

Phone 91-7232-242456

Fax 91-7232-244148

SHRI. VASANTRAO NAIK GOVT. MEDICAL COLLEGE, YAVATMAL.

श्री. वसंतराव नाईक शासकीय वैद्यकीय महाविद्यालय, यवतमाळ

Ref. No.SVNGMC/Pathology/QT/ 19-20 / 14856 /19

Dt. 20/09 /2019

Open Quotation Notice (2019-20)

For the supply of Pathology for MCI

Dean Shri Vasant Rao Naik Govt. Medical College, Yavatmal invited separate open quotation for the supply of Instruments **listed below** in **two envelope** system from manufacturer & authorized dealers. Detail list & specification is enclosed. Interested Manufacturer/dealer can send their quotation.

A. ENVELOPE NO :- 1 TECHNICAL BID:- Following documents must be submit in this envelope

1. Shop/Udhyog Aadhar/GEM Reg. establishment act registration.
2. PAN Card
3. GST Registration certificate
4. Cancel Cheque & Bank Details on letter head.
5. Acceptance of all terms of conditions with stamp of signature firm/company on letter head.
6. Authorization certificate from the manufacturer

B. ENVELOPE NO :- 2 PRICE BID

1. Quote your Minimum Rates in a following Format on the letterhead of the firm/company in Price Bid envelop the cost should be quoted in Indian currency only. Quote maximum two models on separate sheet.

1. Basic Price:-.....

2. Taxes: Excise duty..... Custom duty..... GST..... other.....

3. Installation Charges:-.....

4. TOTAL=(i)+(ii)+(iii)+(iv):-.....

5. CMC/AMC:-.....

6. Prices for consumables/ Disposable/ accessories should be submitted separately in price bid which will be valid for warranty period, AMC.CMC period.

Both the sealed envelope No. 1 and No.2 should be put together in one cover and it should be sealed. This sealed envelope should be marked on upper left hand corner mentioning name of the items No of the Item Quotation enquiry No. And Date of quotation opening. The full name and address of the Firm/Company should be written on the left hand lower corner. Such separate envelope containing sets of Envelope No.1 and No. 2 should be submitted separately for each Items mentioned in the List.

Envelope No.2 will be opened only when the documents as mentioned in envelope No.1 are in order as per requirements and if item is as per specifications.

Separate quotation should be prepared for every item mentioned in the list and sent in sealed envelope (duly sealed) by post or hand delivery so as to reach Inward Section of administrative office, Shri Vasant Rao Naik Govt. Medical College, Yavatmal on or before 28 / 09 /2019 up to 03.30 pm.

Date & timing of the opening of quotation (Technical Bid) :- 20 / 09 /2019 at 03.30 pm. at College Council Hall. Date & time of opening of the Price bid will be decide after scrutiny of the technical detail. Representative of the Supplier may attend the meeting by submitting authorization letter.

Please quote your minimum rates for Supply of articles as per details given below/list enclosed.. The separate envelopes (every Item) containing the quotation should be sealed and super-scribed as under:-

Quotation due on..... Against inquiry No.....for the purchase of.....

LIST OF INSTRUMENT REQUIRED

Sr No	Name of the Instrument/Equipment & Specification	QTY
1	Specimen identification solution	1
2	Manual rotary microtome	4
3	Hot plate	2
4	Paraffin embedding bath	2
5	Tissue embedding unit (MTC-TE)	2
6	Automated tissue processor – Histokinette	1
7	Autoclave	2
8	Centrifuge machine	6
9	Cabinet for slides (10,000 capacity)	3
10.	Digital SLR at least 20 MP with Accessories	1
11	Standalone cold plate	2
12	Water bath	3
13	Single pan digital balance	2
14	Binocular microscope with high end apochromatic optics	6
15	Three part fully automated cell counter	3
16	Automatic urine analyzer	2
17	pH meter (electric)	2
18	Paraffin dispenser with thermostat	2
19	Saws, wire for cutting bones	2 sets
20	x-ray viewing box	5
21	Laboratory Stirrer	5

The terms and conditions for the supply are:-

1. Enquiry No. must invariably be given at the top of the envelope. Envelopes without indication will not be entertained.
2. For equipment/ accessories/ spares, technical bid and price bid must be sent in two separate, sealed envelopes and front of the envelop marked clearly in capitals as 'PRICE BID', 'TECHNICAL BID'. Otherwise the bid will be summarily REJECTED.
3. Offers other than those from the manufacturer should be supported by an authority letter from the manufacturer as per Annexure-A.
4. AMC/CMC/Extended Warranty if applicable must be quoted along with price bid and not with the Technical bid. However, in technical bid form consent for AMC/CMC must be given.CMC (Labor& Spare parts), these charges include the cost of replacement parts/Components/spares/accessories etc. This shall be borne by the firm. In case of consumables/these will also be included in CMC as per Technical Specification. However, AMC charge will cover labor only and does include the cost of any replacement parts/components etc.

5. Unsealed quotations will be rejected.

6. Full description, make and quantity of the articles must be mentioned in your quotation. Original catalogue/literature should be submitted with the quotation (Technical bid envelop)
7. Validity of the quotation should be for a minimum period of 120 days.
8. Delivery period for each item be specifically mentioned in the quotations from the date of Supply order it should be maximum of 6 weeks.
9. The Dean reserves the right to call the firm for physical demonstration of item to verify the quality of the offered item from the lowest bidder. The firm must demonstrate the product within 7 days of requisition, failing which the bid will be rejected.
10. The institute reserves the right to reject the supplied goods if the same are not found in accordance with the specifications approved and asked for. In case there is a short/defective supply the firm will be informed and the defective material will be lifted from the concerned department/Central store by the supplier at their own cost within two weeks period. The institute will not bear any expenses on this account.
11. The rates and total cost must be quoted in both words and figures (over-writing not allowed.)

12. Rate should be for free delivery at Shri V.N. Govt. Medical College, Yavatmal premises only. Rate should be quoted including all charges. Rates must be quote on letter head alongwith Pan, VAT, CST/GST Number. It should be submit in Price envelope. (envelope No 2)

13. The suppliers will have to adhere to the delivery schedule. Delayed supplies beyond 30 days from the date of supply order as the case may be will be subject to demurrage @0.5% per weeks or part thereof of the contract price subject to maximum of 10% of contract price, if the Price is below 2 lakh, else it will be @ 0.5% up to as maximum of 5%.

14. Warranty/Guarantee should be quoted as per the Technical specifications. (2 Years)

15. The successful bidder will submit P.B.G in the shape of FDR/TDR only in favor of **Dean, Shri Vasantrao Naik Government Medical College, Yavatmal** @ 3% of the total value of the order which will be valid for 30 months in case the warranty is for 24 months and 66 months in case the warranty is for five years. The same shall be further extended for 5 more year till the time AMC/CMC inforce.

16. The Manufacturer/Distributor/Agent should furnish along with the Price Bid a certificate that the rates quoted by the firm are the same as are being charged from other Government or Non-Government Departments/Institutions for similar items.

17. Compliance Chart :- (If quoting for more than one model then separate formats should be enclosed for different models in the same envelope.) Make & Model No of the quoted Item should be mentioned on the top Part of the compliance Chart.

Equipment Name -			Make & Model:	
Sr No	Tender /Quotation specifications as asked in the tender form	Equivalent specifications quoted by the tendered with the name of the manufacturer	Whether the tender/ Quotation quoted by the supplier is as per specifications asked for Indicate against each item clearly YES/NO	If the tender quoted is not as per specifications then variations/deviations should be clearly indicated against each item asked for.
1	2	3	4	5

18. The firm should submit undertaking on letter head stating that firm & its personnel do not have any direct or indirect interests with purchasing institute.

19. The Envelop No. 2 (Commercial Bid) will be opened of only those tenderers who have submitted all the documents as per tender terms and conditions in the envelop no. 01 and are technically qualified. The demonstration of tenderer who had quoted lowest price will be taken. If two tenderers had quoted same cost of equipment, then the demonstration of both the tenderer will be taken.

20. Complaint/s :- Any complaint / representation regarding tender/quotation will be entertained only after depositing of **Rs. 10,000/-** in form of **Demand Draft** in the name of Dean Shri V N Govt Medical College Yavatmal. Subsequently necessary action will be taken by the Dean and decision of Dean will be binding upon the complainant. If the complaint turns out to the false or invalid the amount will be forfeited. The Amount shall be refunded if after scrutiny the complaint is found to be true. No further complaint/ representation from the same complainant for the same tender/quotation will be entertained.

Note:- The Technical Specification, quoted price & availability of service Centre near Yavatmal will be considered while approving the prices.

21. I) The Instrument/Equipment Shall be of ISI/ISO mark or equivalent.
- II) It shall necessary to provide OEM (original Equipment Manufacturer)
- III) Supplier to provide user of maintenance AMC/CMC additional services.

DEAN

Shri Vasantrao Naik Government Medical
College, Yavatmal

Sr. No.01 SPECIMEN IDENTIFICATION SOLUTION

SCANNER

1. It should be 2D scanner.
2. It should be light weight.
3. Its resistance should be 1.2 M scan.
4. It should be friendly with HMIS system.
5. It should support US and UK language.
6. Its scanning rate should be more than 50 scans/seconds.
7. Its voltage should be +5V +/- 10% 3.7 V 800mAh.

PRINTER

1. Printer should have 4 inch width.
2. The resolution of the printer should be 203 DPI.
3. Speed of the printer should be 6 IPS.
4. Printer should have capacity of 110x300 meter ribbon capacity.
5. It should have media sensor.
6. It should be easy to use.
7. It should be friendly with HMIS system.
8. It should have more than 6 MB flash memory.
9. It should have reflective and transmissive sensor.

Sr No.02 Specifications of Manual rotary microtome

1. Should be a manual microtome with specimen feeding system.
2. Section thickness should range from 0.5-60um. With increments
3. Should have specimen feed of 25 mm and vertical stroke length of 59 mm and blade holder setting angle upto 10 degree with marking 0,5 ,10, degree in blade holder.
4. Specimen retraction in the return stroke should be turn on and off.
5. Should have section thickness indication by visual display.
6. Should have course feed manual via coarse feed hand.
7. Should have dedicated nob mechanical trimming thickness selection of 10 and 50um.
8. Should have user selectable coarse feed turn direction clock or counter clockwise.
9. Precise specimen orientation of 8 degree in X-Y with anti tilt feature.
10. Knife holder base with lateral displacement for disposable blades.
11. Should have 12 o clock locking by simply pulling te handle so rest the specimen holder at upper position for fixation of another block.
12. Should have Slot cover to protect the interior of the instrument from sectioning debris.
13. Should have disposable blade holders with finger guard protection.
14. Should have hand rest for easy sectioning.
15. Should be certified with GS, CE, IEC.

Sr.No 03 SPECIFICATIONS OF HOT PLATE

1. Plate should be of round shape.
2. Choice of controller should be either energy regulator or thermostat.
3. Maximum surge temperature should be 300 degree celcius.
4. It should be shock proof and easily repairable.

Sr.No. 04 Paraffin embedding bath

- * Should have 3to 6 liters paraffin reservoir with temperature setting range from 30 to 700 C, adjustable in 10 C increment
- * Activation of paraffin flow should be operated manually as well as via foot switch
- * should have weekly working days setting with real time setting
- * Should be Programmable for weekly time, work days, work stating time ,work end time, real time and day of week for should have automatic switch on and off of the instrument
- * Should have continuously adjustable paraffin flow rate and Peltier cooling unit in front of the nozzle with temperature setting -5 degc
- * Should have large heated working surface
- * Should have adjustable work surface for optimum ergonomics
- * Heated waste tray should be removable
- * Should have connections for 2 inbuilt electrically heated forceps along with 2 electric forceps
- * Optimal illumination of working surface via individually adjustable LED lamp/halogen lamp and Magnification lens
- * Removable tray should be for 80-100 cassettes

Sr.No.05 Tissue Embedding Unit (MTC-TE)

Microprocessor controlled tissue embedding system consisting of heated paraffin station and cold plate.

Paraffin embedding bath

- * Should have 3to 6 liters paraffin reservoir with temperature setting range from 30 to 700 C, adjustable in 10 C increment
- * Activation of paraffin flow should be operated manually as well as via foot switch
- * should have weekly working days setting with real time setting
- * Should be Programmable for weekly time, work days, work stating time ,work end time, real time and day of week for should have automatic switch on and off of the instrument
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- * Should have large heated working surface
- * Should have adjustable work surface for optimum ergonomics
- * Heated waste tray should be removable
- * Should have connections for 2 inbuilt electrically heated forceps along with 2 electric forceps
- * Optimal illumination of working surface-via individually adjustable LED lamp/halogen lamp and Magnification lens
- * Removable tray should be for 80-100 cassettes

Sr.No 06 Automated Tissue Processor- Histokinette

Technical specification for Automatic tissue processor:

- 1) It should be carousel type with 12 stations (10 reagents and 2 wax bath).
- 2) It should have in built vacuum function with fume control system.
- 3) It should have metal tissue baskets with capacity of 80-100 cassettes.
- 4) It should have metal reagent container-10(1.8liters). Beakers carrier -10, Wax bath -2(1.8L).
- 5) Temperature setting range should be 45-65°C.
- 6) Power input should be 100-240V/50- 60Hz fitted with Indian plug.
- 7) The unit should be capable of being store continuously in ambient temp. of 0-50°C and relative humidity of 15-90%.
- 8) Should have Ergonomic control panel with foil protected keyboard and LCD.
- 9) Infiltration time should be separately programmable for each station .
- 10) should have delayed start function upto 9 days.
- 11) It should have infiltration time upto 99h 59min can be individually programmable for each station.
- 12) Interrupting an automatic processor for reloading or removing cassettes before end of a run should be possible.
- 13) There should be automatic immersion of tissue basket in a station in case of main power failure.
- 14) Automatic reheating of wax before basket transfer to a wax bath.
- 15) There should be facility of easy editing and changing of programs, even during a processing run.
- 16) Audible alarms ,error messages and warning codes.
- 17) Should have advanced safety concepts.
- 18) Should have suitable voltage stabilizer should be provided.
- 19) Should have suitable UPS with maintenance free batteries for minimum two hrs backup should be supplied with the system.
- 20) Comprehensive training for lab staff & support service till familiarity with system.
- 21) User/technical/maintenance manual to be supplied with the instrument.

Sr.No 07 Specifications for Autoclave

1. Should have water level indicator, pressure gauge, steam release clock spring loaded safety valve.
2. Should have triple walled construction.
3. Lid should be made of steel.
4. Pressure adjustable from 5 psi to 20 psi with an accuracy of +/- 1 psi
5. Working chamber dimension should be 750 mm x 450 mm
6. Pressure inside the chamber should be variable from 5 psi to 20 psi.
7. Should have automatic pressure control switch.
8. Should have automatic water cut off device.
9. Should have temperature indicator.
10. Should have timer with alarm system.
11. Apparatus should conform to national and international standards.

Sr.No 08 Specifications for Centrifuge

1. Should be bench top centrifuge with digital speedometer.
2. Should have digital timer of range 0-59 mins.
3. Should have max. speed of 14000 rpm
4. Should have dust cover.
5. Should have 2 spare fuses , 2 spare carbon sets, cord and plug to work on 220 volts 50 hz AC.
6. Should be CE certified.

Sr.No 09 Cabinet for slides

1. Should be made of steel with attractive powder coated pain finish.
 2. Should have cabinet of 480x75 mm drawer and take slide in vertical position.
 3. Each drawer should move in a slot and is completely removable for easy lifting.
- The cabinet should accommodate

Sr.No 10 Specifications for digital DSLR camera with accessories

1. It should be DSLR
2. Should have at least 20 MP camera
3. 1080p FHD video recording
4. 23.5x 15.6 mm, APS-C inch CMOS Sensor
5. 3 in, 921 k dots , LCD display 1/4000 sec max shutter speed.
6. HDMI , TV output
7. Pict bridge , and should have microphone
8. Should have wifi.

Sr.No.11 Standalone Cold Plate :

- *Should have a constant temperature of -6 to -180 C with an increment of 10 to hold upto 100 Standard cassettes.
- 2) Accessories to be supplied along with machine-Embedding rings (pack of 5000), Stainless steel Embedding molds 24x24x5 mm (24 in number), Stainless steel embedding molds 24x30x5 mm (25 in number), stainless steel embedding molds 24x24x12 mm (24 in number)
 - 3) Voltage should be as appropriate for the system
 - 4)Should have LCD display & integrated capacitive touch key
 - 5) Should have 3 years comprehensive warranty to be followed by 5 years AMC. Technical support required spares & consumables should be assured for 2 years after initial 3years period is Over
 - 6) It should be CE Certified by European notified body (under MDD) along with declaration of conformity Or US FDA approved
 - 7) Demonstration of quoted model is compulsory.
 - 8) Power supply : 230V+15%,50Hz+3%
 - 9) Service Training to MEC Engg. And Operational training to be user friendly for department.
 - 10) Operating and detail service manual should be provided.
 - 11) Tropicalization : Operating Temperature should be of 40C. Storage Temperature should be 60C Relative Humidity should be Upto 90% non Condensing.
- At least 5 installations in Government of Maharashtra College &Institutions with Performance certificate for the quoted model & make

Sr.No.12 Specifications for water bath

- Should have low profile design with removable rectangular glass basin
 - The water bath should be illuminated from the side and provide exceptional viewing of the tissue section(s)
 - Should have easy to read LED display showing both set temperature and actual temperature
 - Temp Range: Room Temp to 75° C +/- 1° C
 - Capacity: 2 Liters (1/2 gallon)
 - Size Glass Tray (included): 10" (W) x 6.5" (D) x 2" (H)
 - Overall Size should be : 14" x 14" x 4"
 - Shipping Weight should be 22 lbs.
 - Power Requirements should be 300W (110V, 60Hz)
 - Should be CE certified
 - Cord should be CSA & UL approved
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Sr.No.13 Single pan digital balance

1. It should be highly accurate.
 2. It should have 0.1 mg readability.
 3. It should be durable.
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Sr.No.14 Specifications of binocular research microscope with high end apochromatic Optics

1. Ergonomically designed rugged stand for long time comfortable usage. Carrying handle should be built into the stand. It should have built in adjustable and centerable luminous field diaphragm.
2. Built in transmitted light illumination with 6 V 30W halogen lamp.
3. Power supply should be external.
4. Transmitted light filters blue green, and yellow should be available.
5. Quadruple revolving nosepiece reverse facing with precision click stops, for easy change of objectives.
6. Abbe condenser with iris diaphragm, numerical aperture, 1.25 with centerable and height adjustable drive for perfect kochler illumination.
7. Mechanical stage should have a good ball bearing specimen holder and should have coaxial X and Y movement with the size 133 to 140 mm x 125 to 135 mm. the travelling range of the stage should be 75 mm in X direction and 30mm in Y direction.
8. The stage movement in Z axis should be 15 mm to 20 mm stroke in coarse movement and 2 to 2.5 microns scale interval in fine focus graduation.
9. Trinocular tube with inclination of 30 deg. With swiveling eyepiece tube and adjustable viewing of height of at least 35mm. interpupillary distance should be variable between 50 mm- 74 mm or better. The trinocular tube should have a beam splitting ration of 50% for observation and 50% for documementation.
10. Eye pieces (anti-fungus) with 10 x magnification field of view 20 mm and should be suitable for spectacle wearers. Both eyepieces should be of focusable type and should have +/- diopter adjustments.
11. High contrast fully plan achromatic objectives 4x/0.10, 10x/0.25, 40x/0.65 and 100x/1.25 oil. 40x and 100x front optics should be spring loaded.
12. Microscope should be antifungus treated.

Sr.No.15 Cell Counter 3 Part fully automated cell counter

- 1) automated hematology analyzer should include 20 parameters including histogram for RBC, WBC, Platelet
- 2) Should have impedance principle for counting and photometer for counting.
- 3) It should have at least 60 samples per hour or more
- 4) Should have dual channel measurement
- 5) Double dilution chamber
- 6) Sample volume less than 10 micro liters in whole blood and prediluted mode.
- 7) It should have various type of discrete modes and real time random access analysis to save reagent consumption and analysis time.
- 8) Sampling should have automatic wash from inside and outside.
- 9) LCD with graphical user interface (GUI) for easy operation.
- 10) Large illuminated colored VGA LCD should display the result of all parameters and histogram together
- 11) Should have sample manual and capillary mode
- 12) Should have capacity to store at least 20000 numeric patient result and 5000 graphics.
- 13) Should have inbuilt graphic printer.
- 14) Floating discriminates facility should be available.
- 15) Levey jennings charts should be available.
- 16) Should have RS232 serial and parallel port can be connected with LAN and laser Printer.
- 17) Should have membrane keyboard for routine operations and maintenance with optical attached external keyboard for patient demographic entry at instrument operation.
- 18) Window interface software should be available.
- 19) Should have extended analysis time for cytopenic sample.
- 20) Should be able to integrate with optional automated slide maker and stainer.
- 21) Should have zero routine maintenance with automatic electronic aperture cleaning and back flush after each sample.
- 22) Instrument should accept all types of vacutainer tubes.
- 23) The instrument should have an option for auto sampler, barcode reader.
- 24) Reagent cost per cycle including start up and shut down if 200 and 500 samples are processed a time should be submitted separately in the financial bid.
- 25) There should be automatic storage of calibration data and extensive quality control programme with L J plot for at least 8 control lots and at least 25 runs per lot.
- 26) Input voltage 230 volts 50 Hz as per Indian Standards. Service manual and technical data with all necessary passwords without any obligation.
- 27) Instructions & operational manuals without any obligation.
- 28) UPS preferably sine wave based with maintenance free batteries with duration two hours.

Sr.No.16 Specifications of Automatic urine analyser

1. Test parameters must include -blood protein, nitrite leukocytes, glucose, ketones, ph, bilirubin and specific gravity.
2. Test wavelength should be – 525nm, 572 nm, 610 nm, 660 nm
3. Test principle should include Method of reflectivity and refractivity.
4. Test speed should be more than 240 tests/hr.
5. Sample rack 110 urine samples with 11 racks/ should have continuous self loading function.
6. Strip loading- 200 strips.
7. Should be read 10 and 11 parameters of urine test strips.
8. Should have Large LCD with torch screen operation.
9. Should accept more than 200 urine strips at a time, moreover, continuous, loading of urine strips should be possible.
10. Should be automatically mixes the urine sample before aspirating and dispensing the same over the urine strip. The strip should be then transported to the measuring area and finally discarded after measurement.
11. Should have long life.
12. Should include 2 years of warranty and comprehensive maintainance.
13. In case of breakdown the technical support should reach the machine within 48 hrs.
14. Should be CE certified.

Sr.No.17 Technical Specification for ph meter (electric)

1. Should have Working range from 0 to 14.
2. Should have resolution 0.1/0.01 pH.
3. Should have Temperature compensation zero to 100 degree C with ATC
4. Should have RS.232C output and supply Data connector cable.
5. Should have Automatic calibration facility.
6. Should have data storage facility and record maximum and minimum value.
7. Should have 3 stage calibration.
8. Should have digital display with 0.001 pH unit readability
9. Should supply Tri-combination pH/ATC electrode
10. Should supply Electrode + Standard buffer solution (pH 4.0, 7.0, 10.01 x 50ml for each bottle) + standard electrode holder +Ac /DC Adaptor.
11. Should be provided with an electrode holder/arm with smooth movement.

Sr.No.18 Paraffin dispenser with thermostat technical specifications

1. Should have temperature range continuously adjustable within 0-100 degree
2. Temperature control precision +/- 1 degree.
3. It should have capacity of 10000ml.
4. Should enable fast and energy efficient heating.
5. It should be fully computerized and automated.
6. It should not weigh more than 20 kgs.

Sr.No.19 Surgical instrument (Post Mortem kit)Saws, wire for cutting bones)

1. Scalpel with metal handle, cutting Length 50 mm
2. Virchow Autopsy knife with metal handle, cutting length 85 mm
3. Incision scissors, 145 mm
4. Bone shears 225 mm
5. Bowel scissors. 210 mm
6. Bone saw 350 mm, incl Spare saw blade
7. Metal mallet, Bergmann, 235 mm, 300 gram
8. Osteotom, 130 mm
9. Rachiotom 220 mm
10. Probes 200/1, 5 mm
11. Surgical needles
12. Dissecting knife, cutting length 100 mm
13. Dissecting forceps, standard, length 160 mm
14. Dissecting forceps, 2x3 cm, length 145 mm
15. Dissecting forceps 1x2 cm, length 250 mm
16. Tape measure in plastic capsule, 1500 mm
17. Chisel, 245 mm
18. Bow saw, 420 mm incl. Spare saw blade

Sr.No.20 Specifications of x ray viewing box

1. Should have LED light source
2. Should have power supply of 15 W.
3. Should have dimensions of 503x 503x 29 mm

Sr.No.21 Laboratory stirrer

1. Adjustable speed ; 100 to 3000 rpm.
2. Continuous and intermittent touch control modes.
3. 220-230 volts, AC, 50 HZ
4. Cup heads size, 25 mm dia. X 22 mm deep for mixing contents in McCartney bottles.
5. Heavy cast-metal base and suction cup to assure stability, prevent walking.
6. Institutions guidelines or any other national or international guidelines. Voltage regulator of appropriate rating to be included to cope with 160-60V.