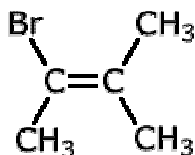


## Exercise 9.19 – Optical isomerism HL

**Q919-01** Which kind(s) of isomerism may be exhibited by the molecule:



- A. optical only
- B. geometrical only
- C. both geometrical and optical
- D. neither geometrical nor optical

**Q919-02** Which compounds can exist as optical isomers?

- A.  $\text{H}_2\text{NCH}_2\text{COOH}$
- B.  $\text{CH}_2\text{ClCH}_2\text{Cl}$
- C.  $\text{CH}_3\text{CHBrI}$
- D.  $\text{HCOOCH}_3$

**Q919-03** Which molecule possesses a chiral centre?

- A.  $\text{H}_2\text{NCH}_2\text{COOH}$
- B.  $\text{CH}_3\text{CH}(\text{NH}_2)\text{COOH}$
- C.  $\text{CH}_3\text{C}(\text{NH}_2)_2\text{COOH}$
- D.  $(\text{CH}_3)_2\text{C}(\text{NH}_2)\text{COOH}$

**Q919-04** Which one of the following compounds is optically active?

- A.  $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{NH}_2$
- B.  $\text{CH}_3\text{CH}_2\text{CH}(\text{NH}_2)\text{CH}_3$
- C.  $\text{CH}_3\text{CH}_2\text{NHCH}_2\text{CH}_3$
- D.  $\text{CH}_3\text{CH}_2\text{N}(\text{CH}_3)_2$

**Q919-05** Which compound can exist as optical isomers

- A.  $\text{CH}_3\text{CHBrCH}_3$
- B.  $\text{CH}_2\text{BrCHBrCH}_3$
- C.  $\text{CH}_2\text{BrCHBrCH}_2\text{Br}$
- D.  $\text{CHBr}_2\text{CHBrCHBr}_2$

**Q919-06** Which compound can show optical activity?

- A.  $\text{CH}_3\text{COOH}$
- B.  $\text{NH}_2\text{CH}_2\text{COOH}$
- C.  $\text{HOCH}(\text{CH}_3)\text{COOH}$
- D.  $(\text{CH}_3)_3\text{CCOOH}$

**Q919-07** Which of the following compounds is optically active?

- A.  $\text{CH}_3\text{COCH}(\text{CH}_3)_2$
- B.  $(\text{CH}_3)_3\text{CCHO}$
- C.  $\text{CH}_3\text{CH}_2\text{COCH}_2\text{CH}_3$
- D.  $\text{CH}_3\text{CH}_2\text{CH}(\text{CH}_3)\text{CHO}$

## Exercise 9.19 – Optical isomerism HL

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**Q919-08** Which species shows optical activity?

- A. 1-chloropentane
  - B. 3-chloropentane
  - C. 1-chloro-2-methylpentane
  - D. 2-chloro-2-methylpentane
- 

**Q919-09** Which of the following compounds is optically active?

- A.  $\text{HO-CH}_2\text{-COOH}$
  - B.  $\text{H}_3\text{C-CH(OH)-COOH}$
  - C.  $\text{H}_3\text{C-CH(CH}_3\text{)-COOH}$
  - D.  $\text{H}_3\text{C-CCl(CH}_3\text{)-COOH}$
- 

**Q919-10** Which of the following expressions is used for an equimolar solution of two optical isomers, which is externally compensated and shows no optical activity?

- A. Ophthalmic mixture
  - B. Ayurvedic mixture
  - C. Enantiomeric mixture
  - D. Racemic mixture
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