CENTRAL UNIVERSITY OF KERALA
(संसद के अधिनियम, वर्ष 2009 द्वारा स्थापित / *Established under the Act of Parliament in 2009*)तेजस्विनि हिलस,
पेरिये डाक, कासरगोड-671 325, केरल / Tejaswini Hills, Periye P.O. KASARAGOD-671 325, KERALA
दूरभाष/ Phone: 0467 -2309495, वेबसाइट/ Website:- cukerala.ac.in, ई-मेल / E mail:- registrar@@cukerala.ac.in

Notification No. CUK/PUR/Sci.Eqpt./EVS/f.975/2025 **Dated, 06.11.2025**

INVITATION FOR QUOTATIONS

Quotations are invited in single cover system from the reputed and well-established supplier for the supply and installation of Green house to the **Department of Environmental Science** as detailed below:

Sl No	Name of the Scientific Equipment	Last Date for submission of Quotations
1	**Green House**	27.11.2025

The detailed technical specifications and quantities of the item shall be provided as per the **Annexure I.** The General Terms and Conditions for submitting quotations and supplying the equipment shall be as per **Annexure II**.

The quotations shall be submitted in a sealed cover to the **Assistant Registrar, Purchase Section, Central University of Kerala, Periya, Kasargod, 671325**. It is requested that the quotations along with brochures and equipment manuals, if any, may be submitted to the **Assistant Registrar, Purchase Section, Central University of Kerala, Periya, Kasargod, 671325** on or before the due date. The quotations will be opened on Nov. 29th **2025 at 11.00 am.** If the proposed day happens to be holiday for CUK, the quotations will be opened on subsequent working day.

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Technical Specifications of Green House

Size – 12.2 m × 9.4m (approximate)

The Green House area shall be further divided in to –

Seeding Area / Potting Area	- 3.04m ×4.2m
Decontamination Area / Stress Area	- 4.5m × 4.2m
Plant Growing Area	- 8.55m × 4.6m
Growth Chamber Room	- 4.1m × 4.2m
Nursery Room	- 4.5m × 4.2m

Side eight: - 9'
Center Height: - 12'
MODEL :- Gable Shape / Multispan

Automatic Air modulation system shall be made available above the False Roof side with controls for easier Temperature Maintenance.

Structure:

All Structures, Rafters, Perlins, Trusses are hot dip galvanized and design to take a wind load up to 140 km/h. Hot dip galvanized Steel Structure: Galvanized tubular structure.

a) All Structural Members will be of 50mm x 50mm, 50mm x 25mm & 25mm x 25mm GI Sq. Pipe.
b) Nuts and other metallic parts: Includes all the elements required for joining and water tightens components (such as fittings, clamps, screws and nuts should be GI plated to avoid corrosion).
c) Partition will be made using 50mm x 50mm, 50mm x 25mm & 25mm x 25mm GI Sq. Pipe with a sealed door size : 6' x 3'.

Buffer Room:

Double door Buffer Entry willcovered with 6mm thick Multiwall UV stabilised Polycarbonate sheet duly fixed using Aluminium profiles.
Door: Double door size: 6' x 3' (L x W), normally lockable made with clear 6mm polycarbonate glazing, top & bottom tracks, jambs, flashings & installation hardware.

Glazing:
Conventional, Plastic material unbreakable, Liquid and chemicals resistant.

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Must be properly installed and regularly maintained greenhouse glazing will be provided a suitable barrier for transgenic research materials.
.*BL4-P standard.
POLYCARBONATE SHEET SPECIFICATION:
Thickness:

10mm multiwalled. (Four layer) and 6mm multiwalled. (Double layer) Sound insulation dB; - 18 Make :- Ultralite / Laxan Clear code : 112
Impact Performance : -40°C to +120°C

Both side UV stabilised
Standard lengths: 2.1 m x 11.8 m.
Sheet Structure: 10/4, 6/2RS Approx. weight g/m² 1300U.L
Temperature Rating :100°C
K.value W/m²K 3, 5
Sound Insulation DIN52210: 18db
Multiwalled : Impact resistant, Energy saving. Impact Resistant: 200 times of GLASS LIGHT TRANSMISSION: 82 – 84%. Excellent Thermal Insulation: 3.5 down.
Safe Fire Performance: Self-extinguishing and difficult to ignite
Light Weight: Weight ranging from 1.3 Kgs/Sqms for 6mm.
Thermal conductivity: DIN52612W/2°C -0.21
*BL4-P walls and ceilings sealed with internal shell.
Polycarbonate Sheet Fixing with aluminum Profile: Anodized, strengthened, sealed internal shell.

Specification	:- Anodized ,strengthened ,sealed internal shell.
Size	:- 2" inch
Weight	:- 1.25 Kg / 12 feet
Length	:- 12 feet
Screw	:- SS non Magnetic / High quality GI
Thermal safety	:- Silicon

Shading System

External Shading System: -75% agro shading net green colour (agro shade net) with manual rolling arrangement connecting pipe etc. The shading system can be rolled up and down when required.

Grow Light system in Growth Chamber Room and Plant Growing Area

Photosynthetically Active Radiation Grow Lamp: PAR (LED) illumination using Grow Lamps uniformally distributed throughout the entire Green House Area. High Efficiency Grow Light (75 & 150 W) dimmable (10% to 100%)

Producing Peak PPFD – 568 µmol/m2/s

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Average PPFD - 347 µmol/m2/s Usable PPF – 124.92 µmol/m2/s
PPF Efficiency – 2.04 µmol/m2/s
Splash Proof Coated PCB. 2.7 µmol /J LED Chips Versatile 3500K+660nm RED Spectrum

High quality IP67 Driver.
2.7umol/J LED Chips Total of 240 LED Chips IP64 Rated. Suitable for Outdoor Use Versatile 3500K + 660NM

Cooling System

Biotech Air Conditioner Heavy Duty cooling system using commercial type air conditioner systems
(3 Nos. in Growth Chamber Room) cooling capacity 24000 BTU/Hr. (Total 72000 BTU/Hr.) (4 Nos. in Plant Growing Area) cooling capacity 24000 BTU/Hr. (Total 96000 BTU/Hr.) All the Air conditioners runs on 3 phase electrical supply for longer and trouble free operations with accumulator.

Heating System (Uniformly installed in each respective room): - Heavy duty Paralytic Technique

Which is ideal for heating in biotech work and greenhouse.
Inbuilt auto thermal cut off device. Biotech grade 2.5 KW. It has ISI standard make heating element and ISI standard 900 rpm speed fan they prevent SO2 injury to plants as caused by other make of heater due to improper combustion of fuel gases as a common phenomenon seen in green house. Input 200- 240 VAC. 50Hz; single phase; Ambient 5°C to 50°C RH upto 90 %.

Microprocessor Control Panel for Automation:

Microprocessor Photosynthesis control Panel :- (User friendly) for TEMPERATURE, HUMIDITY and LIGHT duly fixed in Processing Area with L&T / Havells make miniature circuit breakers and rigid standard of safety (For Plant Growing Area and Growth Chamber Room)

Technical features of Temperature Control System:

- Temp. Range: 0.1 to 59.9°C.
- Accuracy: ±1°C.
- Hysteresis: 0.4°C with sensor probe Pt-100 Sensor cord 15 meters.
- Set point lock within the setting panel to protect setting changes. Level lock to ensure that the parameter can be read but cannot be changed.
- Sensor failure indication.
- Selection of unit °C, °F.
- Display resolution 0.1 °. Automatic hysteresis control.

- Input: 200-240VAC, phase-single.
- Ambient: 5°C to 45°C, RH up to 85% normally.

Technical Features of Humidity Control System:

- RH in the range of ±4%.
- Range: 30% to 90%.
- Real RH: ±2%. ±1 digit (at 45%).
- Set point lock within the setting panel to protect setting changes. Level lock to ensure that the parameter can be read but cannot be changed
- Input: 220VAC, phase- single.
- Ambient: 5° to 45°C, RH up to 95%.

Technical feature of Programmable Photoperiodic Control System

- Clock Accuracy ±2.5sec/day@20°C
- 1 Channel
- Week Program

- 6 memory locations adjustable to the minutes.
- Auto summer and winter time changing.
- 1500 Hrs. Running reserve.
- Input: 200-240 VAC, phase – single.
- Ambient: 5°C to 45°C, RH up to 85%normally.

Plant Work Station (4 Nos. in Plant Growing Area, 2 Nos. in Growth Chamber Room)

Each Bench Size: 9'×2'6"×1'8" (L×W×H). Stand/Legs: Made of galvanized steel Steel expended metal bench top approximate 3/4"- 1" diamond shape & G.I Supporting frame. G.I. rust resisting benching. Benches are engineered for standard 1200 kg. per bench weight limit.

Humidification (For Plant Growing Area and Growth Chamber Room)

Ultra Sonic Vapour Humidifier

It creates the simulated natural humidity in ANY SPECIFIC REQUIRED AREA without disturbing the inside TEMPERATURE because vapour comes out in cold form.

Salient Features:
Optimum Utilization of water. Instant Vaporization (STARTS). No thermal losses. Automatic water selection system. Auto off in case of non-availability of water. Low electrical consumption.

Ultrasonic Frequency: - 1700±40 KHz. Ceramic Disc size: Φ 20mm Titanium Coated. Mist Generation

> 900 ml/Hr. Stainless Steel 304 grade enclosure with automatic water feeding arrangements and fiber filter. (RO water for humidifier ~~will~~ be in user scope of work)

Electrical wiring

-All connections will be made from the provided location of University electric line (Near the site)

-All electrical wires will be of FR grade multistrand copper wire of desired load (Make- Polycab/ Finolex)

-Each Area of Green House have its own electric line/ circuits with individual circuit breakers/ MCB's and conduting of ISI make complete in all respect. However, electricity and earthling arrangement at site will be users responsibility without any cost effect for construction and operational use.

Miscellaneous items:

Stainless washbasin (01 no.) in Decontamination area and Seeding Area with tap.

Certificates:

The Company shall have ISO 9001:2015 certificate

Microprocessor Control Panel for Automation: CE certificate (for the light & Instruments)

Warranty

One-year comprehensive onsite

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केरल केंद्रीय विश्वविद्यालय
CENTRAL UNIVERSITY OF KERALA
PERIYA, KASARAGOD-671325

GENERAL TERMS AND CONDITIONS

1. The duly filled hard copy of the quotation for the item shall be submitted in a sealed cover with all equipment manuals and supporting documents to the following address. **Assistant Registrar, Purchase Section, Central University of Kerala, Periya, Kasargod, 671325** on or before the due date.

2. Submitting quotations by any other means other than specified above shall not be considered. The University is not responsible for any postal/courier delay.

3. The quantities of the item may increase or decrease at the time of placing purchase orders.

4. The invitation notice, technical specifications of the equipment, schedule of quantities and other necessary documents can be seen and downloaded from the University official website **https://cukerala.ac.in/**.

5. The supplier should be a well-established professional organizer and must have an experienced background in supplying equipment to Universities and research institutes.

6. The quoted price must be in Indian rupees and shall include GST, service tax, duties, transportation of materials etc. and no additional claim will be entertained by University in this regard.

7. The bidder shall comply with all the technical specifications and any deviation invites disqualification from the competition.

8. The successful bidder shall be required to comply with all the instructions of the University. The decision of the University is final.

9. The successful bidder shall be required to supply the equipment within 30 days from the date of issuing purchase orders. Delay in supply of equipment will invite Liquidated Damage charges as per GFR, Govt. of India rules.

10. Installation and training shall be completed at free of cost within THREE working days after supply of the item to the Department of **Environmental Science**, Narmada Building, Central University of Kerala.

11. The warranty for the supplied equipment shall be minimum ONE year from the date of installation.

12. Selection of a bidder is decided based on evaluation of technical specifications and followed by offer price (lowest price, L1). However, University reserves the right to place purchase orders to L1 and L1 bidder may be called for price negotiation.

13. Payment (100%) shall be released only after successful installation of the equipment in the Department of Environmental Science and satisfactory report of the end user.

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14. University shall recover the GST, TDS, any other statutory taxes as per Govt. of India norms.

15. In case of any dispute, the decision of Registrar, whose decision is final and binding on the supplier.

16. In the interest of the Central University of Kerala, additional terms & conditions may be imposed or introduced to the conditions as stated above.

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