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

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Name of the Student:_____
Max. Marks : 19 Marks **Time : 19 Minutes**

Q1.

Consider the following reaction in which an alkene is formed from a haloalkane.

$$CH_3CHBrCH_2CH_3 + KOH \xrightarrow[\text{ethanol solvent}]{\text{heat}} \underset{\text{but-2-ene}}{CH_3CH{=}CHCH_3} + KBr + H_2O$$

(a) Name the haloalkane used in this reaction.

_____

(1)

(b) Name and outline a mechanism for this reaction.

Name of mechanism _____

Mechanism

(4)

(c) Another alkene, which is a structural isomer of but-2-ene, is also formed during this reaction.

(i) State what is meant by the term *structural isomers*.

_____

_____

(ii) Draw the structure of this other alkene.

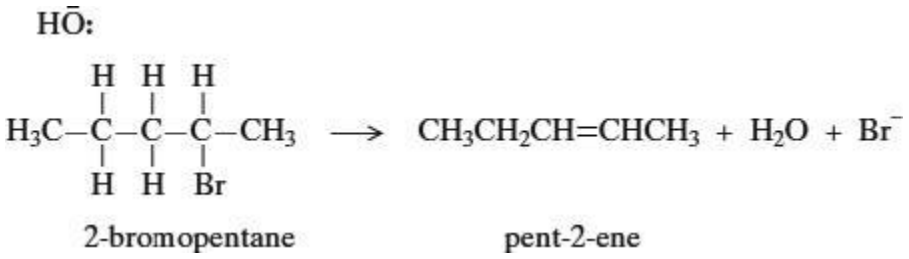
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(2)
(Total 7 marks)

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Q2.

(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.

_____

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

_____

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_____

(7)

(Total 12 marks)

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