



# Sidho-Kanho-Birsha University

Ranchi Road, P.O.- Sainik School  
District - Purulia, PIN – 723104, W.B.  
Phone : 03252- 202419 Website-[www.skbu.ac.in](http://www.skbu.ac.in)

## NOTICE INVITING E -TENDER

**Ref No: FO/627 /SKBU/17**

**Date: 10/10/2017**

1. SIDHO-KANHO-BIRSHA University, Purulia intends to procure Lab Instruments for **Zoology Department (DBT-BOOST)** at Purulia. The tentative quantity of the required items along with technical configuration of each items are mentioned at Annexures separately. SKB University is looking for interested bidders who have experience in supplying of above type of instruments.

2. Bidders are advised to study all technical and financial aspects, instructions, forms, terms and specifications carefully in the tender document. Failure to furnish all information required in the Tender Document or submission of a bid not substantially responsive to the Tender document in every respect will be at the Bidder's risk and may result in the rejection of the bid.

3. Intending bidder may download the tender documents from the website <https://wbtenders.gov.in> OR [www.skbu.ac.in](http://www.skbu.ac.in). Only Online Submission of Tender will be accepted. **Last date of submission: 23/10/2017 up to 12:00 hrs. Opening Date 25/10/2017, 1 PM.**

4. The categories of items and quantity indicated in the Tender Document are tentative. SKB University (SKBU), however, reserves the right to increase or decrease the quantity or delete some or all of the items depending on the needs of the SKBU and availability of funds without assigning any reasons.

5. The bidder should indicate specifically the Basic Price, Taxes, GST, Entry tax, other duties (if any), and levies chargeable quantitatively against each item. University will assist to have way bill (if necessary) but the pay will be borne by the bidder. University having valid Central excise duty exemption certificate issued by DSIR, New Delhi. No additional information will be entertained after due date. SKBU may reject bids if they do not carry such information separately and specifically quantitatively.

6. The tender should be submitted in two cover system (electronically) as defined in E-Tender participation system: (a) Technical Bid (b) Financial Bid.

7. The bidder should clearly indicate the delivery period and validity period of tender.

8. The bidder should clearly indicate the availability of service and maintenance facilities at Purulia for the items quoted.

9. The bidders are required to quote for each item separately in terms of basic price and all other charges. Multicurrency bid submission is allowed.

10. The bidder (Technical Bid) must be submitted along with the copies of OEM license or authority from the manufacturer.

11. SKB University reserves the right to reject any or all tenders without assigning any reason whatsoever.

12. No advance payment or payment against Performa invoice will be made. Payment will be made after receipt, inspection, and installation/testing.
13. All damaged or unapproved goods shall be returned at the bidder's risk and cost and the incidental expenditure thereupon shall be recovered from the concerned party.
14. On acceptance of tender, the date of delivery should be strictly adhered to otherwise, the SKB University reserves the right not to accept the delivery in full or in part. In case the order is not executed within the stipulated period, the SKB University will be at liberty to make purchases through other sources.
15. Payment of bill will be made through by crossed account payee Cheque or electronic payment (NEFT) only after delivery and successful installation of each of the items.
16. Delivery Schedule: The Company shall be able to deliver the required items within 15 days of the receipt of order. Delivery/Installation is to be done at Purulia, West Bengal.
17. **Warranty: All equipment should be covered by a minimum three years comprehensive Maintenance Contract (CMC) and two years additional Annual Maintenance Contract (AMC) as per Funding Agency Guidelines.**
18. The products asked for should be of very high standard and of mentioned brand.
19. Liquidated Damages : The Company shall be liable to indemnify the SKB University in all respects and meet and pay off the litigation expenses and all the liabilities including damages, sums etc. arising out of and as a consequence of the negligence, deficiencies, mistakes, lapses, delays etc. in the execution of the various jobs and the services provided.
20. The company should ensure quick back up response in case of equipment failure which should be replaced if needed within 48 hours of the emergency/distress call.
21. Payment: There is no provision for making advance payment to the Company. However, the running bills for the jobs completed can be submitted by the company and will be cleared for payment within reasonable period.
22. Purchase Order: The purchase order for the entire quantity can be placed either in one lump sum or as per the requirement through repeat order subject to availability of fund of the required items. The quantity shown is tentative and may increase or decrease.

Sd/-

Registrar

Annexure 1

**Proforma For Technical Bid**

Particulars Information

- 1 Name of the Firm & Owner: (with Telephone/Mobile Numbers, email)
- 2 Type of Organisation (Proprietorship/Partnership/Pvt. Ltd./Limited Company) and Month/Year of Establishment
- 3 Website of Bidder, if any
- 4 Month/Year of Establishment
- 5 PAN/Sales Tax/VAT Regd. Nos.
- 6 Annual Turnover 2016-17
- 7 Whether product(s) offered by the bidders are exactly as per the configuration of SKB University. If not, indicate the changes in each product
- 8 Clientele (submit copies)
- 9 Validity of Tender
- 10 Whether Terms & Conditions issued by SKB University are acceptable to the Firm
- 11 Whether Warranty as per the desired specification

\*\* Bidder should only quote rate for 1 unit of each item in BOQ.

Date

Name:

Signature of Owner/Authorized Representative

**Technical specification for e-tender:**

| <b>All equipment should be covered by a minimum three years comprehensive Maintenance Contract (CMC) and two years additional Annual Maintenance Contract (AMC) as per Funding Agency Guidelines</b> |                          |            |   |
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| <b>Sl No.</b>  | <b>Instrument</b>        | <b>No.</b> | <b>Specifications</b>   |
| 1.   | UV vis spectrophotometer | 1          | <p>Spectrophotometer UV-Wavelength range-190 to 1100nm</p> <p>Dual source - high intensity Tungsten-Halogen and Deuterium lamp with automatic changeover</p> <p>High sensitivity matched pair Silicon Photodiode detector</p> <p>5 USB ports for high speed PC and printer connectivity, data storage and transfer through USB pen drive.</p> <p>All operational modes as standard - Photometric; Spectrum; Quantitation; Kinetics, Time Scan, DNA and Protein Quantitation in stand-alone and PC mode.</p> <p>Additionally, Multi-Component measurement available in stand-alone mode.</p> <p>Spectral bandwidth 1nm (190 to 1100nm)</p> <p>Photometric system Double Beam</p> <p>Photometric range Absorbance: -4 to 4 Abs</p> <p>Transmittance: 0% to 400%</p> <p>Wavelength display 0.1-nm increments</p> <p>Wavelength setting 0.1-nm increments (1-nm increments when setting scanning range)</p> <p>Wavelength accuracy <math>\pm 0.1\text{nm}</math> at 656.1nm D2 <math>\pm 0.3\text{nm}</math> (190 to 1100nm)</p> <p>Wavelength repeatability-<math>\pm 0.1\text{nm}</math></p> <p>Stray light less than 0.02% NaI at 220nm, <math>\text{NaNO}_2</math> at 340nm less than 1.0% KCl at 198nm</p> <p>Photometric accuracy <math>\pm 0.002</math> Abs (0.5Abs)<br/> <math>\pm 0.004</math> Abs (1.0Abs)<br/> <math>\pm 0.006</math> Abs (2.0Abs)</p> <p>Photometric repeatability less than <math>\pm 0.001</math> Abs (0.5Abs)<br/> less than <math>\pm 0.001</math> Abs (1Abs)<br/> less than <math>\pm 0.003</math> Abs (2.0Abs)</p> <p>Baseline stability-less than 0.0003 Abs/H at 700nm (one hour after light source turned ON)</p> <p>Baseline flatness within <math>\pm 0.0006</math> Abs (190 to 1100nm, one hour after light source turned ON)</p> <p>Noise level Within 0.00005 Abs RMS value (at 700nm)</p> <p>Dimensions (W×D×H) 450(W) x 490(D) x 270(H)</p> <p>Cuvette - 0.5 ml, 1ml, 3 ml is a must</p> <p>Stabilizer dedicated for the instrument.</p> <p>Vendor must offer a dedicated PC and printer as an option</p> |
| 2.   | Rota-evaporator          | 1          | <p><b>Rotary Evaporator with chillers and Vacuum Pump</b></p> <p><b>Minimum specification:</b></p> <p>Rotary evaporator with Vertical condenser for all standard distillations with motorized lift, Auto Lift in case of power loss. Evaporating flasks and receiving</p>   |

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|    |   |   | <p>flask 250 ml, 500 ml and 1000 ml and vapour tubes should be supplied with standard ground joint NS 24/29. The coupling ring and the flange on the condenser side of the drive should be robust and chemically resistant.</p> <p>All glassware set should feature GL 10 thread, Should have long life graphite filled PTFE vacuum seal With non-sticking quick release vapour tube for easy cleaning, vapour tube should have large bore for fast distillation rates up to 1200 ml (H<sub>2</sub>O)/hour with convenient large dial controls for adjustments of rotation speed from 20–270 rpm, with microprocessor controlled heating bath temperature 200°C –2100°C with digital display of bath temperature with heating capacity of 1300 W. Should have LCD digital graphic display featuring all parameters (bath temperature).</p> <p><b>Vacuum Pump:</b><br/>Two-Stage diaphragm pump made from chemically resistant materials, Suction capacity 1.7m<sup>3</sup>/hr. The vacuum pump should achieve an ultimate vacuum of 9 mbar.</p> <p><b>Chiller:</b><br/>The chiller should be designed for rotary evaporators, temperature range: -10°C to +40°C, Environmentally friendly CFC free refrigerant.</p>  |
| 3. | Accessories for upgradation of existing AAS Thermo Fischer- Graphite Furnace and bulbs for analysis | 1 | <p><b>Vapour Generator:</b><br/>Software Controlled Continuous Flow Vapour Generation System (For the analysis of Hg, As, Se, Sb, Te, Bi and Sn in trace level) The System should perform hydride and mercury vapour measurements with significant sensitivity improvement over normal flame techniques. An air/acetylene flame or an electrically heated cell is used for atomization.</p> <p>The unit must incorporate the reagent reservoirs, a variable speed 4 channel peristaltic pumps, control electronics and gas liquid separator. An integrated mass flow controller allows the carrier gas flow to be controlled and monitored through the system software and the continuous flow principle eliminates the need to clean the reaction vessel after each sample. The system should operate automatically under Data Station control.</p> <p>Carrier gas: Argon or nitrogen Reducing agents: Sodium borohydride. Tin (II) chloride may be used for mercury analysis</p> <p>Bulbs: Hg, As, Se, Sb, Bi and Sn in trace level</p> <p>Solution transport: Variable speed, 4 channel peristaltic pump using continuous flow principle</p> <p>The system should be fully automatic and controlled by the data station and software. Suitable for 220/240V and 110/120V operation which should Include items: 2 T-cells (open ended, silica, 120 mm long), Mercury cell (long path 150mm long), Mount for T-cell • Pump tubing, Reagent bottles, Glass beads, Semi-permeable membrane. Valve &amp; Valve Guard with Double Stage SS Diaphragm Pressure Regulator</p> |

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| 4. | Elisa Reader            | 1 | <p>Light Source Quartz-halogen lamp<br/>         Detector Type: Photodetector<br/>         Wavelength Selection Filters, Fast reading of both 96- and 384-well plates.<br/>         Wavelength Range-wavelength range should be of 340 to 850nm<br/>         Interface User: On-board or PC control and should have USB port for easy data transfer, Requirement of large color screen and a variety of language versions.<br/>         Filters 8-position filter wheel; should have filters installed: 405nm, 450nm, and 620nm<br/>         Linearity should be 0–3 Abs, ± 2% at 405nm, 96-well plate<br/>         0–2.5 Abs, ± 2% at 405nm, 384-well plate<br/>         Read-out Range: 0 to 6 Abs, Resolution: 0.001 Abs<br/>         Accuracy: ± 1% (0–3 Abs) or ± 0.003 Abs, whichever is greater at 405nm<br/>         Precision: CV ≤ 0.2% (0.3–3 Abs) at 405nm<br/>         Incubator Temperature, Shaking and incubation up to 50°C temperature sensitive assays, Ambient +4° to 50°C<br/>         Voltage Stabilizer dedicated for the instrument<br/>         Vendor must offer a dedicated PC and printer as an option</p>  |
| 5. | Refrigerated Centrifuge | 1 | <p>Operated on: 230 V 50-60 Hz<br/>         RPM range should be: 200 to 13,800 in increment of 10 rpm or more<br/>         Max rcf : 20,700 x g or more, Max capacity should be: 4 x 250 ml or more, Rotor, bucket, lid and adapters should be autoclavable at 121°C, Temperature range -8°C to +38°C, Timer: 1min to 98min and continuous, Centrifuge timer should start only after the machine reached at user set rpm</p> <p>Inbuilt technology to allow the compressor to run without auto cut off to maintain the precise and constant temperature</p> <p>Short spin key should run at desired rotational speed, Standby refrigeration for maintaining temperature when not in use</p> <p>Should have the facility to change the value during centrifugation in case of urgency</p> <p>Display should show the full digit of time, temperature and rpm and g-force, Should be able to adjust radius setting for every adapter of maximum rcf accuracy, System should shut-off compressor automatically after 7 to 9 hrs of non-use</p> <p>Access height should be &lt;30 cm, Should have built in condensation drain to eliminate condensed water</p> <p>At least 30 programmes should be stored and recalled immediately, Noise Level &lt; 59dB with swingout rotor</p> |

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|    |                           |   | <p>Should have 10 or 11 Acceleration and Braking Ramps for sensitive sample material. Rotors and lid should be metallic</p> <p>Should be IVD complied and Preferably to have good number of installations in and around the region also must be CE certified.</p> <p><b>Rotors:</b></p> <ul style="list-style-type: none"> <li>a) Swing out rotor for 4 x100ml bottle with speed up &gt; 3,200 × g (4,000 rpm) to run &gt; 30nos. of 15ml conical tube, &gt; 12nos of 50ml conical tube and 4 x 250ml bottle. Rotor life time should be max. 58,000 cycles or more.</li> <li>b) Deepwell plate Rotor to run at Max. speed: 2,200 × g (3,600 rpm), it should be capable to accommodate 2 × 5 MTP, 2 × 4 Cell culture plates, 2 × 2 DWP, 2 × 1 Filtration plate kits allowing loading height upto 89 mm</li> <li>c) Fixed angle anodized aluminum rotor for 30 x 1.5/2.0 mL tubes with metallic lid to run &gt; 20,700 × g.</li> <li>d) Dedicated voltage stabilizer</li> </ul> |
| 6. | COD meter                 | 1 | <p>Light Source: tungsten lamps with different narrow band interference filters</p> <p>Light: Detector      silicon photocell</p> <p>Backlit Graphic LCD Display</p> <p>Data Logging - Users can store up to 200 readings by simply pressing the LOG key, PC Connectivity - Logged readings can be quickly and easily transferred to a PC via USB using Windows compatible software. Result Conversion. Common conversions at the touch of a button.</p> <p>Built-in Timer - Display of time remaining before a measurement is taken.</p> <p>Error Messages - Messages on display alerting to problems including no cap, high zero, and standard too low.</p> <p>Cooling Lamp Indicator</p> <p>Units of Measure - Appropriate unit of measure is displayed along with reading.</p>  |
| 7. | Water Purification System | 1 | <p>Dist. Water Output (Approx): 2.5 lt/hr.</p> <p>Electrical requirements    230-250 Volts Single phase</p> <p>1.5kw Quartz heater Biological Activity: Pyrogen Free, pH 6-7</p> <p>Conductivity S/cm    &lt;3 x 10<sup>-6</sup></p> <p>Distillate Temp      65-750°C, along with tubing accessories</p>  |
| 8. | Digital SLR Camera        | 1 | <p>Type: Single-lens reflex digital camera</p> <p>Effective angle of view: Approx. 1.5 x lens focal length (35 mm format equivalent); Effective pixels: 24.2 million</p> <p>Image sensor: 23.2 x 15.4 mm CMOS sensor</p> <p>Total pixels: 24.7 million</p> <p>Dust-reduction System: Image sensor cleaning</p> <p>Image size (pixels): 6,016 x 4,000 (Large) 4,512 x 3,000 (Medium) 3,008 x 2,000 (Small)</p>   |

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|    |                 |   | <p>File format: NEF (RAW): (RAW) and JPEG formats</p> <p>Picture Control System: Standard, Neutral, Vivid, Monochrome, Portrait, Landscape; selected Picture Control can be modified</p> <p>Media: SD (Secure Digital) and UHS-I compliant SDHC and SDXC memory cards</p> <p>File system: DCF (Design Rule for Camera File System)</p> <p>Magn: Approx. 0.8 x (50 mm f/1.4 lens at infinity, -1.0 m-1)</p> <p>Eyepoint-18 mm (-1.0m-1; from center surface of viewfinder eyepiece lens)</p> <p>Diopter adjustment -1.7 - +0.5 m-1</p> <p>Focusing screen: Type B Brite View Clear Matte screen</p> <p>Lens aperture: Instant return, electronically controlled</p> <p>Compatible lenses: Autofocus is available with AF-S and AF-I lenses. Autofocus is not available with other type G and D lenses, AF lenses and AI-P lenses.</p>              |
| 9. | Haematoanalyzer | 1 | <p>Parameters (26) [HCT, RBC, HGB, MCV, MCH, MCHC, RDW, reticulocytes (absolute number and percentage), WBC, neutrophils (number and percentage), lymphocytes (number and percentage), monocytes (number and percentage), eosinophils (number and percentage), basophils (number and percentage), platelets (number, MPV, PDW and PCT), band neutrophils (when presence suspected) and nRBCs]</p> <p>For Species Canine, Rabbit, Mice, Rats and Guinea Pig.</p> <p>Units: Conventional or SI units; Fluids :(Abdominal &amp; Thoracic).Sample Size: 30 <math>\mu</math>L whole blood with anticoagulant per evaluation.</p> <p>Operating temp: 25-35 <math>^{\circ}</math>C</p> <p>Time to results : Return the sample in 30 seconds and results in approximately 1-2 minutes.</p> <p>Reagents System required -2 [1 external and 1 internal]</p> |