

CLASS : XIIth

DATE :

SUBJECT : CHEMISTRY

DPP NO. : 7

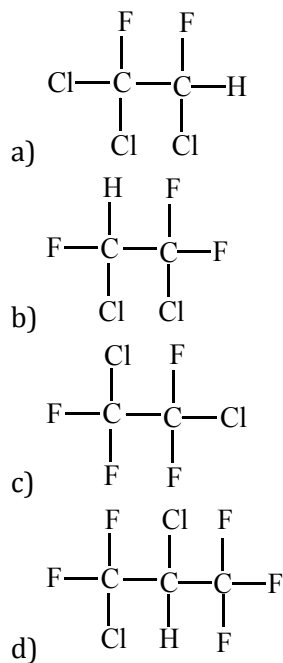
Topic :-ORGANIC CHEMISTRY - SOME BASIC PRINCIPLES AND TECHNIQUES

- The reagent used in dehalogenation process is :
a) KOH alc. b) Zn dust + alc. c) Na d) KOH(aq)
- Benzaldoxime exists in how many forms?
a) 1 b) 2 c) 3 d) 4
- Resonance arises due to the :
a) Migration of atoms
b) Migration of proton
c) Delocalisation of σ -electron
d) Delocalisation of π -electron
- In the given structure, which carbon atom is most electronegative?
$$\text{CH}_3-\text{CH}_2-\overset{\oplus}{\text{C}}\text{H}=\text{CH}$$

(I) (II) (III) (IV)

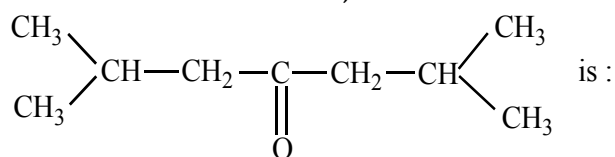
a) (I) b) (II) c) (III) d) (IV)
- The following reaction is an example of Reaction.
$$\text{C}_2\text{H}_4\text{Br}_2 \xrightarrow{\text{Alc.KOH}} \text{C}_2\text{H}_2$$

a) Addition b) Dehydrobromination
c) Substitution d) Debromination
- Which one of the following pair represents stereoisomerism?
a) Structural and geometrical isomerism
b) Linkage and geometrical isomerism
c) Chain and rotational isomerism
d) Optical and geometrical isomerism
- Freon-114 is an organic compound. It is chemically called 1,2-dichlorotetrafluoroethane. Its correct structural formula is :



8. Which of the following compounds is expected to be optically active?
 a) $(\text{CH}_3)_2\text{CHCHO}$ b) $\text{CH}_3\text{CH}_2\text{CH}_2\text{CHO}$ c) $\text{CH}_3\text{CH}_2\text{CHBrCHO}$ d) $\text{CH}_3\text{CH}_2\text{CBr}_2\text{CHO}$
9. Which of the following is least reactive in a nucleophilic substitution reaction?
 a) $(\text{CH}_3)_3\text{C}-\text{Cl}$ b) $\text{CH}_2=\text{CHCl}$ c) $\text{CH}_3\text{CH}_2\text{Cl}$ d) $\text{CH}_2=\text{CHCH}_2\text{Cl}$
10. During debromination of meso-dibromo-butane, the major compound formed is :
 a) *n*-butane b) 1-butene c) *cis*-2-butene d) *trans*-2-butene
11. What is the empirical formula of a compound having 40% carbon, 6.66% hydrogen and 53.34% oxygen?
 a) $\text{C}_2\text{H}_2\text{O}$ b) $\text{C}_2\text{H}_4\text{O}$ c) CH_2O d) CHO
12. Which of the following can act as an nucleophile?
 a) BF_3 b) FeCl_3 c) ZnCl_2 d) $\text{C}_2\text{H}_5\text{MgBr}$
13. The hybrid orbitals at carbon 2 and 3 in the compound $\text{CH}_3\text{CH}=\text{CHCH}_3$ are :
 a) sp^3, sp b) sp^2, sp^2 c) sp, sp d) sp^2, sp
14. The alkyl halide that undergoes $\text{S}_\text{N}1$ reaction more readily is
 a) Ethyl bromide b) Isopropyl bromide c) Vinyl bromide d) *n*-propyl bromide

15. The IUPAC name of,



- a) 2,4-dimethylhexanone-3

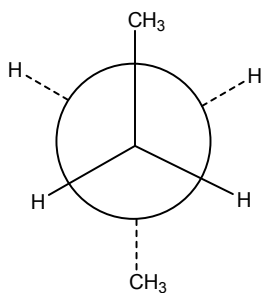
- b) 2,6-dimethylheptanone-4
- c) 2,6-dimethylhexanone-4
- d) 2,6-dimethylheptanone-5

16. In Lassaigne's test, a blue colour is obtained if the organic compound contains nitrogen. The blue colour is due to

- a) $K_4[Fe(CN)_6]$
- b) $Fe_4[Fe(CN)_6]_3$
- c) $Na_3[Fe(CN)_6]$
- d) $Cu_2[Fe(CN)_6]$

17. According to Gahn-Ingold-Prelog sequence rules, the correct order of priority for the given group is

- a) $-COOH > -CH_2OH > -OH > -CHO$
- b) $-COOH > -CHO > -CH_2OH > -OH$
- c) $-OH > -CH_2OH > -CHO > -COOH$
- d) $-OH > -COOH > -CHO > -CH_2OH$



18.

C_2 is rotated anticlockwise 102° about $C_2 - C_3$ bond. The resulting conformer is

- a) Partially eclipsed
- b) Eclipsed
- c) gauche
- d) Staggered

19. Amongst the following compounds, the optically active alkane having lowest molecular mass is

- a) $CH_3 - CH_2 - CH_2 - CH_3$
- b) $CH_3 - CH_2 - CH(CH_3) - CH_3$
- c)
- d) $CH_3 - CH_2 - C \equiv CH$

20. How many chiral isomers can be drawn from 2-bromo, 3-chloro butane?

- a) 2
- b) 3
- c) 4
- d) 5