

Question Bank

Course: **II year B.Sc. Computer Science**

SubCode: PHU1032

Subject: **Applied Physics-II**

Short Questions

1. What are X-rays?
2. List some properties of X-rays.
3. What is Chain reaction? Mention its types.
4. What do you mean by nuclear fission?
5. What is nuclear fusion?
6. Distinguish between nuclear fission and nuclear fusion.
7. How does critical mass play a role in nuclear reactions.
8. How are X-rays generated?
9. State Bragg's law.
10. List few applications of X-rays.
11. What are types of magnetic materials?
12. Define magnetic flux and magnetic induction. Mention their unit.
13. Give the relation between relative permeability and susceptibility.
14. Write a note on floppy disc.
15. What are dielectrics?
16. Define dipole and dipole moment.
17. What is Dielectric loss?
18. What is dielectric breakdown?
19. Name different types of dielectric breakdown mechanism.
20. List few applications of dielectrics.
21. What are metallic glasses? Give some examples.
22. Mention some unique properties of metallic glasses.
23. What is meant by superconductivity?
24. What is Meissner effect?
25. What are nano materials?
26. List some properties of nano materials.
27. What are shape memory alloys? Give examples.
28. What is one way and two way memory?
29. What are bio materials? List its applications.
30. Write few applications of SMA.
31. What are Photodiodes?
32. What is Photoconductive cell?
33. What is dark resistance of photo diode.

34. What is LED? Mentions its advantages.
35. Give two applications of LEDs.
36. Write 2 differences between LED and LCD.
37. What is LCD? List its applications?
38. Give the circuit symbol of LED.
39. What is an avalanche photodiode?
40. Which is better LED or LCD?
41. What are logic gates?
42. What is an integrated circuit?
43. Mentions few advantages of IC's.
44. List some disadvantages of using integrated circuits.
45. Write a note on scale of Integrations of ICs.
46. What are different steps involved in fabrication of IC's.
47. What are linear integrated circuits?
48. What are Digital integrated circuits?
49. Write a note on epitaxial layer.
50. What is Universal gate? Why is it so named?

Review questions

1. Explain Bragg's law. Explain Bragg X-ray spectrometer with a neat sketch.
2. Describe the construction and working of a nuclear reactor with a neat sketch.
3. Explain the properties of different types of magnetic materials.
4. What is the internal field in a dielectric material? Derive Clausius-Mossotti equation.
5. What are nano materials? List some of its applications.
6. Explain the synthesis of Nano materials.
7. Explain Ball milling and Sol-Gel techniques of nano materials.
8. Discuss about the Type I and Type II Superconductors?
9. Write an essay on High Temperature Superconductors.
10. What are metallic glasses? How they are prepared?
11. Explain the working principle of a Photomultiplier Tube.
12. Explain the working Light Emitting Diode.
13. Explain the action of a Photo conductive Cell.
14. Explain the working of LCD.
15. What is an Integrated Circuit? Write a note on the Fabrications of ICs.
16. Explain in detail the two types of logic used in binary logic circuits.
17. Explain logic gates with the help of truth tables.
18. Explain why NAND and NOR gates are called as Universal gates.