

This file was downloaded from the American Curriculum website



Hydrocarbons about Worksheet الملف

[Almanahj Website](#) → [American curriculum](#) → [12th Grade](#) → [Chemistry](#) → [Term 1](#) → [The file](#)

More files for 12th Grade , Subject Chemistry , Term 1

Worksheet about Atomic theory	1
Worksheet about Solid State	2
Worksheet about Introduction to Organic Chemistry	3
CHEMISTRY TEST	4

Unit 13 Hydrocarbons

Evaluation

I. Choose the best answer.

1. The correct statement regarding the comparison of staggered and eclipsed conformations of ethane, is (NEET)

- the eclipsed conformation of ethane is more stable than staggered conformation even though the eclipsed conformation has torsional strain.
- the staggered conformation of ethane is more stable than eclipsed conformation, because staggered conformation has no torsional strain.
- the staggered conformation of ethane is less stable than eclipsed conformation, because staggered conformation has torsional strain.
- the staggered conformation of ethane is less stable than eclipsed conformation, because staggered conformation has no torsional strain.

2. $C_2H_5Br + 2Na \xrightarrow{\text{dry ether}} C_4H_{10} + 2NaBr$ The above reaction is an example of which of the following

- Reimer Tiemann reaction
- Wurtz reaction
- Aldol condensation
- Hoffmann reaction

3. An alkyl bromide (A) reacts with sodium in ether to form 4, 5- diethyloctane, the

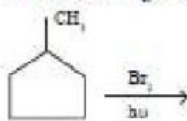
compound (A) is

- $CH_3(CH_2)_3Br$
- $CH_3(CH_2)_5Br$
- $CH_3(CH_2)_3CH(Br)CH_3$
- $CH_3 - (CH_2)_3 - CH(Br) - CH_3$
 $\quad \quad \quad |$
 $\quad \quad \quad CH_3$

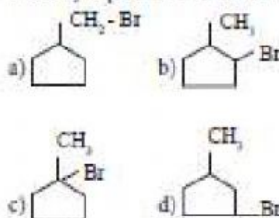
4. The C - H bond and C - C bond in ethane are formed by which of the following types of overlap

- $sp^3 - s$ and $sp^3 - sp^3$
- $sp^2 - s$ and $sp^2 - sp^2$
- $sp - sp$ and $sp - sp$
- $p - s$ and $p - p$

5. In the following reaction,



The major product obtained is



6. Which of the following is optically active

- 2 - methyl pentane
- citric acid
- Glycerol
- none of these

7. The compounds formed at anode in the electrolysis of an aqueous solution of potassium acetate are

- a) CH_4 and H_2
- b) CH_4 and CO_2
- c) C_2H_6 and CO_2
- d) C_2H_4 and Cl_2

8. The general formula for cyclo alkanes

- a) C_nH_n b) C_nH_{2n}
- c) $\text{C}_n\text{H}_{2n-2}$ d) $\text{C}_n\text{H}_{2n+2}$

9. The compound that will react most readily with gaseous bromine has the formula (NEET)

- a) C_3H_6 b) C_2H_2
- c) C_4H_{10} d) C_2H_4

10. Which of the following compounds shall not produce propene by reaction with HBr followed by elimination (or) only direct elimination reaction (NEET)

- a) ∇
- b) $\text{CH}_3 - \text{CH}_2 - \text{CH}_2 - \text{OH}$
- c) $\text{H}_2\text{C} = \text{C} = \text{O}$
- d) $\text{CH}_3 - \text{CH}_2 - \text{CH}_2\text{Br}$

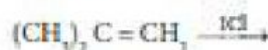
11. Which among the following alkenes on reductive ozonolysis produces only propanone ?

- a) 2 - Methyl propene
- b) 2 - Methyl but - 2 - ene
- c) 2, 3 - Dimethyl but - 1 - ene
- d) 2, 3 - Dimethyl but - 2 - ene

12. The major product formed when 2 - bromo - 2 - methyl butane is refluxed with ethanolic KOH is

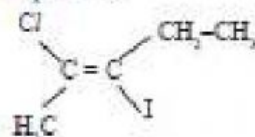
- a) 2 - methylbut - 2 - ene
- b) 2 - methyl butan - 1 - ol
- c) 2 - methyl but - 1 - ene
- d) 2 - methyl butan - 2 - ol

13. Major product of the below mentioned reaction is,



- a) 2-chloro - 1 - iodo - 2 - methyl propane
- b) 1-chloro - 2 - iodo - 2 - methylpropane
- c) 1,2 - dichloro - 2 - methyl propane
- d) 1, 2 - diiodo - 2 - methyl propane

14. The IUPAC name of the following compound is

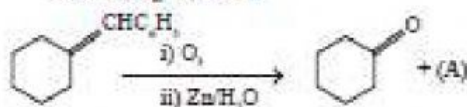


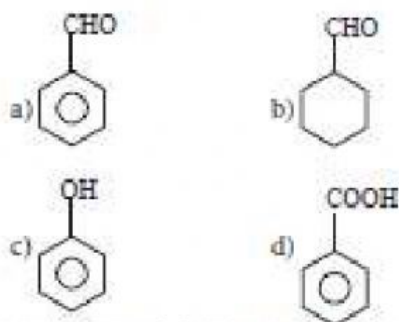
- a) trans - 2 - chloro - 3 - iodo - 2 - pentene
- b) cis - 3 - iodo - 4 - chloro - 3 - pentane
- c) trans - 3 - iodo - 4 - chloro - 3 - pentene
- d) cis - 2 - chloro - 3 - iodo - 2 - pentene

15. Cis - 2 - butene and trans - 2 - butene are

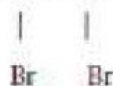
- a) conformational isomers
- b) structural isomers
- c) configurational isomers
- d) optical isomers

16. Identify the compound (A) in the following reaction





17. $\text{CH}_2 - \text{CH}_2 \xrightarrow{\text{A}} \text{CH} \equiv \text{CH}$, where A is,

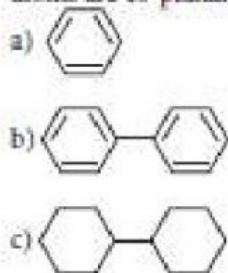


- a) Zn
c) alc. KOH
- b) Conc H_2SO_4
d) dil H_2SO_4

18. Consider the nitration of benzene using mixed conc. H_2SO_4 and HNO_3 , if a large quantity of KHSO_4 is added to the mixture, the rate of nitration will be

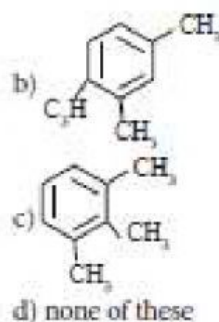
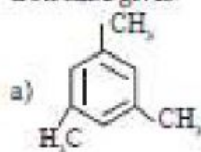
- a) unchanged
c) faster
- b) doubled
d) slower

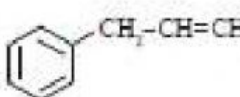
19. In which of the following molecules, all atoms are co-planar

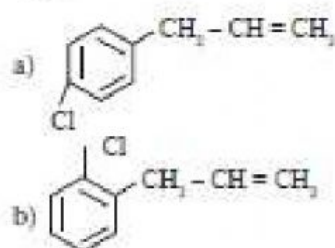


- d) both (a) and (b)

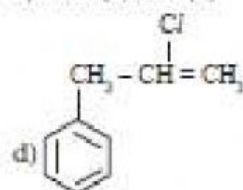
20. Propyne on passing through red hot iron tube gives



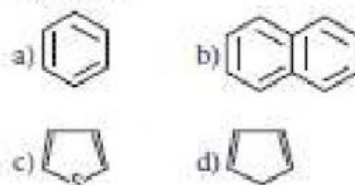
21.  $\xrightarrow{\text{HCl}}$ (A) is



- c) both (a) and (b)



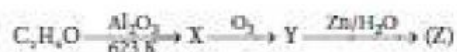
22. Which one of the following is non aromatic?



23. Which of the following compounds will not undergo Friedel-Crafts reaction easily? (NEET)

- a) Nitro benzene
b) Toluene

- c) Cumene d) Xylene
24. Some meta-directing substituents in aromatic substitution are given. Which one is most deactivating ?
- a) -COOH b) -NO₂
c) -C≡N d) -SO₃H
25. Which of the following can be used as the halide component for Friedel-Crafts reaction ?
- a) Chloro benzene
b) Bromo benzene
c) chloro ethene
d) isopropyl chloride
26. An alkane is obtained by decarboxylation of sodium propanoate. Same alkane can be prepared by
- a) Catalytic hydrogenation of propene
b) action of sodium metal on iodomethane
c) reduction of 1-chloro propane
d) reduction of bromomethane
27. Which of the following is aliphatic saturated hydrocarbon
- a) C₈H₁₈ b) C₈H₁₆
c) C₈H₁₄ d) All of these
28. Identify the compound 'Z' in the following reaction



- a) Formaldehyde
b) Acetaldehyde

c) Formic acid d) none of these

29. Peroxide effect (Kharasch effect) can be studied in case of

- a) Oct-4-ene b) hex-3-ene
c) pent-1-ene d) but-2-ene

30. 2-butyne on chlorination gives

- a) 1-chloro butane
b) 1,2-dichloro butane
c) 1,1,2,2-tetrachlorobutane
d) 2,2,3,3-tetra chloro butane