

CHEMISTRY 10th SSC-10th-Swat-2026 Time: 20 Minutes Marks: 12 Multiple Choice Questions 01 Mark for each	Paper Code ① ② ●	Roll No. of the Student Serial No. Of the Answer Book _____
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SECTION-A

Note:

- 1) Attempting all MCQs is compulsory. This paper along with the OMR sheet must be returned to the superintendent after due time.
- 2) Fill the circle (A) (B) (C) (D), which one is correct with blue or black ball point in separate OMR Sheet like ●
- 3) If more than one circle in the OMR sheet is filled then no credit will be given to such answer.

I.i. The Naturally occurring metallic compounds are called:

- (A) Ores ● Minerals (C) Gangue (D) Clay

ii. Why urea is considered a nitrogenous fertilizer?

- (A) It contains only nitrogen ● It has a high percentage of nitrogen (C) It releases oxygen in soil (D) It dissolves in water

iii. Permanent hardness of water can be removed by:

- (A) Boiling (B) Adding lime water ● Adding washing soda (D) Cooling

iv. Temporary hardness of water is caused by:

- Calcium and
● magnesium bicarbonates (B) Sodium salts (C) Chlorides only (D) Sulfates only

v. The major gases responsible for acid rain are:

- (A) CO₂ and O₂ ● SO₂ and NO₂ (C) NH₃ and H₂S (D) CO and CH₄

vi. The layer just above the troposphere is:

- (A) Exosphere (B) Mesosphere (C) Thermosphere ● Stratosphere

vii. Why cotton is considered a pure form of cellulose?

- Because it contains Because it is Because plat fibers
(A) large amounts of starch (B) obtained directly from fruits ● mainly consist of cellulose (D) Because it is a disaccharide sugar

viii. The correct structural formula of propene (C₃H₆) is:

- (A) CH₃ - CH₂ - CH₃ (B) CH₂ = CH - CH₃ (C) CH ≡ C - CH₃ ● CH₃ - CH = CH₂

ix. A compound having carbon atoms joined in a ring is called:

- (A) Straight chain compound (B) Branched chain compound ● Cyclic compound (D) Saturated compound

x. Carbon can form four covalent bonds because it is:

- (A) Divalent (B) Trivalent ● Tetravalent (D) Pentavalent

xi. Arrhenius acids increase the concentration of which ion in water?

- (A) OH⁻ (B) NA⁺ ● H⁺ (D) Cl⁻

xii. A reaction is said to be reversible when:

- (A) It occurs only in one direction ● Products can react to form reactants again (C) It always goes to completion (D) It gives only one product

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CHEMISTRY (10th)

SSC-10th-Swat-2026

Note: Time allowed for section B and C is 2 hours and 40 minutes.

SECTION "B"

Marks: 32

1. **Attempt any EIGHT Parts out of the following. Each Part carries equal marks.**
1. Define reversible reaction? Explain any three conditions required to maintain a reversible reaction.
 2. Identify the following for the reaction: $\text{HNO}_3 + \text{H}_2\text{O} \rightleftharpoons \text{H}_3\text{O}^+ + \text{NO}_3^-$
a) proton donor b) proton acceptor c) HNO_3 as acid or base d) H_2O as acid or base
 3. Differentiate between saturated and unsaturated hydrocarbons on the basis of nature and type of carbon-carbon bonds.
 4. Define carbonyl compound. Write its types. Differentiate between aldehyde and ketone with respect to their functional groups and general formulas.
 5. What is dehydration reaction? Write a chemical equation for the dehydration of propanol to form propene. Name the two conditions of the reaction.
 6. Define carbohydrates. Differentiate between disaccharides and trisaccharides with reference to example of each.
 7. What are vitamins? Mention two main functions of vitamins in the human body.
 8. Describe any two sources of carbon monoxide. Explain any two harmful effects of carbon monoxide on human health.
 9. Write the physical properties of pure water in terms of:
a) density b) heat capacity c) latent heat of fusion d) latent heat of vaporization
 10. Write the four characteristics of small molecules obtained from fractional distillation of petroleum.
 11. State the four conditions necessary for the formation of petroleum and natural gas (each).

SECTION "C"

Marks: 21

Note: Attempt any THREE questions of the following. Each question carries equal Marks.

12. (a) Write the following four formulae of propane: 4
i. molecular ii. condensed iii. structural iv. dot-cross
(b) Write the equilibrium constant expression for: $2\text{SO}_2(\text{g}) + \text{O}_2(\text{g}) \rightleftharpoons 2\text{SO}_3(\text{g})$ 3
Identify reactants and products in the expression.
13. (a) What are chlorofluorocarbons (CFCs)? Give summary of their three reactions involved in ozone depletion. 4
(b) Why is H^+ considered a Lewis acid? Classify H^+ and H_2O in the formation of hydronium ion. 3
14. (a) Give the percentage distribution of water on earth in the following: 4
a. icecaps b. Groundwater c. Inland d. Atmospheric water
(b) Write the chemical equation for the preparation of ethyne from 1,2-dichloroethane using alcoholic KOH. 3
15. (a) Write any four steps in manufacture of sodium carbonate by Solvay's process. 4
(b) What are oils? Differentiate between fats and oils on the basis of nature of fatty acids and effect of melting point. 3