



Oxford Cambridge and RSA

GCE A level Chemistry A (H432)

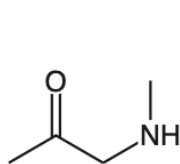
H432/02 Synthesis and analytical techniques

MCQ Question Set 6

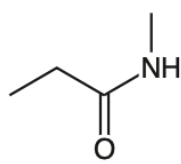
6.2 Nitrogen compounds, polymers and synthesis

Multiple Choice Questions

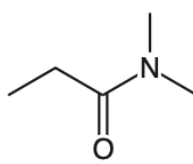
1. Which molecule is a secondary amine?



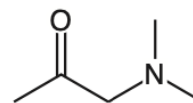
A



B



C

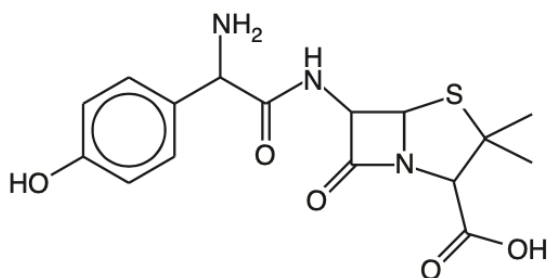


D

Your answer

[1]

2. What is the number of chiral centres in the molecule below?



A 2

B 3

C 4

D 5

Your answer

[1]

3. How many straight-chain structural isomers of $C_7H_{15}Cl$ contain a chiral carbon atom?

A 1

B 2

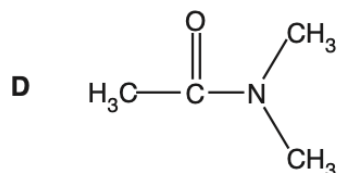
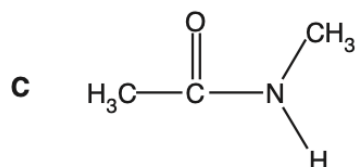
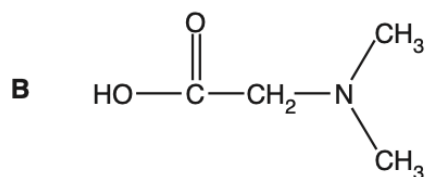
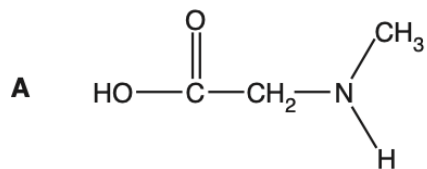
C 3

D 4

Your answer

[1]

4. Which compound is a secondary amide?



Your answer

[1]

5. A solid organic compound can be purified by recrystallisation.

Which statement(s) about recrystallisation is/are true?

- 1 The organic compound is more soluble in hot solvent.
- 2 The hot solution is cooled before the purified organic compound is collected.
- 3 The melting point of the purified organic compound is lower than the impure compound.

A 1, 2 and 3

B Only 1 and 2

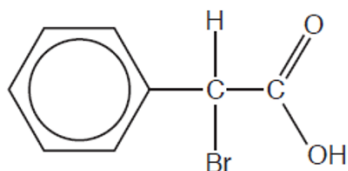
C Only 2 and 3

D Only 1

Your answer

[1]

6. Which of the following could react with the compound below to form a carbon–carbon bond?



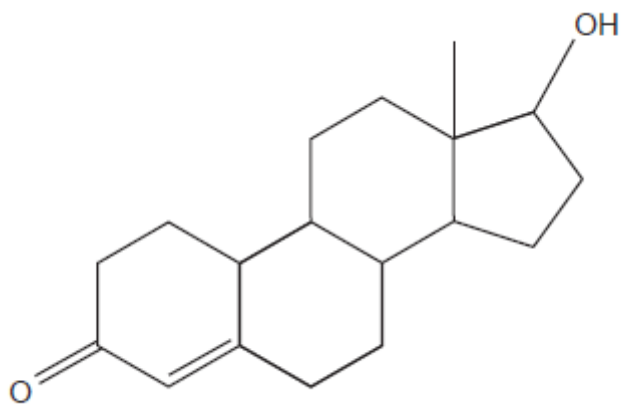
- 1 CH_3Cl and AlCl_3
- 2 KCN in ethanol
- 3 CH_3OH and H_2SO_4

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

Your answer

[1]

7. What is the number of chiral carbon atoms in the steroid molecule below?

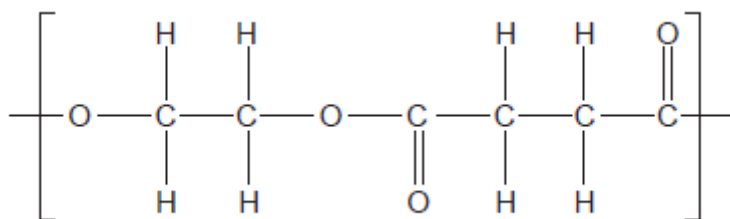


- A** 5
B 6
C 7
D 8

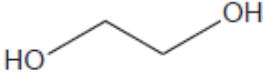
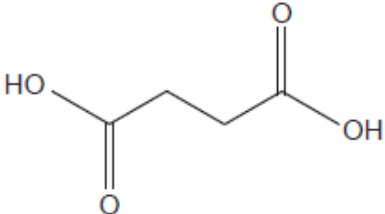
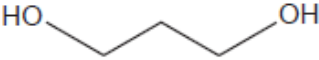
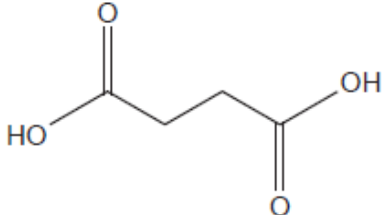
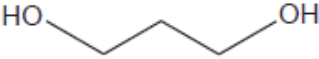
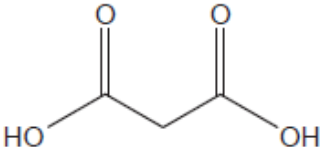
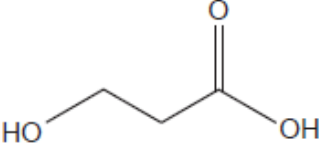
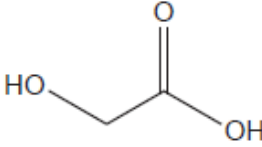
Your answer

[1]

8. The repeat unit of a polymer is shown below.



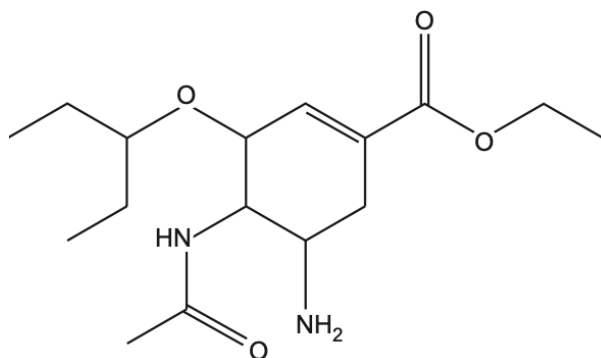
Which monomers could form this polymer?

A		
B		
C		
D		

Your answer

[1]

9. The structure of a compound used to treat influenza is shown below.



Which functional group(s) is/are in a molecule of the compound?

- 1 Ester
 - 2 Secondary amide
 - 3 Ketone
- 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 6: 9

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