Specifications

S.No. 14

Item Name: Digital Oscilloscope with LAN/Wi-Fi Connectivity

Specifications:

Bandwidth: approx. 50 MHz, Channels: Dual (2), Sample Rate: 1 G/s, Sample Rate / Relay Time Accuracy: ±100 ppm, Display: 7" Colour LCD, 800 × 480 pixels,Probe Attenuation Factor: 1X, 10X, 100X, 1000X, DC Accuracy: age ≥ 16 ±(3% reading + 0.05 div) for Δ V.DC, DC Channel Isolation: 50 Hz: 100:1, 10MHz : 40 : 1,- Input Impedance: 1 MΩ ±2% in parallel with 20 pF ±5 pF Communication Interface: USB host, USB device, Built-in Frequency Counter

Quantity Required: 1 set

S.No. 16

Item Name: Measurement of Field Strength B and Its Variation in a Solenoid (dB/dx)

Specifications:

Digital Gaussmeter, Range: 0–200, Resolution: 0.1 G, Accuracy: ±0.5%, Display: 3½-digit 7-segment LED, with autopolarity, offset Balance: On panel, Maximum Current: 0.5 A, Two Coils: Diameter 200 mm, Number of turns 1000, Coil Spacing Adjustable: from 6 cm to 87 cm Least Count: 1mm, Constant Current Power Supply current: 0–0.5 A smoothly adjustable Line, Regulator Accuracy: ±0.2% for 10% mains variation, Load Regulator ± 0.2% for 0 to full load. Display: 3½ digit 7 segment LED Display., Protection against overload/short current

Quantity Required: 1 set

S.No. 17

Item Name: To setup the Millikan Oil Drop Apparatus (To determine charge of an electron)

Specifications:

A pair of horizontal parallel plate electrodes separated by about 5 mm thick ebonite ring with a hole for viewing the oil droplets. The upper plate has a small hole in its centre for the emission of the droplets which are produce by spraying oil with an atomizer. A device to illuminate the space between the plate electrodes. Three levelling screws at the base of the panel to make the parallel plate electrodes perfectly horizontal (perpendicular to the gravitational field) and a water-level placed on top of the panel to check it. A microscope with CCD camera head to view and transmit image of oil droplets between the plate electrodes to the monitor. A power pack to supply continuously variable voltage inthe range 0-800 V to the upper plate electrode when the electric field is to be created between the plates. The lower plate is permanently grounded. A digital voltmeter to measure the potential applied to the upper plate. A 'Time Meter' to display the time for which the oil droplet is allowed to more. A timing device to measure time interval between the passage of droplets through present points. There are two keys to operate this device. Pressing the 'Clear' kay. wipes out the time information. This is like a reset key. The time meter now reads '00.0' sec. Pressing the 'Start/Stop' key starts the timing device. Pressing it again stops the device. The elapsed time can be read on the meter. A monitor with

graduated screen. The horizontal lines on the monitor screen help in setting the distance through which the droplets more. An atomizer to spray droplets. A thermometer to measure the room temperature.

Quantity Required: 1 set

S.No. 18

Item Name: Study of Thermoluminescence of F-centres in Alkali Halide Crystals
Specifications:

Spectral Response Range: 300–650 nm (approx.), Peak Wavelength: 400 nm, Dynode Structure/No: of stages: CC/9, Maximum Cathode Voltage: 1250 V DC, Maximum, Average Anode Current: 0.1 Ma, Cathode Sensitivity: Minimum 40 µA/lm, Typical.60 µA/lm Anode sensitivity:, Minimum: 200 A/lm, Typical 600A/lm , Anode-to-Cathode Supply Voltage: 1000 V DC , Current Amplification: 1.0 × 10**7, Anode Dark Current (after 30 min): Typical 1 nA, Max 10 nA

Quantity Required: 1 set

S.No. 19
Item Name: Photoelectric Effect Apparatus
Specifications:

Photosensitive Device: Vacuum Photo Tube, Light Source: Halogen Tungsten Lamp 12 V/35 W (LED-based illumination combined with narrow-band optical filters), Colour Filters: 635 nm, 570 nm, 540 nm, 500 nm, 460 nm, Regulated Voltage Power Supply, Output: ±15 V continuously variable through multi-turn Pot, Display: 3½ digit 7-segment LED ,Accuracy: ±0.2%, Current Measuring Unit: Digital Nano-ammeter (measure low Current with high stability), Range: 1000 µA, 100 µA, 10 µA & 1 µA with 100% over ranging facility, Resolution: 1 nA (1 µA Range) ,Display: 31/2 digit 7-segment LED, Accuracy +0.2%

Quantity Required: 1 set

S.No. 20
Item Name: Heated Vacuum Diode
Specifications:

In-Built Variable DC Regulated Power Supply for Anode., In-built Fixed AC Power Supply of 6.3 V for Filament., Two Analog Meters Mounted on Front Panel

Quantity Required: 1 set

S.No. 21

Item Name: Wavelength of H-Alpha Emission Line of Hydrogen Atom
Specifications:

1. Spectrometer:

Type: Standard Optical Spectrometer, Telescope: Collimating telescope with fine adjustment and angular scale, Prism/Table: Equilateral dispersion prism or diffraction grating mountable on adjustable table., Least Count: Typically 1 arc-minute or better, Angular Scale: Graduated in degrees for accurate angle measurement., Scale Diameter: 7 inches or better

2. Hydrogen Discharge Tube:Type Sealed glass discharge tube filled with pure hydrogen gas, Length: Approx. 10–15 cm or higher, Electrodes fitted with Robust and insulated terminals., Mounting: Compatible with tube holder/stand for secure positioning

3. Discharge Tube Power Supply: Output Voltage: Typically 3–4 kV or higher, Safety: Built-in protection features such as current limiting and overload protection., Operation On/off switch with indicator; designed for safe laboratory use.

4. Light Source Housing:

Tube holder with adjustable for precise alignment for precise positioning relative to spectrometer., Shielded housing to minimize ambient light interference, Diffraction Grating (Optional/Alternative):, Line Density: Typically, 300, and 600 lines/mm or higher., Mounted on a holder compatible with the spectrometer table.

Quantity Required: 1 set

S.No. 22

Item Name: To determine the Absorption Lines in the Rotational Spectrum of Iodine Vapour
Specifications:

Spectrometer (6 inch), Long Absorption Glass Tube & Filament, Light Source (Mercury Source), Diffraction Grating , Spirit Level, Power Supply for Iodine Tube, Suitable Stands, Connecting Leads and Reading Lens

Quantity Required: 1 set