

Chemistry	10th Lahore Board 2017	Paper: II
Time: 15 min.	OBJECTIVE	Marks: 12

(Group - I)

Note: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question.

1.1. Night-blindness is because of deficiency of:

- (A) Vitamin C (B) Vitamin E
(C) Vitamin A (D) Vitamin D

2. Swimming pools are cleaned by a process:

- (A) Hydrogenation (B) Bromination
(C) Chlorination (D) Nitration

3. The general formula of alkanes is:

- (A) C_nH_{2n+1} (B) C_nH_{2n+3}
(C) C_nH_{2n-1} (D) C_nH_{2n-1}

4. At sea level the boiling point of water is:

- (A) $0^\circ C$ (B) $98^\circ C$
(C) $100^\circ C$ (D) $110^\circ C$

5. The units of molar concentration are:
 (A) $\text{mol}^{-1}\text{dm}^{-3}$ (B) $\text{mol}^{-1}\text{dm}^3$
 (C) mol dm^3 (D) mol dm^{-3}
6. Which gas protects earth's surface from ultraviolet radiations:
 (A) O_3 (B) CO_2
 (C) CO (D) N_2
7. If the $Q_c > K_c$ the reaction will be in:
 (A) Chemical equilibrium (B) Static equilibrium
 (C) Reverse direction (D) Forward direction
8. Which one of the following is tasteless compound:
 (A) Starch (B) Glucose
 (C) Fructose (D) Sucrose
9. Which acid is used as an electrolyte in lead storage batteries:
 (A) Citric acid (B) Formic acid
 (C) Uric acid (D) Sulphuric acid
10. In product of Lewis acid-base reaction, the bond between the adduct species is:
 (A) Ionic (B) Covalent
 (C) Metallic (D) Coordinate covalent
11. Which fraction of the following is used as jet fuel:
 (A) Kerosene oil (B) Lubricating oil
 (C) Fuel oil (D) Petroleum ether
12. In laboratory, urea was prepared first time by:
 (A) Wohler (B) Rutherford
 (C) Berzellius (D) Dalton

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Time: 1: 45 Hrs.	SUBJECTIVE	Marks: 48

(SECTION - I) (Group - I)

2. Write short answers to any FIVE questions: (2×5=10)

- i. Define irreversible reaction.
- ii. Define equilibrium state.
- iii. Give any two characteristics of reverse reaction.
- iv. Define organic compound.
- v. Give two characteristics properties of bases.
- vi. What is conjugate acid? Define it.
- vii. Which acid is present in apples?
- viii. Define pH. What is the pH of pure water?

3. Write short answers to any FIVE questions: (2×5=10)

- i. Write formula of carboxyl group. Give an example of carboxylic acid.
- ii. What are aromatic compounds? Give an example.
- iii. Write any two properties of homologous series.
- iv. Define hydro-carbons.
- v. Describe any two uses of methane and ethane.
- vi. Give the characteristics of disaccharides (any two).
- vii. How do you justify that the amino acids are the building blocks of proteins?
- viii. Write two sources of vitamin D.

4. Write short answers to any FIVE questions: (2×5=10)

- i. Write two effects of global warming.
- ii. Describe primary pollutants and secondary pollutants.
- iii. Point out two serious effects of ozone depletion.
- iv. Write two properties of water.
- v. What are dysentery and typhoid.
- vi. Write name of raw materials which are used in Solvay's process.

- vii. Write two advantages of Solvay's process.
viii. Write two important uses of urea.

(SECTION-II)

Note:

Attempt any TWO questions:

5. (a) State the Law of Mass Action and derive the expression for equilibrium constant for a general reaction. (5)
(b) Write four chemical properties of acid. (4)
6. (a) Write down any five physical properties of alkanes. (4)
(b) Describe any four uses of carbohydrates. (5)
7. (a) Write importance and status of urea. (4)
(b) Explain the methods of removing hardness in water. (5)

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(Group-II)

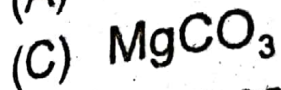
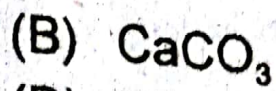
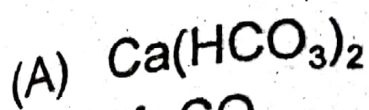
Note: You have four choices for each objective type question as A, B, C and D. The choice which you think is correct, fill that circle in front of that question number. Use marker or pen to fill the circles. Cutting or filling two or more circles will result in zero mark in that question.

1.1. The units of equilibrium constant K_c for reaction in the balance equation.



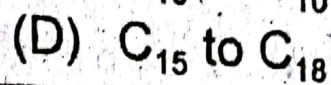
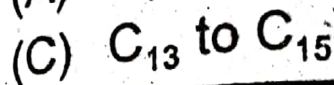
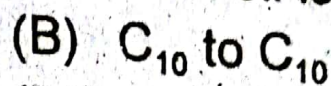
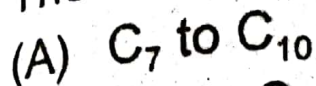
- (A) mol dm^{-3} (B) $\text{mol}^{-1} \text{dm}^3$
(C) $\text{mol}^{-2} \text{dm}^6$ (D) No units

2. Reactions which have comparable amounts of reactants and products at equilibrium state have:
(A) Very small K_c value (B) Very large K_c value
(C) Moderate K_c value (D) None of these
3. Potassium ferrocyanide $K_4[Fe(CN)_6]$ is:
(A) Acidic salt (B) Basic salt
(C) Double salt (D) Complex salt
4. The conjugate acid of HPO_4^{2-} is:
(A) PO_4^{3-} (B) $H_2PO_4^{2-}$
(C) $H_2PO_4^-$ (D) H_3PO_4
5. The molecular formula for Decane is:
(A) $C_{10}H_{22}$ (B) $C_{10}H_{20}$
(C) $C_{10}H_{18}$ (D) $C_{10}H_{21}$
6. The oxidation of alkenes produce:
(A) Glyoxal (B) Glycol
(C) Oxalic acid (D) Formic acid
7. The formula of stearic acid is:
(A) $C_{14}H_{31}COOH$ (B) $C_{15}H_{31}COOH$
(C) $C_{16}H_{31}COOH$ (D) $C_{17}H_{35}COOH$
8. Night-blindness is because of deficiency of:
(A) Vitamin A (B) Vitamin E
(C) Vitamin C (D) Vitamin D
9. Normally rainwater is weakly acidic because of:
(A) SO_3 gas (B) CO_2 gas
(C) SO_2 gas (D) NO_2 gas
10. Specific heat capacity of water is:
(A) $4.2 \text{ KJg}^{-1} \text{ K}^{-1}$ (B) $4.2 \text{ Jg}^{-1} \text{ K}^{-1}$
(C) $2.4 \text{ Jg}^{-1} \text{ K}^{-1}$ (D) $2.4 \text{ KJg}^{-1} \text{ K}^{-1}$
11. Temporary hardness of water is due to:



12.

The composition of carbon in fuel oil is:



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(SECTION - I) (Group - II)

2.

Write short answers to any FIVE questions: (2×5=10)

i.

Define the Law of Mass Action.

ii.

What do you mean by equilibrium constant?

iii.

Write two characteristics of forward reaction.

iv.

How direction of a reaction can be predicted?

v.

Why BF_3 behaves as a Lewis acid?

vi.

Prove that water is an amphoteric species.

vii.

Define pH. What is pH of pure water?

viii.

How are the soluble salts recovered from water?

3.

Write short answers to any FIVE questions: (2×5=10)

i.

Define Homocyclic compound.

ii.

Describe two isomers of C_5H_{12} .

iii.

What are Alkyl radicals? Also write their general formula.

iv.

Why the alkenes are called olefins?

v.

Write the equation for the hydrogenation of alkenes.

vi.

How plants synthesize carbohydrates?

vii.

Define hydrocarbons.

viii.

Give the general formula of lipids.

4.

Write short answers to any FIVE questions: (2×5=10)

i.

Write percentage composition of atmosphere by

volume.

- ii. Give two effects of SO_2 .
- iii. Define ozone and ozone hole.
- iv. Define soft water and hard water.
- v. Give chemistry of swimming pool cleanliness.
- vi. Define gangue and metallurgy.
- vii. How Na_2CO_3 is obtained from NaHCO_3 ?
- viii. How ammonia is prepared by Haber's process?

(SECTION - II)

Note: Attempt any TWO questions:

5. (a) What is the importance of equilibrium constant? (5)
(b) Write down the uses of following bases: (5)
 - (i) Sodium Hydroxide.
 - (ii) Calcium Hydroxide.
 - (iii) Magnesium Hydroxide.
 - (iv) Aluminium Hydroxide.
6. (a) Describe uses of Ethene. (5)
(b) Write a note on mono-saccharides. (4)
7. (a) Define refining and write a note on fractional distillation of petroleum. (5)
(b) Explain any two waterborne diseases. How can these be prevented? (4)