

## **Sahaj Business Mentor Course – Exercise 1**

Complete the worksheet and submit again.

7. Which of the two will be chemically more reactive, Sulphur(S) with atomic number 16 or Chlorine (Cl) with atomic number 17?

- (a) Chlorine
- (b) Sulphur
- (c) Both are equally reactive
- (d) Can't say

**Answer. (a) Chlorine**

8. Which of the following elements does not exhibit the electrovalency?

- (a) Sodium
- (b) Calcium
- (c) Carbon
- (d) Chlorine

**Answer. (c) Carbon**

9. Which of the following statements is incorrect about the structure of an atom?

- i. The whole mass of an atom is concentrated in the nucleus
- ii. The atom is an indivisible particle
- iii. The atom as a whole is neutral
- iv. All the atoms are stable in their basic state

Choose the right option among the following:

- (a) (i) and (iii)
- (b) only (ii)
- (c) (ii) and (iv)
- (d) none of these

**Answer. (c) (ii) and (iv)**

10. Which scientist gave the concept of fixed energy levels around the nucleus?

- (a) Ernest Rutherford
- (b) Neils Bohar
- (c) J.J.Thomsan
- (d) None of these

**Answer. (b) Neils Bohar**

11. What prevents an atom from being collapsed?

- (a) The nuclear forces
- (b) Movement of electrons in discrete energy levels
- (c) The electron-electron repulsions
- (d) All of these

**Answer. (b) Movement of electrons in discrete energy levels**

12. Which of the following pairs are isobars?

- (a)  $_{17}\text{Cl}^{35}$  &  $_{17}\text{Cl}^{37}$
- (b)  $_{18}\text{Ar}^{40}$  &  $_{20}\text{Ca}^{40}$
- (c)  $_{6}\text{C}^{12}$  &  $_{6}\text{C}^{14}$
- (d) None of these

**Answer. (b)  $_{18}\text{Ar}^{40}$  &  $_{20}\text{Ca}^{40}$**

13. Which of the following is an incorrect statement in reference with observation in Rutherford's  $\alpha$ -particle scattering experiment?

- (a) Some of the  $\alpha$ -particles rebound after hitting the gold foil
- (b) Some of the particles deflected from their path
- (c) Some of the particles not pass through the gold foil
- (d) Most of the particles pass straight through the gold foil

**Answer. (a) Some of the  $\alpha$ -particles rebound after hitting the gold foil**

14. Which radioactive element is used in the treatment of cancer?

- (a) Iodine-131
- (b) Uranium-234
- (c) Plutonium-239
- (d) Cobalt-60

**Answer. (d) Cobalt-60**

15. Why do most of the elements try to participate in the chemical combinations?

- i. To gain more electrons
- ii. To achieve Inert Gas configuration
- iii. To complete their octet
- iv. To complete their inner shells

Choose the correct option among the following

- (a) Both (i) & (iii)
- (b) Both (ii) & (iii)
- (c) Only (ii)
- (d) Both (i) & (iv)

**Answer. (b) Both (ii) & (iii)**