Chapter 13

Organic chemistry

13.1 Names of compounds

01. 0620_m22_qp_62 Q: 3

Solution **A** and solid **B** were analysed. Solution **A** was aqueous copper(II) bromide.
Tests were done on each substance.

Complete the expected observations.

tests on solution A

Solution **A** was divided into three approximately equal portions in three test-tubes.

(a) The end of a piece of wire was dipped into the first portion of solution **A**. The end of the wire was then placed at the edge of a roaring Bunsen burner flame.

observations ..... [1]

(b) To the second portion of solution **A** aqueous ammonia was added dropwise until in excess.

observations .....

.....

..... [3]

(c) To the third portion of solution **A** about 1 cm depth of dilute nitric acid followed by a few drops of aqueous silver nitrate were added.

observations .....

..... [1]

tests on solid B

tests	observations
Solid **B** was added to 15 cm^3 of water in a boiling tube. A bung was placed in the boiling tube and it was shaken to dissolve solid **B** and form solution **B**. Solution **B** was divided into three approximately equal portions in three test-tubes. **test 1** The first portion of solution **B** was tested using universal indicator paper.	the universal indicator paper turned blue
test 2 To the second portion of solution **B** aqueous sodium hydroxide was added dropwise and then in excess.	a white precipitate formed which remained when excess aqueous sodium hydroxide was added
test 3 To the third portion of solution **B** aqueous ammonia was added dropwise and then in excess.	the solution remained colourless

(d) Deduce the pH of solution **B**.

pH = ... [1]

(e) Identify solid **B**.

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..... [2]

[Total: 8]

02. 0620_w18_qp_61 Q: 4

Propanone and ethyl ethanoate are both solvents which can be used to remove paint.

Plan an investigation to determine which of these **two** solvents is better to use to remove paint.

You are provided with glass slides, paint, the two solvents and common laboratory apparatus.

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..... [6]

[Total: 6]

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Question	Answer	Marks
(a)	blue-green (flame)	1
(b)	(light/pale) blue precipitate	1
	dissolves / forms a solution	1
	deep(er) blue	1
(c)	cream precipitate	1
(d)	any pH in range 8 to 14	1
(e)	calcium / Ca^{2+}	1
	hydroxide / OH^-	1

02. 0620_w18_ms_61 Q: 4

	Method 1 □ Coat/paint glass slide(or any suitable inert material) □ With same amount / thickness of paint □ (leave to) dry □ Add controlled amount / drops of propanone □ Until paint / coating removed □ Count drops / measure volume □ Repeat with ethyl ethanoate □ Comparison / conclusion	**Max 6**
	Method 2 □ Weigh slides □ Add equal mass of paint to both □ Leave to dry □ Immerse each slide in 2 containers with each of solvents □ Fixed volume of solvent / excess solvent □ For set time interval / time □ Dry and reweigh slides / to dissolve □ Conclusion e.g. solvent causing greater mass loss is better or shortest time to dissolve is better	**Max 6**