

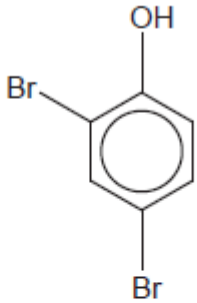
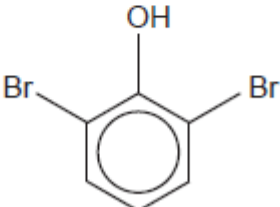
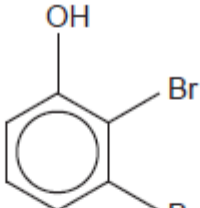
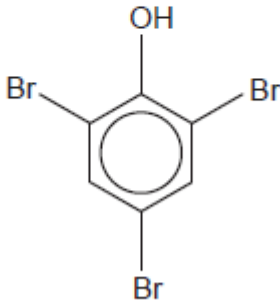
GCE A level Chemistry A (H432)
H432/02 Synthesis and analytical techniques

MCQ Question Set 5
6.1 Aromatic compounds, carbonyls and acids

Multiple Choice Questions

1. Phenol reacts with bromine.

Which is the **least** likely organic product?

A	
B	
C	
D	

Your answer

[1]

2. Equal amounts of the four compounds are added to the same volume of water.

Which compound would produce the most acidic solution?

- A CH_3CONH_2
- B CH_3COOH
- C $\text{CH}_3\text{COOCH}_3$
- D CH_3COCl

Your answer

[1]

3. 0.1 mol of $\text{HOOCCH}_2\text{COOH}$ are reacted with 0.1 mol of aqueous NaOH .

How many molecules of water are formed?

- A 6.02×10^{22}
- B 3.01×10^{22}
- C 6.02×10^{23}
- D 3.01×10^{23}

Your answer

[1]

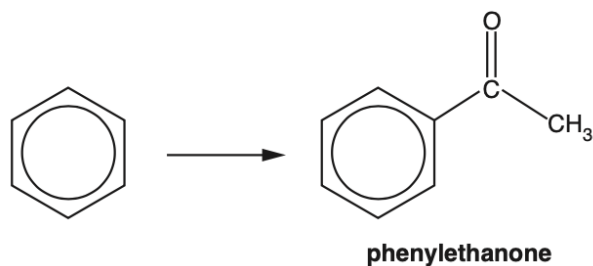
4. Which reagents could be used to prepare $\text{CH}_3\text{CH}_2\text{CONHCH}_3$?

- A $\text{CH}_3\text{CH}_2\text{COCl} + \text{CH}_3\text{NH}_2$
- B $\text{CH}_3\text{CH}_2\text{CONH}_2 + \text{CH}_3\text{Br}$
- C $\text{CH}_3\text{CH}_2\text{COONa} + \text{CH}_3\text{NH}_2$
- D $\text{CH}_3\text{CH}_2\text{COCH}_3 + \text{NH}_3$

Your answer

[1]

5. Benzene reacts with an organic reagent in the presence of a halogen carrier to form phenylethanone.



Which organic reagent is required?

- A $\text{CH}_3\text{CH}_2\text{OH}$
- B CH_3CHO
- C CH_3COCl
- D CH_3COOH

Your answer

[1]

6. Which statement(s) support(s) the delocalised model for the structure of benzene?

- 1 All carbon–carbon bonds have the same length.
- 2 The enthalpy change of hydrogenation of benzene is less exothermic than expected.
- 3 Bromine reacts with benzene less readily than with cyclohexene.

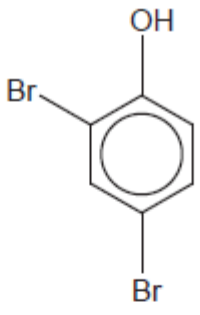
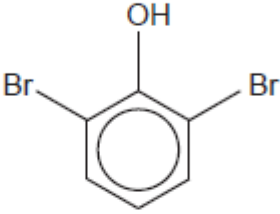
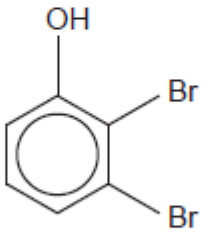
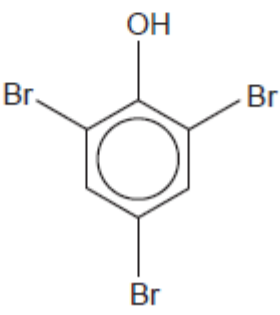
- A 1, 2 and 3
- B Only 1 and 2
- C Only 2 and 3
- D Only 1

Your answer

[1]

7. Phenol reacts with bromine.

Which is the **least** likely organic product?

A	
B	
C	
D	

Your answer

[1]

8. A carbonyl compound is reacted with NaBH_4 . Which compound(s) could be formed?

1 2-Methylpentan-2-ol

2 2-Methylpentan-1-ol

3 3-Methylpentan-2-ol

A 1, 2 and 3

B Only 1 and 2

C Only 2 and 3

D Only 1

Your answer

[1]

9. Which chemical(s) can react with phenol?

1 Potassium hydroxide

2 Ethanoyl chloride

3 Nitric acid

A 1, 2 and 3

B Only 1 and 2

C Only 2 and 3

D Only 1

Your answer

[1]

Total Marks for Question Set 5: 9

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