Physics Test Paper

Class XII

Chapter 3: Current Electricity

MM:20 **TIME:1H**

MCQs

1. A student connects three cells of emf 1, 2 and 3 volts in series. The net emf will be:
a) 6 v b) 9v c) 1v d) None [1]

2. To get the same potential difference for each device in home, how you connect them:
a) Parallel b) Series c) Both a & b d) None [1]

3. To reduce the error, the order of resistances in Wheat stone bridge must be different:
a) True b) False c) Any order you take d) None [1]

ASSERTION-REASON

4. A: Electric Cell have an internal resistance.
R: Due to current flow through ions in electrolyte. [1]

5. A: Kirchoff rules follows conservation laws
R: 1st law follows energy and 2nd law follow charge conservation. [1]

6. Find the expression relating current and drift speed. Find current density. Also write definition of drift speed, relaxation time.
[3] 7. Find relationship among emf, terminal voltage, current and internal resistance. If E=6V, V=5V, r=0.8 ohm, find I. [3]

8. Write the statement of Ohm's law. And write the two ways to get resistance from slope of V-I curve. Can you explain why a thick wire have low resistance than a thin one? [3]

9. Why resistivity of a conductor rises and that of semiconductor decreases with increase in temperature? Also draw resistivity temperature graph for both as well as for alloys. Why resistors are made from alloys rather than conductor? [3]

10. Solve the given circuits using Kirchoff rules [3]