Central Research Facility (CRF)
Indian Institute of Engineering Science and Technology, Shibpur
Howrah - 711 103

Enquiry No.: 01/CRF/IIEST/2016-17 **Date: 04.10.2016**

Sealed quotations are invited for supply of /to carry out the following items/works for the **Central Research Facility (CRF)**. The sealed quotations should be addressed to the ***Chairman***, **CRF** indicating enquiry no. with date on the top of the sealed envelope.

The sealed quotations should be submitted at the **Office** of the ***CoE, TEQIP-II*** on any of the working day up to October 21, 2016 till 5.00 P.M.

ITEM: 7.5 KVA Online UPS

The above UPS is to be attached with the chiller of Tecnai G^2 Transmission electron microscope. Vendor should have proper servicing centre in and around Kolkata region to get the quick response of emergency call as and when required preferably within 72 hours.

TECHNICAL SPECIFICATIONS:

Parameters		**Specification**
Technology		Microprocessor controlled IGBT based double conversion PWM True On-line UPS
		Built-in Isolation Transformer on the Inverter output
		Input & Output EMI filter
Input	Rated voltage	400 VAC three-phase + N
	Voltage Range	± 20%
	PF	>0.97
Battery	Type	Sealed Maintenance Free Lead-Acid
	Make	Amara Raja Quanta / Exide Power Safe
	Backup Time	15 Minutes
Output	Power requirement of the chiller to be attached with the UPS	220 V - 1 phase - 50 Hz / 230 V - 1 phase - 60 Hz
	Power consumption of the chiller to be attached with the UPS	1.9 kW 50 Hz / 2.3 kW 60 Hz
	Power Factor	0.8
	Freq. Stability	± 0.05% (without AC input from mains)
	THD	<3% for linear load & <4% for non-linear load
	Crest factor	3 : 1
	Waveform	Pure Sine wave
	Overload capacity	Good overload capacity
Efficiency	AC to AC	>90%

Central Research Facility (CRF)
Indian Institute of Engineering Science and Technology, Shibpur
Howrah - 711 103

Transfer time	Power cut or Power on	No break
Environmental	Operating temp.	0 – 40° C
	Relative humidity	<90% non condensing
	Noise	<50dB at 1 m
Indications	LCD Display	Input-Output Voltage & Freq., temp., charging & discharging current, load current percentage
	LED light	Fault Indicator, Load indicator, Bypass Indicator, Inverter Indicator, Battery Indicator
	Mimic Display	Mimic diagram should be provided to know the status of the rectifier, inverter, battery and output.
Alarm	Utility disconnect Battery exhausted Overload	Buzzer beeps once every 4 seconds Buzzer beeps once every one second Buzzer continuously beeps
Protection	Advanced Electronics protection for devices safety backed with MCB's/MCCB's, fast acting fuses, Short Circuit protection etc.	
Fault Indication	In the event of an UPS fault, UPS should enters fault operation mode, the buzzer should beeps continuously and the data information area should shows fault code	
Comm. Software	UPS monitoring & auto shutdown should be software controlled	
Generator Compatibility	UPS should be Generator compatible	
Misc.	Neutral and Ground should be having the same potential and this should be achieved with proper circuitry / PCB	
General & safety Standards	The system complies with the following Safety & International standards: Low Voltage Directive 2006/95/EC : Test Standards CEI EN 62040-1-1 :2003, EMC Directive 2004/108/EC: Test Standards EN62040-2 :2006	
Certification	Compatible with international standard and vendor should provide the certificate	
Installation	To be done by the vendor	

Specific terms and conditions: Quoted price must be inclusive of all applicable taxes, charges, duties etc. ***Price comparison will be made considering total cost for all of the above mentioned items and works***. Other terms and conditions are as per rules and regulations of the institute.

(A. Basumallick)
Chairman, CRF

Copy forwarded for information to:

Finance Officer, IIEST, Shibpur, Howrah-711 103 with a request to publish the enquiry in the IIEST, Shibpur notice board for wide publicity.