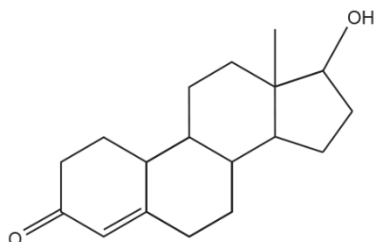


Amino Acids, Amides and Chirality

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



- A** 5
B 6
C 7
D 8

Your answer

[1]

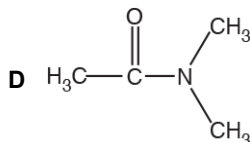
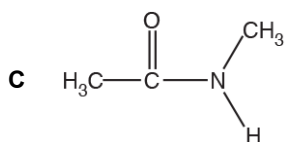
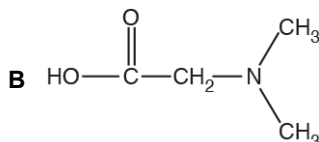
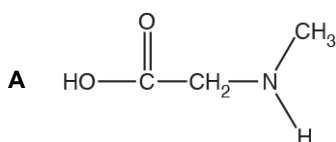
2. How many straight-chain structural isomers of $C_7H_{15}Cl$ contain a chiral carbon atom?

- A** 1
B 2
C 3
D 4

Your answer

[1]

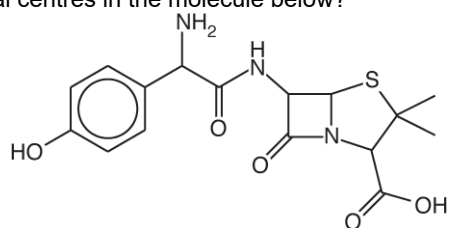
3. Which compound is a secondary amide?



Your answer

[1]

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

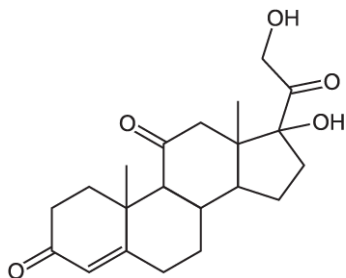


- A 2
B 3
C 4
D 5

Your answer

[1]

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



- A 4
B 5
C 6
D 7

Your answer

[1]

6. How many stereoisomers are there of $\text{CH}_3\text{CH}=\text{CHCH}(\text{OH})\text{CH}_2\text{CH}=\text{CH}_2$?

- A. 2
B. 4
C. 6
D. 8

Your answer

[1]

END OF QUESTION PAPER

Mark scheme – Amino Acids, Amides and Chirality (MCQ)

Question			Answer/Indicative content	Marks	Guidance
1			B	1 (AO 1.2)	ALLOW 6 (This is the number of chiral centres)
			Total	1	
2			B	1	ALLOW 2 (This is the number of straight chain isomers with a chiral C atom) Examiner's Comments This question proved difficult. Candidates who drew out the different isomers of chloroheptane were able to identify B as the correct response.
			Total	1	
3			C	1	Examiner's Comments The majority of candidates identified C as the secondary amide.
			Total	1	
4			C	1	ALLOW 4 (This is the number of chiral centres) Examiner Comments This question was answered well. The correct answer C, was provided by just over 60% of candidates. Where incorrect responses were seen, it was frequently due to the candidate missing one of the chiral centres, typically the one nearest to the sulfur atom within the ring.
			Total	1	
5			C	1	
			Total	1	
6			B	1	
			Total	1	