

Multiple Choice Answers

Q39: D

Q40: A

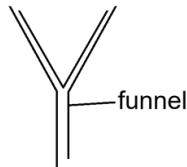
Multiple Choice Answers

Q39: B

Q40: D

3(a)	M1 2H ₂ O M2 state symbols (aq) and (l)
3(b)	neutralisation
3(c)	$0.0100 \times 1000 \div 40 = 0.25(0)$
3(d)	burette
3(e)	M1 mol H ₂ SO ₄ needed = $0.0100 \div 2 = 0.005(00)$ M2 vol of H ₂ SO ₄ needed = $0.005(00) \div 0.200 \times 1000 = 25 \text{ (cm}^3\text{)}$
3(f)	M1 yellow M2 orange
3(g)	repeat steps 1 and 3 without indicator
3(h)(i)	M1 (a solution containing the) maximum concentration of a solute dissolved in the solvent M2 at a specified temperature
3(h)(ii)	solubility decreases as temperature decreases
3(h)(iii)	none

1(a)	(conical) flask
1(b)	(concentrated) hydrochloric acid
1(c)	Bunsen (burner)
1(d)	<i>any one from:</i> • collection tube needs to be the other way up • use downward delivery • use upward displacement of air • collect chlorine in a gas syringe
1(e)	chlorine is toxic

1(a)(i)	effervescence/fizzing/bubbles
1(a)(ii)	M1 test with universal indicator M2 turns red/orange OR M1 add (more) acid M2 no fizzing/bubbles/effervescence
1(b)(i)	 M1 diagram showing filter paper in a funnel (both funnel and paper must be visible) M2 labels
1(b)(ii)	M1 (dilute) hydrochloric acid M2 calcium chloride
1(b)(iii)	M1 $2.00 - 0.11 = 1.89$ M2 $(1.89 \div 2.00) \times 100 = 94.5$