

Chemistry

Additional questions

- The number of protons, neutrons and electrons in ${}_{35}\text{Br}^{80}$ are respectively
(a) 35,45,35 (b) 35,35,45 (c) 35,35,80 (d) 35,80,35
- An electron of an atom of sodium moves from its valence shell to K shell. It will
(a) absorb energy (b) release energy (c) neither absorb nor release energy (d) none of the above
- The electronic configuration of an ion X^{-2} is 2,8,8. If its mass number is 32, the number of protons, neutrons and electrons are respectively
(a) 18, 14, 18
(b) 16,16,16
(c) 14,18,24
(d) None of these
- Which pair shows isobars?
(a) ${}^1_1\text{H}$ and ${}^2_1\text{H}$
(b) ${}^{14}_6\text{C}$ and ${}^{14}_7\text{N}$
(c) ${}^{40}_{18}\text{Ar}$ and ${}^{40}_{10}\text{K}$
(d) both B and C
- The neutral atom isoelectronic with Ca^{2+} is
(a) Cl^-
(b) K
(c) Ar
(d) Kr
- Radioactive isotope of carbon is
(a) ${}^6_6\text{C}^{12}$
(b) ${}^6_6\text{C}^{13}$
(c) ${}^6_6\text{C}^{14}$
(d) All of these
- The unipositive ion of an element contains 8 electrons in its M shell. If its nucleus contains 20 neutrons, what is the mass number of the element?
(a) 18
(b) 19
(c) 38
(d) 39
- Many elements have non - integral masses because
(a) they have isobars
(b) their isotopes have non - integral masses.
(c) they have isotopes.
(d) the constituents' neutrons, protons & electrons combine to give fractional masses
- Members of which of the following have similar chemical properties?
(a) Isotopes
(b) Isobars

- (c) Allotropes
 - (d) Both isotopes & allotropes
10. The number of electrons in the L- shell of phosphorus is not equal to that in the
- (a) L - shell of neon
 - (b) M - shell of potassium
 - (c) M - shell of chromium
 - (d) M - shell of argon
11. The electronic configuration of sodium is
- (a) 2, 8, 1
 - (b) 2, 6
 - (c) 2, 8, 2
 - (d) 2, 2
12. The element with the same atomic number and mass number is
- (a) Oxygen
 - (b) Hydrogen
 - (c) Helium
 - (d) Carbon
13. The mass of proton is same as that of
- (a) Carbon atom
 - (b) An electron
 - (c) Hydrogen ion
 - (d) Oxygen atom.
14. Neutrons were discovered by
- (a) Joseph Thomson
 - (b) James Chadwick
 - (c) Ernest Rutherford
 - (d) John Dalton
15. The mass number of an element is denoted by
- (a) A
 - (b) Z
 - (c) X
 - (d) N
16. Total number of electrons in an atom of phosphorous is
- (a) 9
 - (b) 15
 - (c) 16
 - (d) 17
17. The electronic configuration of Silicon is
- (a) 2,4
 - (b) 2,8,4
 - (c) 2,8,1
 - (d) 2,8,5
18. When chlorine atom becomes chloride ion it
- (a) Loses an electron
 - (b) Gain an electron

- (c) Does not lose or gain
(d) Share electron
19. An atom that becomes charged by gaining or losing an electron is called
(a) Cation
(b) Anion
(c) Ion
(d) Electron
20. The valency of chloride radical in FeCl_3 is
(a) 3
(b) 4
(c) 1
(d) 2
21. Which one of the following is the largest in size?
(a) Atom
(b) Electron
(c) Proton
(d) Neutron
22. Naturally occurring bromine has a relative atomic mass of 80 and consists entirely of two isotopes of relative isotopic masses of 79 and 81. It can be deduced that naturally occurring bromine
(a) is radioactive.
(b) has two different valencies.
(c) is a dense volatile liquid
(d) contains the two isotopes in equal proportions.
23. What is the atomic structure of the ion in which X^{2+} has atomic number 8 and mass number 18?
(a) 10 electrons, 8 protons, 8 neutrons.
(b) 10 electrons, 8 protons, 10 neutrons.
(c) 10 electrons, 9 protons, 9 neutrons
(d) 8 electrons, 8 protons, 18 neutrons
24. Two particles 'X' and 'Y' have the following composition:

	Electrons	Neutrons	Protons
X	4	6	5
Y	6	4	5

- It follows that X and Y
(a) are both positively charged.
(b) have the same mass number
(c) are particles of the same element
(d) have different atomic numbers
25. The first model of an atom was given by
(a) N. Bohr
(b) E. Goldstein
(c) Rutherford
(d) J.J. Thomson