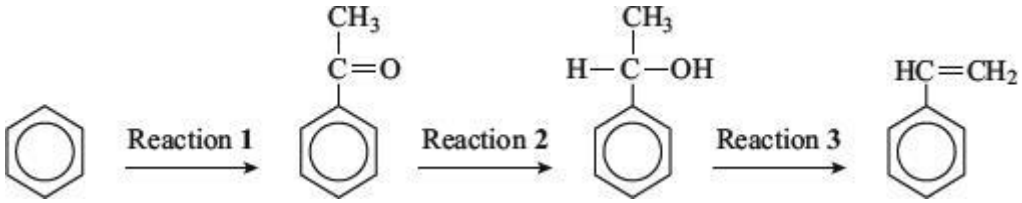
Practice Question Set For A-Level
Subject : Chemistry
Paper-2 Topic: Aromatic Chemistry

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Name of the Student:_____
Max. Marks : 22 Marks **Time : 22 Minutes**

Q1.

A possible synthesis of phenylethene *(styrene)* is outlined below.



(a) In Reaction **1**, ethanoyl chloride and aluminium chloride are used to form a reactive species which then reacts with benzene.
Write an equation to show the formation of the reactive species.
Name and outline the mechanism by which this reactive species reacts with benzene.

(6)

(b) $NaBH_4$ is a possible reagent for Reaction **2**.
Name and outline the mechanism for the reaction with $NaBH_4$ in Reaction **2**.
Name the product of Reaction **2**.

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(6)

(c) Name the type of reaction involved in Reaction **3** and give a reagent for the reaction.

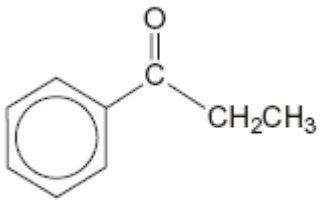
(2)

(Total 14 marks)

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Q2.

Consider compound **P** shown below that is formed by the reaction of benzene with an electrophile.



P

(a) Give the **two** substances that react together to form the electrophile and write an equation to show the formation of this electrophile.

_____

_____

_____

_____

_____

_____

(3)

(b) Outline a mechanism for the reaction of this electrophile with benzene to form **P**.

(3)

(c) Compound **Q** is an isomer of **P** that shows optical isomerism. **Q** forms a silver mirror when added to a suitable reagent.

Identify this reagent and suggest a structure for **Q**.

_____

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_____

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(2)

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(Total 8 marks)

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