

SAST/CLPC/ACU-BGSMCH/ 199/2025-26

Date: 08-12-2025

TENDER NOTIFICATION

The Head, CLPC, Sri Adichunchanagiri Shikshana Trust invites closed tenders from eligible tenderers or bonafide licensed manufacturer (OEM) or their authorized local supplier/ dealer/ distributor in the state of Karnataka for the **Procurement of Equipment's for the department of Physiology at BGS MCH Hospital, Nagarur, Nelamangala.** as per section I & II.

01	Name of the work	Procurement of Equipment's for the department of Physiology at BGS MCH Hospital, Nagarur, Nelamangala.
02	Last Date for Tender Submission	On or before 05.01.2026 before 5.30 PM

Section-1**Instructions to Tenderers**

- The Tenderer shall submit the bids (Technical & Financial bids) through the mail id: **clpchead@bgscet.ac.in** on or before the last date of tender submission (for any or all list of items) on professional business letterheads only. The details to be printed on the letter head is as follows
 - Tender for Procurement of Equipment's for the department of Physiology at BGS MCH Hospital, Nagarur, Nelamangala.
 - Tender Reference number.....[Insert Number]
 - Address to "The HEAD, CLPC, Sri Adichunchanagiri Shikshana Trust, BGSCET Campus, Mahalakshmiapuram, Bengaluru - 560086"
 - The tenderer shall submit the original documents to this office on the last day of submission for verification who prefers to submit the tender through Post can dispatch the same through Registered post / Speed post or Couriers as to reach the above address on or before the due date and time specified in the Tender Notice. Tenders received after the due date and time, for what so ever reasons will not be considered and the authority, Head of CLPC will not be liable or responsible for the same.
- Tender Currency:** Prices shall be quoted in Indian Rupees only.
- AMC/CMC (IF ANY)** is subject to the Sri Adichunchanagiri shikshana trust's norms.
- Warranty:** 3 years.
- Amendment of tender documents:** At any time prior to the deadline of submission of tenders the trust may, for no reason, whether as its own initiative or otherwise modify the tender documents by amendment. Sri Adichunchanagiri Shikshana Trust reserves all the rights to accept, reject, incorporate changes and re-tender without giving any reasons.



- 6) **Documents Comprising the Tender:** Shall attach Brochure, Certification of the product, Bank/account details, PAN, GSTIN, Good Standing Certificate and 02 years of ITR declaration inside the envelope and the company contact details with email id on the in the below mention format in annexure - 1.
- 7) **Tender Prices:** Prices indicated on the price schedule shall be entered separately I.e. the price of the goods, quoted (ex-works, ex-factory, ex-showroom, ex-warehouse, or off-the-shelf, as applicable), including all duties and sales and the other taxes already paid or payable. Any Indian duties, sales and other taxes which will be payable on the goods if the contract is awarded. Conditional tenders will not be considered. The bidder has to give the quotation in the below enclosed format in annexure – 2.
- 8) **Validity of the Bid:** 90 days from the last date of submission of bid.
- 9) **Corrupt or Fraudulent practices:** Sri Adichunchanagiri Shikshana Trust requires that the tenderers, observe the highest standard of ethics during the procurement and execution of such contracts. In purchase of this policy:
 - a) Will reject a proposal for award if it determines the tenderer recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question;
 - b) Will declare a firm ineligible, either indefinitely or for the stated period of time, to be awarded a university contract if it any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing, a trust contract.
- 10) **Process to be confidential:** Information relating to the examination, clarification, evaluation, and comparison of tenders and recommendations for the award of contract will not be disclosed to tenderers or any other persons not officially concerned with such process until the award to the successful tenderer has been announced. Any effort by a tenderer to influence the employer's processing of tenders or award decisions may result in rejection of his tender.
- 11) **Clarification of Tenders:** To assist in the examination, evaluation, and comparison of tenders the employer may, at his discretion, ask and tenderer for clarification of his tender, including breakdowns of unit rates. The request for clarification and the response shall be writing or by cable, but no change in the price or substance of the tender shall be sought, offered, or permitted except as required to confirm the correction of arithmetic errors discovered by the employers in the evaluation of the tenders.
- 12) **Delivery:** The successful BIDDER should commence the service as per the tender document/work or purchase order. For any queries or assistance, please write to clpchead@bgscet.ac.in or telephone to +91-8123707324.
- 13) **Penalty Clause:** Non-execution of supply order – for the reasons of failure to supply partially or completely within the stipulated time or any event of breach of contract. In case at any following stages
 - a) For the delayed supply (3 days of grace period) – 5% deduction
 - b) Quantity issues – 5 % deduction
 - c) Quality issues – 10% deduction

Section-2**Technical Specification**

SL. No	Particulars	Total Quantity in Nos.
1.	Motorized Treadmill (Exercise testing – with VO2 max display)	1
2.	Computerized spirometer	1
3.	Digital physiological data acquisition system (Powerlab or Biopac)	1
4.	Amphibian Experimental Physiology software	1
5.	Ambulatory BP monitoring device	1
6.	Medical Tilt table	1

1. Motorized Treadmill specifications:

- **Motor Power:** Higher - 6.0 HP & above, to sustain intense, long-duration workouts required for a VO2 max test.
- **Speed Range:** A broad speed range, often up to 18-22 km/h (11-14 mph) or more, to accommodate maximal exertion levels.
- **Incline/Elevation:** Automatic incline (often up to 15-20 levels or more) is essential for varying intensity during the test protocols (like the Bruce protocol).
- **Display/Console:** A large, advanced LCD or LED console (7 inches or larger) that displays comprehensive real-time metrics including:
 - Time, Speed, Distance, Calories, and Incline.
 - Heart Rate (Pulse).
 - The calculated or estimated VO2 max value (often in ml/kg/min).
- **Heart Rate Monitoring:** Both hand pulse sensors and compatibility with wireless chest strap transmitters for more accurate heart rate data, which is critical for the VO2 max calculation.
- **Durability and Build:** Heavy-gauge steel frames and robust running decks with superior shock absorption systems to handle intense impact and heavier user weights (up to 140-150 kg or more).

2. Computerized spirometer (portable) specifications:

Instrument should measure : Spirometry & Flow Volume Parameters, Maximum Ventilation Volume, Lung Volumes & Sub-divisions, Pre & Post Bronchodilator comparison, Real Time Flow Volume and Volume Traces on Computer Screen.

• **Required Features:**

1. Incorporates Precision Pneumotachograph
2. Should meet Criteria of ATS Standards: (i) Minimum Flow Range: + 0-14 L/Sec (Linear) (ii) Resistance: 0.5 cm H₂O/L/Sec. (iii) Accuracy = Error less than 3%
3. Parameters should be measured with highest accuracy & reproducibility and accuracy not effected with Humidity, Moisture & Water droplets.
4. Should incorporate Electronic Barometer & Temperature Sensors, for Automatic BTPS Correction.
5. Overlaying of previous test curves for comparison.
6. Capability to select and modify predicted equations.
7. Facility to interface for desktop/Laptop computer.
8. System software should be based on the latest Micro Soft Windows Operating System and should be compatible to run on Windows 2008.
9. Laptop Computer (HP/Dell/ Compaq/ lenovo)- 2 GB RAM, at least 14" TFT Screen, USB Ports, DVD R/W, Hard Disc Drive (1x320 Gbyte).
10. HP/Canon/Epson Deskjet printer and good quality UPS.
11. Should be supplied with computer interfacing package, Cables, Software, 2/3 Litre Calibration Syringe as per requirement of the instrument, Standard accessories, Manual and a Strong Carrying Case.
12. Additional Accessories: Pneumotach Screens (05 Nos), Pulmonary Filters (50 Nos), Disposable Mouthpieces (250 Nos) and nose clip.
13. Battery backup of more than 2 hours.
14. Instrument should conform to and certified by ISO/CE/USFDA.
15. CAMC for 5 years after completion of 3 years guarantee period.
16. The assemblage (Spirometer and laptop) should be portable.

3. **Digital physiological data acquisition system or equivalent (Power Lab or Biopac):**

Uses – These systems are widely used in laboratories and classrooms for:

- Physiology (human and animal)
- Pharmacology
- Neurophysiology
- Biomedical Engineering
- Sports and Exercise Studies
- Psychophysiology

They can record various physiological parameters, including:

- Electrocardiograms (ECG/EKG)
- Electromyograms (EMG)
- Electroencephalograms (EEG)
- Blood pressure and flow
- Respiration
- Temperature



- Muscle activity
- Nerve activity

Key Specifications (General)

Feature	Specification
Resolution	16-bit analog-to-digital conversion (ADC)
Sampling Rate	Up to 400 kHz aggregate (e.g., 200 kHz per channel on an 8/35 or 16/35 model)
Input Channels	Varies by model; typically 2, 4, 8, or 16 analog input channels, with options for differential or single-ended connections
Connectivity	High-speed USB to Windows or Mac computers
Signal Inputs	Compatible with ADInstruments signal conditioners (Bio Amps, Bridge Amps, etc.) and many third-party transducers
Outputs	Built-in analog outputs for stimulation or pulse generation (software controlled), and digital I/O channels on some models
Software	Lab-Chart or equivalent - Lightning for data acquisition, display, and analysis

4. Amphibian experimental software:

Amphibian experimental physiology software is a type of **computer-assisted learning (CAL) or simulation software** used as an ethical and practical alternative to live animal experiments, particularly for medical students. These programs typically simulate traditional experiments, allowing students to observe physiological responses (like muscle twitches or heart activity) on a computer screen.

- **Purpose:** To simulate core amphibian physiology experiments for educational purposes, replacing traditional live demonstrations due to ethical concerns and regulatory requirements.
- **Content:** The software should cover a range of experiments, including:

- Skeletal muscle properties (simple twitch, effect of stimuli strength/frequency, genesis of tetanus, fatigue, pre-load/after-load effects).
- Nerve-muscle physiology (conduction velocity).
- Cardiac muscle properties (effect of temperature, electrical stimuli, drugs/chemicals on heart activity).
- **User Interface:** An interactive interface that is student-centric and provides better visualization of experiments than traditional methods.
- **Output:** The ability to display, generate, and often print graphs of physiological data, similar to those obtained from mechanical recording instruments like kymographs.
- **Instructional Features:**
 - Explanation of the theory behind each experiment.
 - Description of the instruments used.
 - Step-by-step procedures for conducting the "virtual" experiment.
 - Quizzes or assessment tools (implied by educational use).
- **Technical Specifications:**
 - **Delivery Medium:** Often distributed via CD-ROM or USB pen drives with password protection, or as downloadable software.
 - **System Compatibility:** Typically designed for standard operating systems like Windows (e.g., compatible with Windows 7.1 or later versions).
 - **License:** Usually a one-time cost for a lifetime license for an institution.
 - **Standards:** Often required to meet relevant quality and safety standards (e.g., ISO, CE, US-FDA criteria).

5. Ambulatory BP monitoring device:

Ambulatory blood pressure (BP) monitoring devices typically use the oscillometric method to measure blood pressure and pulse rate automatically at programmed intervals over a 24-hour period.

Core specifications

- **Measurement Method:** Oscillometric
- **Parameters Measured:** Systolic BP, diastolic BP, mean arterial pressure, and pulse rate
- **Measurement Range:**
 - **Adult BP:** 10 to 270 mmHg
 - **Adult Pulse Rate:** 30 to 220 bpm
 - **Pediatric BP:** 10 to 200 mmHg

○ **Neonate BP:** 10 to 135 mmHg

- **Measurement Intervals:** Automatic or manual, with intervals selectable from 1 to 90 minutes
- **Measurement Type:** Continuous and automatic recording, typically for 24 hours or more
- **Accuracy:** Typically ± 3 mmHg for pressure and $\pm 5\%$ for pulse, though this can vary by device

Device features

- **Display:** Backlit graphical color display
- **Data Storage:** Stores a high number of readings (e.g., up to 350 automatic and 300 manual)
- **PC Connectivity:** USB interface for downloading data to a computer for analysis, trend graphs, and reports
- **Power:** Can be AC-powered or use battery backup (e.g., 4 x 1.5V AA alkaline batteries)
- **Cuff Sizes:** Must be compatible with various cuff sizes to fit different arm circumferences, including small adult (25–36 cm) and adult (34–43 cm)
- **User Interface:** Easy-to-use menu with control buttons and sometimes voice recording capabilities
- **Alarms:** Customizable alerts for high or low readings

6. **Medical Tilt table:**

A medical tilt table for postural blood pressure (BP) variation measurement (tilt table test) should meet specific design and functional requirements to ensure patient safety and accurate results.

Key specifications include:

Mechanical and Safety Features

- **Structural Support:** The table must be sturdy enough to safely support the patient's weight.
- **Safety Straps:** It must be equipped with adjustable retention straps (at least one across the chest and one above the knees) to protect the patient from falling in the event of syncope, while still allowing for some weight-bearing to assess the body's natural response to gravity.
- **Footboard:** A metal or sturdy footboard at the end of the table is necessary for the patient's feet to rest against during upright positioning, providing support.
- **Tilting Mechanism:** The table should be motorized and capable of smooth, controlled tilting to an angle between 60° and 80° from the horizontal position. An angle of 70° is often considered optimal.
- **Rapid Return:** The mechanism must allow for a rapid return to the flat (supine) or even a slightly head-down (Trendelenburg, e.g., -15°) position, ideally in less than 15 seconds, to quickly manage profound symptoms or syncope and minimize the duration of cerebral hypoperfusion.
- **Padding:** The table should be padded for patient comfort.

**Annexure – 1****PARTICULARS OF THE BIDDER**

Sr. No	Description	Details (to be filled by the responder to the Bid)
1	Name of the company	
2	Official address	
3	Phone No. And Fax No.	
4	Corporate Headquarters Address	
5	Phone No. And Fax No.	
6	Web Site Address	
7	Details of Company's Registration (Please enclose copy of the company registration document)	
8	Name of Registration Authority	
9	Registration Number and Year of Registration	
10	ISO certifications and its validity	
11	GST registration No.	
12	Permanent Account Number (PAN)	
13	Company's Revenue for last 3 years (Year wise)	
14	Company's net worth for the last year	
15	Bank Details (Name, Account no., Branch, IFSC, MICR)	

Annexure – 2

The Bidder has to quote the rate in the Item Data available online with this bid. Details to be filled up for price bid are as below:

The price shall be inclusive of all taxes (inclusive of GST) under the relevant Laws of India.

SL. No	Particular	Amount In Rs. (Inclusive of All the taxes)
1	Total Cost for the Procurement of Equipment's for the department of Physiology at BGS MCH Hospital, Nagarur, Nelamangala.	
Total in Rs and in words –		

Cost related to Supply and Installation as per Items mentioned in the Compliance sheet for technical proposal.

SL. No	Particulars	Total Quantity In nos.	Unit Rate in Rs	Total Cost in Rs.
1	Motorized Treadmill (Exercise testing – with VO2 max display)	1		
2	Computerized spirometer	1		
3	Digital physiological data acquisition system (Powerlab or Biopac)	1		
4	Amphibian Experimental Physiology software	1		
5	Ambulatory BP monitoring device	1		
6	Medical Tilt table	1		
Total in Rs				
GST % in Rs.				
Grand Total Amount in Rs.				