

BOARD OF INTERMEDIATE AND SECONDARY EDUCATION, PESHAWAR

Secondary School Certificate (S.S.C.) Examination 2022 · 10th (Fresh/Reappear)

Class 10th	CHEMISTRY	PR X (01) 22
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Time Allowed: 15 Minutes

SECTION - A

Marks: 12

Four circles are given against each question. Fill only the circle of the correct answer. Use a blue or black marker/pen. Filling more than one circle will be treated as a wrong answer.

1. Sugars are polyhydroxy derivative of:	☐ Alkyl halides	☐ Aldehyde	☐ Aldehyde and Ketone
	☐ Ketone		
2. The coldest region in the atmosphere is:	☐ Troposphere	☐ Stratosphere	☐ Mesosphere
			☐ Thermosphere
3. The density of water is maximum at:	☐ -40°C	☐ 40°C	☐ -4°C
			☐ 4°C
4. All steps are used for the extraction of metals except:	☐ Roasting	☐ Smelting	☐ Evaporation
			☐ Bessmiraization
5. Chlorine acts as bleaching agent in the presence of:	☐ HCl	☐ H ₂ O	☐ NaOH
			☐ HNO ₃
6. Percentage of nitrogen in urea is:	☐ 14	☐ 28	☐ 60
			☐ 46
7. Salts formed when OH ⁻ ions of a base are partially neutralized by an acid are called:	☐ Acidic salt	☐ Neutral salt	☐ Basic salt
			☐ All these
8. Chemical reaction in which products can react again to form the reactants is called:	☐ Irreversible reaction	☐ Reversible reaction	
	☐ Addition reaction	☐ Substitution reaction	
9. Which of the given is a Lewis base?	☐ HCl	☐ AlCl ₃	☐ BF ₃
			☐ F ⁻
10. Which of the given is an alcohol?	☐ CH ₃ -O-CH ₃	☐ CH ₃ -CH ₂ -OH	☐ CH ₃ COOH
			☐ CH ₃ -COH
11. Dehydration of ethyl alcohol with conc. H ₂ SO ₄ results in the formation of:	☐ Ethane	☐ Methane	☐ Ethyne
			☐ Ethene
12. Carbon is bonded on both sides to oxygen atom in:	☐ Alcohol	☐ Ketone	☐ Aldehyde
			☐ Ether

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Note: Time allowed for Section – B and Section – C is 2 Hours and 45 minutes.

Section – B

Marks: 32

Q-II Answer any EIGHT parts. Each part carries FOUR marks.

1. Describe Bronsted-Lowery concept of acids and bases.
2. Define the law of mass action.
3. Calculate the pH and pOH of 0.5 M solution of HCl. (pH = 0.301, pOH = 13.69)
4. How alkyl radicals are formed? Discuss with examples.
5. Which one is more reactive between alkane and alkene? Explain.
6. Differentiate between fats and oils.
7. What is acid rain? Explain.
8. Write any five physical properties of water.
9. Differentiate between mineral and ore.
10. Vitamins are vital for us, why?
11. Write any five different uses of urea.

Section – C

Marks: 21

Note: Attempt any THREE questions. All questions carry equal marks.

- Q-III** (a) How are proteins important to living organisms? (4)
 (b) Distinguish between primary pollutants and secondary pollutants. (3)
- Q-IV** (a) What is salt? Write the different types of salts with examples. (5)
 (b) State the conditions necessary for chemical equilibrium. (2)
- Q-V** (a) What are the different uses of organic compounds? (4)
 (b) How alkenes are prepared by dehydration of alcohol? (3)
- Q-VI** (a) How blister copper is purified? (4)
 (b) What are the causes of hardness of water? (3)

Transcribed and typeset by Tayarri from a publisher's scan of the board paper. The scan arrived with the correct options already shaded in; every option is given here unmarked. No answer key is included.

Section A's instructions are printed in Urdu on the original sheet; they are given here in English.

Board spellings and wording are kept exactly as printed.

The subjective sheet's top line (paper reference) is cut off at the scan edge; "PR X (01) 22" is taken from the objective sheet's "Chemistry Paper – X (01) (22)".

Section B Q.3 prints its own answers in brackets (pH = 0.301, pOH = 13.69); reproduced as printed.

Section C Q-IV is split 5 + 2 on the sheet, unlike the 4 + 3 of the other questions; reproduced as printed.

Verbatim board spellings: Bessmiraization (Bessemerization), Bronsted-Lowery.