

Multiple Choice Answers

Q35: A

Multiple Choice Answers

Q36: C

3(a)(i) 2 * = 1 mark (round down). Max 5 marks.

test	observations	
	FA 4	FA 5
1 + NaOH(aq)	red-brown / brown ppt AND insoluble in excess *	white ppt * soluble in excess *
2 + NH ₃ (aq)	red-brown / brown ppt AND insoluble in excess *	white ppt AND insoluble in excess *
3 + Na ₂ CO ₃ (aq)	fizzing * gas gives white ppt with limewater * red-brown ppt *	white ppt * fizzing * gas gives white ppt with limewater (award if not awarded for FA 4)
4 + BaCl ₂ (aq) / Ba(NO ₃) ₂ (aq)	white ppt AND	white ppt *
5 + H ⁺ / KMnO ₄ (aq)	stays purple / no change AND	stays purple / no change *

3(a)(ii)	<i>ions</i>	FA 4	FA 5
	cations	Fe ³⁺ , H ⁺	Al ³⁺
	anions	SO ₄ ²⁻	SO ₄ ²⁻
	5 ions correct = 3 marks 3 or 4 ions correct = 2 marks 2 ions correct = 1 mark		
3(b)(i)	2 * = 1 mark (round down)		
	<i>test</i>	<i>observations</i>	
		FA 6	FA 7
	1 + H ⁺ / KMnO ₄ (aq)	(turns paler pink)	(purple fades slightly)
	and warm	decolourises / turns colourless / turns (pale) yellow *	decolourises / turns colourless / turns (pale) yellow *
	2 + I ₂ (aq) + NaOH (and warm)	no change *	ppt * that is (pale) yellow *
	3 + Na ₂ CO ₃ (aq)	fizzing *	no change *

3(b)(ii)	M1 (FA 6 is) methanoic acid because it produces CO ₂ / reacts with sodium carbonate AND it can be oxidised / it reacts with KMnO ₄ M2 (FA 7 is) propan-2-ol as it gives a ppt in test 2 OR gives a positive tri-iodomethane/iodoform test OR has the -CH(OH)CH ₃ group
3(c)	Correct equation $\text{CH}_3\text{CH}_2\text{COOH} + \text{CH}_3\text{CH}_2\text{OH} \rightarrow \text{CH}_3\text{CH}_2\text{COOCH}_2\text{CH}_3 + \text{H}_2\text{O}$ OR $\text{C}_2\text{H}_5\text{COOH} + \text{C}_2\text{H}_5\text{OH} \rightarrow \text{C}_2\text{H}_5\text{COOC}_2\text{H}_5 + \text{H}_2\text{O}$