Mahadevananda Mahavidyalaya

Accredited by NAAC - A Grade

Monirampore, Barrackpore, North 24 Parganas, Pin – 700120

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Ref No...... *Date* 1/6/18

Notice No.277/2017-18 (Contd-)

Department-wise sealed quotations are invited from vendors for purchase of equipment from grant under RUSA 2.0 scheme.
Quotations are to be submitted before 2:00 PM, June 7, 2018.

9. Department of Physics

Sl. #	Name of the equipment with specification	Quantity
	1.8 Core P2 – Mechanics Lab	
	Travelling microscope.	
01	To determine the value of g using Bar Pendulum.	1
	1.10 Core P3 – Electricity and Magnetism Lab	1
01	To study the characteristics of a series RC Circuit.	1
02	To determine an unknown Low Resistance using Potentiometer.	1
03	To determine an unknown Low Resistance using Carey Foster's Bridge.	1
04	To determine the resistance of a galvanometer using Thomson's method.	1
05	Measurement of field strength B and its variation in a solenoid (determine dB/dx)	1
		1
06	To study the response curve of a parallel LCR circuit and determine its (a) Anti-resonant frequency and (b) Quality factor Q.	1
	1.12 Core P4 – Wave and Optics Lab	1
01	To determine the frequency of an electric tuning fork by Melde's experiment and verify _2 –T law.	1
02	To investigate the motion of coupled oscillators.	1
03	To study Lissajous Figures. Complete with C.R.O & Function Generator.	1
04	To determine the wavelength of sodium source using Michelson's interferometer.	1
05	To determine wavelength of sodium light using Fresnel Biprism.	1
06	To determine the thickness of a thin paper by measuring the width of the interference fringes produced by a wedge-shaped Film.	1
	1.16 Core P6 – Thermal Physics Lab	1
01	To determine Mechanical Equivalent of Heat, J, by Callender and Barne's constant flow method.	1
02	To determine the Coefficient of Thermal Conductivity of Cu by Searle's Apparatus.	1
03	To determine the Coefficient of Thermal Conductivity of Cu by Angstrom's Method.	1
04	To determine the Temperature Coefficient of Resistance by Platinum Resistance Thermometer (PRT).	1
05	To calibrate a thermocouple to measure temperature in a specified Range using (1) Null Method, (2) Direct measurement using Op-Amp difference amplifier and to determine Neutral Temperatur	1

Principal
Mahadevananda Mahavidyalaya
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	1.18 Core P7 – Digital Systems and Applications Lab	
01	Half Adder, Full Adder and 4-bit binary Adder.	1
02	Half Subtractor, Full Subtractor, Adder-Subtractor using Full Adder I.C.	1
03	To build Flip-Flop (RS, Clocked RS, D-type and JK) circuits using NAND gates	1
04	To build JK Master-slave flip-flop using Flip-Flop ICs	1
05	To build a 4-bit Counter using D-type/JK Flip-Flop ICs and study timing diagram	1
06	To make a 4-bit Shift Register (serial and parallel) using D-type/JK Flip-Flop ICs.	1
07	To design an astable multivibrator of given specifications using 555 Timer.	1
08	To design a monostable multivibrator of given specifications using 555 Timer.	1
	1.22 Core P9 – Elements of Modern Physics Lab	1
01	Measurement of Planck's constant using black body radiation and photodetector	1
02	Photo-electric effect: photo current versus intensity and wavelength of light; maximum energy of photo-electrons versus frequency of light Complete in all respect.Make:SES Instruments Pvt Ltd,ROORKEE.	1
03	To determine work function of material of filament of directly heated vacuum diode.	1
04	To determine the Planck's constant using LEDs of at least 4 different colours.	1
05	To determine the wavelength of H-alpha emission line of Hydrogen atom.	1
06	To determine the ionization potential of mercury, Complete in all respect but a oscilloscope will be helpful. .Make:SES Instruments Pvt Ltd,ROORKEE.	1
07	To determine the absorption lines in the rotational spectrum of Iodine vapour.	1
08	To determine the value of e/m by (a) Magnetic focusing or (b) Bar magnet.	1
09	To setup the Millikan oil drop apparatus and determine the charge of an electron. Measurement of electron charge by Millikan's Experiment.The experiment comes complete with 16" LED Flat Panel monitor,timer,atomizer etc.The oil droplets can be seen on monitor ensuring convenience & accuracy. .Make:SES Instruments Pvt Ltd,ROORKEE.	1
10	To show the tunneling effect in tunnel diode using I-V characteristics.	1
11	To determine the wavelength of laser source using diffraction of single slit.	1
12	To determine the wavelength of laser source using diffraction of double slits.	1
13	To determine (1) wavelength and (2) angular spread of He-Ne laser using plane diffraction grating	1

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