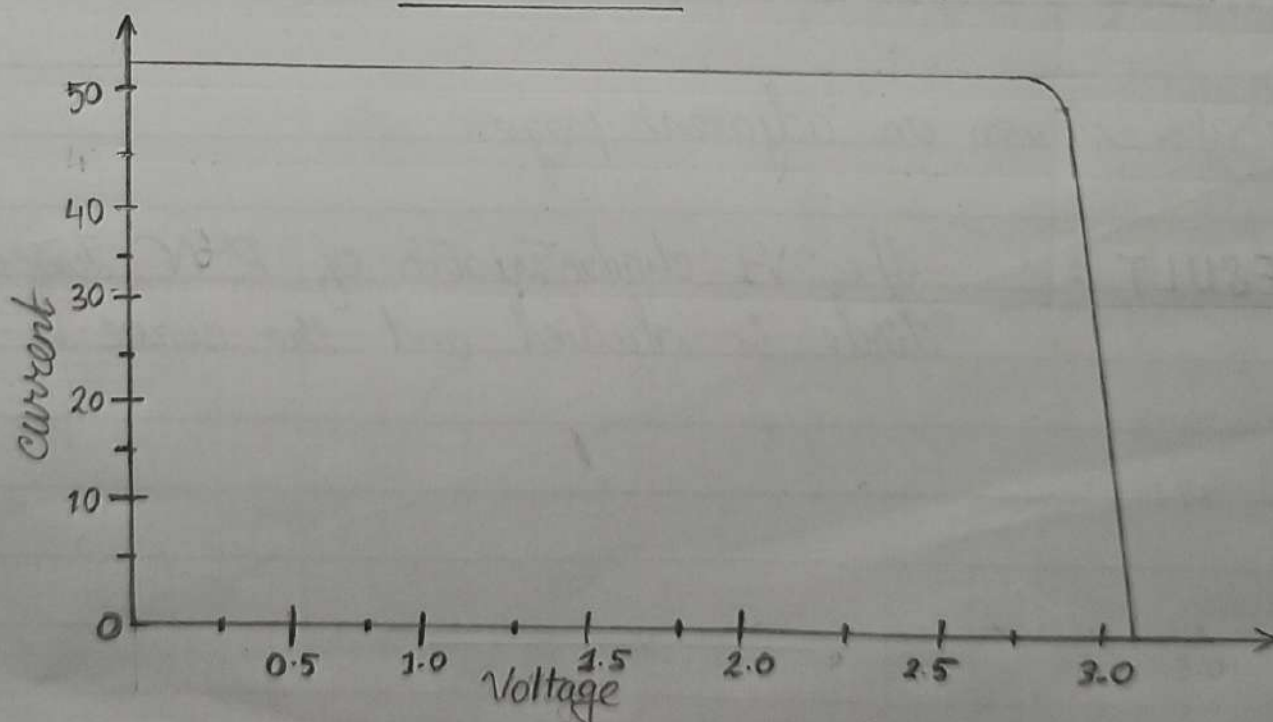


GRADUATED SCALE

PHOTO CELL



V-I Characteristic graph of a photo cell

## To study the I-V characteristics of a photo cell.

AIM: To study the I-V characteristics of photo cell

### APPARATUS :

Photo cell (Selenium) mounted in the metal box with connections brought out at terminals, lamp holder with 60 W bulb, two moving coil analog meters (1000  $\mu$ A & 500 mV) mounted on the front panel and connections brought out at terminals, two single point and two multipoint patch cords.

### OBSERVATIONS :

Table I - Illumination characteristics :

SL. NO	Intensity (distance) (in cm)	Voltage (in V)
1.	11	0.26
2.	20	0.16
3.	29	0.11
4.	38	0.08
5.	42	0.08



Table 2: I-V Characteristic :-

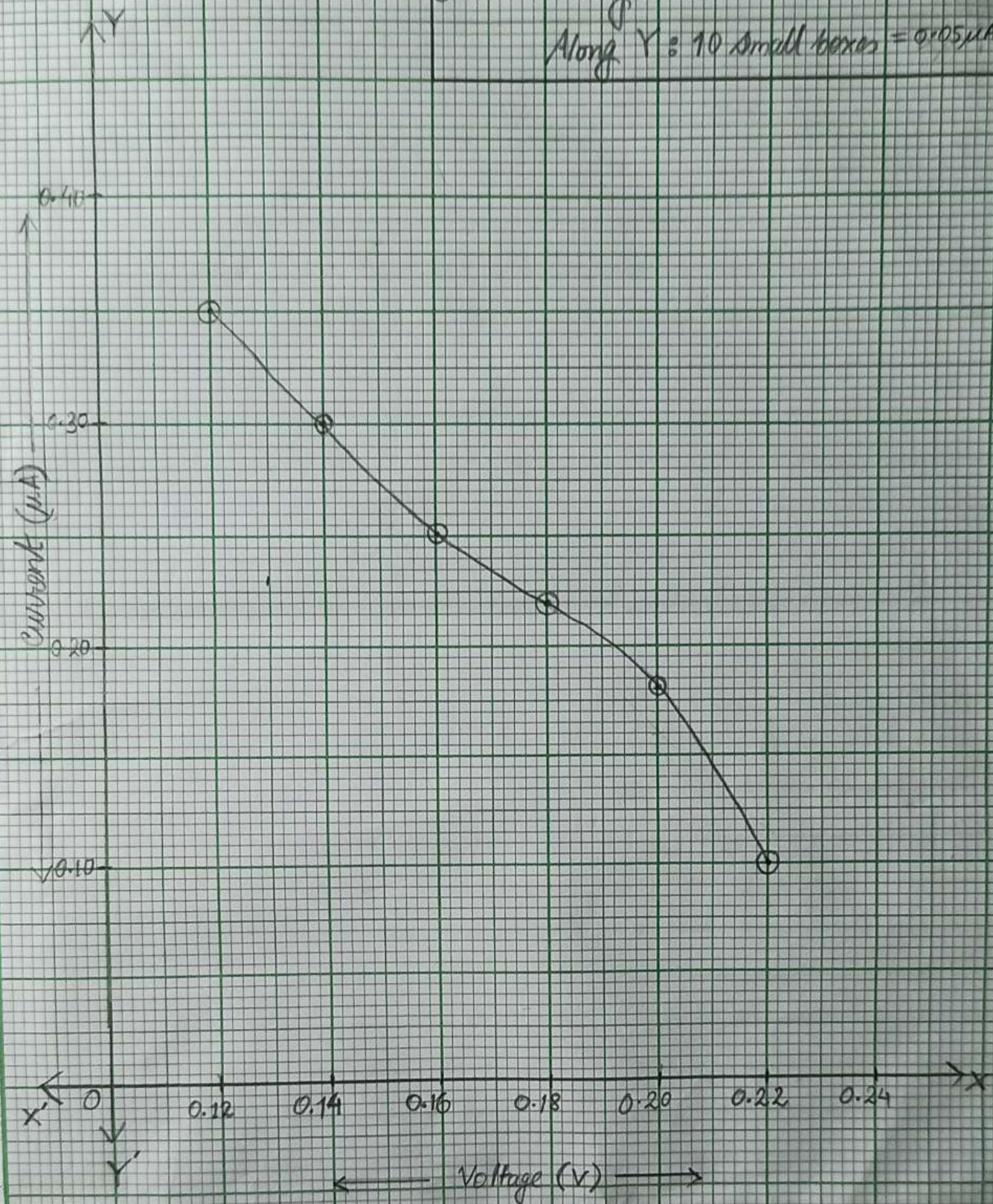
$R_L$ (ohms)	Intensity $I_1$ (at distance 15cm)		Intensity $I_2$ (at distance 20cm)		Intensity $I_3$ (at distance 25cm)	
	voltage (volts)	Current (micro-amps)	Voltage (volts)	Current (micro-amps)	Voltage (volts)	Current (micro-amps)
100	0.12	0.35	0.10	0.25	0.08	0.15
220	0.14	0.30	0.11	0.20	0.09	0.13
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



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①

Scale :- Along X : 10 small boxes = 0.02 volts  
Along Y : 10 small boxes = 0.05  $\mu$ A

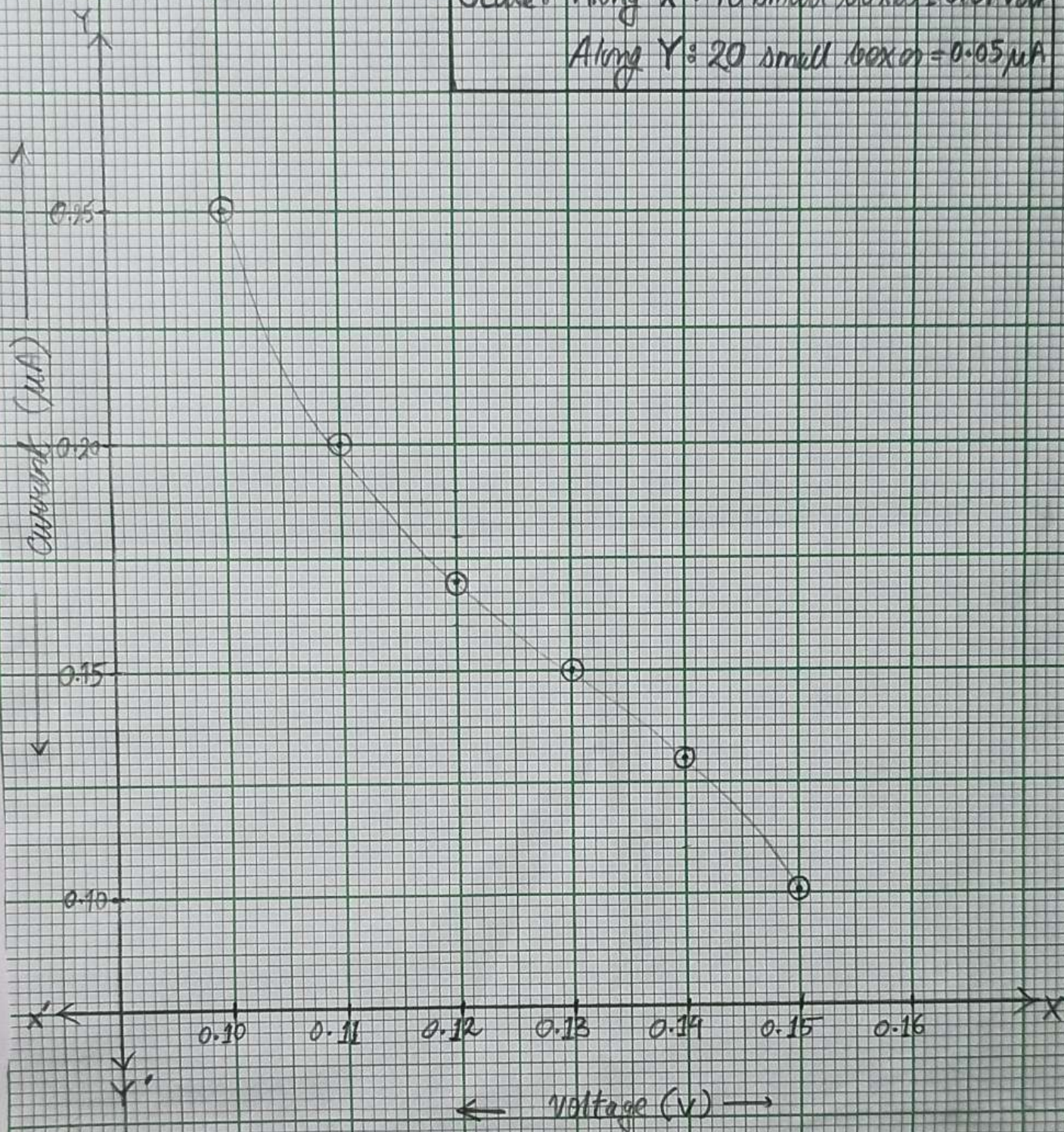


I-V characteristics when intensity I, (at distance 15 cm)



②

Scale: Along X: 10 small boxes = 0.01 Volt  
Along Y: 20 small boxes = 0.05  $\mu\text{A}$

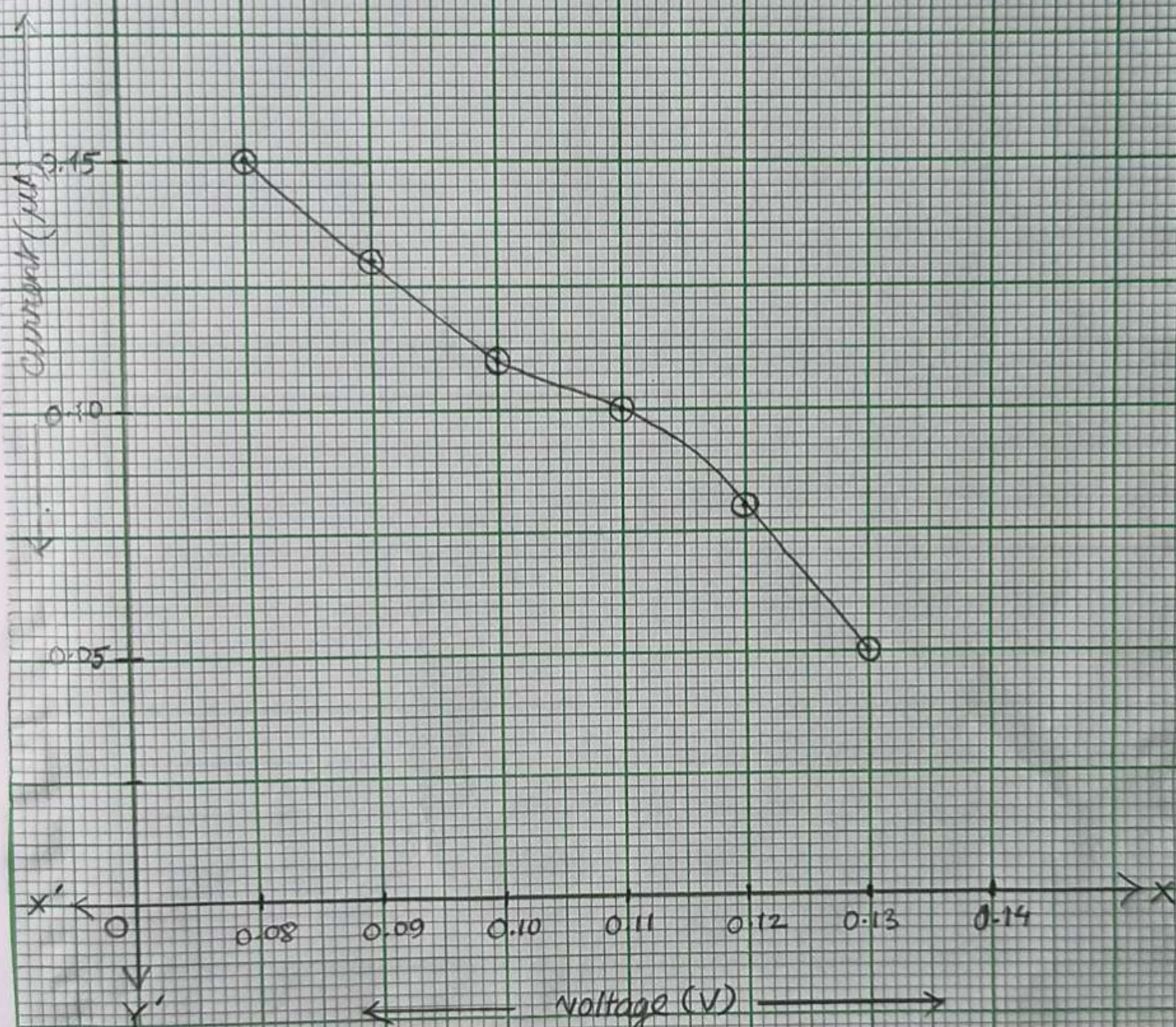


I-V characteristics when intensity  $I_2$  (at distance 20 cm)



③

Scale: Along X: 10 small boxes = 0.01 V  
 Along Y: 10 small boxes = 0.05  $\mu$ A



I-V characteristics when intensity  $I_3$  (at 25 cm)



**RESULT :**

The I-V characteristics of a Photo cell was studied.

—X—