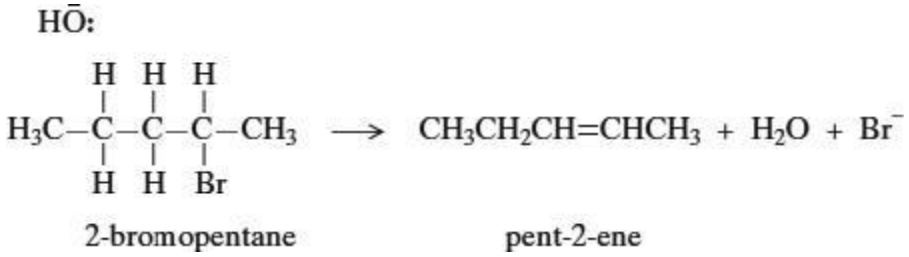
Practice Question Set For A-Level
Subject : Chemistry
Paper-2 Topic: IntroductionTo Organic Chemistry

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Name of the Student:_____
Max. Marks : 24 Marks **Time : 24 Minutes**

Q1.

(a) Complete the mechanism below by drawing appropriate curly arrows.



(3)

(b) Draw and name the geometrical E-Z isomers of pent-2-ene.

Isomer 1 *Isomer 2*

Name _____ *Name* _____

(2)

(c) Pent-1-ene reacts with hydrogen bromide to produce 2-bromopentane as the major product.

(i) Outline the mechanism for this reaction.

(ii) Identify the minor product formed in this reaction.

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(iii) Explain why 2-bromopentane is the major product of this reaction.

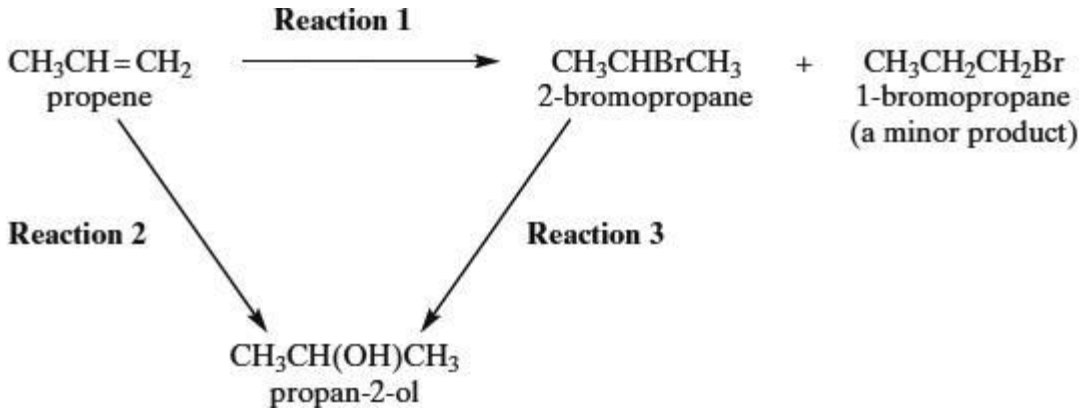
(7)

(Total 12 marks)

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Q2.

Consider the following reaction scheme.



(a) (i) Name the mechanism for **Reaction 1**.

_____

(ii) Explain why 1-bromopropane is only a minor product in **Reaction 1**.

_____

_____

_____

(3)

(b) Give a suitable reagent and state the essential conditions required for **Reaction 3**.

Reagent _____

Conditions _____

(2)

(c) The reagent used for **Reaction 3** can also be used to convert 2-bromopropane into propene. State the different conditions needed for this reaction.

_____

(1)

(d) **Reaction 2** proceeds in two stages.

Stage 1 $CH_3CH=CH_2 + H_2SO_4 \rightarrow CH_3CH(OSO_2OH)CH_3$

Stage 2 $CH_3CH(OSO_2OH)CH_3 + H_2O \rightarrow CH_3CH(OH)CH_3 + H_2SO_4$

(i) Name the class of alcohols to which propan-2-ol belongs.

_____

(ii) Outline a mechanism for Stage 1 of **Reaction 2**, using concentrated sulphuric acid.

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(iii) State the overall role of the sulphuric acid in **Reaction 2**.

_____

(6)
(Total 12 marks)

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