

Section-A

(Multiple Choice Questions (MCQ's))

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

- (i) The mixture of hydrogen and carbon monoxide gas is called:
(a) Dry air (b) Water gas (c) Water (d) Soda water
- (ii) Copper is extracted from sulphide ores contains Cu% about:
(a) 6% (b) 8% (c) 10% (d) 12%
- (iii) Electro negativity value of hydrogen is similar to group in periodic table:
(a) I A (b) II A (c) IVA (d) VIIA
- (iv) Which one of these elements has the highest heat of hydration:
(a) Be (b) Sr (c) Ca (d) Ba
- (v) In fire extinguishers, which of the following compound is used as a source of carbon dioxide:
(a) Na_2CO_3 (b) NaCl (c) Ca(OH)_2 (d) NaHCO_3
- (vi) Chlorine gas has colour:
(a) Blue (b) Green (c) Red (d) Orange
- (vii) Which one of the following from halogen group acts as strong bleaching agent and disinfectant:
(a) Fluorine (b) Bromine (c) Chlorine (d) Iodine
- (viii) Which one of the following is a transition element:
(a) Sr (b) Cr (c) Sn (d) Br
- (ix) Lunar Caustic means:
(a) NaOH (b) NaCl (c) AgNO_3 (d) KMnO_4
- (x) Which one of the following is a heterocyclic compound:
(a) Benzene (b) Chloro benzene (c) Toluene (d) Pyridine
- (xi) The thermal decomposition of heavy hydrocarbon into a lighter one is called:
(a) Pyrolysis (b) Cracking (c) Distillation (d) Knocking
- (xii) The nature of hydrogen atom in acetylene is:
(a) Basic (b) Acidic (c) Neutral (d) Amphoteric
- (xiii) Which one from the given has least carbon-carbon bond length:
(a) Ethane (b) Ethene (c) Ethyne (d) Benzene
- (xiv) Monohalo derivatives of alkane is called:
(a) Aryl halide (b) Acyl halide (c) Alkyl halide (d) None of these
- (xv) The formula of Iodoform is:
(a) CH_2I (b) CHI_3 (c) CH_2I_2 (d) CI_4
- (xvi) Lipid fats are called:
(a) Fatty acids (b) Ketones (c) Oils (d) Sugars
- (xvii) Sodium salt of long chain carboxylic acid is called:
(a) Detergents (b) Soap (c) Fats (d) Steroids

Section-B (Short Answer)

Note: Answer any EIGHT of the following questions. Each question carries 05 marks.

Q.2 What do you know about isotopes? Describe isotopes of Hydrogen.

Q.3 Give reason why:

- (i) Water Gas is more Energetic than coal?
(ii) Noble gases are placed in Zero group of periodic table?
(iii) Na^+ ion is smaller than sodium atom?
(iv) CO gas is highly poisonous?

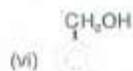
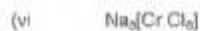
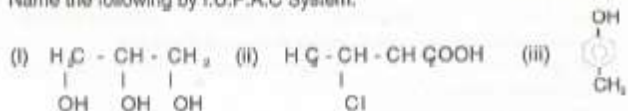
- (v) Alkali and alkaline earth metals can not be used in voltaic cells:
- Q.4 What is Diagonal relationship? Discuss briefly diagonal relationship of Beryllium with Aluminum.
- Q.5 Briefly describe the natural sources of Organic Compounds.
- Q.6 What are SN^1 and SN^2 reactions? Discuss with example.
- Q.7 What are Zwitter ions? How an amino acid is acted as Zwitter ions?
- Q.8 Discuss advantages and disadvantages of Detergents.
- Q.9 Differentiate between sugars and non-sugars.
- Q.10 How chlorine is prepared on commercial Scale?
- Q.11 How can you define an acetone? State briefly common uses of acetone.

Section-C (Descriptive Answer)

Note: Answer any TWO of the following questions.

- Q.12 (a) Define glass, also write its composition. What are the main types of glass, discuss each type?
- (b) What is Blister Copper? How is Blister Copper refined?
- Q.13 (a) Define Thermite process. How it is used for welding and extraction of metals?
- (b) Complete and balance the following equations:
- (i) $FeCl_3 + H_2S \rightarrow$ (ii) $Zn + NaOH \rightarrow$
- (iii) $C + H_2SO_4 \rightarrow$ (iv) $Cl_2 + NaOH \rightarrow$
- (v) $Cl_2 + H_2O \rightarrow$ (vi) $CH_3COOC_2H_5 + NaOH \rightarrow$
- (vii) $C_2H_5OH + PCl_5 \rightarrow$
- Q.14 (a) How will you write the structure of the following:
- (i) Acetic anhydride (ii) 2-naphthol (iii) Bromoform
- (iv) Oxonium ion (v) Glutamine (vi) Valeric Acid
- (vii) Methyl formate

(b) Name the following by I.U.P.A.C System:



Eduvision.edu.pk