

Four possible answers A, B, C and D to each question are given. The choice which you think is correct, fill that circle in front of that question with Marker or Pen ink in the answer-book. Cutting or filling two or more circles will result in zero mark in that question.

- 1 Reaction between acid and base forms :
(A) salt and water (B) salt and gas
(C) salt and acid (D) salt and base
- 2 Alkenes are prepared from alcohols by a process called:
(A) Dehydrogenation (B) Dehalogenation
(C) Dehydration (D) Dehydrohalogenation
- 3 Main component of natural gas is :
(A) Methane (B) Propane
(C) Butane (D) Propyne
- 4 Thousands of amino acids polymerize to form :
(A) Carbohydrates (B) Proteins
(C) Lipids (D) Vitamins
- 5 If any liquid has $\text{pH} = 7$, it will be :
(A) Colourless and odourless
(B) Boil at 100°C and freeze at 0°C
(C) Neutral (D) Aqueous solution
- 6 Which one of the following is fat soluble vitamin:
(A) A (B) E
(C) K (D) All of these
- 7 A complete reaction is in which :
(A) All the reactants convert into products
(B) All the reactants do not convert into products
(C) Half reactants convert into products
(D) Only 10% reactants convert into products
- 8 Matte is a mixture of :

- (A) FeS and CuO (B) Cu₂O and FeO
 (C) Cu₂S and FeS (D) Cu₂S and FeO
- 9** Such reactions which continue in both directions are called:
 (A) Irreversible (B) Reversible
 (C) Non-reactive (D) Dynamic
- 10** Which one of the disease causes liver inflammation:
 (A) Typhoid (B) Jaundice
 (C) Cholera (D) Hepatitis
- 11** Depending upon temperature variation, atmosphere is divided into how many regions:
 (A) 1 (B) 2
 (C) 3 (D) 4
- 12** Permanent hardness is removed by adding:
 (A) Sodium zeolite (B) Soda lime
 (C) Lime water (D) Quick lime

Chemistry	10th, Lahore Board 2016	Group - I
Time: 2.45 hrs	Subjective Type	Marks : 63

PART-I

- 2.** Write short answers to any FIVE (5) questions : 10
- i** How can you know that a reaction has achieved an equilibrium state?
 - ii** What is relation between active mass and rate of reaction?
 - iii** Define pH. What is the pH of pure water?
 - iv** Name two acids used in the manufacture of fertilizers.
 - v** Why H^+ ion acts as a Lewis acid?

- How is coal formed?
What is the importance of natural gas?
Write the classification of coal.
- Write short answers to any SIX (6) questions: 12**
- i What are saturated hydrocarbon, give example?
- ii Give process of hydrogenation of alkenes with chemical equation.
- iii Define carbohydrates, write their general formula.
- iv What are polysaccharides, give an example.
- v Write the general formula of amino acid?
- vi Write the chemical formulas of palmitic acid and stearic acid.
- vii What are the major constituents of troposphere?
- viii How CO_2 is responsible for heating up atmosphere?
- ix How ozone layer forms in stratosphere?
- Write short answers to any FIVE (5) questions: 10**
- i How water rises in plants?
- ii What are the causes of hardness of water?
- iii What are the reasons of water-borne diseases?
- iv Give a method to remove permanent hardness of water.
- v What is the difference between crude oil and residual oil?
- vi What is the principle of Solvay's process?
- vii What is the role of pine oil in the froth flotation process?
- viii Define petroleum.

PART-II

Note : Attempt any THREE questions.

- 5.(a) Differentiate between forward and reverse reaction.
- 6.(a) Differentiate between acidic and basic salts. Give four properties of homologous series.
- 7.(a) Write three sources of alkanes. How monosaccharides are prepared? Give their characteristics.
- 8.(a) Describe effects of acid rain. Write about cholera and cryptosporidium.
- 9.(a) Write about steps for the preparation of urea. Explain ammonia recovery process and preparation of carbon dioxide gas in Solvay process.
- (b) What is green house effect? Explain it.

PART-III

(Practical Part)

Note : Attempt any TWO questions.

- A.(i) Write down the apparatus to determine the molarity of the given NaOH solution by volumetric analysis.
- (ii) Write down the procedure to identify metal ions by flame test.
- B.(i) Write the required apparatus to identify ketone by using 2,4 dinitrophenyl hydrazine test.
- (ii) Give procedure to identify ketone by using 2,4 dinitrophenyl hydrazine test.
- C.(i) Write the required apparatus to identify the saturated and unsaturated organic compounds by potassium permagnate test.
- (ii) Write down the procedure to identify phenol using ferric chloride test.

Chemistry	10 th , Lahore Board 2016	Group - II
Time: 15 Min.	Objective Type	Marks : 12

Four possible answers A, B, C and D to each question are given. The choice which you think is correct, fill that circle in front of that question with Marker or Pen ink in the answer-book. Cutting or filling two or more circles will result in zero mark in that question.

Which of the following is fat soluble vitamin :

- (A) A (B) E
(C) K (D) All of these.

Which one of the following is triglyceride :

- (A) Carbohydrates (B) Proteins
(C) Vitamins (D) Lipids

Temporary hardness is because of :

- (A) $\text{Ca}(\text{HCO}_3)_2$ (B) CaCO_3
(C) MgCO_3 (D) MgSO_4

When $Q_c < K_c$ the reaction goes in:

- (A) Forward (B) Reverse
(C) Equilibrium (D) None

Which one of the following is Lewis base :

- (A) BF_3 (B) NH_3
(C) H^+ (D) AlCl_3

Oxidation of alkenes produce :

- (A) Glyoxal (B) Oxalic acid
(C) Glycol (D) Formic acid

Which one of the following ions does not cause hardness in water:

- (A) Ca^{2+} (B) Mg^{2+}

- (C) SO_4^{2-} (D) Na^+
- 8** Which gas protects the earth's surface from ultraviolet radiations:
 (A) CO_2 (B) CO
 (C) O_3 (D) N_2
- 9** The colour of HI is :
 (A) Orange (B) Purple
 (C) Red (D) Colourless
- 10** The nitrogen present in urea is used by plant to synthesize :
 (A) Sugar (B) Proteins
 (C) Fats (D) DNA
- 11** Which one of the following does not contain starch :
 (A) Sugar cane (B) Barley
 (C) Maize (D) Potatoes
- 12** Which one of the following is acidic salt :
 (A) KHSO_4 (B) $\text{Al}(\text{OH})_2\text{Cl}$
 (C) NaCl (D) $\text{Ca}(\text{OCl})\text{Cl}$

Chemistry

**10th, Lahore Board
2016**

Group – II

Time: 2.45 hrs

Subjective Type

Marks : 63

PART-I

- 2.** Write short answers to any FIVE questions:
- i** Write uses of atmospheric gases in manufacture of chemicals.
- ii** What are irreversible reactions? Give a characteristics of them.
- iii** Write uses of sulphuric acid.
- iv** A solution of HCl is 0.01 M. What is its

value?

v Write uses of CaCl_2 .

vi Write four sources of organic compounds. (Only names)

vii Define functional group with an example.

viii What are heterocyclic compounds? Give example.

Write short answers to any SIX (6) questions: 12

i State one important use of each:

(a) Chloroform (b) Carbon tetra chloride.

ii How are alkyl halides reduced?

iii Give the types of vitamins.

iv How are proteins formed?

v Draw the structural formula of glucose.

vi Give the balanced equation for the hydrolysis of sucrose.

vii What do you mean by atmosphere?

viii Give two effects of global warming.

ix How is acid rain produced?

Write short answers to any FIVE (5) questions :

i Describe the difference between temporary and permanent hardness of water.

ii Write two disadvantages of hard water.

iii What are water-borne diseases of water?

iv What is fluorosis?

v What is difference between minerals and ores?

vi Define metallurgy.

vii How ammonical brine is prepared?

viii Write two advantages of Solvay's process.

PART-II

Note : Attempt any THREE questions.

- 5.(a)** Define law of mass action and derive the general expression for equilibrium constant for a general reaction. 4
- (b)** Write down the reaction of acids with metals carbonates and bicarbonates. 3
- 6.(a)** Write down the composition and uses of different types of coal. 4
- (b)** Write down any three physical properties of alkenes. 3
- 7.(a)** Describe four uses of carbohydrates. 4
- (b)** Describe any three effects of "Global Warming". 3
- 8.(a)** Write down the methods to remove the permanent hardness of water. 4
- (b)** Describe the importance of urea. 3
- 9.(a)** Write note on fractional distillation of petroleum. 4
- (b)** Describe composition of atmosphere. 3

PART-III

(Practical Part)

Note : Attempt any TWO questions.

- A.(i)** Write the apparatus required to standardize hydrochloric acid solution. 2
- (ii)** Write the procedure of experiment to find molarity of sodium hydroxide solution by volumetric analysis. 3
- B.(i)** Write apparatus for the experiment to identify things as acidic, basic or neutral. 2
- (ii)** Give procedure to identify ketones by dinitrophenyl hydrazine test. 2, 4
- C.(i)** Write the apparatus required to identify phenols by ferric chloride test. 2
- (ii)** Write the procedure for the experiment to 2

identify saturated and unsaturated hydrocarbons by $KMnO_4$ test.