University of Calcutta

Dept. of Applied Physics
UCSTA
92 APC Road, Kolkata 700009
Tender Notice

Enq No.: AP/5/ENQ/EE/SC/17-18
Date: 30/10/2017
To
The All Interested Parties

Dear M/s.
Please submit sealed quotation within **15/11/2017 (4 PM)** at the Office of the Department of Applied Physics for the following item.

Please enclose the copy of the following papers along with the quotation.
1. Trade License, 2. PAN Card, 3. VAT & Service Tax Registration wherever necessary

Power Electronics Trainer – Master Unit

Salient Features:

- Aesthetically designed injection molded electronic desk
- Master unit carrying useful experiment resources like line Synchronized firing circuits, Power supplies, lamp load, RLC loads, Battery charging supply etc. while the central slot will hold replaceable experiment panels.
- Each multi experiment panel is secured in an ABS molded plastic sturdy enclosure, and has colorful screw less overlay showing circuit & Connection through Sturdy 4mm Banana Sockets & Patch Chords.
- Set of User Guide provided with each unit.

Specifications:

Built in power supply
DC supply:

- + 12V, 500mA
- Unregulated Power supply 17V/ 750mA
- Regulated 7 V DC to 14 V DC / 3 A O/P is provided as 12V Battery charging supply. In absence of battery, same may be used as simulated battery source to run experiments on inverters etc.
- Isolated DC supply +12V/ 300 mA with isolated common
- On board Inverter transformer of Primary and Secondaries: 12-11-0-11-12 / 3A
- On board o/p to Isolated Drive Circuit

AC supply:

- 230V AC line voltage is made available on two banana 4mm sockets as well as 1.5A fuse extender for variac if used.

Aux DC Power Supply:

(Useful as field / armature supply for DC motor)

- Variable up to 200 V DC / 0.5 Amp (Phase controlled Thyristor half bridge)
- Field ON/OFF control with **field failure relay** & over current protection circuit

LSPT Panel consisting of:

- Two pulse transformers of 1:1:1 are provided for isolation & supplying firing pulses along with required DC Power supply to experiment panel under test through 15 pin female 'D' connector.
- Selector switch of 2 pole 6 way for selecting different types of firing pulses like out of phase inverter firing using LM3525 with dead time, freq. Control in freq variation from 170 Hz to 250 Hz, 12.5 / 25/6..25 Hz Frequency gated with High Frequency (3KHz) for Cycloconverter, line Synchronized UJT firing for converter and pulse width

R-L-C Load Panel:

- Load resistor of 10ohm/ 40Wand 100ohm/ 10W- 1No.each
- Centre tapped 3Achoke 4mH/ 16mHeach -2Nos.
- DC choke 0-100-200 mH / 750 mA- 1No.
- Commutation capacitors of 10uF/100V- 4Nos.
- AC Paper capacitor of 4uF/440V- 1No.
- DC Capacitor 220 uF / 63 V – 1 No.
- Diode BYT71 (5407) - 1 No.
- On board Lamp load of 15 W / 230 V AC provided

Accessories:

- 15 pin D connector cable assembly,
- 4 mm patch cords: 100 mm X 10 Nos. & 500 mm X 20 Nos.

Mechanical Dimensions:

- Master Unit: 460 mm (W), 160 mm (H), 350 mm (D), Net weight: 10 Kg., Gross weight: 12 Kg.
- Panel: 215 mm (W), 165 mm (H), 40 mm (D), Net weight: 700 gm approx.

Operating Voltage: 220 / 240 V AC switch settable +/- 10%, 50 Hz, 75 VA

For

Prof. Sumana Chowdhuri
Dept of Applied Physics
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Intel core i5 computer with 22'' monitor

Spec: Intel core i5 (7^{th} generation), Asus motherboard 150, 8 GB DDR 4 RAM Kingston, 1 TB HDD, DVD R/W, Logitech optical mouse, Logitech keyboard, I-ball cabinet with SMPS, HP 1020 plus laser printer, 22'' LED monitor Samsung

For
Prof. Sumana Chowdhuri
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