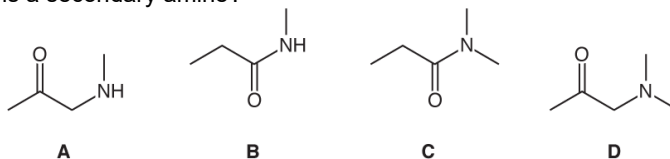


## Amines (MCQ)

1. Which molecule is a secondary amine?



Your answer

[1]

2.  $\text{CH}_3\text{CH}_2\text{Cl}$  reacts with an excess of ethanolic  $\text{NH}_3$ .

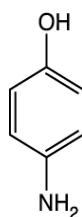
Which compound is the main organic product?

- A**  $\text{CH}_3\text{CH}_2\text{NH}_2$   
**B**  $(\text{CH}_3\text{CH}_2)_2\text{NH}$   
**C**  $(\text{CH}_3\text{CH}_2)_3\text{N}$   
**D**  $(\text{CH}_3\text{CH}_2)_4\text{N}^+$

Your answer

[1]

3. The compound shown below can be prepared from phenol.



Which reagent(s) is/are required?

- A** Concentrated  $\text{NH}_3$   
**B** Dilute  $\text{NH}_3$   
**C** Dilute  $\text{HNO}_3$  and then concentrated  $\text{HCl}/\text{Sn}$   
**D** Dilute  $\text{HNO}_3$  and then  $\text{NaBH}_4$

Your answer

[1]

END OF QUESTION PAPER

## Mark scheme – Amines (MCQ)

Question			Answer/Indicative content	Marks	Guidance
1			A	1	<b>Examiner Comments</b> This question was answered correctly by over 80% of the candidates. The main distractor appeared to be B which was an amide rather than an amine.
			<b>Total</b>	<b>1</b>	
2			A	1	
			<b>Total</b>	<b>1</b>	
3			C	1	
			<b>Total</b>	<b>1</b>	