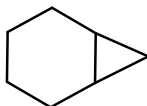


CLASS : XII<sup>th</sup>  
DATE :

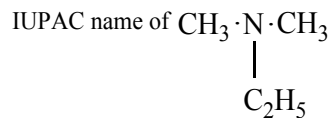
SUBJECT : CHEMISTRY  
DPP NO. : 4

## Topic :-ORGANIC CHEMISTRY - SOME BASIC PRINCIPLES AND TECHNIQUES

- The racemisation of optically active compounds is driven by :  
 a) Entropy                      b) Enthalpy                      c) Entropy and enthalpy      d) Element of symmetry
- A cyclic stereoisomer having the molecular formula  $C_4H_7Cl$  are classified and tabulated. Find out the correct set of numbers.  

Geometrical	Optical		
a) 6	2	b) 4	2
c) 6	0	d) 4	0
- The correct name for the following hydrocarbon is  


a) Tricycle [4.1.0]heptane	b) Bicyclo [5.2.1] heptane
c) Bicyclo [4.1.0] heptane	d) Bicyclo [4.1.0] hexane
- Which of the following is the most stable radical?  
 a)  $CH_3^\bullet$                       b)  $RCH_2^\bullet$                       c)  $R_2CH^\bullet$                       d)  $R_3C^\bullet$
- The number of  $4^\circ$  carbon atoms in 2,2,4,4-tetramethylpentane :  
 a) 1                                  b) 2                                  c) 3                                  d) 4
- Inductive effect involves  
 a) Delocalisation of  $\sigma$ -electrons                      b) Displacement of  $\sigma$ -electrons  
 c) Delocalisation of  $\pi$  – electrons                      d) Displacement of  $\pi$ -electrons
- Compounds whose molecules are superimposable on their mirror images even though they contain asymmetric carbon atoms or chiral centres are known as :  
 a) Enantiomers                      b) Racemers                      c) Mesomers                      d) Conformers
- Percentage of hydrogen is maximum in .  
 a)  $C_2H_4$                       b)  $CH_4$                       c)  $C_2H_2$                       d)  $C_6H_6$
- Which of the following has most acidic hydrogen?  
 a) 3-hexanone                      b) 2, 4-hexanedione                      c) 2, 4-hexanedione                      d) 2, 3-hexanedione



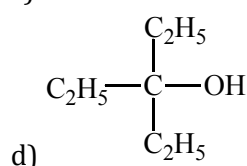
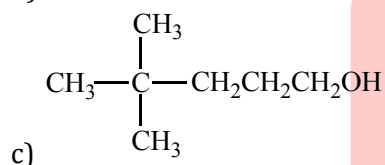
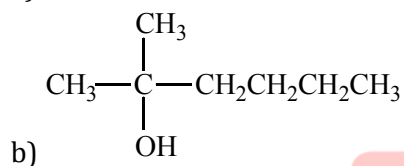
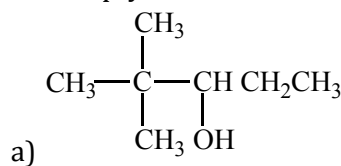
10.

- a) *N, N*- dimethylethanamine
- b) *N*-methyl, *N*-ethylmethanamine
- c) Dimethyl-ethylamine
- d) None of the above

11. Ease of abstraction of hydrogen is greater when attached to :

- a) 1° carbon
- b) 2° carbon
- c) 3° carbon
- d) *neo*-carbon

12. *neo*-Heptyl alcohol is correctly represented as :



PE

13. The IUPAC name for  $\text{CH}_3\text{COCH}(\text{CH}_3)_2$  is :

- a) 4-methyl isopropyl ketone
- b) 3-methyl-2-butanone
- c) Isopropyl methyl ketone
- d) 2-methyl-3-butanone

14. Steam distillation is based on the fact that vaporisation of organic liquid takes place at

- a) Lower temperature than its boiling point
- b) Higher temperature than its boiling point
- c) Its boiling point
- d) Water and organic liquid both undergo distillation

15. IUPAC name of  $\text{CH}_2 = \text{CH} - \text{CH}(\text{CH}_3)_2$  is :

- a) 1,1-dimethyl-2-propene
- b) 3-methyl-1-butene

- c) 2-vinylpropane
- d) 1-isopropyl ethylene

16. The hybridization of central carbon atom in 1,2- propadiene (allene) is  
a)  $sp^3$                       b)  $sp^2$                       c)  $sp$                       d) None of these
17. The fairly neutral character of  $\text{CH}_3\text{OH}$  is changed to which of the following by adding sodium metal?  
a) Acidic                      b) Neutral                      c) An electrophile                      d) A nucleophile
18. The kind of delocalisation involving sigma bond is called  
a) Inductive effect                      b) Hyperconjugation effect  
c) Electromeric effect                      d) Mesomeric effect
19. In the case of homologous series of alkanes, which one of the following statements is incorrect?  
a) The members of the series have the general formula  $\text{C}_n\text{H}_{2n+2}$ , where  $n$  is an integer  
b) The difference between any two successive members of the series corresponds to 14 unit of relative atomic mass  
c) The members of the series are isomers of each other  
d) The members of the series have similar chemical properties
20. Which of the following reagents will be fruitful for separating a mixture of nitrobenzene and aniline?  
a) Aq.  $\text{NaHCO}_3$                       b)  $\text{H}_2\text{O}$                       c) Aq.  $\text{HCl}$                       d) Aq.  $\text{NaOH}$

PE