

ELECTRICAL ENGINEERING MATERIAL

Two mark questions

1. Define 'resistivity' ?
2. Name the materials which are used in making filament lamps?
3. What are bimetals ?
4. What Are advantages of using bundle conductors in EHT lines?
5. What is intrinsic semiconductor?
6. List four applications of semiconductor materials?
7. What is ageing ?
8. Define permittivity.
9. What is magnetostriction?
10. Name for materials used for thermocouples .
11. What is curie point ?
12. What is ACSR and where it is used ?
13. What is varistor ?
14. What is inamel ?
15. What do you mean by skin effect ?
16. What do you mean by paramagnetic material ?
17. Write names of four numbers of insulating materials and their use.
18. What do you man by hysteresis n ?
19. What is effect of porosity ?
20. Define forbidden energy gap.
21. What are bundle conductors ?
22. What are bimetals ?
23. What is thermister ?
24. What is covalent bond ?
25. Define superconductivity.
26. Write down any two chemical properties of an insulating material.
27. Explain why conducting materials like copper and aluminums are not used for making the element for electrical heaters.
28. What is intrinsic semiconductors ?
29. What are the material used for permanent magnets and transformer cores ?
30. What is the function of oil which is used in transformer ?
31. What is the function of dielectric materials ?
32. What is a thermocouple material /
33. What is curie point ?

34. What is A.A.C ?
35. State the difference between a dielectric material and an insulating material as regard their function.
36. How the resistivity of semiconductors material does varies with temp.
37. What are the use of platinum and its alloys in contact material ?
38. What are the type of insulating material and name them ?
39. What are the application of semiconductor materials ?
40. What is the fuse and what are the materials for fuse wire.
41. What is Bakelite and for what purpose it is used ?
42. What is dielectric loss ?
43. What do you mean by dielectric strength ?
44. What are hard magnetic materials .
45. What are the commonly used semiconductor materials ?
46. Mention the specific use of paper relating to insulating material.
47. Lest the material used for permanent magnet
48. What is breakdown voltage ?
49. What do you mean by Hysteresis ?
50. Mention the specific use of strain gauge .

Five mark questions

1. Why carbon material is used as brushes in electrical machine? Mention other applications of carbon in field of electrical engineering.
2. Give examples each of low resistivity and high resistivity materials and mention their application in electrical field.
3. With the help of energy band concept differentiate among semiconductor, conductors and insulators.
4. Explain about p-Type and N-Type materials.
5. Write short notes on thermal properties of insulating materials.
6. What is dehydrating material and state its application ?
7. What are soft and hard magnetic materials ?
8. Make a comparison between conductor and insulator .
9. Explain superconductivity and its application.
10. With net sketch explain about hall-effect generator and write their application.
11. What are thermocouple materials ? state their application.
12. What are ferrites ? What are chief properties and field of application ?
13. Explain briefly about the fuse materials.

14. Explain difference between extrinsic and intrinsic semiconductors.
15. Explain briefly about magnetization curve.
16. Explain briefly about magnetostriction.
17. Make a comparison between conductor and insulator .
18. Explain briefly about the fuse materials .
19. Compare the properties and use of copper and aluminum.
20. What is enamel ? State a few enamels with their properties.
21. What are thermocouple materials ? State their application.
22. What are Ferrites ? What are their chief properties and field of application ?
23. Explain superconductivity and its application.
24. What are the factors affecting the semiconductor ?
25. What is meant by the term dielectric strength ? What are the factor the factors
Which effect the dielectric strength of a dielectric materials ?
26. Explain properties of dehydrating materials with examples.
27. Briefly discuss general properties of insulating materials.
28. Explain the effect of temperature, alloying and mechanical stressing on the value of
resistivity of a conducting material.
29. Write in detail about paper and ceramics materials ?
30. Write in brief about PVC and Rubber
31. Write in brief about bimetals and ceramic material ?
32. What are the commercially available electrical contact material Explain in brief ?
33. State the advantages and disadvantages of aluminum as compared to copper for
use as conductor in electricity .
34. Write in brief about Brass and Bronze ?
35. Explain the principle of thermocouple and different types of thermocouples.
36. Explain difference between extrinsic and intrinsic semiconductors.
37. Explain briefly about hysteresis loss.
38. Write in brief about solar cell in brief ?
39. State four factors which decide the selection of an insulating material for a given
purpose .
40. Explain with energy band diagram about conductor, semi conductor and insulator ?
41. Write short notes on hard magnetic materials and their application.
42. Briefly describe about polarization .
43. What is eddy current loss and hysteresis loss ? on what factors do the losses
depended ?What is the concept of majority and minority charge carries ?
44. Explain the effect of temperature on resistivity .
45. Explain the Hysteresis phenomenon for the magnetic materials.

TEN MARK QUESTIONS

1. Explain the effect of temperature, alloying and mechanical stress on resistivity of a conducting material.
2. Write in brief about superconductivity and their application ? Why glass is used as insulating material and what are its uses ?
3. (a) State the application of dielectrics. (b) Briefly explain about fuse materials.
4. Write notes on Diamagnetism, Para magnetism and ferromagnetism.
5. Write short notes on any two : (a)PVC (b)Polarisation (c) Hall effect generators
6. Give short notes on soldering materials and fuse materials .
7. Write notes on hard magnetic materials and their applications.
8. Mention the application of semiconductor materials.
9. Write short notes on any two: (i) Polarisation(ii) Hall effect(iii) Varnishes
10. What are solder materials also explain about electrical contact materials?
11. Explain with Energy band diagram about conductor, Semi conductor and insulator?
12. What are the commercially available electrical contact materials Explain in brief ?
13. Write notes on diamagnetism, para-magnetism, ferro-magnetism.
14. Draw hysteresis loop for ferromagnetic material and explain.
15. What do you mean by intrinsic and extrinsic semiconductors? Explain N-type and P-type materials.
16. Write shor notes on any two: (i) Polarisation (ii) PVC (iii) Dielectric materials.
17. Discuss about Super conductivity and their applications in detail?
18. Write in brief about Paramagnetism Phenomenon?
19. What are semiconductors? Explain the types of Semiconductor.
20. What are the commercially available electrical contact materials Explain in brief?
21. Explain the effect of temperature on resistivity.