DPP No. 5	PHYSICS DPP DAILY PRACTICE PROBLEMS Class - X
Topic : NLM, Electricity (till heating effect)	

Instructions : Single choice objective (Q.1 to Q.3)
Very Short Answer Type (Q.4 & Q.5)
Short Answer Type (Q.6 to Q.8)
Long Answer Type (Q.9 to Q.10)

1. The condition for an electric charge to flow from one point to other is that the two points must have electric:
(A) Circuit (closed) (B) Current
(C) Potential difference (D) (A) & (C) both are correct

2. Two electric lamps whose coils having different resistance are connected in series with 210 V battery then:
(A) Same amount of current flows through each lamp.
(B) Same potential difference occurs in each lamp
(C) Same power is consumed in each lamp
(D) Same electrical energy is consumed by each lamp.

3. The inertia of a body depends upon.
(A) Gravitational acceleration (B) Centre of gravity of body
(C) Shape of body (D) mass of body

4. State joule's law of heating.

5. In an electric circuit, it is found that all its elements carry same current but have different potential difference. Is it a series or parallel circuit?

6. **(i)** Draw a schematic diagram of a circuit consisting of a battery of five 2 V cells, a 5 ohm resistor, a 10 ohm resistor and a 15 ohm resistor, and a plug key, all connected in series.

(ii) Calculate the electric current passing through the above circuit when the key is closed.

7. A bulb is rated at 5.0 volt, 100 mA. Calculate its (i)power and (ii) resistance.

8. A piece of wire of resistance 20Ω is melted and recast so that its length is increased to twice its original length. Calculate the resistance of the wire in the new situation.

9. State the formula correlating the electric current flowing in a conductor and the voltage applied across it. Also show this relationship by drawing a diagram. What would be resistance of a conductor if the current flowing through it is 0.35 ampere when the potential difference across it 1.4 volt?

10. An electric lamp is marked 100 W, 220 V. It is used for 5 hours daily.
Calculate:
(i) Its resistance while glowing,
(**ii)** Energy consumed in kWh per day.