**BHARATI VIDYAPEETH INSTITUTE OF TECHNOLOGY**

**QUESTION BANK**

**Unit Test :-( I)**

**Program: - EJ2I**

**Semester: - II Course:- ELECTRONICS ENGINEERING MATERILS(22217)**

**CHAPTER 1 CONDUCTIVITY OF MATERIALS**

**Question For 2 Marks**

1. Define resistivity & state its unit.
2. Define conductivity & state its unit.
3. Define superconductivity.
4. Name any two superconductor.
5. State the two important characteristics of metals.

**Question For 4 Marks**

1. Explain thermionic emission.
2. Describe photo-electric emission.
3. Write a short note on : The electron gas model of metals.
4. Write a short note on thermal conductivity of metals.
5. Write a short note on : Secondary emission.
6. Explain thermoelectric effect.
7. Explain clearly the effect of temperature on electrical conductivity of metals.

 **CHAPTER 2 DIELECTRIC MATERIALS**

**Question For 2 Marks**

1. Draw the equivalent circuit diagram of a lossy capacitor.
2. Draw the phasor diagram of a lossy capacitor.
3. Define breakdown in dielectric materials
4. Define leakage current.
5. Define breakdown in dielectric materials.

**Question For 4 Marks**

1. Explain the effect of a dielectric on the behavior of a capacitor.
2. Explain what is electronic polarizability.
3. Describe the breakdown in gaseous dielectrics.
4. What are the requirement of a good insulating materials.
5. Explain the concept , examples and applications of ferroelectricity.
6. Explain the concept , examples and applications of piezoelectricity.
7. Explain the breakdown in solid dielectrics.
8. State the important characteristics types & applications of polymers.
9. Write a short note on rubber as insulating material.
10. Describe the breakdown in liquid dielectrics.

 **CHAPTER 3 MAGNETIC PROPERTIES OF MATERIALS**

**Question For 2 Marks**

1) Define relative permeability & state its units.

2) What is magnetic susceptibility & state its units.

3) Define curie temperature of a ferromagnetic materials.

4) What is hysteresis loss.

5) Define ferrites.

**Question For 4 Marks**

1. Compare magnetic & non magnetic materials.
2. Write a short note on : Diamagnetic materials.
3. Write a short note on : paramagnetic materials.
4. Write a short note on : ferromagnetic materials.
5. Explain the concept of magnetostriction.
6. Explain B-H curve.
7. State and explain the factor affecting the permeability.
8. State and explain the factor affecting the hysteresis loss

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