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NETAJI NAGAR DAY COLLEGE

(Under Graduate & Post Graduate Institute)
Affiliated to University of Calcutta
Accredited by NAAC (B+)
170/436, N. S. C. BOSE ROAD
REGENT ESTATE, KOLKATA - 700 092

Ref. No .....

Date 29.01.2018

Notice

Netaji Nagar Day College invites Quotations for the Department of Physics for following items from authorized parties (preferably sole distributors). Suppliers are hereby requested to submit quotations indicating the **rate per unit** basis for all the items including their Current Trade License, PAN No. and other credentials **within 10.02.2018** in a sealed envelope addressed to the undersigned. The authority reserves the right to accept/reject any quotation without showing any reason thereof.

SBJash

(Dr. Sonali Banerjee Jash)
Principal,
Netaji Nagar Day College

Principal
Netaji Nagar Day College
Kolkata - 700 092

Sl. No.	Particulars/Specifications
1.	1. DC Regulated power supply- Single meter DC 0-12V @ 1 A **Technical specifications:** i. Output adjustment: Coarse and fine control ii. Over Current or short circuit protection provided. iii. A $3^3/_4$ digit display for voltage iv Low Ripple Voltage v. Better that 10% Line regulation can achieve. vi. Very high Load Regulation of better than 1% is achieved.
2.	DC power supply 5V fixed **Technical specifications:** i. Constant output voltage DC 5V @1 Amp ii. Short circuit protection iii. Low ripple voltage
3.	DC digital voltmeter **Technical specifications:** i. Digital DC voltmeter 0-200 V ii. Resolution upto 0.001 V. iii. Auto ranging iv. Compact size v. $3^3/_4$ digit display
4.	DC Miliammeter **Technical specifications:** 1. Digital DC miliammeter 0-200 mA 2. Resolution up to 0.001 mA. 3. Auto ranging 4. Compact size 5. $3^3/_4$ digit display
5.	Analog Voltmeter **Technical specifications:** i. Analog Voltmeter 0-3V (any range as per requirement) ii. Smallest division 0.1V
6.	Analog mili-ammeter **Technical specifications:** i. Analog miliammeter 0-100 mA (any range as per requirement) ii. Smallest division 1 mA
7.	Function generator Range of function generator Frequency: 0 - 3MHz **Technical specifications:** i. Output waveform: Sine, Triangle, Square, ±Pulse ii. Rise time & Fall time <= 50ns iii. TTL/CMOS and OUTPUT synchronous output iv. Voltage Control Frequency (VCF) Capacity v. Less than 1% distortion at 10Hz-- 3 MHz

	vi. Less than 0.5dB frequency response at 0.1Hz--- 3MHz vii. Frequency Counter: 1Hz--50MHz viii. Display: 16 x 2 character LCD ix. 20dB attenuation x. Amplitude: 0 - 10V pp
8.	Transistor Trainer Kit **Technical specifications:** i. Built-in two DC regulated variable power supply with short circuit protection of each 0 - 12 V and adjusted control. ii. Built in two digital Voltmeter (0-20V), a digital miliammeter (0-100 mA) and a digital micro ammeter (0-200μA) on the front panel. iii. The circuit layout is provided with well graphic on the front panel. iv. Required numbers of patch cords and operating manual.
9.	Transistor Trainer Kit (with h parameter) **Technical Specifications:** i. Built-in two DC regulated variable power supply with short circuit protection of each 0 - 12 V and adjusted with Coarse and fine control. ii. Built in one digital auto-ranging Voltmeter (0-100V), AC digital voltmeter, a digital miliammeter (0-20 mA) and a digital micro ammeter (0-100μA) on the front panel. iii. Circuit Node test point provided for debugging in dynamic condition (as per requirement). iv. Built in one AC source of 1KHz with variable amplitude on the panel. v. The circuit layout is provided with well graphic on the front panel. vi. Required numbers of patch cords and operating manual.
10.	Newton's Ring Setup **Technical Specifications:** i) A microscope with x-y-z axes movement ii) Horizontal measurement scale with fine and coarse movement screw iii) Cross wire in the field of view for ring's diameter measurement iv) Newton's ring assembly consisting of plano-convex lens mounted on an optically plane glass plate v) Sodium vapour lamp as the monochromatic and broad light source
11.	Spectrometer **Technical Specifications:** i) Vernier Constant: 20"
12.	Manual Polarimeter
13.	Digital CRO **Technical Specifications:** Dual channel 25 MHz, sampling >= 250 MS/S, Display>8 inch

<table>
<tr><td>14.</td><td>Zener diode trainer kit
Technical Specifications:
1. Built-in DC regulated variable power supply with short circuit protection of 0-20V.
2. Built-in on panel zener diodes three different values of Vz and other necessary components.
3. Built in two digital Voltmeter (0-20V), a miliammeter (0-200 mA).
5. The circuit layout is provided with well graphic on the front panel.
6. On Board 10 kΩ potentiometer.
7. Required numbers of patch cords and operating manual.</td></tr>
<tr><td>15.</td><td>LCR Trainer kit
Technical Specifications:
1. Frequency generator – 100KHz, Amplitude – 0-10V PP
2. In build voltmeter, ampere meter, proper frequency counter
3. Different type of L, C & R on board (At least three)
4. Required nos of test point on board.</td></tr>
<tr><td>16.</td><td>Isolated variable (0-30 V) AC Source with digital ac voltmeter</td></tr>
<tr><td>17.</td><td>AC source 9-0-9, 12-0-12; 15-0-15@ 1 Amp.</td></tr>
<tr><td>18.</td><td>OPAMP Experimental power supply set-up
Technical Specifications:
1. Fixed power supply: ±12V, ±5V @ 500mA
2. mv power supply: ±50mV, ±100mV, ±200mV, ± 0 – 2000mV @ 20mA
3. POT 10KΩ
4. One bread Board</td></tr>
<tr><td>19.</td><td>$3\frac{1}{2}$Digital Multimeter with capacitance, diode and transistor tester,
Technical Specifications:
<table><tr><th>Basic Functions</th><th>Range</th></tr><tr><td>DC Voltage</td><td>0.1mV ~ 1000V</td></tr><tr><td>AC Voltage</td><td>0.1mV ~ 750V</td></tr><tr><td>DC Current</td><td>0.1uA ~ 20A</td></tr><tr><td>AC Current</td><td>0.1uA ~ 20A</td></tr><tr><td>Resistance</td><td>0.1Ω ~ 40MΩ</td></tr><tr><td>Capacitance</td><td>10pF ~ 200uF</td></tr><tr><td>Frequency</td><td>0.1Hz ~ 30MHz</td></tr><tr><td>hhFE (NPN or PNP)</td><td>0 ~ 1000</td></tr></table></td></tr>
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