

ELECTRICAL ENGINEERING MATERIAL

(Question Bank)

3rd sem
Electrical

(1) CONDUCTING MATERIALS :-

- ① what is Resistivity. write down the factors affecting it.
- ② Differentiate between low-resistivity & high-resistivity material.
- ③ write the application of Aluminium and steel.
- ④ what is stranded conductors?
- ⑤ write the applications of Carbon, platinum.
- ⑥ what is superconductivity. write its examples.

(2) SEMICONDUCTING MATERIALS :-

- ① what is electron energy.
- ② what is Energy Band Theory.
- ③ Differentiate Between conductor, insulator and semiconductor.
- ④ Differentiate Between Intrinsic and extrinsic semiconductor.
- ⑤ Differentiate Between N-type & P-type materials.

- (6) what is Hall effect generators.
- (7) what is photovoltaic cells.
- (8) what is thermistors.

(3) INSULATING MATERIALS :-

- (1) Explain the electrical properties of Insulators.
- (2) what is Ageing related to Insulators.
- (3) Explain classification of Insulating materials based on chemical structures.
- (4) Write the mechanical properties of Insulators.
- (5) what are the commonly used Insulating gases.

(4) Dielectric materials :-

- (1) what is dielectric constant.
- (2) what is dielectric loss.
- (3) what are the properties of Dielectric.
- (4) Write down the Applications of Dielectrics.

(5) MAGNETIC MATERIALS :-

- ① Differentiate Between diamagnetism, Para magnetism, ferromagnetism.
- ② Explain hysteresis loop.
- ③ what is Curie-point.
- ④ what is magnetostriction.
- ⑤ Differentiate Between soft and hard magnetic materials.

(6) MATERIALS FOR SPECIAL PURPOSES :-

- ① Define structural materials. Write with examples.
- ② Write application of steel tapes, wires & strips.
- ③ what is thermocouple materials.
- ④ what is bimetal.
- ⑤ what is fuse, its properties with examples.
- ⑥ what is soldering, what are its examples.