CBSE Sample Papers for Class 12 Physics

Max Marks : 100

GENERAL INSTRUCTIONS:

a) There are four Sections in this paper.

- QUESTION **1-8** ARE OF **ONE** MARK EACH.
- QUESTION **9-18** ARE OF **TWO** MARK EACH.
- QUESTION **19-27** ARE OF **THREE** MARK EACH.
- QUESTION **28-30** ARE OF **FIVE** MARK EACH.

b) All questions are compulsory. Marks are allotted to Section for your convenience.

Section-I (1 Mark Questions)

Q1. Explain the terms :
(i) Electric charges and the conservation of charges.
(ii) Explain the superposition principle.

Q2. Draw the expression for the torque experienced by the current loop in a uniform magnetic field.

Q3. What are eddy currents?

Q4. Explain the terms mutual induction,alternating current and the wattless current.

Q5. What is the displacement current?

Q6. what is reflection and refraction of light.

Q7. What is Rutherford's model of atom?

Q8. What as diffraction due to single slit?

Section-II (2 Mark Questions)

Q9. What is ohm's law? What are the V-I characteristics ? Also explain the series and the parallel combination of the resisters.

Q10. What is Kirchoff's law and explain its applications.

Q11. Explain the concept of magnetic field. State Biot Savart law and its applications.

Q12. What is polarisation and the plain polarize light.

Q13. What is Photoelectric effect, Hertz and Lenard's observations.

Q14. What is Einstein's photoelectric equation-particle nature of light.

Q15. What is Matter waves-wave nature of particles and de Broglie relation.

Q16. What is Davisson-Germer experiment?

Q17. Explain Composition and size of nucleus, atomic masses, isotopes, isobars; isotones.

Q18. What is semiconductor diode – I-V characteristics in forward and reverse bias?

Section-III (3 Mark Questions)

Q19. State and prove Gauss's theorem.List all the applications of the Gauss's theorem. Also carry out   the expression to find field due to infinitely long straight wire and uni charged thin spherical shell.

Q20. What do you mean by the term capacitor and capacitance.Calculate the capacitance of the parallel plate capacitors with and without dielectric medium between the plates.

Q21. What is Potentiometer? Explain the principle and the application to measure the potential difference. Also calculate the e.m.f of the two cell.

Q22. State and prove the law of refraction and reflection with the help of huygen's principle.

Q23. What are alpha, beta and gamma particles/rays and their properties?

Q24. Draw an expression for the resolving power of the microscope and astronomical telescope.

Q25. Explain Propagation of electromagnetic waves in atmosphere.

Q26. What is Zener diode; Zener diode as a voltage regulator?

Q27. What are the Elements of a communication system (block diagram only) bandwidth of signals (speech, TV)?

Section-IV (5 Mark Questions)

Q28. What is microscope and the astronomical telescope and their magnifying power.

Q29. What is zener diode – I-V characteristics in forward and reverse bias?

Q30. Explain Logic gates (OR, AND, NOT, NAND and NOR).