

Name of the Student: _____

Max. Marks : 21 Marks

Time : 21 Minutes

Q1.

This question is about halogenoalkanes.

- (a) Chlorine atoms are formed in the upper atmosphere when ultraviolet radiation causes C–Cl bonds in chlorofluorocarbons (CFCs) to break.

Write **two** equations to show how chlorine atoms catalyse the decomposition of ozone.

1. _____

2. _____

(2)

- (b) Chloroethane reacts with potassium hydroxide in the presence of propan-1-ol to form ethene.

State the role of potassium hydroxide and the role of propan-1-ol in the reaction.

Role of potassium hydroxide _____

Role of propan-1-ol _____

(2)

- (c) Name and outline a mechanism for the reaction in part **(b)** between chloroethane and potassium hydroxide to produce ethene.

Name of mechanism _____

Mechanism

(4)

- (d) The structure of polymer **A** is shown.

Q2.

2-bromo-2-methylpentane is heated with potassium hydroxide dissolved in ethanol. Two structural isomers are formed.

- (a) State the meaning of the term **structural isomers**.

(1)

- (b) Name and draw the mechanism for the formation of **one** of the isomers.

Name of mechanism _____

Mechanism

(5)

(Total 6 marks)