

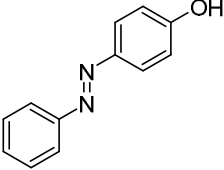
Unit Test 单元测验

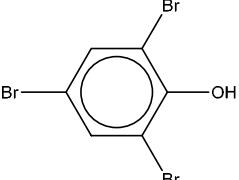
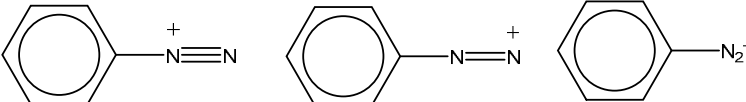
A-Level Chemistry · Unit 32 Hydroxy compounds

23 marks · 25 minutes

Part 1 · Vocabulary answer key. Sections A and C are marked on exact spelling; Section B accepts any listed Chinese form.

Question	Answer	Marks
1	acyl chloride	1
2	phenylamine	1
3	diazonium salt	1
4	azo compound	1
5	nitration	1
6	side-chain	1
7	aromatic	1
8	enthalpy change of hydrogenation	1
9	溴化	1
10	过渡元素	1

10(a)	$\text{C}_6\text{H}_5\text{O}^- / \text{C}_6\text{H}_5\text{O}^-\text{Na}^+ / \text{C}_6\text{H}_5\text{ONa}$ [1] $\text{C}_6\text{H}_5\text{O}^- / \text{C}_6\text{H}_5\text{O}^-\text{Na}^+ / \text{C}_6\text{H}_5\text{ONa}$ [1] $\text{C}_6\text{H}_5\text{N}_2\text{C}_6\text{H}_4\text{O}^-$ or $\text{C}_6\text{H}_5\text{N}_2\text{C}_6\text{H}_4\text{OH}$ or  [1] $\text{C}_6\text{H}_5\text{OCOC}_6\text{H}_4\text{CO}_2\text{C}_6\text{H}_5$ [1]
10(b)	2 and 4 [1]

7(a)	M1 p-orbital / lone pair from O atom is overlaps / delocalised into the ring M2 greater π electron density around the ring OR makes the ring more electron rich / positions 2,4,6 more electron rich M3 polarises electrophiles more easily
7(b)	iodobenzene AND as Br is more electronegative (than I / $\text{I}^{\delta+} / \text{I}^+$ in the electrophile)
7(c)(i)	$\text{C}_6\text{H}_6\text{O} / \text{C}_6\text{H}_5\text{OH} + \text{Na} \rightarrow \text{C}_6\text{H}_5\text{O}^-\text{Na}^+ + \frac{1}{2}\text{H}_2$
7(c)(ii)	
7(c)(iii)	M1 reaction 1: aqueous HNO_3 / dilute HNO_3 M2 reaction 2: alkaline / NaOH AND $\text{C}_6\text{H}_5\text{N}_2^+$ (Ct^-)  OR alkaline / NaOH AND benzene / phenyl diazonium ion / salt