

AGA KHAN UNIVERSITY EXAMINATION BOARD

SECONDARY SCHOOL CERTIFICATE

CLASS X

ANNUAL EXAMINATIONS (THEORY) 2023

Chemistry Paper II

Time: 1 hour 50 minutes Marks: 25

INSTRUCTIONS

Please read the following instructions carefully.

1. Check your name and school information. Sign if it is accurate.

**I agree that this is my name and school.
Candidate's Signature**

RUBRIC

2. There are SIX questions. Answer ALL questions. Questions 5 & 6 each offer TWO choices. Attempt any ONE choice from each.
3. When answering the questions:

Read each question carefully.
Use a black pointer to write your answers. DO NOT write your answers in pencil.
Use a black pencil for diagrams. DO NOT use coloured pencils.
DO NOT use staples, paper clips, glue, correcting fluid or ink erasers.
Complete your answer in the allocated space only. DO NOT write outside the answer box.
4. The marks for the questions are shown in brackets ().
5. You may use a simple calculator if you wish.

Q.1. (Total 4 Marks)

Mention FOUR macroscopic properties of a reversible reaction with reference to both forward and reverse reactions.

S. No.	Forward Reaction	Reverse Reaction
1		
2		
3		
4		

Q.2. (Total 3 Marks)

Draw the structures of any THREE possible alkyl radicals that can be formed using the given chain isomers.

- n-butane
- Isobutane

n-butane	Isobutane

Q.3.

(Total 3 Marks)

Differentiate between oils and fats on the basis of the given features.

Feature	Oils	Fats
Source		
Level of Unsaturation		
Physical State at Room Temperature		

Q.4.

(Total 3 Marks)

Chemical wastes are one of the causes of water pollution.

a. Identify the source through which these wastes enter into water.

(1 Mark)

b. Describe any ONE harmful effect of these wastes on each of the following:

(2 Marks)

i. Water quality

ii. Aquatic life

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Q.5.

(Total 6 Marks)

EITHER

a.

- i. Write any TWO characteristic properties of salts. (2 Marks)
- ii. With the help of balanced chemical equation, show the preparation of soluble salts by reacting
 - hydrochloric acid with aluminium. (2 Marks)
 - sulphuric acid with ammonium hydroxide. (2 Marks)

OR

b.

- i. Write any TWO physical properties of ethene. (2 Marks)
- ii. Write chemical equations to show the preparation of ethene by the following methods.
- Dehydration of ethanol using excess of sulphuric acid (2 Marks)
 - Dehydrohalogenation of ethyl bromide with alcoholic potassium hydroxide (2 Marks)

(**Note:** Mention conditions where essential for the reaction to occur.)

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Q.6.

(Total 6 Marks)

EITHER

- a. An air quality index (AQI) of a city reports that the level of greenhouse gases and particulate matter is alarming.

Suggest any SIX measures that the city government should take to combat the given situation.

(6 Marks)

OR

- b. Explain the negative effect of excessive use of fertilisers on the following components of the environment.

i. Water bodies

(2 Marks)

ii. Human health

(2 Marks)

iii. Climate across the globe

(2 Marks)

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Please use this page for rough work

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