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

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Name of the Student:_____
Max. Marks :12 Marks **Time :12 Minutes**

Mark Schemes

Q1.

B

[1]

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Q2.

(a) (i) 0.86 **(1)**

(ii) total moles = 0.86 + 0.43 +0.085 = 1.375 **(1)**

∴ **mole fraction of H_2** = $\frac{0.86}{1.375}$ = 0.625 **(1)**

(0.62 - 0.63)

Conseq on (i)

(iii) pp = mole fract^n × total P **(1)**
= 0.625 × 1.75 × 10^4
= 1.09 × 10^4 (kPa) **(1)**
or 1.1(0)
Ignore units
Conseq on (ii)

5

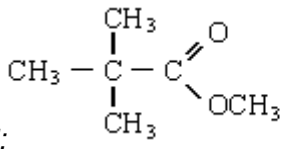
(b) (i) $K_p = \frac{P_{CH3OH}}{P^2_{H_2} \times P_{CO}}$ **(1)**
Penalise [ ]

(ii) $K_p = \frac{2710}{(12300)^2 \times (7550)}$ = 2.37 (2.4) × 10^{-9} **(1)**
OR 2.37 × 10^{-15}

Units: kPa^{-2}**(1)**
or Pa^{-2}
not conseq to wrong K_p expression

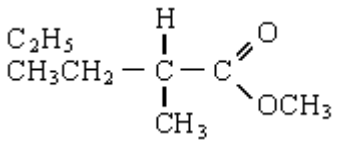
3

(c) *Isomer **E**:*



allow $(CH_3)_3CCOOCH_3$ or $(CH_3)_3CCO_2CH_3$ **(1)**

*Isomer **F**:*



(1)

2

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Q3.

D

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