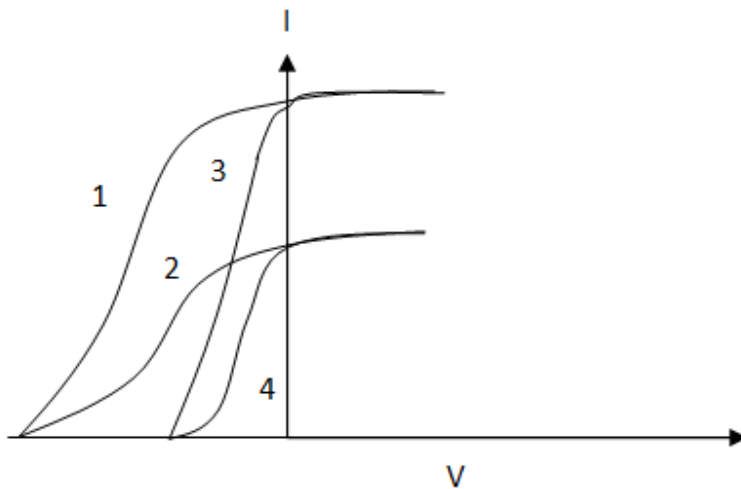




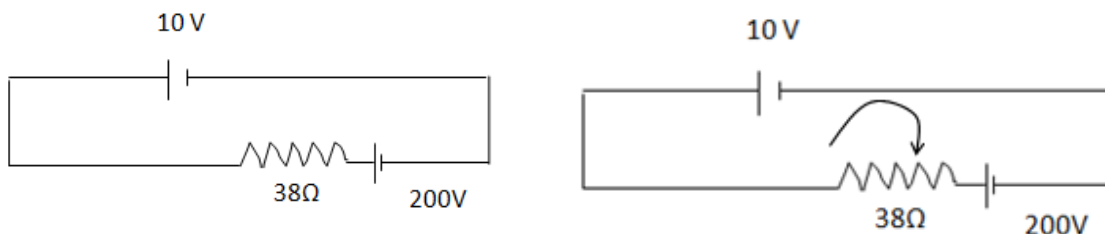
Q6. The given graph shows the variation of photo-electric current (I) versus applied voltage (V) for two different photosensitive materials and for two different intensities of the incident radiation. Identify the pairs of curves that correspond to different materials but same intensity of incident radiation.



We know for different material stopping potential may be different. Therefore graph starting from same point on X-axis i.e. stopping potential is unlikely to be of different material.

We know that with increase in V , current I increased if intensity of incident light kept constant. Therefore from the graph obvious correct pairs (1,3) and (2,4) corresponds to different materials having same intensity of incident radiation.

Q7. A 10 V battery of negligible internal resistance is connected across a 200 V battery and a resistance of 38 W as shown in the figure. Find the value of the current in circuit.



Considering clock wise direction as positive, applying Kirchoff's loop rule. Let I be the current in the circuit then

$$-10 + 200 - 38I = 0$$

$$\text{or } I = 190/38 = 5 \text{ A}$$