

Section-A

Multiple Choice Questions(MCQ's)

M.Marks: 17

Time:15 minutes

Q.1 Choose the correct answer for each from the given options:

- (i) The only liquid metal in _____.
- (a) Gold (b) Mercury (c) Bromine (d) None of these
- (ii) Mendeleev's periodic table contains _____ periods.
- (a) 7 (b) 8 (c) 12 (d) 10
- (iii) _____ is the branch of chemistry which deals with the carbon compounds.
- (a) Physical Chemistry (b) analytical Chemistry
(c) Inorganic Chemistry (d) Organic Chemistry
- (iv) The elements of VII-A group are known as:
- (a) Halogens (b) Lanthanides
(c) Actinides (d) None of these*
- (v) The formula of baking soda is:
- (a) Na_2CO_3 (b) $\text{Na}_2\text{CO}_3 \cdot 8\text{H}_2\text{O}$
(c) NaCHO_3 (d) CaCO_3
- (vi) Which one is a weak acid:
- (a) HCl (b) H_2SO_4 (c) CH_3COOH (d) HNO_3
- (vii) The heat given out in a chemical reaction is called _____ reaction.
- (a) Endothermic (b) Exothermic (c) Enthapy (d) None of these
- (viii) The solubility of a gas _____ with the rise in temperature.
- (a) Increase (b) Decrease (c) Similar (d) None of these
- (ix) Hydrogen was discovered by:
- (a) Faraday (b) Priesly (c) Cavendish (d) Dalton
- (x) 5 moles of water is equals to :
- (a) 80gm (b) 90 gm (c) 100 gm (d) 90 a.m.u
- (xi) The nucleus of an atom consist of:
- (a) Electrons and Protons (b) Protons and Neutrons
(c) Co-ordinate Covalent bond (d) None of these*
- (xii) Charge on an electron is :
- (xiii) The shared pair of electron which links the atoms in a molecule is known as:
- (a) Electrovalent bond (b) Covalent Bond
(c) Co-ordinates Covalent bond (d) None of these
- (xiv) Co-ordinate Covalent bond is always formed between the two atoms:
- (a) Like atoms (b) Unlike atoms (c) Similar atoms (d) None of these
- (xv) The temperature at which the vapour pressure of a liquid, becomes equal to its external pressure is called _____ point.
- (a) Melting (b) Boiling (c) Triple (d) Freezing
- (xvi) 10% M./M solution contains 10 gm solute, dissolved in _____ solvent.
- (a) 100 gm (b) 90 gm (c) 80gm (d) 110 gm
- (xvii) The value of one Faraday in electric charge is _____ coulombs.
- (a) 95500 (b) 96500 (c) 94500 (d) None of these

Section-B (Short Answers)

Note: Write short answer any "Eight" of the following questions.

- Q.2 Define chemistry .Give the name of any six branches of chemistry.
- Q.3 Define the law of definite proportions in your own words. Give an example.
- Q.4 Discuss some of the physical properties of the elements which exhibits periodicity.
- Q.5 Give the characteristics of Covalent Bond.
- Q.6 Define any two of the following terms:
- (i) Evaporation (ii) Boiling point (iii) Standard Solution
- Q.7 Differentiate between any one of the following:
- (i) Saturated and unsaturated solution (ii) Solution and Suspension
- Q.8 Define Electrolyte and Non- Electrolytes.
- Q.9 Calculate molarity of solution containing 16 gm of glucose ($\text{C}_6\text{H}_{12}\text{O}_6$) in 500 ml of solution.
- Q.10 What is salt? Give any three formula of the following salts.
- (i) Common Salt (b) Potash Alum
(iii) Copper Sulphate (d) Sodium Carbonate
- Q.11 Calculate the pH of 0.01 M HCl solution.
- Q.12 Balance the following equation?
- (i) $\text{C} + \text{O}_2 \longrightarrow \text{CO}$
(ii) $\text{KNO}_3 \longrightarrow \text{KNO}_2 + \text{O}_2$
(iii) $\text{N}_2 + \text{H}_2 \longrightarrow \text{NH}_3$
(iv) $\text{CH}_4 + \text{O}_2 \longrightarrow \text{CO}_2 + \text{H}_2\text{O}$
(v) $\text{Na} + \text{O}_2 \longrightarrow \text{Na}_2\text{O}$

Section-C (Descriptive)

Note: Answer any TWO of the following questions in detail.

- Q.13 (a) What is chemical reaction? Explain any three types of chemical with example.
(b) Calculate the formula mass (in a.m.u) of each of the following:
(i) KNO_3 (ii) Al_2O_3 (c) C_6H_6 (iv) H_2O
(Atomic mass: K = 39, = 14, O = 16 ,H =1, C = 12, Al = 27)
- Q.14 (a) Define discovery of Electron by discharge tube experiment.
(b) How many protons, Neutron ,Electrons are present in the following atoms?
(i) $^{18}_7\text{N}$ (ii) $^{27}_{13}\text{Al}$ (iii) $^{39}_{19}\text{K}$ (d) $^{80}_{17}\text{Cl}$
- Q.15 (a) Describe the construction and working of Dry Cell.
(b) Define metallic bond.