

**All questions carry equal marks(10 marks)**

Q.1	Discuss various properties of engineering materials.
Q.2	Write different materials used for photovoltaic material. Describe its construction and working principle..
Q.3	Differentiate between photo-conductive and photo-emissive
Q.4	Explain P-type and N-type semiconductor materials.
Q.5	Describe Light emitting diode.
Q.6	Discuss High resistivity materials
Q.7	Differentiate between photo-conductive and photo-emissive
Q.8	What are insulators? Describe any four insulating materials.
Q.9	Write different materials used for photovoltaic material. Describe its construction and working principle.
Q.10	Explain ionic polarization in detail. How is it different from oriental polarization?
Q.11	What is polarization? Discuss the dielectric strength of material.
Q.12	Explain the differences among conductors, insulators and semiconductors with the help of band theory of solids.
Q.13	Explain sphere gap Voltmeter and its use.
Q.14	Explain Magnetic Anisotropy
Q.15	Write down properties or applications of Paper Press Board, Fibrous Materials, Ceramics, Asbestos, Varnish, Askarel Insulating Gases like Air and SF6.
Q.16	What is LASER? Write various applications of it in the field of engineering.
Q.17	Describe Lamp Filaments, Solders, Thermal Bimetal and Thermocouple
Q.18	Explain Spontaneous Magnetization and Curie-Weiss law. Write a short note on Magnetic Recording Materials and Compact
Q.19	Write the differences between soft and hard magnetic materials.

Q.20	Describe properties and applications of paramagnetic materials. [9]
Q.21	Discuss High resistivity materials
Q.22	Explain Various properties of engineering materials
Q.23	Differentiate between  (i) Magnetic dipole moment and electric dipole moment  (ii) Ferromagnetism and Anti ferromagnetism.
Q.24	What is LASER? Write various applications of it in the field of engineering.
Q.25	What is polarization? Discuss the dielectric strength of material.
Q.26	Explain Natural and artificial wood.
Q.27	Explain Superconductors
Q.28	Describe Integrated circuit
Q.29	Write on Magnetic Anisotropy
Q.30	Explain Magnetostriction
Q.31	Describe sphere gap Voltmeter and its use
Q.32	Give and Explain Magnetic Parameters
Q.33	Write the basic division of material based on the atomic arrangement and discuss the crystals in detail.
Q.34	Write different materials used for photovoltaic material. Describe its construction and working principle..
Q.35	Write the construction, working and application of semiconductor transistor with neat diagram.
Q.36	Compare between solid insulating material and liquid insulating material
Q.37	Describe Light emitting diode
Q.38	Describe in Brief SCR
Q.39	What is piezoelectric effect? Discuss the theory behind the phenomena and application of the effect.
Q.40	What are insulators? Describe any four insulating materials.