CHEMISTRY

BOOKS - FULL MARKS CHEMISTRY (TAMIL ENGLISH)

HYDROCARBONS

Textual Evaluation Solved Multiple Choice Question

1. The correct statement regarding the compariso of staggered and eclipsed conformations of ethane is .....

A. the eclipsed conformation of ethane is more stable than staggered conformation even though the eclipsed conformation has torsional strain

B. the staggered conformation of theane is more stable than eclipsed conformation becasuse staggered conformation has no torsional strain

C. the staggered conformatin of ethane is less stable than eclipsed conformation because staggered conformation has torsional strain

D. the staggered conformation of thane is less stable than eclipsed conformation because

staggered conformation has torsional strain

Answer: b

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2. $C_2H_5Br + 2Na \xrightarrow{Dryether} C_4H_{10} + 2NaBr$

The above reaction is an example of which of the following

A. reimer tiemann reqaction

B. wurtz reaction

C. aldol condensation

D. hoffmann reaction

Answer: b

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3. Any alkyl bromide (a) reacts with sodium in ether to form 4,5 -diethylocatane the compound

A. $CH_3(CH_2)Br$

B. $CH_3(CH_2)_5Br$

C. $CH_3(CH_2)_3CH(Br)CH_3$

D. $CH_3-(CH_2)_2-CH(Br)-\underset{\underset{CH_3}{|}}{C}H_2$

Answer: d

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

A. $sp^3 - s$ and $sp^3 - sp^3$

B. $sp^3 - s$ and $sp^2 - sp^2$

C. sp-sp and sp - sp

D. p-s and p-p

Answer: a

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5. Which of the following is optically active

A. 2-methylpentane

B. citric acid

C. glycerol

D. none of these

Answer: a

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

are.....

A. CH_4 nad H_2

B. CH_4 and CO_2

C. C_2H_6 and CO_2

D. C_2H_4 and CI_2

Answer: c

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7. The general formula for cycloalkanes is .....

A. C_nH_n

B. C_nH_{2n}

C. C_nH_{2n-2}

D. C_nH_{2n+2}

Answer: b

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8. The compound that wil react most readily with gaseous bromine has the formula .....

A. C_3H_6

B. C_2H_2

C. C_4H_{10}

D. C_2H_4

Answer: a

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

A. 

B. $CH_3 - CH_2 - CH_2 - OH$

C. $H_2C = C = O$

D. $CH_3 - CH_2 - CH_2$Br

Answer: c

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

A. 2-methylpropene

B. 2-methylbut -2-ene

C. 2,3-dimethylbut-2-ene

D. 2,3-dimethylbut -2-ene

Answer: d

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11. The major product formed when 2 bromo methylbutane refluxed with ethanolic KOH is .....

A. 2-methylbut -2-ene

B. 2-methylbutan -1-ol

C. 2-methyl but -1-ene

D. 2-methylbutan -2-ol

Answer: a

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12. Major product of the below mentioned rection is .....

$$(CH_3)_2C = CH_2 \xrightarrow{ICI}$$

A. 2-chloro-1-iodo -2-methylpropane

B. 1-chloro -2-iodo -2-methypropane

C. 1,2 -dichloro-2-methypropane

D. 1,2 - diodo -2 -methylpropane

Answer: a

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13. cis -2 butene and trans -2- butene are .....

A. conformation isomers

B. structural isomers

C. configuratinoal isomers

D. optical isomers

Answer: c

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14. $\underset{Br}{\overset{|}{CH_2}} - \underset{Br}{\overset{|}{CH_2}} \xrightarrow{A} CH = CH$ where A is

A. Zn

B. Conc H_2SO_4

C. Alc,KOH

D. Dil ,H_2SO_4

Answer: d

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

A. unchanged

B. doubled

C. faster

D. slower

Answer: d

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16. In which of the following molecules all atoms are co planar

A. 

B. 

C. 

D. both (a) and (b)

Answer: a

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17. Propyne on passing through red hot iron tube gives .....

A. 

B. 

C. 

D. none of these

Answer: d

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18. Which one of the following is non aromatic

A. 

B. 

C. 

D. 

Answer: d

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19. Which of the following compounds will not undergo friedal crafts reaction easily ?

A. nitrobenzeen

B. toluene

C. cumene

D. xylene

Answer: a

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20. Some meta directing substituents in aromatic substitution are given which one is most deactivating

A. $-COOH$

B. $-NO_2$

C. $-C=N$

D. $-SO_3H$

Answer: b

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21. Which of the following can be used as the halide component for friedal crafts reaction

A. chlorobenzene

B. bromobenzene

C. chloroethene

D. isopropyl chloride

Answer: d

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22. An alkane is obtained by decarboxylation of sodium propionate same alkane can be prepared by.....

A. catalytic hydrogenation of propene

B. action of sodium metal on iodomethane

C. reduction of 1 chloropropane

D. reduction of bromomethane

Answer: b

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23. Which of the following is aliphatic saturated hydrocarbon

A. C_8H_{18}

B. C_9H_{18}

C. C_8H_{14}

D. all of these

Answer: a

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24. Identify the compound 'Z' in the following reactin

A. formaldehyde

B. acetaldehyde

C. formic acid

D. none of these

Answer: a

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25. Peroxide effect (Kharash effect) can be studied in case of .....

A. oct -4 -ene

B. hex -3-ene

C. pent -1-ene

D. but -2-ene

Answer: a

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26. 2- butyne on chlorination gives .....

A. 1-chlorobutane

B. 1,2-dichlorobutane

C. 1,1,2,2-tetrachlorobutane

D. 2,2,3,3 tetrachklorobutane

Answer: d

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Textual Evaluation Solved Ii Short Answer Question

1. Give IUPAC names for the following comounds

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2. Identify the compound A,B,C and D in the following series of reaction

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3. Write a short note on ortho para directors in aromatic electrophilic subsitution reaction

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4. How is propyne prepared from an alkyene dihalide ?

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5. An alkyl halide with molecular formula $C_6H_{13}Br$ on dehydrohalogenation gave two isomeric alkens X and

Y with molecular formula C_6H_{12} on reductive ozonolysis X and Y gave four compounds $CH_3COCH_3CH_3CHOCH_3CH_2CHO$ and $(CH_3)_2$ CHCHO` find the alkyl halide

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6. Describe the mechanism of nitratin of benzene

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7. How does huckel rule jhelp to decide the aromatic character of a compound

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8. Suggest the route for the preparation of the following from benzene

1 3-chloro nitrobenzene

2 4-chlorotoluene

3 Bromobenzene

4 m-dinitrobenzene

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9. Suggest a simple chemical test to distinguish propane and propene

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10. What happens when isobutly lene is treated with acidified potassium permanganate

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11. How will you convert ethyl chloride in to (i) ethane (ii) n butane

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12. Describe the conformers of n butane

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13. Write the chemical equations for comubstionof propane

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14. Explain markovnikoff's rule witjh suitable example

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15. What happens when ethylene is passed through cold dilute alkaline potassium permanganate

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16. Write the structures of following alkanes

(i) 2,3 - Dimethyl-6-(2- methylpropyl) decane

(ii) 5-(2-Ethylbutyl)-3,3-dimethyldecane

(iii)5-(1,2-Dimethylpropyl)-2-methylnonane

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17. How will you prepare propane from a sodium salt of fatty acid

View Text Solution

18. 

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19. Complete the following

(i) 2butyne $\xrightarrow{\text{lindlar catalyst}}$

(ii) $CH_2 = CH_2 \xrightarrow{I_2}$

$(iii)\underset{Br}{\underset{|}{C}}H_2 = CH_2 \xrightarrow{zn\,/\,c_2h_2oh}$

$(iv) cac_2 \xrightarrow{h_2o}$

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20. How will you distinguish 1- butyne 2 butyne

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Evaluate Yourself

1. Write the structural formula and carbon skeleton formula for all possible chain isomer of C_6H_{14} (Hexan)

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2. Give the IUPAC name for the following alkane

(a) $CH_3 - CH - CH_2 - CH_2 - cH - CH_3$

(b) $\underset{\underset{CH_2}{|}}{C}\ H_3\underset{|}{C}H_3 - CH - \underset{\underset{|}{CH_3}}{CH} - \underset{\underset{CH_2}{|}}{C}\ H - CH_2 - CH_2 - CH_2 - CH_3$

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3. Draw the structural formula for 4,5 diethyl -3,4,5 trimethyloctane

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4. Water destroys grignard reagents why?

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5. Is it possible to prepare methane by kolbe electrolytic method

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6. Write down the combuston reaction of propane whose $\triangle H^{\circ} = -2220kj$

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7. Why ethane is produced in chlorination of methane ?

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8. How toluene can be prepared by this method

(i) form n heptane

(ii) from 2-methylhexane

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9. Write the IUPAC names for the following alknenes

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10. Draw the structures for the following alkenes

(i) 6-brommo -2,3 -dimethyl -2-hexene

(ii) 5-bromo -4-chloro -1-heptene

(iv) 4-methyl -2 pentene

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11. Draw the structure and write down the IUPc name for the isomerism exhibited by the molecular formulae

(i) C_5H_{10} -Pentene (3 isomers)

(ii) C_6H_{12}-Hexene (5 isomers)

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12. Determine whether each of the following alkenes can exist ac c is trans isotmers

(a) 1 chloropropene

(b) 2-chloropropene

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13. Draw cis trans isomers for the following comounds

(a) 2 lchoro 2 butene

(b) $CH_3 - CH = CH - CH_2 - CH_3$

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14. How propene is prepared form 1,2 dichloropropane

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15. How ozone reacts with 2 methyl properie

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16. An organic compound (A) on ozonolysis gives only acetaldehyde (A) reacts with Br_2/CI_4 to give compound (B) identify the compound (A)and (B) write the IUPC name of (A) and (B) given the gemoterica isomers of (A)

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17. An organic compound (A) C_2H_4 decolorise water (A) on reaction with chlorine gives (B) A reacts with HBr to give (C) identify (A),(B) (C) explain the reactions

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18. Prepare propyne form its corresponding alkene

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19. Write the products A & B for the following reaction

$$CI - CH_2 - CH_2 - Ci \xrightarrow[HCI]{KOH} (A) \xrightarrow[HCI]{KOH} (B)$$

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20. $CH = C - CH_3 + H_2 \xrightarrow{pt} ?\,{}_{H_2}\rightarrow$

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21. Calculate the number of rigns present in $C_{18}H_{12}$

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22. Write all possible isomers for an aromatic benzenoid comopund havign the molecular formula C_8H_{10}

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23. Write all possible isomers for a monosubstitued aromatic benzenoid compound having the molecular

formula C_9H_{12}

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24. How benzene can be prepared by griganrd reagent

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25. Why benzene undergoes electrophilic substitution reaction whereas alkenes undergoes additon reaction

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26. Convert ethyne to benzene and name the process

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27. Toluene undergoes nitration easily polymerisation process

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Additional Question Solved Choose The Correct Statement

1. Statement I : methane ethane propene and butane are alkane group compounds Statement II they are obeying C_nH_{2n+2} formula and each differs from its proceeding member by a CH_2 group

A. statement -I and II are correct and statement II is correct explanation of statement -I

B. statement I and II are correct but statement II is not correct explanation of statement I

C. statement I is correct but statement II is wrong

D. statement I is wrong but statement II is correct

Answer: a

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2. Statement -I n - butane and iso butane are isomers

Statement -II : because they are having same molecular formula but diffes only in the structural formula

A. statement -I and II are correct and statement -II is correct explanation of statement -I

B. statement -I and II are correct but statement II is not correct explanation of statement -I

C. statement -I is correct but statement -II is wrong

D. statement -I is worng but statement -II is correct

Answer: a

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3. Which one of the following shows three possible isomeric structures

A. C_6HA_{10}

B. C_5H_{12}

C. C_6H_{12}

D. C_3H_4

Answer: b

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4. Find out the brached hydrocarbon form the following compounds

A. 1-propane

B. n-propane

C. iso butane

D. n-butane

Answer: c

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5. Which of the following compound cannot be prepared by kolbe electrolytic method

A. $CH_3 - CH_3$

B. CH_4

C. $CH_2 = CH_2$

D. `CH=CH

Answer: b

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6. Statement -I boiling point of methane is lower than that of butane

Statement -II the boiling point of continous chain alkanes increases in length of carbon chain

A. statement -I and II are correct and statement -II is correct explanation of statement -I

B.

C.

D.

Answer: a

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7. Statement -I alkenes shows both structural and geometrical isomerism

Statement -II because of the presence of double bond

A. Statement -I and II are correct but statement -II is not correct explanation of statement -I

B. statement -I and II are correct but statement -II is not correct explanation of statement -I

C. statement -I is correct but statement -II is wrong

D. statement -II is wrong but statement -I is correct

Answer: a

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8. Consider the following statement

(i) the process of reduction using sodium in liquid ammonia is called as birch reduction

(ii) birch reduction is sterospecific in reaction

(iii) alkynes can be reduced to cis alkeneous using birch reduction which of the above statement is / are correct

A. the process of reductio using sodium in liquid ammonai is called as birch reductino

B. birch reduction is stereospecific in reaction

C. alkynes can be reduced to cis - alkenes using birch reduction

D. which of the above statement is /are correct

Answer: a

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9. Statement-I alkenes are more reactive than alkanes Statement -II because of the presence of a double bond

A. statement -I and II are correct and statement -II is correct explanation of statement -I

B. statement -I and II are correct but statement -II is not correct explanation of statement I

C. statement -I is correct but statement -II is wrong

D. statement -I is worng but statement -II is correct

Answer: a

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10. Peroxid effect is not observed in .....

A. HCI

B. HI

C. HBr

D. both (a) and (b)

Answer: d

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11. Which one of the following has garlic odour

A. ethane

B. thene

C. ethyne

D. ethanol

Answer: c

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12. $CH_3 - C = Ch \xrightarrow[333k]{Hg^{2+} / H^+}$ X. identify the X

A. propane

B. acetone

C. acetaldehyfde

D. formaldehyde

Answer: b

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13. Which one of the following is not a monocylic aromatic hydrocarbon

A. benzene

B. pheno9l

C. toluene

D. naphyhalene

Answer: d

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14. Which one of the following is a polynuclear aromatic hydrocarbon

A. anthraceen

B. phenol

C. toluene

D. naphthalene

Answer: a

View Text Solution

15. Which one of the following is an aromatic compounds

A. 

B. 

C. 

D. 

Answer: a

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16. Molecular formula of benzene is .....

A. C_6H_6

B. C_{6H_5}

C. C_7H_8

D. CH_4

Answer: a

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17. Statement -I unlike alkenes and alkynes benzene undergoes substitution reaction rather than addition reaction under normal condition

Statement -II because of the delocalisation of

electrons a strong π bond is formed which makes the molecule stable

A. statement -I and II are correct statement -II is correct explanatin of statement -I

B. statement -I and II are correct but statement -II is not correct explantion of statement -I

C. statement -I is correct but statement -II is wrong

D. statement -I is worng but statement -II is correct

Answer: a

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18. Benzene undergoes birch reduction to form .....

A. 

B. 

C. 

D. 

Answer: c

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19. Which one fo the followig is not an ortho para director

A. $-NO_2$

B. $-CH_3$

C. $-OH$

D. $-C_2H_5$

Answer: a

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20. Which one fo the following is not a meta director

A. $-NH_2$

B. $-NO_2$

C. $-COOR$

D. $-CO_3H$

Answer: a

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21. Which one of the followingis benzene ring deactivator

A. $-CHO$

B. $-OH$

C. $-CH_3$

D. $-OCH_3$

Answer: a

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22. Fine the odd one out

A. benzene

B. ethane

C. ethene

D. propyne

Answer: a

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23. Which among these is not associated with aliphatic compounds

A. they contain (4n+2) electrons

B. they contain straight chain compounds

C. they contain brached chain compound

D. they have appropriate number of g atoms and unctional groups

Answer: a

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24. Which of the following compound will exhibit cis trans isomerism

A. 2-butene

B. 2-butyne

C. 1-butene

D. 2-butanol

Answer: a

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25. Which confomation of ethane has the lowest potential energy

A. eclipsed

B. staggered

C. skew

D. all will have equal energy

Answer: b

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26. Which of the following is less reactive than benzene towards electrophilic substitution reactions

A. nitrobenzene

B. aniline

C. bromobenzene

D. chlorobenzene

Answer: a

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Additional Question Solved Fill In The Blanks

1. Liquefied petroleum gas consists of a mixture of .....

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2. Mangoes contain

View Text Solution

3. Methane gas is also called as.....

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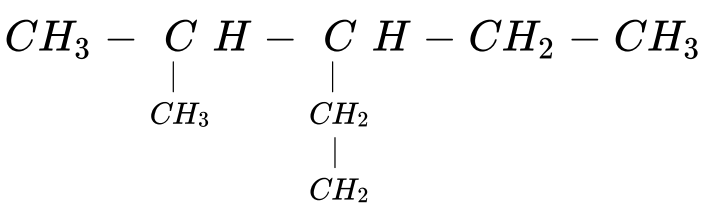
4. The IUPAC name of the following compound is



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5. Sodalime is the mixture of .....

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6. Wutrz reaction used in the preparation of .....

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7. The major reagent present in corey house reaction is .....

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8. The rotation of C-C single bond leads to different isomeric structure called as .....

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9. The least stable conformer of ethane is .....form

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10. The potential energy difference between the staggered and eclipsed conformation of ethane is .....

View Text Solution

11. The most stable conformer of butane is .....

View Text Solution

12. Paraffin means .....

View Text Solution

13. Preparation of methyl chlooride is followed by .....mechanism

View Text Solution

14. n hexane passsed over chromic oxide supported on alumina at 873 k will give .....

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15. Alkynes undergoes reduction using lindlar catalyst to give .....

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16. Alkynes undergoes reduction using sodium in liquid ammonia to give .....

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17. The order of reactivity of differeent hydrogen halides (HCI,HI,HBr) is .....

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18. Addtion of hydrohalides to alkene is an example for .....

View Text Solution

19. Ethane rects with HBr to form .....

View Text Solution

20. Homolytic fission of benzoyl peroxide will give .....

View Text Solution

21. Propene reacts with HBr in the presence of peroxide to form .....

View Text Solution

22. Baeyer 's reagent is .....

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23. Three molecules of acetylene undergoes polymerisatino to give .....

View Text Solution

24. Benezene reacts with bromine in the presence of $AICI_3$ to form bromobenzene and it is an example of

.....reaction

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25. The six carbon atoms of benzene are ..... hybridised

View Text Solution

26. Bond angle in benzene is .....

View Text Solution

27. Wurtz fitting reaction helps to prepare .....compound

View Text Solution

28. When phenol reqacts with Zn dust under dry distillation conditions it gives .....

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29. Nbenzeen reacts with hydrogen in the presence of pt to yield

View Text Solution

30. Benezene reacts with CI_2 in the presenece of sunlight to give .....

View Text Solution

31. The step in which CI-CI bond homolysis occurs is called .....

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32. Dienses are the anem given to compounds with .....

View Text Solution

33. The hybridisation state of a carbocation is .....

View Text Solution

34. The peroxide effect in anti markovnikoff addition involves a .....mechanism

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Additional Question Solved Iv Choose The Odd One Out

1. Chosse the odd one out

A. ethane

B. benzene

C. ethene

D. ethyne

Answer:

View Text Solution

2. Chosse the odd one out

A. Zn+HCl

B. $Zn + CH_3COOH$

C. $LiAIH_4$

D. Acidified $K_2Cr_2O_7$

Answer:

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3. Chosse the odd one out

A. soft drink bottle

B. jars

C. vegetable oil bottle

D. straws

Answer:

View Text Solution

4. Chosse the odd one out

A. straws

B. foam cups

C. diapers

D. toys

Answer:

View Text Solution

5. Chosse the odd one out

A. orlon

B. neoprene rubber

C. pvc

D. pet

Answer:

View Text Solution

Additional Question Solved Vii Assertion Reason

1. Assertion (A) methane is called marsh gas

Reason (R) decomposition of plant and animal matter in ain oxygen deficient environment like swamps mashes and bogs prodluce methane gas

A. both a and r are correct and r is the correct explanation of a

B. both a and r are correct but r is not the corect explantion of a

C. a is correct but r is worng

D. a is worng but r is correct

Answer: d

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2. Assertion (A) water destryos grignard reagent and so it is not used as solvent for RmHx Reason (R): water decomposes grignard reagent (RMGX) to give alkane

A. both a and r are correct and r is the correct explanation of a

B. both a and r are correct but r is not the correct explanation of a

C. a si correct but r is wrong

D. a is worng but r is correct

Answer: a

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3. Assertion (A) : The boiling point of straight chain isomers have higher boiling point as compared to branched chain isomers

Reson(R) The boiling point decreases with increase in branching as the molecule becomes compact and the area of contact decreases

A. both a and r are correct and r is the correct expalanation a

B. both a and r are correct but r is not the correct explanation of a

C. a is correct but r is worng

D. a is wrong but r is correct

Answer: a

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4. Assertion (A) the eclipsed conformation of thane is less stable than stggered conformation of ethane

Reason (R) :In eclipsed conformation the distance between the two methyl group is minimum and so

there is maximum repulsion between them and it is the least stable conformer

A. both a and r are correct is r is the correct explanatin of a

B. both a and r are correct but r is not the correct explanation of a

C. a is correct but r is worng

D. a is worng but r is correct

Answer: a

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Additional Question Solved 2 Mark Question

1. What are unsaturated hydrocarbons

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2. What is marsh gas

View Text Solution

3. Write a note methane clathrates

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4. What is isomerism mention the type of isomerism

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5. Draw and name the possible structural formula for C_4H_{10}

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6. Give the IUPAC name of the following compounds

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7. What is sabatier sendersens reaction

View Text Solution

8. What are decarboxylation reactions given an example

View Text Solution

9. Write a note on kolbe electrolytie method

View Text Solution

10. How will you prepare propane from chloropropane

View Text Solution

11. What is wurtz reaction

View Text Solution

12. Write short notes on corey house reaction

View Text Solution

13. How will you prepare methane form grignard reagent

View Text Solution

14. What are conformers

View Text Solution

15. Draw the conformations of ethane using newman projection formula method

View Text Solution

16. What are combuistion reactions

View Text Solution

17. What is aromatisation

View Text Solution

18. Write notes on isomerisaton

View Text Solution

19. Mention the uses of alkanes

View Text Solution

20. Draw and name the structureal formula for C_4H_8

View Text Solution

21. C is isomers are less stable than trans isomers

View Text Solution

22. How will you prepare ethene form ethanol

View Text Solution

23. How will you convert 1- bromorpropane into propene

View Text Solution

24. How will you prepare ethane by kolbe electrolytic method

View Text Solution

25. Write any two test for alkenes

View Text Solution

26. State markoynikoff 's rule

View Text Solution

27. What is peroxide effect

View Text Solution

28. Identify the product A and B from the following reaction

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29. What happens when prpene reacts with concentrated H_2SO_4

View Text Solution

30. Complete the following reaction and identify A,B and C

(a) $CH_3 - \overset{CH_3}{\underset{|}{C}} = CH_2 \xrightarrow{KMnO_4 | H^+} A$

(b) $CH_3 - CH = CH - CH_3 \xrightarrow{KMO_4 | H^+} B \xrightarrow{O} C$

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31. Mention the uses of alkenes

View Text Solution

32. What are gem dihalides how will you prepare propyne form gem dihalides

View Text Solution

33. How will you prepare acetyene from potassium maleate

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34. How will you prepare acetylene form calcium carbide

View Text Solution

35. How will you convert ethyne into ethanol

View Text Solution

36. Mention the uses of acetylene

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37. What are all the conditions for aromaticity

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38. Classify the following compounds by using aromaticity concepts

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39. Write note on resonance of benzene

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40. How will you convert phenol into benzene

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41. What is wurtz fitting reaction

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42. What are activating and deactivatikn groups

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43. Why does benze undergo electrophilic substitution reactions easily and nucleophilic substitution with difficulty

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44. Out of benzen m - dinitrobenzene and toluene which will undergo nitration most easily and why

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45. Why the classification of hydrocarbons

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Additional Question Solved 3 Mark Question

1. Explain the classification of hydrocarbons

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2. How to write the possible isomers of C_5H_{12}

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3. Explain how to draw the structural formula for 3 ethyl 2,3 dimethylpentane

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4. In alkane compound with same number of carbon atoms straight chain isomers have higher boiling point as compared to brached chain isomers justify statement

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5. Why lil spills in aqueous environment spread so quickly

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6. Explain pyrolysis method

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7. Write notes on geometrical isomerism or cis iruns isomerism

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8. Explain how 2 butyne reacts with (a) lindlar 's catalyst and (b) sodium in liquid ammonia

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9. What are vicinal dihalides how will you perpane alkene from vicinal dihaldes

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10. Why alknenes are more reactive than alkanes

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11. Explain the mechanism of addition of HBr to propene

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12. Explain the mechanis of addtion of HBr to 3 methyl 1- butene

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13. Why peroxide effect is not observed in HCI and HI

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14. Expalin the ozonolysis of (a) Ethene and (b) propene

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15. What is polymerisation explain with suitable example

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16. Complete the following reactions

(a) $CH = CH + H_2 \xrightarrow{pt} ? \xrightarrow{H_2}$

(b) $CH_3 - C = CH + Br_2 \rightarrow ? \xrightarrow{Br_2}$

(c) $CH_3 - C = C - CH_3 \xrightarrow{HCI}$

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17. Explain the ozonoluysis of (a) Acetylene (b) proyne

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18. Explain the polymerisation of acetylene molecues

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19. Discuss the kekule structure of benezene

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20. Why benezene undergoes substitutions reaction rather than addition reaction under normal conditions

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21. Explain the industrial perpartion of benzene from coal tar

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22. Explain the sulphonation of benzene

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23. What is BHC how will you prepare BHC mention its uses

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24. In ary halides halogen group is a ortho para director and a deactivator towards electrophilic substitution reaction why

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25. Explain the carcinogenity and toxicity of aromatic hydrocarbons

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26. Arrange benezene n hexane and ethyne in decreasing order of acidic behavior also give reason for his behavior

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Additional Question Solved 5 Mark Question

1. Explain the conformation analysis of ethane

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2. Explain the structure of benzene

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3. Explain the mechanisim of the reaction betweeen methane and chlorine

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4. Write the mechanism for following reaction

$$\underset{\text{Propane}}{CH_3-CH=CH_2}+Hbr\xrightarrow{C_6H_5CO_2O_2}\underset{\text{1-bromopropane}}{CH_3-CH_2-Br}$$

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5. Explain the acidic nature of alkynes

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6. Write the mechanism of chlorinaltin of benezene

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7. Describe the mechanism of sulphonation of benezene

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8. Describe the mechanism of freidel craft alkylation

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9. Write the mechanism of freidel craft acylation

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10. An organic compound (A) of a molecular formula C_6H_6 is a simple aromatic hydrocarbon A reacts with O_2 in the presence of V_2O_5 at 773 k to give B.A is further treated with sodium and liquid ammonia to give C which is a diene compound identify A,B and C and explain the reaction

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11. What are ortho para directors expalin why OH group is an ortho para director and activator

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12. An organic compound 1,1 dichloropropane reacts with alcholic KOH ot give a of molecular formula C_3H_4 a reacts with mercuric and dil H_2SO_4 at 333 K to give B a on passing through red hot iron tube at 873 k will give C which is a cyclic compound identify A,B and C explain the reaction

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13. What are meta directors explain with suitable example

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14. An organic compound (A) of molecular formula C_2H_4 which is a simple alkene reacts with baeyer reagent to give B of molecular formula $C_2H_6O_2$ a again reacts with ozone followed by hydrolysis in the presence of zinc c of molecular formula CH_2O identify A,B and C explain with reaction

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15. An organic compound 1,1 dichloropropane reacts with alcholic KOH to give molecular formula C_3H_4 a reacts with mercuric sulphate and dil H_2SO_4 at 333 k to give B.A on passing through red hot iron tube at 873 k will give c which is a cyclic compound identify A,B and C explain the reaction

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