Practice Question Set For A-Level
Subject : Chemistry
Paper-2 Topic: Carboxylic Acids & Derivatives

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

Mark Schemes

Q1.

(a) (i) An appropriate alkene; $CH_3CH_2CHCH_2$ or $(CH_3)_2CCH_2$ **1**

Isomer 1 **1**

Isomer 2 **1**

Position isomerism **1**

Mechanism

electrophilic attack and electron shift to Br (Unless H^+ used) **1**

carbocation **1**

reaction with carbocation
[Allow mechanism marks for the alkene $CH_3CHCHCH_3$]
[Allow one mark if mechanism for minor product given] **1**

(ii) An appropriate carbonyl; CH_3CH_2CHO **1**

Mechanism nucleophilic attack and electron shift to O **1**

anion intermediate **1**

reaction with anion
[Allow mechanism marks for the carbonyl $(CH_3)_2CO$] **1**

Isomer 1 **1**

Isomer 2 **1**

Optical isomerism
NB Isomer structures must be tetrahedral

NB Penalise "stick" structures once in part (a)

1

(b) QoL
Large charge on carbonyl carbon atom due to bonding to O and Cl

1

Nucleophiles have electron pairs which can be donated

1

Equation Species

1

Balanced

1

[18]