Assignment 7 Experiment 7

To study the I-V characteristic of photo cell

Aim: To study the I-V characteristic of Photo-electric cell.

Apparatus: Photo cell (Selenium) mounted in the metal box with connections brought out at terminals, Lamp holder with 60W bulb, Two moving coil analog meters (1000µA & 500mV) mounted on the front panel and connections brought out at terminals, Two single point and two multi points patch cords.

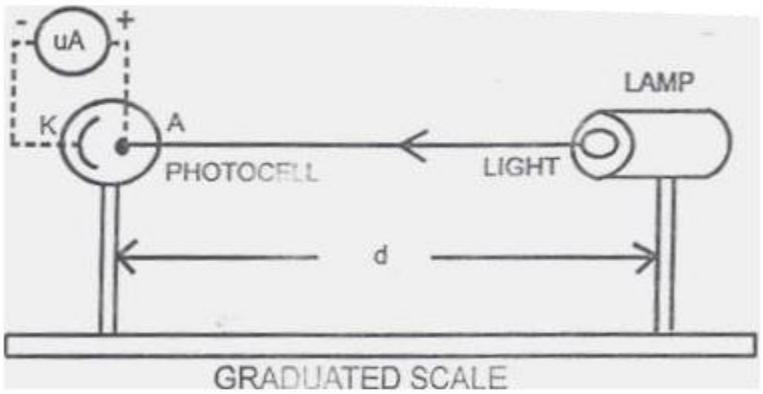
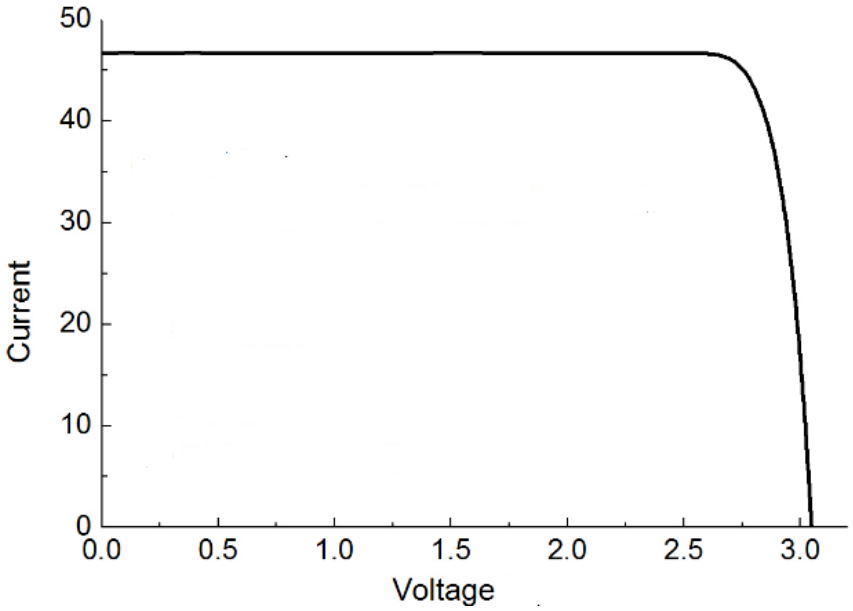


Fig. 7.1. Photo cell



GRAPH: For V-I CHARACTERISTICS, a graph is plotted between the current and voltage

Observations:

Table 1: Illumination Characteristic

Intensity (distance Cm)	Voltage
11	0.26 V
20	0.16 V
29	0.11 V
38	0.08 V
42	0.08 V

Table 2: I-V Characteristic

R_L (Ohms)	Intensity I_1(at distance.**15** cm)		Intensity I_2 (at distance. **20** cm)		Intensity I_3(at distance **25** cm)	
	Voltage (Volts)	Current (micro-amps)	Voltage (Volts)	Current (micro-amps)	Voltage (Volts)	Current (micro-amps)
100	0.12	0.35	0.10	0.25	0.08	0.15
220	0.14	0.30	0.11	0.20	0.09	0.13
330	0.16	0.25	0.12	0.17	0.10	0.11
470	0.18	0.22	0.13	0.15	0.11	0.10
1000	0.20	0.18	0.14	0.13	0.12	0.08
2000	0.22	0.10	0.15	0.10	0.13	0.05

Assignment Question:

1. By using the readings in the tabular coloum (V and I), draw the I-V characteristic graph for any two distance. (Two graphs)

2. Write the result in the following order

   (i) I-V characteristic of Photo cell was studied.

   Finally, submit the scanned copy of your observation note book in GCR on (or) before THREE working days from the date of experiment.