

# CHAPTER - 4

## ELEMENTS, COMPOUNDS, SYMBOLS & FORMULAE

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### Objective type Questions :-

1. Fill in the blanks :-

a) Atomicity refers to the number of atoms in the molecule of an element.

b) The most abundant element in the earth's crust is oxygen.

c) A metal which is a liquid at room temperature is mercury.

d) The most abundant element in the atmosphere is nitrogen.

e) A metal which is a poor conductor of electricity is tungsten.

f) A diatomic gaseous element is oxygen.

g) A liquid non-metal is bromine.

2. Match the Columns :-

Column A

Column B

- a) Metals
- b) Molecules
- c) Non metals
- d) Noble gases

- i) Non-reactive (d)
- ii) Brittle (c)
- iii) Lustrous (a)
- iv) Smallest unit of Compound - (b)

Answers : a (iii) b (iv) c (ii) d (i)

3. State True or false :

- a) A Compound is made up of just one kind of atom. False (made up of 2 or more elements in a fixed proportion by mass)
- b) Metals reflect light and are good conductor of electricity. True
- c) Metals can be polished. True
- d) Elements are made up of compounds. False (made of atoms)
- e) All elements are artificially prepared. False (made up of a limited number of basic substances)
- f) Molecules can exist independently. True

- g) Molecules combine to form atoms. false  
(form molecules)
- h) Noble gases are highly reactive. false  
(non-reactive)
- i) Ozone is a triatomic molecule. True

### Multiple choice questions :-

1. All pure substances have
- a) the same physical state
  - b) the same colour
  - c) the same composition
  - d) a definite set of properties.
2. Sugar is a compound which consists of the elements.
- a) carbon and hydrogen
  - b) hydrogen and oxygen
  - c) carbon, hydrogen and oxygen
  - d) hydrogen, carbon and sulphur.
3. Atoms of different kinds combine to form molecules of
- a) an element
  - b) a compound
  - c) a mixture
  - d) all of the above.

4. Sulphur and Carbon are

- a) metals
- b) non-metals
- c) metalloids
- d) noble gases

5. Gold is used to make jewellery because

- a) it is dull
- b) lustrous and attractive
- c) highly reactive
- d) very cheap

6. The most abundant elements in the universe are

- a) neon and argon
- b) hydrogen and helium
- c) aluminium and Copper
- d) oxygen and nitrogen

7. The Compound used as Common Salt is

- a) Sodium chloride
- b) Calcium chloride
- c) Sodium oxide
- d) hydrogen chloride

- 8) Brass and bronze are
- a) elements
  - ~~b) mixtures~~
  - c) compounds
  - d) All of the above.

- 9) Sand is a compound of
- a) silicon and nitrogen
  - ~~b) silicon and oxygen~~
  - c) oxygen and sulphur
  - d) none of the above.

- 10) From the list given below select the correct substance which is most suitable to the statement given :

[oxygen, diamond, zinc, graphite, gold]

- a) A metal which is brittle. Zinc
- b) A non-metal which is a good conductor of electricity. graphite
- c) The hardest naturally occurring substance. Diamond.
- d) The most ductile metal. Gold
- e) A gaseous non-metal. oxygen.

## Exercise - II

Q7. Write the molecular formulae of compounds Calcium oxide, hydrogen sulphide, carbon monoxide and lead sulphite.

Ans. Calcium oxide -  $\text{CaO}$   
hydrogen sulphide -  $\text{H}_2\text{S}$   
carbon monoxide -  $\text{CO}$   
lead sulphite -  $\text{PbS}$

Q8. Give two examples each of compounds existing in the following states :

(a) Solid :  $\text{NaCl}$ ,  $\text{SiO}_2$

(b) Liquid :  $\text{H}_2\text{O}$ ,  $\text{HCl}$

(c) Gaseous :  $\text{CO}_2$

Q) Write formulas of :

i) iron oxide :  $\text{Fe}_2\text{O}_3$

ii) Calcium oxide :  $\text{CaO}$

iii) Sodium oxide :  $\text{Na}_2\text{O}$

iv) Zinc chloride :  $\text{ZnCl}_2$