37. Analytical techniques

37.2 Gas - liquid chromatography

Paper 4

Marking Scheme

Q1.

(b)(i)	time between injection and detection	**1**
(b)(ii)	29.5%	**1**

Q2.

(c)(i)	time between injection and detection [1]	**1**
(c)(ii)	an unreactive gas **AND** a non-polar liquid [1]	**1**
(c)(iii)	area of peak divided by total area of all peaks × 100% [1]	**1**

Q3.

(g)	mass of L = 58 / 44 * 5.52 × 10^{-2} = 7.28 × 10^{-2} g conc. of L = 7.28 × 10^{-2} / 116 = 6.27 × 10^{-4} (mol dm^{-3}) min 2sf	**1**

Q4.

(a)(i)	**stationary**: non-volatile (non-polar) liquid **mobile**: nitrogen / argon / any inert gas	**1**
(a)(ii)	the time that the substance stays in the column **OR** time between injection and detection **OWTTE**	**1**

(a)(iii)	areas are 30, 100, 25 **OR** 30, 150, 25 (½ × b × h) **OR** 100 / 155 [1] % of B = 100 × (100 / 155) **OR** % of B = 100 × 150 / 205 = = **64.5** = **73.2** [1] ecf M1 *areas*	**2**