SMART TEST SERIES

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Name:		Subject:	Physics-12
Roll # :		Unit(s):	13,
Class:	Inter Part-II	Test:	Type 8 - Short Test (No Choice) - Marks=30
Date:		Time:	

Q.1 Circle the Correct Answers. (6x1=6)

1 The heat produced by the passage of current through a resistor is:
(A) $H = I^2Rt$ (B) $H = IR^2t$ (C) $H = \frac{I}{Rt}$ (D) $H = \frac{I^2}{Rt}$

2 Magnetic effect of current is used in:
(A) Toaster (B) Electric motor (C) Electric iron (D) D.C battery

3 Heat generated by a 50 watt bulb in one hour is:
(A) 36000 J (B) 48000 J (C) 18000 J (D) 180000 J

4 For ohmic device the graph between V and I is:
(A) A straight line (B) Curve (C) Hyperbola (D) Parabola

5 Temperature coefficient of resistance($\propto$) is equal:
(A) $\frac{R_t+R_o}{R_o\Delta t}$ (B) $\frac{R_o-R_t}{R_o\Delta t}$ (C) $\frac{R_t-R_o}{R_o\Delta t}$ (D) None of these

6 Siemen is the unit of:
(A) Resistivity (B) Resistance (C) Conductivity (D) Conductance

Q.2 Write short answers of the following questions. (8x2=16)

(i) What is unit of electric current? Define it.

(ii) A potential difference is applied across the ends of a copper wire. What is the effect on the drift velocity of free electrons by a) increasing the potential difference b) decreasing the length and temperature of the wire?

(iii) What are the difficulties in testing whether the filament of a lighted bulb obeys Ohm's Law?

(iv) Define temperature coefficient of resistance. Give its unit.

(v) Give colour code of carbon resistor.

(vi) Explain why the terminal potential difference of battery decreases when the current drawn from it in increased?

(vii) Write down the rules for finding the potential changes along a circuit.

(viii) Why we prefer potentiometer in place of voltmeter for measuring potential difference?

NOTE: Attempt the long question. (5+3=8)

3(a) Define electric power. Also explain how power is dissipated in resistor?

(b) How many electrons pass through a electric bulb in one minute if 300 mA current is passing through it?