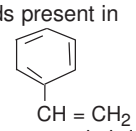
ఈనాడు
శనివారం 23 మే 2020 ■ email: help@eenadupratibha.net
ప్రతిభ

Hyper conjugation is?

Basic Concepts in Organic Chemistry and Hydrocarbons

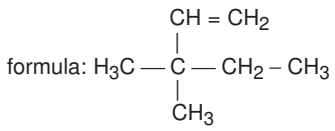
1. The number of σ and π bonds present in



1) 12σ, 4π 2) 8σ, 4π
3) 16σ, 4π 4) 12σ, 3π

2. The ratio of hybrid orbitals to unhybrid orbitals in 1, 3 - butadiene is
1) 8 : 3 2) 6 : 5 3) 5 : 6 4) 3 : 8

3. The IUPAC name of the compound having



formula: $H_3C-\underset{\underset{CH_3}{|}}{\overset{\overset{CH=CH_2}{|}}{C}}-CH_2-CH_3$

1) 3, 3 - dimethyl butene
2) 3 - methyl 3 - ethyl butene
3) 3, 3 - dimethyl butene
4) 3, 3 - dimethyl pent -1 - ene

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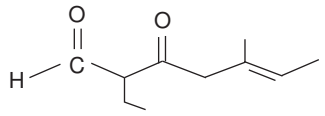
Subject Expert

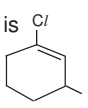
4. The IUPAC name of the compound is



1) 2 - ethyl 5 - methyl 3 - oxo hept - 5 - enal
2) 5 - ethyl 3 - methyl 5 - oxo hept - 2 - enal
3) 3 - methyl 5 - oxo 6 - formyl oct - 2 - ene
4) 6 - methyl 3 - formyl 4 - oxo oct - 6 - ene

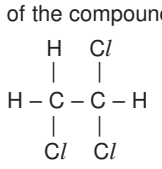
5. Which of the following represents.
2, 3 - dichloro butanoic acid
1) $CH_2(Cl)-CH(Cl)-COOH$
2) $CH_3-CH(Cl)-CH_2(Cl)-COOH$
3) $CH_3-CH(Cl)-CH(Cl)-CH_2-COOH$
4) $CH_2(Cl)-CH(Cl)-CH_2-COOH$

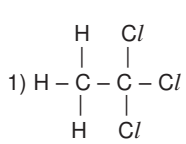
6. The IUPAC name of the compound is



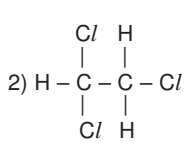
1) 1 - chloro 3 - methyl cyclohexene
2) 1 - methyl 3 - chloro cyclohexene
3) 3 - methyl 3 - chloro cyclohexene
4) 1 - chloro 5 - methyl cyclohexene

7. The compound shown below has a molecular formula $C_2H_3Cl_3$. Identify any structure below represents the constitutional isomer of the compound shown below.

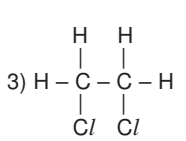




1)



2)

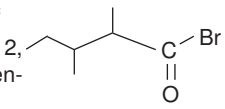


3)

4) None

8. Propene and cyclopropane are
1) Position isomers 2) Metamers
3) Ring Chain isomers
4) Geometrical isomers

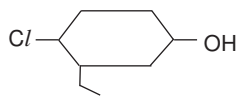
9. The IUPAC name of

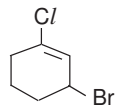


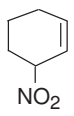
1) 1 - bromo 1 - oxo 2, 3 - dimethyl pentane
2) 2 - ethyl 3 - methyl butanoyl bromide
3) 3, 4 - dimethyl pentanoyl bromide
4) 2, 3 - dimethyl pentanoyl bromide

10. Which of the following IUPAC names is not correctly matched?

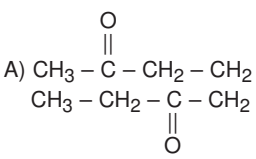
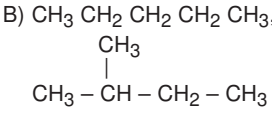
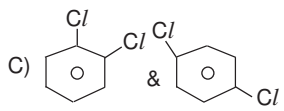
1)  1, 4 - dimethyl cyclohexane

2)  4 - chloro 3 - ethyl cyclo hexanaol

3)  1 - bromo 3 - chloro cyclohexene

4)  3 - nitro cylohexene

11. Match the Column I with Column II and mark the appropriate choice.

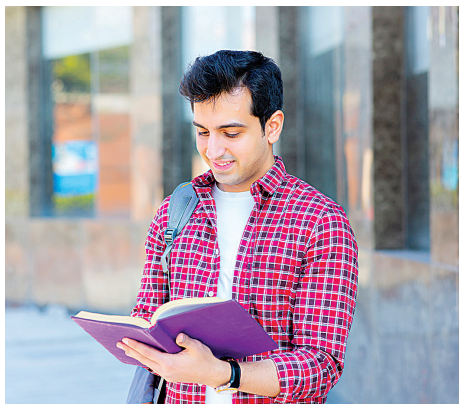
Column - I	Column II
A) 	i) Chain isomers
B) 	ii) Position isomers
C) 	iii) Functional isomers
D) $CH_3CH_2CH_2CHO$, $CH_3CH_2COCH_3$	iv) Metamers

1) A-iv, B-i, C-ii D-iii 2) A-iii, B- I, C-iv, D-ii
3) A-ii, B-iv, C-iii, D-i 4) A-iii, B-iv, C-ii, D-i

12. Hyper conjugation is
1) No bond resonance
2) Delocalisation of π electrons
3) Permanent displacement of σ bonded electrons
4) All

13. Which of the following is the correct order of acidity of carboxylic acids?
1) acetic acid < fluoroacetic acid < bromoacetic acid
2) acetic acid < bromoacetic acid < fluoroacetic acid
3) bromoacetic acid < acetic acid < fluoroacetic acid
4) bromo acetic acid < fluroacetic acid < acetic acid

14. The hybridisation of carbon in $\overset{+}{C}H_3$, $\dot{C}H_3$, $\bar{C}H_3$ are
1) sp^2, sp^3, sp^2 2) sp^2, sp^2, sp^2
3) sp^2, sp^2, sp^3 4) sp^3, sp^3, sp^3



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Chemistry

15. The correct order of stability of carbon ions is
i) $CH_3-\bar{C}HCH_3$ ii) $(CH_3)_3\bar{C}$
iii) $\bar{C}H_3$ iv) $CH_3\bar{C}H_2$
1) iii < iv < ii < i 2) iii < iv < i < ii
3) ii < i < iv < iii 4) ii < i < iii < iv

16. Which of the following is a characteristic feature of a free radical
1) It is a negatively charged species
2) It is a positively charged species
3) It is a unpaired electron containing species
4) None

17. The number of isomers in $C_4H_{10}O$ are
1) 7 2) 8 3) 5 4) 6

18. Lassaigne's test is used in qualitative analysis to detect
1) Carbon 2) Nitrogen
3) Hydrogen 4) All

19. Stability of carbocations is explained by
1) Resonance 2) Electromeric effect
3) Inductive effect 4) Both 1 and 2

20. An organic compound gave 0.931g of CO_2 on complete combustion. If the mass of the compound taken was 0.4230 g. Percentage of C in the compound is
1) 60% 2) 27% 3) 28.9% 4) 15%

21. In Duma's method 0.52 g of an organic compound on combustion gave 68.6 ml N_2 at 27°C and 756 mm pressure. The percentage of nitrogen in the compound is
1) 12.22% 2) 14.9% 3) 15.84% 4) 16.23%

22. When methane is oxidized in the presence of Mo_2O_3 forms
1) CO_2, H_2O 2) Methanol
3) Methanal 4) Acetic acid

23. The number of chain isomers possible for hydrocarbon C_6H_{14} is
1) 3 2) 5 3) 4 4) 6

24. The major constituent of Natural gas is
1) Methane 2) Hexane
3) Butane 4) Propane

25. Which of the following method is not useful for preparation of methane?
1) Decarboxylation
2) Clemenson's reduction
3) Wurtz reaction
4) Wolf-Kishner's reduction

26. The major product formed when 1- butene is treated with HCl in presence of H_2O_2 is
1) 2 - chloro butane 2) 1 - chloro butane
3) 3 - chloro 1 - butene 4) 4 - chloro butane

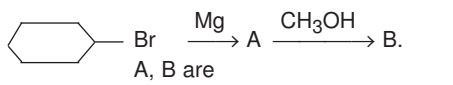
27. $CH_3CH_2CH_2CH_3 \xrightarrow{X} CH_3\underset{\underset{CH_3}{|}}{\overset{\overset{CH_3}{|}}{C}}HCH_3$, X is
1) Con.HNO_3 2) $AlCl_3 + HCl$
3) $LiAlH_4$ 4) Both 2 and 3

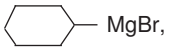
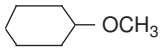
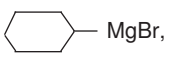
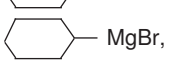
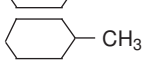
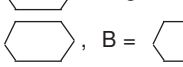
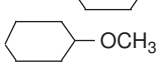
28. $CH_3CH_2COOH \xrightarrow{NaOH} X \xrightarrow{Electrolysis} Y$, X, Y are
1) X = CH_3CH_2COONa, Y = C_2H_6
2) X = CH_3CH_3, Y = C_4H_8
3) X = CH_3CH_2COONa, Y = C_2H_6
4) X = CH_3CH_2COONa, Y = C_4H_{10}

29. An alkene on ozonolysis, followed by hydrolysis with Zn/H_2O gives 2 moles of ethanal. Alkene is
1) 1- butene 2) 2 - butene
3) propene 4) 1 - pentene

30. An alkane having molecular formula C_5H_{12} gave only one mono halogenative product on halogenation. IUPAC name of alkane
1) 2 - methyl butane 2) 3 - methyl pentane
3) 2, 2 - dimethyl propane
4) 3, 3 - dimethyl butane

31. In the reaction



A, B are
1) A =  B = 
2) A =  B = 
3) A =  B = 
4) A =  , B = 

32. 2 - methyl butan - 2- ol $\xrightarrow[170°C]{H_2SO_4}$ X. Then X is
1) 2 - methyl - 2 - butene
2) 2 - methyl pentane
3) 2 - methyl pent - 2 - ene
4) No reaction

33. When 2 - butyne is treated with Na/ liq.NH_3 forms
1) Butane 2) Cis – 2 – butene
3) Trans – 2 – butene 4) Both 3 and 4

34. $CH_3-C\equiv C-CH_3 \xrightarrow[HgSO_4/H_2SO_4]{} X$.
X is
1) $CH_3CH_2CH_2CHO$
2) $CH_3-\underset{\underset{O}{||}}{C}-CH_2-CH_3$
3) CH_3CHO 4) $CH_3-\underset{\underset{O}{||}}{C}-CH_3$

35. Propyne gas is passed through red hot copper tube forms
1) Benzene 2) Methyl benzene
3) 1, 3 - dimethyl benzene
4) 1, 3, 5 - trimethyl benzene

36. Identify Z in the following reaction
$CH_3CH=CH_2 \xrightarrow{HBr/H_2O_2} X \xrightarrow{C_2H_5ONa} z$
1) $CH_3CH_2CH_2OCH_2CH_3$
2) $(CH_3)_2CHOCH_2CH_3$
3) $CH_3CH_2OCH_2CH_3$
4) $CH_3CH_2CH_2OCH_2CH_2CH_3$

37. Which of the following will exhibit geometrical isomerism?
1) 2 - butene 2) 2 - butyne
3) 1 - butyne 4) butane

Answers

1-3	2-2	3-4	4-1	5-2	6-1	7-1	8-3	9-4	10-3
11-1	12-1	13-2	14-3	15-3	16-3	17-1	18-2		
19-3	20-1	21-2	22-3	23-2	24-1	25-3	26-1		
27-2	28-4	29-2	30-3	31-2	32-1	33-3	34-2		
35-4	36-1	37-1.							