PART-A

1. State Ohms law.

2. What is Specific resistance?

3. State Coulomb's inverse square law of magnetism.

4. State Lenz's law.

PART-B

5(a). In a meter bridge experiment, a resistor of unknown resistance is kept in left gap and known resistance of 10 ohms is kept in right gap. If the balancing length is 60 cm, find the value of unknown resistance.

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5(b). An electric bulb is connected to a 220 V generator. The current is 0.50 A. What is the power of the bulb?

6(a). A bar magnet of length 20 cm and pole strength 5 Am makes an angle 30 degrees with uniform magnetic field of strength 100 Tesla. Find the moment of couple acting on it.

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6(b). Compare the dia, para, and ferromagnetic materials.

PART-C

7(a). Explain Kirchhoff's current law and voltage law in electricity.

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7(b). Develop balancing condition of Wheatstone bridge with a neat diagram.

8(a). Explain the principle and working of a Transformer.

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8(b). Develop an expression for magnetic induction field strength at a point on the axial line of a bar magnet.