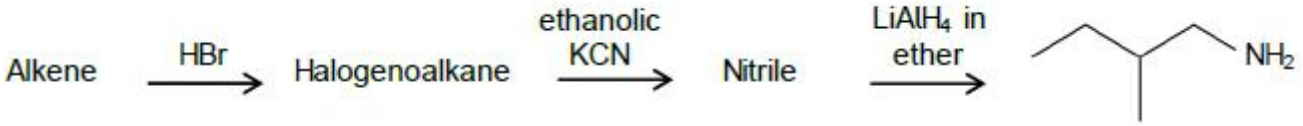
Practice Question Set For A-Level
Subject : Chemistry
Paper-2 Topic: Organic Synthesis

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Name of the Student:_____
Max. Marks : 18 Marks **Time : 18 Minutes**

Q1.

2-Methylbutylamine can be synthesised from an alkene.



What is the identity of the alkene?

A But-2-ene ⬭

B Methylpropene ⬭

C 2-Methylbut-1-ene ⬭

D 2-Methylbut-2-ene ⬭

(Total 1 mark)

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Q2.

The N-substituted amide $C_6H_{13}NO$ can be formed from but−2−ene in a three-step synthesis.



For each reaction

- state a reagent
- give the structure of the product
- name the mechanism of the reaction.

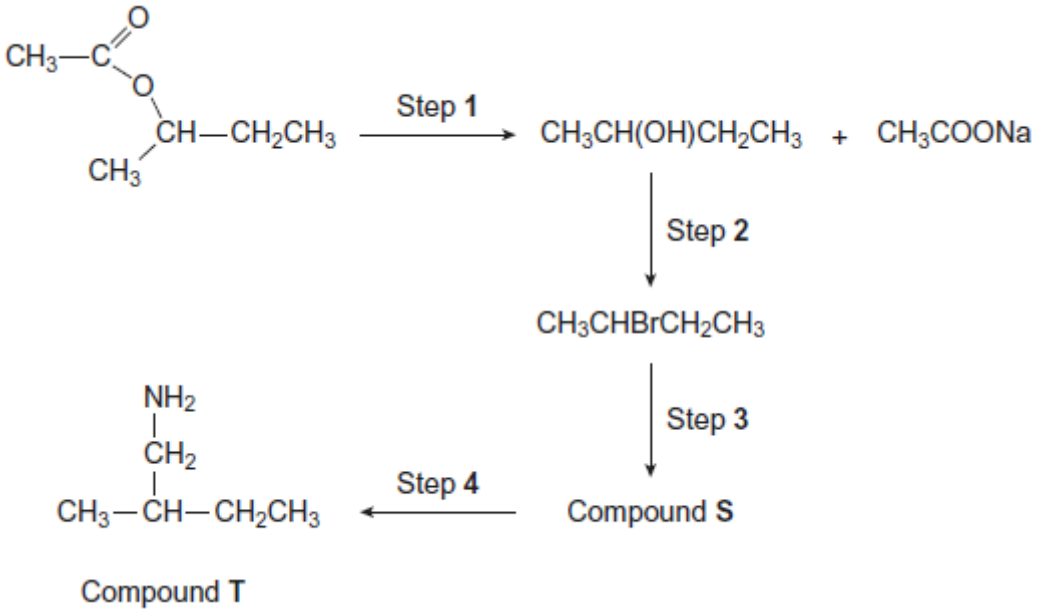
Detailed mechanisms are **not** required.

(Total 9 marks)

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Q3.

A four-step synthesis of compound **T** is shown.



(a) Give the reagent and conditions for Step **1**.
State how you could obtain a sample of the alcohol from the reaction mixture formed in Step **1**.

_____

_____

_____

_____

_____

(3)

(b) Draw the structure of compound **S**.
For each of Steps **3** and **4**, give a reagent and one condition, other than heat.

(5)

(Total 8 marks)

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