

Question Bank (I-Scheme)

Name of course: Electrical Materials & Wiring Practice

Unit Test: I

Subject code: 22328 (EMW)

Semester: III

Program: EE

Chapter 1: Wiring Components, Tools and Safety Devices

2 Marks

1. Write the names of any four components used in electrical wiring.
2. Write the names of any four Safety tools used in electrical wiring.
3. State function of Fuse.
4. State full form of MCCB and ELCB.
5. State different types of switches used in wiring installation.

4 Marks

1. Write any four of the IE rules to be followed in respect of safety while working on Electrical installation systems.
2. Describe the use of the following tools in carrying out electrical wiring installations,
i) Pliers, ii) Screw driver sets, iii) Crimping tools and iv) Test lamp
3. State the use of the following wiring components and write typical rating of each; i) MCB and ii) RCCB.
4. Describe working of ELCB.
5. Draw Constructional diagram of HRC fuse and explain its operation.
6. State advantages and disadvantages of rewirable fuse.
7. State the application/use of the following accessories in electrical engineering works:
Tester, rubber hand gloves, ceiling roses and crimping tool.

Chapter 2: Conductors and Electromagnetic Materials

2 Marks

1. State any two electrical and mechanical properties of high-conducting materials.
2. Give any two properties of Tungsten Material.
3. Give classification of magnetic materials.
4. State the factors affecting hysteresis loss.
5. Define magnetostriction.

4 Marks

1. Compare the properties of copper and aluminum as good conductors of electricity.
2. Draw and Explain the hysteresis loop (B-H Curve) for an electromagnetic material.
3. Draw labeled sketches of the hysteresis loops for hard steel, Wrought iron, copper and wood.
4. Explain the suitability of copper as an electrical conductor with reference to its mechanical and electrical properties.
5. Explain HRGO and CRGO. State Benefits of CRGO for manufacturing of Core.
6. Give 2 applications of following materials in electrical engineering field-
 1. Brass 2. Mercury 3. Silver 4. Nickel

Chapter 3: Electrical Insulating Materials

2 Marks

1. Name two gaseous and two liquid insulating material.
2. State any two electrical properties of insulation material.
3. Classify Insulating materials.
4. Define Di-electric Strength of an insulating material. What is its unit?
5. Write any two chemical properties of a good electrical insulation material.

4 Marks

1. Write two examples and two applications for each example for the insulating material in the following classes: i) class Y ii) class F iii) class C
2. Write Classification of insulating materials based on their temperature withstanding ability, with their limiting temperatures and one example each.
3. What are the thermal properties of good insulating material?
4. What is Dielectric Strength of an insulating material? What is its unit?
5. State four Solid insulating materials and give their 2 applications in electrical field.