

ATOMIC STRUCTURE, MOLECULES AND NUCLEAR CHEMISTRY BASED GENERAL SCIENCE MCQ PRACTICE QUESTIONS AND ANSWERS PDF WITH EXPLANATION

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Created By [Careericons](#) Team

Q1. The Nucleus of Helium has

- a) Two protons
 - b) Two protons and two neutrons
 - c) Only one neutron
 - d) One proton and two neutrons
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Q2. Which one among the following is correct regarding ^{20}Ne , $^{23}\text{Na}^+$, $^{19}\text{F}^-$ and $^{24}\text{Mg}^{2+}$?

- a) They are isoelectronic with each other
 - b) They are isotopes of each other
 - c) They are isomers of each other
 - d) All of the above
-

Q3. Radioactivity was discovered by

- a) Becquerel
 - b) Bohr
 - c) Rutherford
 - d) Madam Curie
-

Q4. In an atom valence electron are present in

- a) next to outermost orbit
- b) first orbit

- c) outermost orbit
- d) any one of its orbit

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Q5. The alpha particle carries two positive charges. Its mass is very nearly equal to that of

- a) An atom of helium
- b) Sum of masses of two positrons and two neutrons
- c) Two protons
- d) Two positrons as each positron carries a single positive charge

Q6. While performing cathode ray experiments, it was observed that there was no passage of electric current under normal conditions. Which of the following can account for this observation ?

- a) Carbon dioxide is present in air
- b) Air is a poor conductor of electricity under normal conditions
- c) Dust particles are present in air
- d) None of these

Q7. Which one of the following laws explains the formation of carbon monoxide and carbon dioxide from carbon and oxygen?

- a) Law of multiple proportions
 - b) Law of reciprocal proportions
 - c) Law of conservation of mass
 - d) Law of definite proportions
-

Q8. Which of the following statement about molecular structure is correct?

- a) Electron and proton are inside the nucleus and neutron revolve around the nucleus
 - b) Proton and neutron are inside the nucleus and electrons revolve around the nucleus
 - c) Neutron and electron are found inside the nucleus and protons revolves around the nucleus
 - d) Proton, neutron and electron all are inside the nucleus
-

Q9. Protons and neutrons are bound in a nucleus by the

- a) long range 'electromagnetic interaction'
 - b) short range 'strong interaction'
 - c) short range 'weak interaction'
 - d) long range 'gravitational interaction'
-

Q10. One gram of which of the following contains largest number of oxygen atoms?

- a) O₂
 - b) O₃
 - c) O
 - d) All contains same
-

Q11. What is the number of water molecules present in a tiny drop of water (volume 0.0018 ml) at room temperature?

- a) 6.023×10^{19}
 - b) 4.184×10^{18}
 - c) 4.84×10^{17}
 - d) 6.023×10^{23}
-

Q12. Which of the following is not a subatomic particle?

- a) Proton
- b) Deuteron
- c) Neutron
- d) Electron

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Q13. In an atom, the order of filling up of the orbitals is governed by

- a) Heisenberg's uncertainty principle
- b) Hund's rule
- c) Aufbau's principle
- d) Pauli's exclusion principle

Q14. The atomic weights are expressed in terms of atomic mass unit. Which one of the following is used as a standard?

- a) $^{16}\text{O}_8$
- b) $^{12}\text{C}_6$
- c) $^1\text{H}_1$
- d) $^{35}\text{Cl}_{17}$

Q15. Which of the following describes an isotope with a mass number of 99 that contains 56 neutrons in its nucleus ?

- a) $^{99}_{43}\text{Ba}$
- b) $^{99}_{43}\text{Tc}$
- c) $^{99}_{56}\text{Ba}$
- d) $^{99}_{56}\text{Tc}$

Answers to the above questions :

Q1. Answer: (b)

Q2. Answer: (a)

Q3. Answer: (a)

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ECOLOGY AND ENVIRONMENT AWARENESS
GENETIC ENGINEERING AND BIO TECHNOLOGY

Q4. Answer: (c)

Q5. Answer: (a)

Q6. Answer: (b)

Q7. Answer: (a)

Law of multiple proportions explains the formation of CO and CO₂, in these same weight of carbon that combines with weights of oxygen are in simple rate of 1 : 2.

Q8. Answer: (b)

Q9. Answer: (b)

Q10. Answer: (b)

The no. of atoms in O_3 is maximum i.e., 3

Q11. Answer: (a)

Q12. Answer: (b)

Q13. Answer: (c)

Q14. Answer: (b)

Q15. Answer: (b)

Given mass number (Z) = 99

No. of neutrons = 56

? No. of protons = atomic number = $99 - 56 = 43$

i.e., ${}^{99}_{43}\text{Tc}$

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