Assignment 5-Experiment-5

STUDY OF V-I AND V-R CHARACTERISTICS OF A SOLAR CELL

Aim

To study the V-I and V-R characteristics of a solar cell.

Apparatus Required

Solar cell, voltmeter, milliammeter, a dial type resistance box, Keys, illuminating lamps, connecting wires etc.

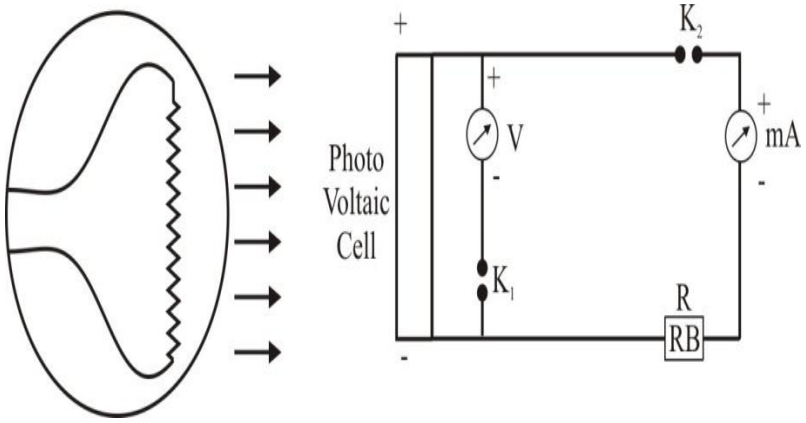

Fig.8.1 Schematic representation and circuit of Solar Cell

(i) Table V-I and V-R characteristics

Intensity	Resistance (Ohm)	Voltmeter Reading (V)	Ammeter Reading (mA)
Maximum	10	1.57	122.6
	22	2.83	122.1
	47	3.62	74.1
	56	3.63	63.3
	68	3.84	55.2
	82	3.9	45.5
	100	3.93	36.2
	160	3.94	26.2
	180	3.96	21.6

Table V-I and V-R characteristics

Intensity	Resistance (Ohm)	Voltmeter Reading (V)	Ammeter Reading (mA)
Minimum	10	0.39	32.5
	22	0.77	32.2
	47	1.55	32.1
	56	1.84	31.9
	68	2.20	31.7
	82	2.61	30.5
	100	2.93	29.0
	160	3.43	22.8
	180	3.57	19.4

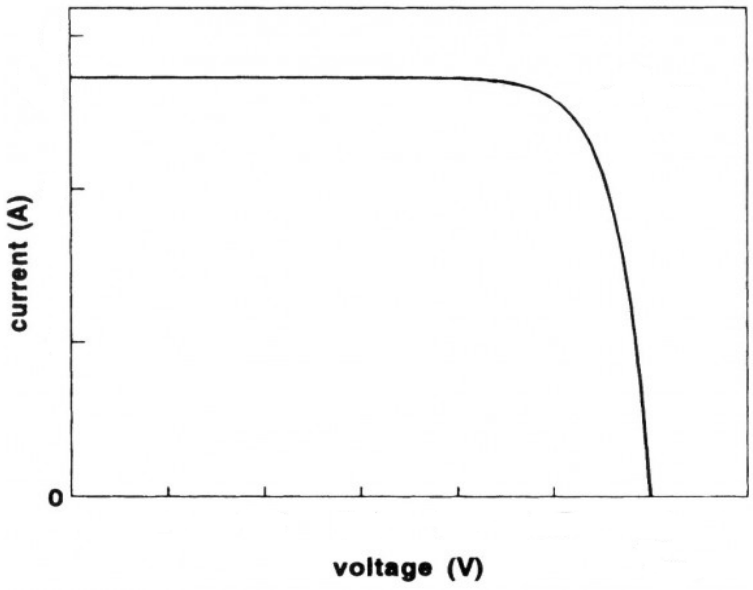

Fig. 8.2. Model Graph for V-I Characteristic

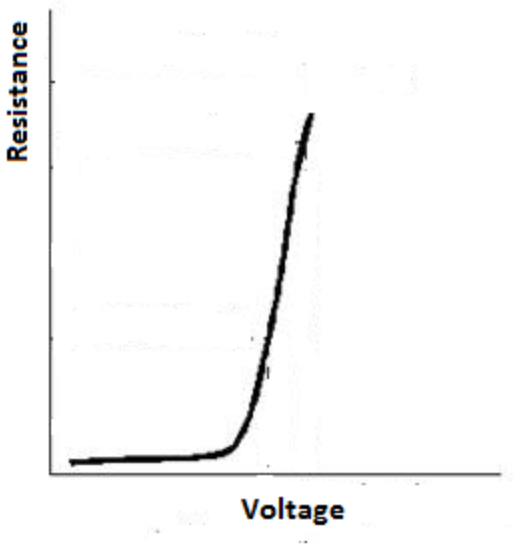

Fig. 8.3 Model Graph for V-R Characteristic

Assignment Question:

1. By using the readings in the tabular coloum (R, V and I), to draw V-I and V-R characteristic curves for Maximum and Minimum Intensity (4 Graphs).

2. Write the result in the following order

The V-I and V-R Characteristics of the solar cell is studied.

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