Practice Question Set For A-Level
Subject : Chemistry
Paper-2 Topic: Nuclear Magnetic Resonance Spectroscopy

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Name of the Student:_____
Max. Marks : 17 Marks **Time : 17 Minutes**

Mark Schemes

Q1.

C

[1]

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Q2.

D

[1]

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Q3.

(a) $K_2Cr_2O_7/H_2SO_4$ reuced by

$CH_3CH_2CH_2CH_2OH$ **(1)**

oxidised to $CH_3(CH_2)_2CHO$ **(1)**
and $CH_3(CH_2)_2COOH$ **(1)**

$CH_3CH_2CH_2CHO$ **(1)**

oxidised to $CH_3(CH_2)_2COOH$ **(1)**

Equation: $Cr_2O_7^{2-} + 14H^+ + 6e^- \rightarrow 2Cr^{3+} + 7H_2O$ **(1)**

Note: Deduct one if all three compounds given as reducing agents.

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(b) Tollens' reduced by
$CH_3CH_2CH_2CHO$ **(1)**

oxidised to $CH_3(CH_2)_2COOH$ **(1)**

Equation $[Ag(NH_3)_2]^+ + e^- \rightarrow Ag + 2NH_3$ **(1)**

3

(c) $CH_3CH_2CH_2CH_2OH$ **(1)**

Product $CH_3CH_2CH_2CH_2OOCCH_3$ **(1)**

$(CH_3)_3COH$

Product $(CH_3)_3COOCCH_3$ **(1)**

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(d) $CH_3CH_2CH_2OH$ has five peaks **(1)**

$(CH_3)_3COH$ has two peaks **(1)**

2

[15]

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