

CBSE TEST PAPER-03

CLASS - IX Science (Atoms and Molecules)

1. Which of the following statements is correct? [1]
 - (a) Cathode rays travel in straight line and have momentum.
 - (b) Cathode rays travel in straight line and have no momentum
 - (c) Cathode rays do not travel in straight line but have Momentum.
 - (d) Cathode rays do not travel in straight line and have no momentum.
2. β -particles are represented as :- (a) ${}_{-1}^0e$ (b) ${}_{+1}^0e$ (c) ${}_{-1}^1e$ (d) ${}_{+1}^1e$ [1]
3. ${}_{18}^{40}Ar$ and ${}_{20}^{40}Ca$ are (a) Isotopes (b) Isobars (c) Isotones (d) Both b and c [1]
4. The maximum number of electrons in L shell is (a) 8 (b) 18 (c) 28 (d) 38. [1]
5. What are α , β and γ - rays composed of. [2]
6. What is meant by e/m ratio? What was the value of this ratio for a particle in the cathode rays? [2]
7. Complete the following equations which describe nuclear charge - [2]
 - a) ${}_{11}^{23}Na + {}_0^1n \rightarrow \text{_____} + {}_{-1}^0e$
 - b) ${}_4^9Be + {}_2^4He \rightarrow {}_0^1n + \text{_____}$
 - c) ${}_8^{16}O + {}_0^1n \rightarrow \text{_____} + {}_2^4He$
8. Stat the properties of cathode rays? [2]
9. Write an experiment to show that cathode rays travel in straight line? [3]
10. What is radioactivity? What are the applications of radioisotopes? [3]
11. There are 2 elements C and B. C emits an α - particle and B emits a β - particle. [3]
How will the resultant elements charge?
12. What are isotopes? Name the isotopes of hydrogen and draw the structure of their atoms? [3]