           Digital Display<br/>           Temperature : RT-550 Degree with increment 1 degree<br/>           Speed Range: 60-1500 RPM<br/>           Temperature Accuracy : ±0.1°C<br/>           Power consumption 550W</p>  | 8        | Nos. |   |                  |                   |

Signature & Stamp of Bidder

|    |   |    |      |  |  |  |
|----|---|----|------|--|--|--|
| 3  | <b>Multistation Magnetic stirrers with heating or equivalent</b><br>Stirring Position: 4<br>Stirring Capacity: 3L x 4<br>Speed Range : 0-1500 RPM<br>Heating Power: 4 x 600W<br>Temp: RT-150 Degree<br>Material: Aluminum<br>220V , 50 Hz | 4  | Nos. |  |  |  |
| 4  | <b>Weighing Balance (top loading):</b><br>Maximum weighing capacity 3100 g;<br>Readability 0.01 g<br>Built in RS 232 output interface direct connection to Computer or printer or equivalent  | 12 | Nos. |  |  |  |
| 5  | <b>Analytical Balance</b><br>Capacity-220gm,Readability-0.1mg<br>Minimum load-10mg, Minimum sample WT. as per USP-200mg<br>Operating temperature-18°C to 30°C. or equivalent  | 1  | No.  |  |  |  |
| 6  | <b>Oven</b><br>(170L, natural convection, Temperature range 5°C above ambient up to +300°C)<br>Temp Precision: 0.1 Degree<br>Temp Fluctuation : ±0.5°C<br>Timing Range: 1 ~ 9999 min<br>Shelves : 2                                       | 10 | Nos. |  |  |  |
| 7  | <b>Lab Refrigerator</b><br>(Capacity 20 cubic feet. temperature 2°C)  | 2  | Nos. |  |  |  |
| 8  | <b>Lab Freezer</b><br>-2°C to -40°C   | 1  | No.  |  |  |  |
| 9  | <b>Furnace</b><br>14L capacity, maximum temp. 1200°C<br>Chamber Material: High Thermal Density Ceramic Fiber<br>PLC Temperature Control System<br>Aludirome Heater Strip<br>Temp Precision: ±1°C<br>690 x 520 x 780 mm or equivalent      | 1  | No.  |  |  |  |
| 10 | <b>De-ionization plant or equivalent</b><br>(Lab Water System)making water capacity-10L/H.power-30V,source voltage-AC 220V/110V   | 1  | No   |  |  |  |
| 11 | <b>Incubator</b><br>(Air circulation Economy Forced, Temp Range, Ambient +5°C to 80°C, Temp Control)  | 3  | Nos. |  |  |  |

|    |  |   |      |  |  |  |
|----|--|---|------|--|--|--|
|    | Temp Fluctuation: $\pm 0.2^{\circ}\text{C}$<br>Timer: 1~9999 mins<br>Capacity: 65 Liter<br>Consumption: 500W<br>LED Large Display<br>Over Temperature Protection<br>Toughened Glass inner door or equivalent<br>Size: 550 x 550 x 840 mm   |   |      |  |  |  |
| 12 | <b>Sonicator</b><br>(25L capacity, Heated ambient $+5^{\circ}\text{C}$ to $70^{\circ}\text{C}$ )   | 1 | No.  |  |  |  |
| 13 | <b>Uv-vis spectrophotometer</b><br>Measurement wavelength range : 190nm to 1100nm<br>Spectral Band Width: 2nm<br>Wave Length Accuracy: $\pm 0.5\text{nm}$<br>Single Beam: Grating 1200 lines/ mm<br>Light Source: Deuterium Lamp, Tungsten Lamp<br>Detector: Silicon Photodiode<br>Display: 480 x 272 65 Thousand true colour TFT LCD  | 1 | No.  |  |  |  |
| 14 | <b>Polarimeter,</b><br>0.01° Arc Optical Rotation<br>Preheating is not needed<br>Dark-Colored sample can be measured<br>Light Source: LED Lamp<br>Measuring Range: $\pm 45^{\circ}$ (Optical Rotation) / $\pm 120^{\circ}$ Z (Sugar)<br>Wave Length: 580 nm<br>Readable 0.001 ° (Optical Rotation)<br>Temperature accuracy: $\pm 0.5^{\circ}\text{C}$<br>Interface: USB & RS232<br>Display : LCD<br>Power Supply: AC 220Volts<br>Or equivalent | 2 | Nos. |  |  |  |
| 15 | <b>Digital Melting Point Apparatus,</b><br>0.1°C resolution, complete with pack of 100 melting point tubes<br>PID & PWM Controller<br>LCD Touch Screen<br>USB & RS232 interface<br>The melting curve can be recorded automatically<br>Measuring Range: RT~ 400°C<br>Data Storage: 1000 sets<br>Repeatability: 0.3 °C<br>Or equivalent  | 4 | Nos. |  |  |  |

|  |  |                   |      |  |               |         |  |                       |   |  |                  |      |  |  |  |  |  |  |  |
|--|--|-------------------|------|--|---------------|---------|--|-----------------------|---|--|------------------|------|--|--|--|--|--|--|--|
| 16   | <b>Refractrometer,</b><br>CCD technology. accuracy $\pm 0.2\%$ , read sample as small as 0.4ml<br>7" LCD Touch Screen<br>2 USB Ports, RS 232 Port and internet port for connecting printer or internet<br>Auto temperature control system<br>Refractive Index Measuring Range: 1.30000 ~ 1.70000nD<br>Measuring Resolution: $\pm 0.0001$ nD<br>Measuring Resolution (Brix): 0.1 %<br>Peltier temperature control or equivalent       | 1                 | No.  |  |               |         |  |                       |   |  |                  |      |  |  |  |  |  |  |  |
| 17   | <b>pH meter</b><br>(Bench top, $\pm 0.01$ pH, $\pm 0.1^\circ\text{C}$ )<br>Range: -2.00 ~ 19.99PH Accuracy: $\pm 0.01$ PH<br>Digital LED Display<br>With electrode   | 4                 | Nos. |  |               |         |  |                       |   |  |                  |      |  |  |  |  |  |  |  |
| 18   | <b>Autoclave</b><br>75L capacity<br>Chamber Size: 386 x 682 mm<br>Working Temperature : 105 ~ 136 °C<br>Temperature Accuracy : $\pm 0.1^\circ\text{C}$ , Timing Range: 0 ~999 min, Working Pressure : 0.175 MPA<br>Safety Feature: Over Pressure, Over Temperature, Door Sensor, Anti dry out Function , Over Current, Door Cover, LED Screen Display<br>Water inlet Filter to keep high water quality<br>Power Supply: AC 220 Volts | 1                 | No.  |  |               |         |  |                       |   |  |                  |      |  |  |  |  |  |  |  |
| 19   | <b>Wire loops(sterile plastic or nichrome) Or equivalent</b>   | 1                 | No.  |  |               |         |  |                       |   |  |                  |      |  |  |  |  |  |  |  |
| 20   | <b>Digital Colony counter</b><br>CMOS integrated circuit and LED digital display.<br>The special probe counts sensitively and accurately<br>It is composed by counter, probe and count pond, etc.<br>The magnification is variable by adjusting the flectional arm.  | 1                 | No.  |  |               |         |  |                       |   |  |                  |      |  |  |  |  |  |  |  |
| <table border="1"> <tr> <td data-bbox="232 1640 505 1696">Phonetic counting</td> <td data-bbox="513 1640 743 1696">Yes</td> <td data-bbox="751 1640 789 1696"></td> </tr> <tr> <td data-bbox="232 1707 505 1764">Counter range</td> <td colspan="2" data-bbox="513 1707 789 1764">0 ~ 999</td> </tr> <tr> <td data-bbox="232 1774 505 1831">Suitable petri dishes</td> <td colspan="2" data-bbox="513 1774 789 1831"><math>\Phi 50\text{mm}</math>, <math>\Phi 90\text{mm}</math></td> </tr> <tr> <td data-bbox="232 1841 505 1860">Character height</td> <td colspan="2" data-bbox="513 1841 789 1860">13mm</td> </tr> </table> |  | Phonetic counting | Yes  |  | Counter range | 0 ~ 999 |  | Suitable petri dishes | $\Phi 50\text{mm}$ , $\Phi 90\text{mm}$ |  | Character height | 13mm |  |  |  |  |  |  |  |
| Phonetic counting  | Yes  |                   |      |  |               |         |  |                       |   |  |                  |      |  |  |  |  |  |  |  |
| Counter range  | 0 ~ 999  |                   |      |  |               |         |  |                       |   |  |                  |      |  |  |  |  |  |  |  |
| Suitable petri dishes  | $\Phi 50\text{mm}$ , $\Phi 90\text{mm}$  |                   |      |  |               |         |  |                       |   |  |                  |      |  |  |  |  |  |  |  |
| Character height   | 13mm   |                   |      |  |               |         |  |                       |   |  |                  |      |  |  |  |  |  |  |  |

|    |  |                     |    |      |  |  |  |
|----|--|---------------------|----|------|--|--|--|
|    | Lamp power   | 16W                 |    |      |  |  |  |
|    | Power supply   | 220/ 110V, 50/60 Hz |    |      |  |  |  |
|    | External size  | 255 * 180 * 110mm   |    |      |  |  |  |
|    | Or equivalent  |                     |    |      |  |  |  |
| 21 | <b>Centrifuge machine</b><br>with three angle rotors for tube sizes of 10mL, 15mL, and 1.5/2.0mL)<br>Maximum Speed: 16500 RPM<br>Max RCF: 18780 x g<br>Timing Range: 0 ~ 99h 59 min<br>LCD Display<br>Stainless Steel Chamber<br>Can store 20 Procedures or equivalent |                     | 1  | No.  |  |  |  |
| 22 | <b>Filtration assembly</b><br>(vacuum, 1L capacity)<br>Funnel 300 ml<br>Pyrex glass<br>Membrane : 47 mm<br>Triangle fluid bottle<br>Clamp, hose linker, Rubber Hose, Dust cover, Core filter Head, Filter Bowl   |                     | 1  | No.  |  |  |  |
| 23 | <b>Microwave Oven, 30L</b>   |                     | 1  | No.  |  |  |  |
| 24 | <b>Heating Mental</b><br>500ml & 1L with Magnetic Stirrer<br>Maximum Temperature : 380 Degree<br>Speed Range: 1200 RPM<br>LED Display<br>Capacity: 500 ml & 1000 ml<br>(02 each)   |                     | 4  | Nos. |  |  |  |
| 25 | <b>Dissection box</b> (Rust free Stainless steel)-<br>Large, Scalpel Blades, Kelly Hemostat, Iris Scissors, Dissecting Scissors, Dissecting Needle, Forceps, Stainless Steel Punch, Suture Hook or equivalent  |                     | 6  | Sets |  |  |  |
| 26 | <b>Neubauer Chambers or equivalent</b>   |                     | 11 | Nos. |  |  |  |
| 27 | <b>Sahli'shemoglobinometer or equivalent</b>   |                     | 8  | Nos. |  |  |  |
| 28 | <b>Snellen's Eye Chart-illuminated,plastic,near/distant vision or equivalent</b>   |                     | 2  | Nos. |  |  |  |
| 29 | <b>Binocular Microscope, Halogen lamp with brightness adjustment,coarse &amp; fine adjustment, 10X,40X(S),100X(S,Oil), or equivalent</b>   |                     | 16 | Nos. |  |  |  |

|    |   |    |      |  |  |  |
|----|---|----|------|--|--|--|
| 30 | Kymograph .Aluminium,230V,50Hz,speed selection1.00,1.25mm/sec<br>Or equivalent  | 6  | Nos. |  |  |  |
| 31 | Tissue organ bath ,<br>manual,tank 5L,chambers5mL,stainless steel,<br>Or equivalent   | 6  | Nos. |  |  |  |
| 32 | Height measurement scale,adjustable,upto 2meters height, material MS<br>Or equivalent   | 5  | Nos. |  |  |  |
| 33 | ESR apparatus-<br>stainless steel,coated,6pipettes<br>Or equivalent   | 10 | Nos. |  |  |  |
| 34 | Human Eye model –normal, multiple parts,adjustable focal length,model lens<br>Or equivalent   | 3  | Nos. |  |  |  |
| 35 | Human skeleton model,life size,plain,non flexible,on mounted base—mini size-<br>,painted with muscle,flexible,on hanging stand<br>Or equivalent | 2  | Nos. |  |  |  |
| 36 | Human heart model-normal,life size,<br>Or equivalent  | 2  | Nos. |  |  |  |
| 37 | Female reproductive model,--normal<br>Or equivalent   | 2  | Nos. |  |  |  |
| 38 | Male reproductive model---normal<br>Or equivalent   | 2  | Nos. |  |  |  |
| 39 | Human lungs model—normal,segmented with bronchial trees<br>Or equivalent  | 2  | Nos. |  |  |  |
| 40 | Human digestive model –normal,multiple parts<br>Or equivalent   | 2  | Nos. |  |  |  |
| 41 | Perimeter-lab use, central field  | 3  | Nos. |  |  |  |
| 42 | Spirometer-portable,accuracy± 3%,temperature0 to 40C  | 3  | Nos. |  |  |  |
| 43 | Sphygmomanometer—manual   | 12 | Nos. |  |  |  |
| 44 | Stethoscope-  | 14 | Nos. |  |  |  |
| 45 | Specimen histology Slides—basic human medical histological set  | 50 | Nos. |  |  |  |
| 46 | WBC Pipette-with latex<br>Or equivalent   | 10 | Nos. |  |  |  |

|    |   |   |      |  |  |  |
|----|---|---|------|--|--|--|
| 47 | RBC Pipette-with latex<br>Or equivalent   | 8 | Nos. |  |  |  |
| 48 | <b>Fume hoods</b><br><b>Fume hood for the evaporation of solvent</b><br><b>Dimensions:</b><br>External Size: 48 (W) x 54 (H) x 26(D)<br>Inches<br>Approximately<br>Internal Size: 42 (W) x 36 (H) x 25 (D)<br>Inches<br>Approximately<br>Vapor proof fluorescent lights<br>Powerful motor and blower system capable to generate high velocity at working surface.<br>Chemical resistant flat working surface glass fiber sheet temperature Range 400 Degree<br>Base cabinet having 30" height and same width as fume hood<br>Wash Basin<br>Gas Connections<br>5 mm tempered glass<br>Make : Local | 4 | Nos. |  |  |  |

**Special Terms and conditions:**

1. Please quote the rates on our BoQs and clearly mention the quoted model / brands, otherwise your bid / items may be rejected.
2. Purchase / work order (s) will be awarded on **Item Wise Basis** as mentioned in BoQs.
3. In Addition to filling of the attached BoQs, supporting literature of the quoted model must be attached for verification & technical evaluation of the required specification by the technical committee. In case of any clash is found between the quoted model and the literature model. So the item/bid may be rejected.
4. Kindly attach the **Tender fee with Technical Bid** and **Bid money / CDR with Financial Bid**.
5. Please submit the technical and financial bid (s) on our prescribed BoQs and clearly mention the quoted model / brands, otherwise your bid (s) may be rejected and also attach the terms and conditions (signed, stamped) with both bids.
6. **Multiple rates of an item may also lead to the rejection of bid / item.**