

Multiple Choice Answers

Q15: A

Multiple Choice Answers

Q14: C

2(a)	M1 Al_2O_3 is ionic M2 P_4O_{10} is a (simple) molecule M3 ionic bonds are stronger than intermolecular forces
2(b)(i)	$\text{mol}^{-2} \text{ dm}^6$
2(b)(ii)	M1 at equilibrium: moles of CO = 0.120 AND moles of H_2 = 0.240 M2 $[\text{CH}_3\text{OH}] = 0.056$ AND $[\text{CO}] = 0.024$ AND $[\text{H}_2] = 0.048$ M3 use of K_c with correct evaluation = 1.01×10^3
2(b)(iii)	no effect AND K_c is not affected by pressure
2(c)(i)	increases rate by providing a different mechanism with a lower activation energy
2(c)(ii)	$2\text{CH}_3\text{OH} \rightarrow \text{CH}_3\text{OCH}_3 + \text{H}_2\text{O}$
2(c)(iii)	$\text{P}_4\text{O}_{10} + 6\text{H}_2\text{O} \rightarrow 4\text{H}_3\text{PO}_4$