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Guru Gobind Singh Indraprastha University

Dwarka Sector-16C, New Delhi-110078

[University School of Biotechnology]

Prof. N. Raghuram
Dean, USBT

Dated: 01.12.2017

To,
M/s. _____

Sub: Inviting quotations for repair and renovation of USBT Green House.

Respected Sir/Madam,

Please submit the quotation for repair and renovation of USBT Green House as per technical specifications mentioned below, the same may be directly submitted or speed posted in a sealed envelope on or before 22.12.2017 upto 1:00 PM in Room No AFR-206, A-Block, University School of Biotechnology, Guru Gobind Singh Indraprastha University, Dwarka Sector-16C, New Delhi-110078.

The company has to provide the following documents at the time of submission of the quotation:

1. The company has to provide the PAN & GST registration details.
2. The Manufacturer must have an authorized service centre in Delhi/NCR, to honour guarantee/warranty and other obligations.
3. Instrument-wise user list & proof of at least 3 installations.
4. Compliance report with the specifications.
5. **Payment Terms:** After satisfactory installation of the lab equipment.
6. **Bid:** Vendors must submit technical cum financial bid, mentioning the old parts being replaced and their buy-back price, if any.
7. **Final decision making authority:** The committee reserves the right to accept or reject any quotation and to annul the process and reject all quotations at any time, without assigning any reason or incurring any liability to the bidders. No claim whatsoever will be entertained / paid by the university to the bidder (s).
8. **Services during warranty period:**
 - a) The maximum response time for maintenance complaint during warranty period (i.e. time required for bidder's maintenance engineer to report at the installation site after a service call/email/ letter shall not exceed 05 working days.
 - b) The maximum period for repair and complete restoration during the warranty period shall be 30 calendar days from the date of service call/email.

R. Raghuram

U. Raghuram

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SPECIFICATION FOR REPAIR & RENOVATION OF GREEN HOUSE

Evaporative Cooling System (ECS)

Construction material: Eco friendly. 18 GA aluminium Sheets Tray Side, Top etc Cooling Media 100 mm thick Cellulose Pad at velocity of 1 to 3 m /s to give efficiency from 60 to 95 %. Filtration Online water filter for 30 μ efficiency. Water Tank (PVC) 1000 lit of standard make. Evaporative cellulose pad made from cellulose paper impregnated with compounds to prevent rot and ensure a long service life. Paper ambient condition : 20°C - 45°C CeL Pad Cross angle a = 45 ° b = 45 ° Nominal Efficiency Estimated cooling load Water Flow 7.56 LPM Bleed 10% standard make SA04 type. Slow Speed Axial Flow Fans 18" Cooling 4 nos, Pad Size: 6.09m x 1.21m x 100 mm thick. With complete UPVC pipe connection,

Temperature Controller:- Real time microprocessor based user programmable PID Controller. 4 digit LED display for displaying measured values and another 4-digit LED display for displaying settings. Feather touch operation. Set point locks 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°. Accuracy $\pm 0.1^\circ\text{C}$. Automatic hysteresis control. Wide selectable temperature range, ranges from 0° to 100°C. 4 KVA load can be directly connected to the powered output. Sensor:-Platinum sensor probe Pt- 100. Input- 200-240 VAC, 50 Hz. Single phase.

Humidity Controller: Real Time microprocessor based. On/Off control for Humidifying/ Dehumidifying. Hysteresis / Differential 1% - 9%. Delay timer 0-240 sec. Direct / Reverse selectable Lock functions to prevent miss operating. Feather touch operation. Input- 200-240 VAC, 50 Hz. Single phase, Ambient 5°-50°C, RH up to 90%. Sensor:- Fast response sensor – line resistance < 10 Ω Display Accuracy- indicating value $\pm 0.2\%$ ± 1 digit.

Grow Light system:-

High Glow LED LIGHT 06 nos.

Photo synthetically active radiation Lamp: - Intensity with fluorescent light and Photo synthetically Active Radiation lamps (PACRa) W 1.7 to 2.6/60 are specific action spectra lamps for photosynthesis for research and commercial production. PAR with photo simulator are specific action spectra lamps for photosynthesis for research & commercial product: (1) Night break technique (2) Day length manipulation. (3) Supplement the natural day light. (4) Higher rate of carbon fixation.

Electric Wiring and miscellaneous: -Complete wiring with all other necessary works for complete specification of green house to maintain 22°C in peak Delhi summer (47°C) and 37°C in peak Delhi winter (2°C).

Warranty: - One year or more.

AMC/CMC: - Rate of AMC as well as CMC after warranty including all spares should be quoted separately.

Ramesh

U. Singh

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