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IX PHYSICAL SCIENCE
SAMP- 4 MODEL PAPER-3

I. Answer the following questions. 4×1=4

1. Which of the following has no charge ()
A) proton B) Neutron C) Electron D) Nucleus.
2. What is the characteristic feature of isobars?. ()
A) Same atomic number B) same number of neutrons
C) same mass number D) same number of protons
3. In ${}^9_4\text{Be}$ element, no. of electrons, no. of protons, no. of neutrons and its valency respectively ()
A) 4,4,5,2 B) 4,5,4,2 C) 5,4,4,4 D) 4,4,5, 4
- 4) In an octet, outermost electrons are ()
A) 0 B) 6 C) 8 D) 10

II. Answer the following questions. 2×1=2

5. Composition of the nuclei of two atomic species X and Y are given as under

	X	Y
Protons	= 6	6
Neutrons	= 6	8

Give the mass numbers of X and Y. What is the relation between the two species?

III. Answer the following questions. 1×4=4

6. Na^+ has completely filled K and L shells. Explain.

IV. Answer the following questions. 1×8=8

- 7A. a) Draw a diagram showing Rutherford's alpha particle Scattering experiment.
b) What are the limitations of Rutherford's model of an atom?

(OR)

7B. Define valency and explain it by taking examples of Silicon and Oxygen.