

(Section-A) Marks= (12) Time Allowed: 20 Minutes

All questions of this section must be answered on this page
and handed over to the Superintendent within given time

991234



Student Name _____

Name of Paper: CHEMISTRY (CH-II)

SSC-10th-Abbottabad-2026

Paper Date: 11 APR 26

Paper Code: 74

Signature of Student: _____

Paper Version

Sign and Seal of Suptd. _____

SEAL

246

سوالات

سوال نمبر کے مطابق درست جواب نمبر کا دائرہ پر کریں۔

1. At equilibrium, the concentration of reactants and products: a. must be equal,
b. remains constant with time, c. become zero, d. changes rapidly2. Which of the following is NOT an Arrhenius acid? a. H_2SO_4 b. HNO_3
c. CH_3COOH d. $NaOH$ 3. Carbon forms strong covalent bonds due to its. a. small size, b. large size,
c. low electronegativity, d. low ionization energy4. Cyclopropane belongs to which class of organic compounds?
a. straight chain, b. branched chain, c. cyclic, d. unsaturated5. What is the correct structure of butane (C_4H_{10})? a. $CH_3-CH-CH_2-CH_3$
b. $CH_2=CH-CH_2-CH_3$ c. $CH \equiv C-CH_2-CH_3$ d. $CH_2-CH=CH-CH_3$ 6. Which carbohydrate is stored in plants as food? a. glucose, b. starch,
c. cellulose, d. lactose7. The ozone layer is present in the: a. troposphere, b. stratosphere,
c. mesosphere, d. thermosphere8. Nitrogen oxides are mainly released from: a. vehicle and power plants,
b. oceans, c. forests, d. rivers

246

9. Hard water: a. lathers easily with soap, b. does not lather easily,
c. has no calcium or magnesium, d. is same as soft water10. Which chemical is used as ion-exchange method to remove permanent
hardness? a. $CaCl_2$ b. Na_2CO_3 c. $NaCl$ d. Zeolite11. An aggregate of mineral and other impurities is known as:
a. ore, b. mineral, c. gangue, d. rock12. Carbon contributes what percentage to the total mass of urea?
a. 46.67%, b. 20.00%, c. 26.67%, d. 6.6%

1. (A) (B) (C) (D)

2. (A) (B) (C) (D)

3. (A) (B) (C) (D)

4. (A) (B) (C) (D)

5. (A) (B) (C) (D)

6. (A) (B) (C) (D)

7. (A) (B) (C) (D)

8. (A) (B) (C) (D)

9. (A) (B) (C) (D)

10. (A) (B) (C) (D)

11. (A) (B) (C) (D)

12. (A) (B) (C) (D)

13. (A) (B) (C) (D)

14. (A) (B) (C) (D)

15. (A) (B) (C) (D)

If the Candidate is absent, the Superintendent Should fill this Circle } and pack the sheet with solved 10 sheets in roll number order

Time: 2 Hours 40 Minutes

SECTION-B**Marks: 32****NOTE:** Attempt any eight of the following short questions. Each question carries 4 marks

- Q.1 What is meant by a closed system? Explain why is it necessary for equilibrium? 2+2
- Q.2 Identify the following in the reaction: $\text{H}_2\text{SO}_4 + \text{H}_2\text{O} \rightleftharpoons \text{H}_3\text{O}^+ + \text{HSO}_4^-$ according to Bronsted-Lowry theory. (i) acid (ii) base (iii) proton donor (iv) proton acceptor 1+1+1+1
- Q.3 State two differences between saturated and unsaturated hydrocarbons in terms of reactivity and bonding. 2+2
- Q.4 Distinguish formaldehyde and formic acid based on the nature of their functional groups and structure. 2+2
- Q.5 Write balanced chemical equation for the preparation of ethene from chloroethane. Write name of the reaction and conditions required. 2+1+0.5+0.5
- Q.6 How are sucrose and maltose different in terms of. (i) nature of monosaccharides (ii) hydrolysis behaviour 2+2
- Q.7 Define water-soluble vitamins. Write the names of any two such vitamins. 2+2
- Q.8 What are nitrogen oxides? Describe their formation and any two effects on the environment. 1+1+2
- Q.9 Write physical properties of pure water in terms of. (i) odour (ii) taste (iii) effect on litmus (iv) electrical conductivity 1+1+1+1
- Q.10 Define fractional distillation. Explain any two basic principles on which fractional distillation of petroleum is based. 2+2
- Q.11 Explain in four points how are dead plants and animals converted into petroleum. 1+1+1+1

SECTION-C**Marks: 21****NOTE:** Attempt any three of the following questions. Each question carries 7 marks

- Q.12 i. Write the following four formulae of pentane: (i) Molecular (ii) Condensed (iii) Structural (iv) Dot-cross 1+1+1+1
- ii. Write the equilibrium constant expression for: $2\text{NO}_2(\text{g}) \rightleftharpoons 2\text{N}_2\text{O}_4(\text{g})$. Identify reactants and products in the expression. 2+1
- Q.13 i. Describe any four effects of ozone depletion on human health. 1+1+1+1
- ii. Define Lewis acid and base. Why does NH_3 act as Lewis base? 1+1+1
- Q.14 i. Write any four uses of water. 1+1+1+1
- ii. What is dehydrohalogenation reaction? Is this elimination or substitution reaction? Give example with reference to formation of ethyne. 1+1+1
- Q.15 i. Explain briefly carbonation of ammoniacal brine and calcination reactions with balanced chemical equations. 2+2
- ii. Define oils. Differentiate between fats and oils on the basis of source and type of fatty acids. 1+1+1