

TENDER NOTICE

TENDER NO. P3/2019-20 dated 15.05.2019

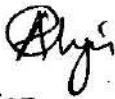
Supply of Lab Equipments of the Following Dept.


Sealed quotations are invited from reputed firms for supplying and commissioning the following items as per specifications given below at various departmental laboratories of the college.

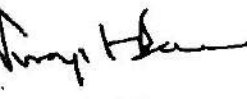
The department-wise particulars are given below:


Department of PHYSICS:

Sl. No.	Item	Detailed Specification	Quantity
1	Calibration of a thermocouple using operational Amplifier	Complete set having Table Galvanometer, power supply, ice and water bath with appropriate borosil round bottom flask and mantle heater, etc.	1
2	To determine the Temperature Coefficient of Resistance by Platinum resistance Thermometer.	Complete set having Table Galvanometer, power supply, ice and water bath with appropriate borosil round bottom flask and mantle heater, Platinum resistance thermometer, etc.	1
3	Kit for Verification of Stefan's Law using torch bulb	Kit with Complete set having power supply, meters, bulb (with 6 pc spare bulb) etc.	2
4	Calibration of a thermocouple between room temperature and oil bath temperature and determination of boiling point of water	Complete set having Table Galvanometer, power supply, oil bath and water bath with appropriate borosil round bottom flasks (2 pc) and mantle heaters (2 pc), etc.	1
5	Digital IC Trainer Kit	Kit having DC Power Supply IC Regulated +5V DC, 250mA, Logic Inputs & Outputs 8 Bit, 4 Bit BCD to 7 segment indicators block, Logic Low Frequency Mono Pulse generator, Low Frequency Clock Generator, logic Probe, DC Digital Voltmeter, Two Bread Board Attachment	8
6	Measurement of Plank constant using LED	Kit with Complete set having power supply, meters, 4 set of 3 different Colour LED (with supplied wavelength) etc.	2
7	Determination of ionization potential	Kit with Complete set having valve, regulated supplies, voltmeters and sensitive microammeter	2


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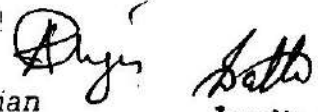

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Convenor, Purchase Committee
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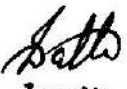

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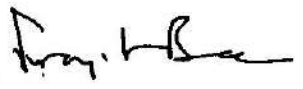

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15/5/2019


	of Mercury		
8	Determination of e/m using bar magnet	Complete set	1
9	Study of photoelectric effect	Complete set with photodiode valve with amplifier, regulated power supply, light source with intensity and wavelength variation, digital meters, etc.	2
10	Determination of wavelength of H-alpha emission of hydrogen atom	Complete set (without spectrometer) having discharge tube with power supply and fitting arrangement/housing, Original imported Grating element etc.	1
11	Kit for studying Tunnel diode characteristics	Complete set with regulated power supply, meters, etc.	2
12	Determination of wavelength and angular spread of He-Ne laser using grating	Complete set with Laser module, housing and power supply, Original imported grating element, Sensor with appropriate amplifier and meter, etc. (Quote for individual items seperately)	1
13	Kit for studying static characteristics of P.N.T	Complete set with regulated supply and meters	1
14	Kit for OP-Amp experiments	Complete board having power supply ($\pm 12V$, Variable $\pm 2V$, discrete fractional voltages), bread board, 10K & 1K pots, Discrete resistors, two digital voltmeter, 1 milli-ammeter	1
15	Inductor with low coil resistance	discrete (1 mH - 200mH)	20
16	Variable Inductor Box (selectable)	Discrete (1 mH - 200mH)	2
17	He-Ne LASER source with housing and power supply	To be used for interference, diffraction and holography experiments, along with SMPS power supply and housing, Beam Diameter $\leq 1\text{mm}$ Beam Divergence : $\leq 1\text{mrad}$ Polarisation : random (unpolarised) Output Power Stability: $< \pm 2.5\%$ Power Input : 220V AC $\pm 10\%$, 50Hz Min. Operating Life time : 15000 Hrs Shelf Life : 10 Years Output Power $\geq 2\text{mW}$.	1
18	Laser Detector with Amplifier and power supply	Complete Set	1
19	Solid State RED LASER with housing and power supply.	To be used for interference, diffraction and holography experiments, along with SMPS power supply and housing, Wavelength: 650nm,	1

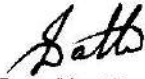

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		Beam Divergence : ≤ 2 mrad Power Input : 220V AC \pm 10%, 50Hz Min. Operating Life time : 5000 Hrs Output Power ≥ 5 mW.	
20	Measurement of magnetic susceptibility of liquid by Quink's Tube method	Complete set containing Quink's tube with stand, sample, Electromagnet with constant current power supply, Digital Gaussmeter etc. (travelling microscope not required)	1
21	Measurement of magnetic susceptibility of solid	Complete set	1
22	Variation of dielectric constant with frequency	Complete set	1
23	Measurement of Hall Voltage by four probe method	Complete set	1
24	To study the temperature coefficient of a semiconductor (NTC Thermistor)	Complete set	1
25	To verify malus Law using a pair of polaroids	Complete set	1
26	Determination of wavelength and velocity of ultrasonic wave in a liquid	Complete set	1
27	Kit for amplitude modulation using transistor and envelop detector for demodulation	Complete set	1
28	Kit for FM generation and detection	Complete set	1
29	Kit for AM Transmitter and receiver	Complete set	1
30	Kit for FM transmitter and receiver	Complete set	1
31	Kit for Time Division	Complete set	1


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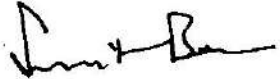

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32	Multiplexing Kit for Pulse Amplitude Modulation	Complete set	1
33	Oscilloscope Digital	Keysight Technologies, Model EDUX1002A/G, 50MHz	1
34	Oscilloscope Digital	Keysight Technologies, Model DSOX1102A, 70MHz	1
35	Oscilloscope Digital	Tektronics, Model TBS1052-EDU, 50 Mhz	1
36	Oscilloscope Digital	Tektronics, Model TBS1072-EDU, 70 Mhz	1
37	Oscilloscope Digital	GWINSTEK, Model GDS-1072A-U, 70 Mhz	1
38	Oscilloscope Digital	GWINSTEK, Model GDS-1000B series, 50/70 MHz	1
39	Oscilloscope Digital	Scientific, Model SMO1072B, 70MHz	1
40	Oscilloscope Digital	Scientific, Model SMO1102A, 100MHz	1
41	Oscilloscope Digital	APLAB, Model 37000A Series, 70 Mhz	1
42	Oscilloscope Analog (CRO)	Scientific, Model SM203G, 30MHz, 1mV/Div	1
43	Oscilloscope Analog (CRO)	GWINSTEK, Model GOS-630FC, 30MHz	1
44	Oscilloscope Analog (CRO)	APLAB, Model 3706C, 30 Mhz	1
45	Oscilloscope Analog (CRO)	APLAB, Model 3803, 30 Mhz	1
46	True RMS AC MilliVoltmeter	SES Roorkee, Model ACM-103, with built-in oscillator	1
47	True RMS AC MilliVoltmeter	SES Roorkee, Model ACM-102	1
48			1
49	Function Generator	SES Roorkee, Model FG-01	1
50	Function Generator	APLAB, Model MSG2M	1
51	Function Generator	APLAB, Model MSGM3M	1
52	Function Generator	Metravi, Model DDS1005	1
53	Regulated Power supply for OP-AMP	SES Roorkee, Model PS-12 or equivalent	1
54	Regulated Power supply	APLAB, Model L1602 or equivalent	1
55	Regulated Power supply	2V,4V Fixed selectable, 500mA with short circuit protection	1
56	Regulated Power supply	0-2V Variable, 0.5A with short circuit protection	1
57	Regulated Power supply	0-6V Variable, 1A with short circuit protection	1
58	Regulated Power supply	0-15V Variable, 1A/2A with short circuit protection	1
59	Analog & Digital	APLAB, Model BB103 or Equivalent	1


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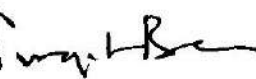
	Educational Trainer board		
60	Advanced Analog & Digital Educational Trainer board	APLAB, Model BB105 or Equivalent	1
61	Multimeter	Metravi, Model XB30 or equivalent	1
62	Multimeter	Metravi, Model XB33CF or equivalent	1
63	Multimeter	Metravi, Model 901-I or equivalent	1
64	Multimeter	Metravi, Model 19 or equivalent	1
65	Multimeter	Metravi, Model 702 or equivalent	1
66	Multimeter	Metravi, Model 603 or equivalent	1
67	Digital Ammeter	3½ Digit, 200µA/20mA/200mA	1
68	Digital Voltmeter	3½ Digit, 2V/20V	1
69	Analog Table top Galvanometer	□□□A/20□A full scale	1
70	Spot reflecting galvanometer	Sensitivity □□□ mm □□□	1
71	Research Quality Laboratory Spectrometer	7"9", 10/20sec Vernier, Make INCO or Equivalent	1

Department of ELECTRONICS:

Sl.N o.	Item	Specification	Quantity
1.	Digital storage oscilloscope	100 Mhz Digital Storage Oscilloscope, Aplab Ltd.	1
2.	Function Generator	Metravi DDS Function Generator Model-1005	1
3.	Digital IC Tester	Minimax MME-DIT 20 Digital IC Tester	1
4.	True RMS AC Milli Voltmeter	Model: ACM-103, SES Instruments Pvt.Ltd.	2
5.	AM Trainer kit	Modulation, Demodulation	1
6.	FM Trainer kit	Modulation, Demodulation	1
7.	PAM Trainer kit	Modulation, Demodulation	1
8.	PWM Trainer kit	Modulation, Demodulation	1
9.	PPM Trainer kit	Modulation, Demodulation	1


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10.	ASK Trainer kit	Modulation, Demodulation	1
11.	PSK Trainer kit	Modulation, Demodulation	1
12.	FSK Trainer kit	Modulation, Demodulation	1
13.	Monitor	SAMSUNG 19"	1
14.	Multimeter	Make:Fluke, True RMS reading, L, C, Autorange	2

Terms and conditions:

- 1) The quotations should be accompanied by self attested copies of current trade license, PAN, GST certificate, Registration certificate with statutory authorities (wherever applicable) and other credentials.
- 2) The rate per unit of each item bid should be invariably given. The rate quoted should be 'all inclusive'.
- 3) All payments will be made after supply and commissioning of the items.
- 4) The equipments should be supplied and commissioned within one week of receiving the work order.
- 5) The rate quoted should be valid for atleast six months from the date of the expiry of the tender.
- 6) The College reserves the right to (1) reject any quotation without assigning any reasons thereof and (2) issue work orders for lesser quantities of items than specified in this tender.
- 7) The quotation should be addressed to "The Principal, Seth Anandram Jaipuria College" and submitted to Dr. Abhijit Chatterjee, Librarian of the college latest by 22/05/2019, 5.00 p.m.

The envelope should be superscribed with "Tender no. P3/2019-20 dated 15.05.2019: Supply of lab equipments-Physics/Electronics (retain whichever is applicable)".

Parties desirous of submitting quotations for supply to both departments should submit multiple envelopes- one for each department.

Abhijit
15/5/19
Librarian
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