



ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

WORKSHEET-49(CLASS-11)

TOPIC- HYDROCARBON



SUBJECT – CHEMISTRY

DURATION – 30 mins

F.M. - 15

DATE – 16.01.21

1. Which of the following conformation of n-butane is the most stable?

- (a) eclipsed
- (b) gauche
- (c) staggered
- (d) skew boat

Answer:©

2. Find the correct order for relative energies of the ethane conformations

- (a) staggered < skewed < eclipsed
- (b) skewed < staggered < eclipsed
- (c) skewed < eclipsed < staggered
- (d) staggered < eclipsed < skewed

Answer:(a)

3. Find the alkane (C_5H_{12}), which will give only one type of monohalogenated compound

- (a) 2,2-dimethylpropane
- (b) 2-methylbutane
- (c) cyclopentane
- (d) n-pentane

Answer:(a)

4. The bond angle between H-C-C bonds in ethane is

- (a) 120°
- (b) 180°

(c) 109°

(d) 109.5°

Answer:(d)

5. Alkanes undergo halogenation. It is an example of

(a) nucleophilic substitution

(b) elimination

(c) free-radical substitution

(d) electrophilic substitution

Answer:©

6. Which of the following is the most volatile compound?

(a) n-pentane

(b) Isobutane

(c) 2-methyl butane

(d) 2, 2-dimethyl propane

Answer:(d)

7. Paraffin wax is

(a) Saturated hydrocarbons

(b) Unsaturated hydrocarbons

(c) Alcohol

(d) Ester

Answer:(a)

8. Find the correct order for the ease of formation of free radicals

(a) $1^\circ > 2^\circ > 3^\circ$

(b) $3^\circ > 2^\circ > 1^\circ$

(c) $2^\circ > 1^\circ > 3^\circ$

(d) $2^\circ > 3^\circ > 1^\circ$

Answer:(b)

9. Formation of an alkane from the reduction of an alkyl halide with Zn is known as

- (a) Cannizzaro reaction
- (b) Frankland reaction
- (c) Kolbe reaction
- (d) Wurtz reaction

Answer:(b)

10. Find the compound with the highest boiling point among the following

- (a) n-Butane
- (b) n-Octane
- (c) Iso-octane
- (d) 2,2,3,3-Tetramethylbutane

Answer:(b)

11. The product obtained on heating 2-Bromopentane with potassium ethoxide in ethanol is

- (a) 1-pentene
- (b) 2-cis-pentene
- (c) trans-2-pentene
- (d) 2-ethoxy pentane

Answer: (c)

12. Choose the process by which liquid hydrocarbons can be converted to gaseous hydrocarbons

- (a) hydrolysis
- (b) oxidation
- (c) cracking
- (d) distillation under reduced pressure

Answer: (c)

13. Which one of the following halide can be used in the Friedel-Crafts reaction?

- (a) Isopropyl chloride
- (b) Bromobenzene
- (c) Chlorobenzene
- (d) Chloroethene

Answer: (a)

14. Which one of the following compound forms salt on reaction with NaNH_2 ?

- (a) C_2H_2
- (b) C_2H_6
- (c) C_6H_6
- (d) C_2H_4

Answer: (a)

15. Which among the following reagent can be used to distinguish between $\text{CH}_2\text{BrCH}=\text{CH}_2$ from $\text{CH}_3\text{CH}=\text{CHBr}$?

- (a) Br_2/CCl_4
- (b) cold KMnO_4
- (c) $\text{AgNO}_3/\text{C}_2\text{H}_5\text{OH}$
- (d) $\text{Ag}(\text{NH}_3)_2\text{OH}$

Answer: (c)

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