Atomic number, Mass number, Atomic species

1. The number of electrons in an atom of an element is equal to its
(a) Atomic weight
(b) Atomic number
(c) Equivalent weight
(d) Electron affinity

2. The nucleus of the element having atomic number 25 and atomic weight 55 will contain
(a) 25 protons and 30 neutrons
(b) 25 neutrons and 30 protons
(c) 55 protons
(d) 55 neutrons

3. If W is atomic weight and N is the atomic number of an element, then
(a) Number of $e^{-1} = W - N$
(b) Number of $0n^1 = W - N$
(c) Number of $1H^1 = W - N$
(d) Number of $0n^1 = N$

4. The total number of neutrons in dipositive zinc ions with mass number 70 is
(a) 34 (b) 40
(c) 36 (d) 38

5. Which of the following are isoelectronic with one another
(a) Na^+ and Ne
(b) K^+ and O
(c) Ne and O
(d) Na^+ and K^+

6. The number of electrons in one molecule of CO_2 are
(a) 22 (b) 44
(c) 66 (d) 88

7. Chlorine atom differs from chloride ion in the number of
(a) Proton
(b) Neutron
(c) Electrons
(d) Protons and electrons

8. CO has same electrons as **or** the ion that is isoelectronic with CO is
(a) N_2^+ (b) CN^-
(c) O_2^+ (d) O_2^-

9. The mass of an atom is constituted mainly by
(a) Neutron and neutrino
(b) Neutron and electron
(c) Neutron and proton
(d) Proton and electron

10. The atomic number of an element represents
(a) Number of neutrons in the nucleus
(b) Number of protons in the nucleus
(c) Atomic weight of element
(d) Valency of element

11. An atom has 26 electrons and its atomic weight is 56. The number of neutrons in the nucleus of the atom will be
(a) 26 (b) 30
(c) 36 (d) 56

12. The most probable radius (in *pm*) for finding the electron in He^+ is
(a) 0.0 (b) 52.9
(c) 26.5 (d) 105.8

13. The number of unpaired electrons in the Fe^{2+} ion is
(a) 0 (b) 4
(c) 6 (d) 3

14. A sodium cation has different number of electrons from
(a) O^{2-} (b) F^-
(c) Li^+ (d) Al^{+3}

15. An atom which has lost one electron would be
(a) Negatively charged
(b) Positively charged
(c) Electrically neutral
(d) Carry double positive charge

16. Number of electrons in the outermost orbit of the element of atomic number 15 is
(a) 1 (b) 3
(c) 5 (d) 7

17. The atomic weight of an element is double its atomic number. If there are four electrons in $2p$ orbital, the element is
(a) C (b) N
(c) O (d) Ca

18. An atom has the electronic configuration of $1s^2, 2s^2 2p^6$, $3s^2 3p^6 3d^{10}, 4s^2 4p^5$. Its atomic weight is 80. Its atomic number and the number of neutrons in its nucleus shall be
(a) 35 and 45 (b) 45 and 35
(c) 40 and 40 (d) 30 and 50

19. Which of the following particles has more electrons than neutrons

(a) C (b) F^{-}
(c) O^{-2} (d) Al^{+3}

20. Compared with an atom of atomic weight 12 and atomic number 6, the atom of atomic weight 13 and atomic number 6
(a) Contains more neutrons
(b) Contains more electrons
(c) Contains more protons
(d) Is a different element

21. In the nucleus of $20Ca^{40}$ there are
(a) 40 protons and 20 electrons
(b) 20 protons and 40 electrons
(c) 20 protons and 20 neutrons
(d) 20 protons and 40 neutrons

22. Na^{+}ion is isoelectronic with
(a) Li^{+} (b) Mg^{+2}
(c) Ca^{+2} (d) Ba^{+2}

23. Ca has atomic no. 20 and atomic weight 40. Which of the following statements is not correct about Caatom
(a) The number of electrons is same as the number of neutrons
(b) The number of nucleons is double of the number of electrons
(c) The number of protons is half of the number of neutrons
(d) The number of nucleons is double of the atomic number

24. Pick out the isoelectronic structures from the following

$\underset{I}{CH_3^+}$ $\underset{II}{H_3O^+}$ $\underset{III}{NH_3}$ $\underset{IV}{CH_3^-}$

(a) I and II (b) I and IV
(c) I and III (d) II, III and IV