

SECTION-II

NOTE: 1. Answer all the questions 8x1=8M
4. Each question carries 1 Mark

13. State the principle of method of mixtures
14. Why pure acetic acid does not conduct electricity
15. Why does ray of light bent when it travels from one medium to another.
16. Write S.I. Unit of power of lens.
17. Which quantum number gives size and energy of the main shell.
18. Define modern periodic law.
19. Define octet rule
20. What happens to the resistance of a conductor if we increase its length.

SECTION-III

NOTE: 1. Answer all the questions 8x2=16M
2. Each question carries 2 Marks

21. Write the formula of specific heat and explain the terms in it.
22. Why does not distilled water conduct electricity.
23. Write the materials required to conduct Ohm's law verification experimentally.
24. A doctor advised to Ravi to use -2D lens for his effect. Based on this information. Answer the questions given below.
 - a) Identify the eye defect of Ravi
 - b) Find the focal length of lens.
25. State and explain pauli's exclusion principle
26. What is the flux through the plane taken parallel to the field.
27. Define a) Mineral b) Ore
28. What is the speciality of carbon.

SECTION-IV

NOTE: 1. Answer all the questions 5x4=20M
2. Each question carries 4 Marks

29. a) Write the difference between heat and temperature (OR)
b) Explain the correction of the eye defect Hypermatropia
30. a) Define modern periodic law? Discuss the construction of the long form of the periodic table.

OR

- c) State and explain with one example of Aufbau. Principle
31. How do you verify the experiment the magnetic field Lines are closed loops.

OR

How do you verify experimentally that $\frac{\sin i}{\sin r}$ is a constant.

32. Fill the following table of results of reactions between some substances and indicators.

S.No.	Sample Solution	Red Litmus Paper	Blue Litmus Paper	Phenolphthalen Solution	Methyl Orange Solution
1.	Hcl	-	Red	-	Red
2.	NaOH	Blue	--	Pink	--
3.	CH ₃ COOH	--	--	--	--
4.	KoH	Blue	No change	--	Yellow

(OR)

a. Observe the table

Hydrocarbon :	Butene	Pentyne	Ethyne	Butane	Ethene
Molecular Formula:	C ₄ H ₈	C ₅ H ₈	C ₂ H ₂	C ₄ H ₁₀	C ₂ H ₄

Answer the following questions.

- i) Identify the saturated hydrocarbons in the given table.
- ii) What is the general formula for alkynes
- iii) What is the simplest alkene given in the table
- iv) Identify the hydro carbons in which double bond (=) is present

33. a) Draw ray diagrams for the following positions of convex lens

- i) Object is placed at 2 F₂
- ii) Object is placed between F₂ and Optic centre P

OR

b) Draw the shape of d-orbitals.