

Chapter 2: Alkanes
Reference: Organic Chemistry for Health Science
Pof.Salem S. Al-Theyab

Questions

Choose the correct answer for each of the following Questions

اختر الإجابة الصحيحة لكل سؤال من الأسئلة التالية

1) The product of the following reaction is:

• ناتج التفاعل التالي هو:



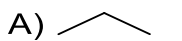

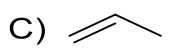

- A) Pentane
- B) Octane
- C) 1-Bromopentane
- D) 1-Bromopropane

2) The number of isomers for the molecular formula C_4H_{10} is:

• عدد المتشكلات المستنبطة من الصيغة الجزيئية C_4H_{10} هي:

- A) 1
- B) 2
- C) 3
- D) 4

3) Hydrogenation of cyclopropane gives:

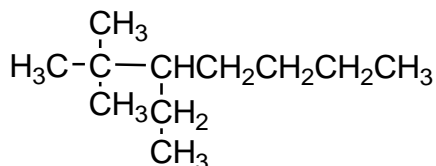
- A) 
- B) 
- C) 
- D) 

4) The bond angle in ethane is:

- a) 90°
- b) 120°
- c) 109.5°
- d) 300°

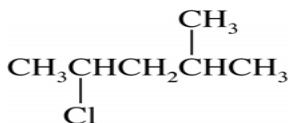
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- 5) The IUPAC name for the following compound,
الاسم النظامي للمركب التالي هو •

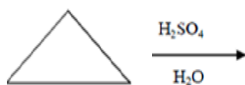


is:

- A) 5-ethyl-6,6-dimethylheptane
B) 3-ethyl-2,2-dimethylheptane
C) 2,2-dimethyl-3-ethylheptane
D) 6,6-dimethyl-5-ethylheptane
- 6) What is the correct IUPAC name of the following compound?



- A) 2-Methyl-4-chloropentane
B) 2-Chloro-4-methylpentane
C) 4-Chloro-2-methylpentane
D) 2-Chloro-2-methylpentane
- 7) Final product of the following reaction is:
الناتج النهائي للتفاعل التالي هو: •



- A) Propanol
B) 2-Propanol
C) Propane
D) Propanal

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8) The Major product of the following reaction is:

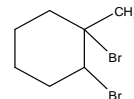
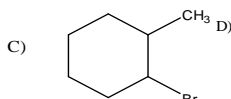
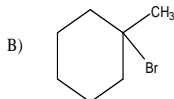
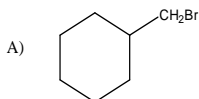
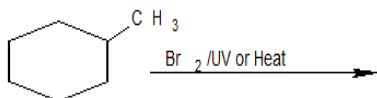
• الناتج الرئيس للتفاعل التالي هو:



- A) $\text{CH}_3\text{-CH}_2\text{-CH}_2\text{Cl}$
 B) $\text{ClCH}_2\text{-CH}_2\text{-CH}_2\text{Cl}$
 C) $\text{CH}_3\text{-CHCl-CH}_2\text{Cl}$
 D) $\text{CH}_3\text{-CHCl-CH}_3$

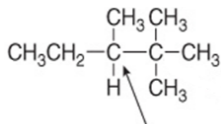
9) Resultant product of the following reaction is:

• ناتج التفاعل التالي هو



10) Indicated carbon in the given molecule is

• الكربون المبين في الجزيء هو



- A) 3^0 carbon B) 2^0 carbon
 C) 1^0 carbon D) 4^0 carbon

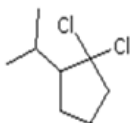
11) How many constitutional isomers are possible for below given compound C_6H_{14}

* كم عدد المتشكلات البنائية الممكنة للمركب الذي يأخذ الصيغة الجزيئية

- A) 3 B) 7 C) 5 D) 9

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12) What is the correct IUPAC name of the following compound?



- A) 1,1-dichloro-2-isopropylcyclopentane
B) 1-isopropyl-2,2-dichlorocyclopentane
C) 2-isopropyl-1,1-dichlorocyclopentane
D) 2,2-dichloro-1-isopropylcyclopentane
- 13) What is the shape (geometry) of CH₄ molecule?
- ما هو شكل جزيء الميثان CH₄ (الهندسي)
- A) Linear
B) Tetrahedral
C) Planar
D) Trigonal planar
- 14) The compound with the highest boiling point is:
• المركب الاكثر درجة غليان هو:
- A) *n*-Hexane
B) 2,2-Dimethylbutane
C) 2-Methylpentane
D) *n*-Pentane
- 15) The bond angle in ethane is:
• الزاوية بين الروابط في جزيء الإيثان هي:
- A) 90° B) 120° C) 109.5° D) 300°
- 16) The hybridization at the carbonyl carbon atom is:
B) تهجين ذرة الكربون في مجموعة الكربونيل هو
- A) sp² B) sp C) sp⁴ D) sp³