

AGA KHAN UNIVERSITY EXAMINATION BOARD

SECONDARY SCHOOL CERTIFICATE

CLASS X EXAMINATION

APRIL/ MAY 2018

Chemistry Paper II

Time: 2 hours 25 minutes Marks: 40

INSTRUCTIONS

Please read the following instructions carefully.

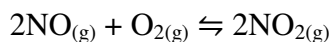
1. Check your name and school information. Sign if it is accurate.

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

2. RUBRIC. There are TEN questions. Answer ALL questions. Questions 9 & 10 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 3 Marks)



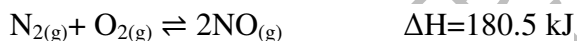
For the given reversible reaction,

a. write the equilibrium constant expression K_C . (1 Mark)

b. determine the unit of equilibrium constant K_C . (2 Marks)

Q.2. (Total 3 Marks)

Consider the following reversible reaction at equilibrium.



a. What will happen to the equilibrium when the following conditions occur?

i. Temperature of the system is decreased (1 Mark)

ii. Pressure of the system is increased (1 Mark)

b. Give a reason for your answer to part ii. (1 Mark)

Q.3.

(Total 3 Marks)

a. State the general formula for alkenes.

(1 Mark)

b. Mention any TWO characteristics of homologous series.

(2 Marks)

Q.4.

(Total 3 Marks)

a. Name and write the structural formula of an alkene with three carbon atoms.

(2 Marks)

b. Write a balanced chemical equation to show the preparation of alkene (identified in part **a**) by the dehydration of alcohol.

(1 Mark)

PLEASE TURN OVER THE PAGE

Q.5. (Total 3 Marks)

Classify the given characteristics of fats and oils in the following table.

- They are usually obtained from plants.
- They can easily be oxidised at high temperature.
- They contain higher amounts of long chain saturated fatty acids.

Fats	Oils

Q.6. (Total 3 Marks)

Vitamin C is a water soluble dietary supplement which is essential for good health.

Mention any THREE of its functions in maintaining good health.

Q.7.

(Total 4 Marks)

Tick (✓) against the statements which are TRUE characteristics of water.

S. No.	Statement	Tick (✓) the TRUE Characteristic of Water
1.	It is a non-polar covalent compound.	
2.	Its molecule consists of two O–H bonds and two lone pairs of electrons on oxygen atom.	
3.	It is amphoteric in nature.	
4.	Its density decreases on cooling up to 4°C.	
5.	It has a high surface tension.	
6.	It releases hydrogen gas when it reacts with calcium oxide.	
7.	It produces 'water gas' when it reacts with carbon in the form of steam.	

Q.8.

(Total 3 Marks)

Petroleum is a naturally occurring crude oil which is yellow to black in appearance.

a. What is petroleum composed of? (1 Mark)

b. Which process is used to separate the components of petroleum? (1 Mark)

c. Define the process identified in part b. (1 Mark)

PLEASE TURN OVER THE PAGE

EITHER

- OR**

- b. Write a balanced chemical equation to show the following reactions. (4 Marks)
- i. Preparation of alkyne by
- dehydrohalogenation of 1,2-dibromoethane (vicinal dihalide) in the presence of alcoholic potassium hydroxide.
 - dehalogenation of 1,1,2,2-tetrabromopropane (tetrahalide) in the presence of zinc dust.
- ii. Oxidation of ethyne in the presence of alkaline potassium permanganate. (4 Marks)

FB May 2018
Learning Only

AKU-EB May 2018
for
Teaching & Learning Only

PLEASE TURN OVER THE PAGE

EITHER

- OR**

AKU-EB May 2020
Teaching & Learning

AKU-EB May 2018
for
Teaching & Learning Only

END OF PAPER

Please use this page for rough work

AKU-EB May 2018
for
Teaching & Learning Only

Please use this page for rough work

AKU-EB May 2018
for
Teaching & Learning Only

Please use this page for rough work

AKU-EB May 2018
for
Teaching & Learning Only