



NAME :

DATE :19/04/2026

STD :XI

## STRUCTURE OF ATOMS

- In an Atom (i) Electron = 7, P = 7, N= 8. Find the charge  
(ii) e = 8, P = 9, N = 9 Find the Charge of the atom
- Yellow light emitted from sodium lamp have wave length 580 nm. Calculate Frequency and Wave Number.
- calculate the frequency of light having wavelength  $0.05 \text{ \AA}$ .
- Calculate wavelength, frequency and wave no. of wave whose time period is  $2 \times 10^{-10} \text{ s}$ .
- Which of the following conclusions could not be derived from Rutherford's  $\alpha$ -particle scattering experiment?
  - Most of the space in the atom is empty.
  - The radius of the atom is about  $10^{-10} \text{ m}$  while that of nucleus is  $10^{-15}$
  - Electrons move in a circular path of fixed energy called orbits.
  - Electrons and the nucleus are held together by electrostatic forces of attraction.
- Two atoms are said to be isobars if
  - they have same atomic number but different mass number.
  - they have same number of electrons but different number of neutrons.
  - they are same number of neutrons but different number of electrons.
  - Sum of the number of protons and neutrons is same but the number of protons is different.
- Assertion: Cathode rays travel in straight lines.  
Reason: Cathode rays consist of charged particles. ANS :B
- Assertion: Electromagnetic waves do not require a medium to travel.  
Reason: They consist of oscillating electric and magnetic fields. ANS :A
- Assertion: The speed of all electromagnetic radiations in vacuum is the same.  
Reason: Their wavelength and frequency vary but their product is constant. ANS :A
- What is the distance between two successive crests of radiation with frequency  $5 \times 10^{14} \text{ Hz}$ ?

