

SECOND PUC PHYSICS PRACTICAL EXAM VIVA QUESTIONS WITH ANSWERS

Experiment - 1: Resistance per unit length

1. What is resistance?

Ans: The opposition offered by the conductor for the flow of charges is called resistance.

2. State ohm's law.

Ans: The electric current flowing through a conductor is directly proportional to the potential difference between its ends, provided temperature and other physical conditions remain unaltered.

3. What is ammeter?

Ans: It is a device used to measure electric current.

4. What is voltmeter?

Ans: It is a device used to measure electric potential difference.

Experiment - 2: Resistivity of the material of the wire

5. What is resistivity?

Ans: It is the resistance of the conductor of length 1 m and area of cross section 1 m² at constant temperature.

6. Resistivity of material of the wire depends on?

Ans: temperature

7. If length of wire is doubled, what happens to its resistivity?

Ans: resistivity will not change

8. What is SI unit of resistivity?

Ans: Ωm (ohmmeter)

Experiment - 3: Internal resistance of cell

21. What is internal resistance of cell?

Ans: The opposition offered by the cell within itself for the flow of current.

22. What is the principle of potentiometer?

Ans: When a steady current flows through a wire of uniform cross section and composition, the potential drop across any length of the wire is directly proportional to the length.

23. What is cell?

Ans: Cell is the source of electrical energy.

24. What is potentiometer?

Ans: It is a device used to measure the EMF of a cell accurately or it is used to compare EMF of two cells or the device used to find internal resistance of a cell.

25. What is internal resistance of an cell?

Ans: Zero

Experiment - 4: Figure of merit of galvanometer

26. What is figure of merit?

Ans: The current required to produce unit division deflection in the galvanometer is called figure of merit.

27. Why the method of finding figure of merit is called half deflection method?

Ans: It is so because the deflection is made half by using a shunt resistance (S).

28. What is the principle of galvanometer?

Ans: Deflection in galvanometer is directly proportional to the current passing through the conductor.

29. What is the significance of arrow on resistance symbol?

Ans: Variable resistance

Experiment - 5: Conversion of galvanometer into a voltmeter

30. What is rheostat?

Ans: Rheostat is the adjustable resistor used to adjust the current by varying the resistance in the circuit.

31. How do you convert given galvanometer to voltmeter?

Ans: The galvanometer can be converted into voltmeter by connecting the high resistance in series with it.

32. How do you connect the voltmeter to measure potential difference?

Ans: To measure the potential difference the voltmeter should be connected in parallel.

33. Is the resistance of voltmeter high or low?

Ans: High

Experiment - 6: Frequency of AC

34. Define frequency of AC.

produced per second is called frequency.

Ans: The number of vibrations

35. What is the SI unit of frequency?

Ans: hertz (Hz).

36. What is electromagnet?

Ans: A magnet that runs on electricity or electromagnet is a magnet that consists of a piece of iron or steel surrounded by a coil or the metal becomes magnet when an electric current is passed through the coil

37. What is alternating current?

Ans: Current in which magnitude changes continuously and direction changes periodically is called AC.

38. What is the frequency of AC supply to domestic use in India?

Ans: 50 Hz

Experiment - 7: Focal length of concave mirror

39. What is focal length of a concave mirror?

Ans: The distance between the pole and principal focus of a mirror.

40. What is radius of curvature?

which the spherical mirror forms a part or it is the distance between pole and centre of curvature.

Ans: It is the radius of the sphere of

41. What is pole of a concave mirror?

concave mirror or spherical mirror.

Ans: It is the midpoint of

42. What is object distance?

Ans: It is the distance between object and pole of the mirror.

43. What is image distance?

and pole of the mirror.

Ans: It is the distance between image

Experiment - 8: Focal length of convex lens by u-v method using lamps or graphical method

44. What is convex lens?

Ans: A lens which converges a parallel beam of light passing through it is called a convex lens or a convex lens is thicker at the middle than at the edges.

45. What is object distance?

Ans: It is the distance between optic centre of a lens and object is called object distance.

46. What is focal length?

Ans: Focal length is the distance between principal focus and the pole.

47. What is the nature of image produced when object is placed between O and F?

Ans: Image is virtual, erect and enlarged.

Experiment - 9: Focal length of a convex mirror

48. What type of image is formed by a concave mirror?

Ans: Virtual, erect and diminished.

49. What is the use of a convex mirror?

Ans: It is used in rear view mirror in vehicles.

50. What is convex mirror?

Ans: It is a mirror in which the reflecting surface is away from the centre of the sphere of which the mirror forms a part.

51. What is focal length?

Ans: The distance between the pole and focus of a spherical mirror.

Experiment - 10: Focal length of concave lens

52. What is concave lens?

Ans: The lens which diverges the parallel beam of light incident on it.

53. What is focal length of a concave lens?

Ans: The distance between principal focus and pole of the mirror.

54. What is the nature of image produced by the concave lens?

Ans: Virtual, erect and diminished.

55. What is lens?

Ans: It is an optical medium bounded by two surfaces of which atleast one is spherical.

Experiment - 11: Angle of minimum deviation

56. What is prism?

Ans: Prism is an optical medium bounded by three rectangular faces and two triangular faces which are parallel to each other used to produce dispersion.

57. What is angle of minimum deviation?

Ans: The least deviation suffered by the ray of light when it passing through a prism is called the angle of minimum deviation.

58. How does angle of deviation varies with the angle of contact?

Ans: First decreases and then increases.

59. What is angle of incidence?

Ans: The angle between normal and incident ray is called angle of incidence.

Experiment - 12: Refractive index of glass

60. What is absolute refractive index of a medium?

Ans: Refractive index of one medium with respect to air or vacuum or It is the ratio of velocity of light in air medium or vaccum to that in the medium.

61. What is real depth?

Ans: It is the distance between the object and the refracting surface.

62. What is apparent depth?

Ans: It is the distance between the image of an object and the refracting surface.

63. Define least count of travelling microscope?

Ans: The least measurement made by the travelling microscope or the smallest value up to which an instrument can measure

Experiment - 13: Refractive index of water using concave mirror

64. What is concave mirror?

Ans: It is a mirror whose reflecting surface towards the centre of the sphere of which mirror forms a part.

65. Mention any one use of concave mirror.

Ans: Used in vehicle headlights, searchlights, torches and Used as shaving mirrors.

66. What is radius of curvature?

Ans: The radius of the sphere of which the mirror / lens is a part is called radius of curvature.

67. What is refraction?

Ans: The change in the direction of a ray of light when it travels from one medium to another of different optical density is called diffraction.

Experiment - 14: Zener diode

68. What is Zener diode?

Ans: A p - n junction designed to operate only at reverse breakdown voltage **or** a p - n junction which is heavily doped is called Zener diode.

69. What is reverse breakdown voltage?

the current increases sharply.

Ans: The reverse voltage at which

70. What is micro ammeter?

Ans: The instrument used to measure current of the order of a micro ampere.

71. What is the use of rheostat?

Ans: To vary the voltage or current.

72. What is rheostat?

Ans: It is the variable resistor

Experiment - 15: Semiconductor diode

73. What is semiconductor diode?

Ans: It is a p - n junction which allow current to flow only in one direction.

74. What is cut in voltage?

Ans: Cut in voltage is the characteristic voltage at which diode current increases exponentially even for a small increase in bias voltage, when tired is in forward bias.

75. What is forward bias?

Ans: The working of diode by connecting the it's p - region to positive terminal and n - region to negative terminal of a battery is called forward bias.

76. What is the difference between milli ammeter and ammeter?

Ans: Milli ammeter measures small current (i.e., 10^{-3} A) and ammeter measure large current