## **CBSE Board**

## Class 9 | Science



## **CHAPTER-4 | Structure of the Atom**

QUIZ-01

<ol> <li>Which sub-atomic particle was discovered by J.J. Thomson?</li> </ol>	6. What is the valency of an element with electronic configuration 2,8,2?
A. Proton B. Neutron	A. 1 B. 2
C. Electron D. Positron (C	
<i>Explanation:</i> J.J. Thomson discovered the electron, a	a
negatively charged sub-atomic particle.	Explanation: The element has 2 electrons in its
2. What is the charge on a proton?	outermost shell, so its valency is 2.
A. Zero B. –1	7. What is the atomic number of an element that has
C. +1 D. +2 (C	8 protons?
Explanation: A proton carries a unit positive charge	A. 6
i.e., +1.	C. 8 D. 16 (C)
3. In Rutherford's gold foil experiment, most alpha	<b>Explanation:</b> The atomic number is equal to the
particles passed through the foil. What did this	number of protons, so the atomic number is 8.
suggest? U U U U U U U U U U U U U U U U U U U	MIC, TIGH MIC:
A. Atoms are solid	8. Isotopes are atoms that have:
B. Nucleus is very large	A. Same mass number, different atomic number
C. Atom is mostly empty space	B. Different number of electrons and neutrons
D. Electrons are heavy (C Explanation: The fact that most alpha particles	C. Same atomic number, different mass number
passed straight through indicated that atoms are	D. Same number of protons and neutrons (C)
mostly empty space.	Explanation: Isotopes have the same atomic number
4. Which particle is present in the nucleus and has n	but different mass numbers.
charge?	9. Which of the following is an isobar pair?
A. Proton B. Electron	A. ${}^6\text{C}^{12}$ and ${}^8\text{O}^{16}$ B. ${}^{17}\text{Cl}^{35}$ and ${}^{17}\text{Cl}^{37}$
C. Neutron D. Positron (C	
Explanation: Neutrons are neutral particles located	in A
the nucleus.	Explanation: Isobars have the same mass number
5. Which formula gives the maximum number of	but different atomic numbers, as in Ar <sup>40</sup> and Ca <sup>40</sup> .
electrons in a shell?	10. How many electrons are present in a neutral atom
A. 2n C. n+2	of sodium (atomic number 11)?  A. 10  B. 11
<b>Explanation:</b> The maximum number of electrons in	sign Gyan Dep (B)
shell is calculated using the formula 2n², where n is the shell number.	
	electrons, so sodium has 11 electrons.