

1. Characteristics of the image formed by plane mirror (Pg 4) 2 marks
2. Conditions for nature of objects and images (Pg 5) 2 marks
3. Relation between f and R (Pg 7) 3 marks
4. Cartesian sign convention (Pg 8) 2 marks
5. Mirror equation (Pg 9) 5 marks
6. Define optical path (Pg 14) 2 marks
7. Refractive index of the medium (Pg 14) 2 marks
8. Laws of reflection & refraction (Pg 1 & 15) 2 marks
9. Characteristics of refraction (Pg 16) 2 marks
10. Principle of reversibility (Pg 17) 2 marks
11. Relative refractive index (Pg 18) 2 marks
12. Apparent depth (Pg 18) 5 marks
13. Define critical angle & total internal reflection (Pg 20) 3 marks
14. Radius of illumination (Snell's window) (Pg 23) 5 marks
15. Acceptance angle in optical fibre (Pg 25) 5 marks
16. Refraction in glass slab (Pg 27) 3 marks
17. Conditions for obtaining refraction at single spherical surface (Pg 28) 2 marks
18. Equation for refraction at single spherical surface (Pg 28) 5 marks
19. Len's makers formula and lens equation (Pg 32) 5 marks
20. Power of lens and its unit (Pg 36) 2 marks
21. Focal length of lenses in out of contact (Pg 37) 5 marks
22. Scattering of light (Pg 46) 2 marks
23. Theories on light (Pg 47) 3 marks
24. Huygen's principle (Pg 49) 2 marks
25. Proof for laws of reflection using Huygen's principle (Pg 50) 5 marks
26. Proof for laws of refraction using Huygen's principle (Pg 51) 5 marks
27. Define Interference & its types (Pg 52) 2 marks
28. Phase difference & path difference (Pg 54) 2 marks
29. Coherent sources & its types (Pg 55) 2 marks
30. Young's double slit experiment (Pg 57) 5 marks
31. Define Band width (Pg 59) 2 marks
32. Conditions for obtaining clear and broad interference bands (Pg 59) 2 marks
33. Difference between Fresnel and Fraunhofer diffractions (Pg 63) 2 marks

34. Diffraction at single slit – 4th order minimum (Pg 64) 5 marks
35. Define Fresnel's distance - 2 marks
36. Difference between Interference and Diffraction (Pg 68) 3 marks

[Learn from Pg 73 – 94 fully]

Volume-II Ln-7

Ln-7 (5 Marks)

1. Hertz, Hall wachs and Lenard's observation (Pg 108)
2. Einstein's explanation of photo electric equation (Pg 116)
3. Construction and working of photo emissive cell (Pg 118)
4. Electron microscope (Pg 123)
5. Types of X-ray spectra (Pg 127)

Ln-8

1. Determination of specific charge (e/m) of an electron – Thomson's experiment (Pg 140 – 142)
2. Determination of charge of an electron – Milikan's oil drop experiment (Pg 143)
3. Radius of the orbit of the electron and velocity and energy of the electron (Pg 150 – 152)
4. Spectral series in Hydrogen spectrum (Pg 158 – 160)
5. Law of radio activity / radio active decay (Pg 171 – 172)
6. Nuclear reactor (Pg 179)

Ln-9

1. Half wave rectifier
2. Full wave rectifier with diagram (Pg 204-206)
3. Construction, working and applications of LED (Pg 209)
4. Construction, working and applications of Photo diodes (Pg 210)
5. Construction, working and applications of Solar cells (Pg 211)
6. Transistor as a switch (Pg 219)
7. Transistor as an amplifier (diagram) (Pg 220)
8. Transistor as an oscillator (Pg 221)

Ln-10

1. Modulation
 - i) Amplitude modulation
 - ii) Frequency modulation
 - iii) Phase modulation
2. Elements of an electronic communication system with block diagram (Pg 241)
3. Types of propagation of electromagnetic waves (Pg 245)
4. Satellite communication (Pg 248)
5. RADAR and applications (Pg 249)