

# 20.3 Stereoisomerism

## Question Paper

Course	DIPB Chemistry
Section	20. Organic Chemistry (HL only)
Topic	20.3 Stereoisomerism
Difficulty	Hard

**Time allowed:** 10  
**Score:** /5  
**Percentage:** /100

### Question 1

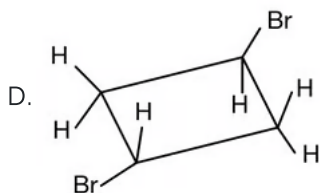
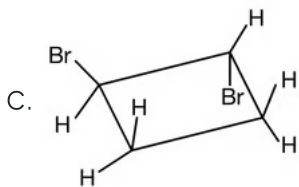
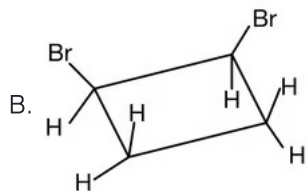
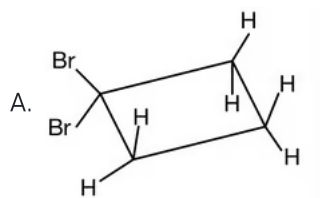
How many five ringed membered isomers are there of dimethyl cyclopentane?

- A. 3
- B. 4
- C. 5
- D. 6

[1 mark]

### Question 2

Which structure is the correct cis trans isomer of trans-1,2-dibromocyclobutane?



[1 mark]

**Question 3**

Which molecule has a chiral centre?

- A.  $\text{CH}_3\text{OCH}_2\text{CH}_3$
- B.  $\text{CH}_3\text{CH}_2\text{CHO}$
- C.  $\text{CH}_3\text{CH}(\text{NH}_2)\text{CH}_3$
- D.  $\text{CH}_3\text{CH}(\text{OH})\text{CH}_2\text{CH}_3$

[1 mark]

**Question 4**

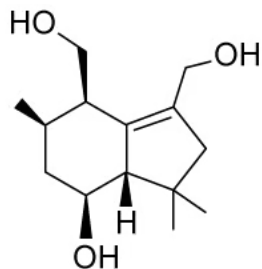
Which of the following statements is correct?

- I. 2-bromo-1-chloro-1-fluoropropene can not be classed as a cis or trans isomer
  - II. A polarimeter measures the configuration of a molecule as R or S
  - III. Conformational isomers occur due to the free rotation about a single  $\sigma$ -bond
- A. I and II only
  - B. I and III only
  - C. II and III only
  - D. I, II and III

[1 mark]

### Question 5

Arthrinin-F is a compound isolated from fungus.



What is the correct number of chiral carbons in the structure?

- A. 2
- B. 3
- C. 4
- D. 5

[1 mark]