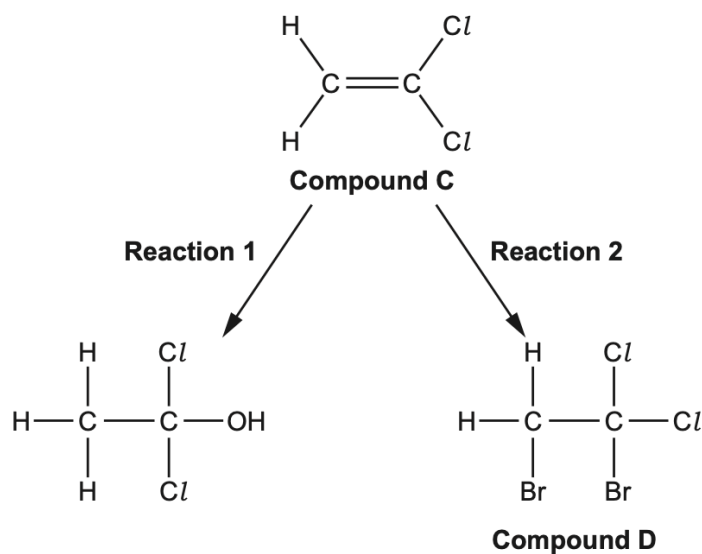


## **AS level Chemistry A**

**H032/02** Depth in chemistry

### **Question Set 12**

1. Two reactions of compound **C** are shown in the flowchart below.



- (a) State the reagents and conditions for **reaction 1**. [1]

*steam and acid catalyst (e.g.  $\text{H}_2\text{SO}_4$ )*

- (b) In **reaction 2**, compound **C** reacts with bromine to form compound **D**.

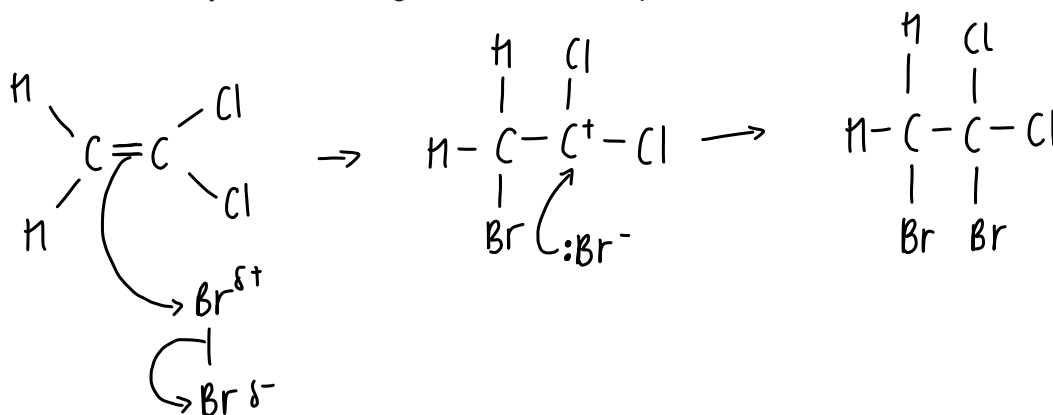
- (i) Give the systematic name of compound **D**. [1]

*1,2-dibromo-1,1-dichloroethane*

- (ii) Outline the mechanism for **reaction 2**.

Include curly arrows, charges and relevant dipoles.

[3]

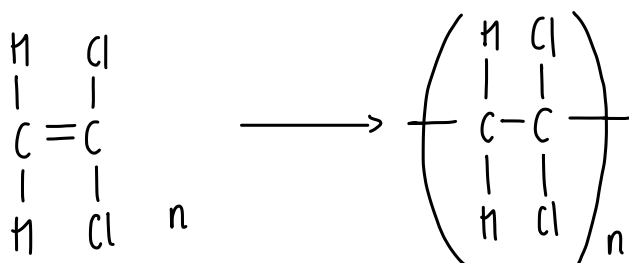


- (c) Compound **C** forms an addition polymer **E**.

- (i) Write a balanced equation for this reaction.

Show displayed formulae.

[2]



(ii) Outline the mechanism for **reaction 2**.

State **one** advantage and **one** disadvantage of using combustion as a method for the disposal of waste polymer **E**.

[2]

advantage : energy production  
disadvantage : formation of  $\text{CO}_2$  gases that cause global warming

**Total Marks for Question Set 6: 9**

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