DPP
DAILY PRACTICE PROBLEMS

CLASS : XIIth **SUBJECT : CHEMISTRY**
DATE : **DPP NO. : 10**

Topic :-HYDROCARBONS

1. An alkene gives two moles of HCHO, one mole of CO_2 and one mole of CH_3COCHO on ozonolysis. What is its structure?

a) $CH_2 = C = CH - CH_2 - CH_3$ b) CH_3
|
$CH_2 = CH - CH - CH = CH_2$

c) $CH_2 = C = C - CH_3$
|
CH_3 d) CH_3
|
$CH_2 = C = C - CH = CH_2$

2. Alkyl halides get converted to alkenes through:
a) Electrophilic substitution b) Nucleophilic additionc) Elimination reaction
d) Hydrolysis

3. In the complete combustion of C_nH_{2n+2}, the number of oxygen moles required is:
a) $\left(\frac{n}{2}\right)O_2$ b) $\left(\frac{n+1}{2}\right)O_2$ c) $\left(\frac{3n+1}{2}\right)O_2$ d) $\left(\frac{n+2}{2}\right)O_2$

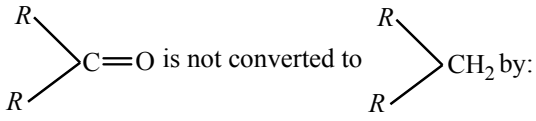
4. When $CH_3CH_2CHCl_2$ is treated with $NaNH_2$ the product formed is:
a) $CH_3CH = CH_2$ b) $CH_3—C \equiv CH$ c) $CH_3CH_2CH(NH_2)_2$ d) $CH_3CH_2CH(Cl)NH_2$

5. Cycloalkanes are isomeric with
a) Alkanes b) Alkenes c) Alkynes d) Arenes

6. Which gives only one monosubstitution product on chlorination?
a) *n*-pentane b) Neopentane c) Isopentane d) *n*-butane

7. The products obtained via oxymercuration ($HgSO_4 + H_2SO_4$)of 1-butyne would be:
a) $CH_3CH_2COCH_3$
b) $CH_3CH_2CH_2CHO$
c) $CH_3CH_2CHO + HCHO$

d) $CH_3CH_2COOH + HCOOH$

8.  is not converted to by:

a) Wolff-Kishner reaction b) Clemmensen reduction c) Red P+HI at 200°C
d) Wurtz reaction

9. The presence of the chlorine atom on benzene ring makes the second substituent enter at a position

a) *ortho* b) *meta* c) *para* d) *ortho/para*

10. Two organic compounds (A) and (B) both containing only carbon and hydrogen, on quantitative analysis gave the same percentage composition by weight

$C = \left(\frac{12}{12}\right) \times 100\%,\ H = \left(\frac{1}{13}\right) \times 100\%$

A decolourises bromine water but B does not. A and B respectively are

a) C_2H_2 and C_6H_6 b) C_6H_6 and C_2H_2 c) C_2H_4 and C_2H_6 d) C_2H_2 and C_2H_6

11. Which of the following compounds react with, an aqueous solution of $Ag(NH_2)_2OH$?

a) ethane b) Ethene c) 1-butyne d) 2-butyne

12. Aromatisation of n-heptane by passing over ($Al_2O_3 + Cr_2O_3$) catalyst at 773 K gives

a) Benzene b) Toluene c) Mixture of both d) Heptylene

13. In a mixture of n-hexadecane and α-methylnaphthalene the percentage of the latter is 10.The value of cetane number is:

a) 110 b) 90 c) 10 d) Zero

14. Addition of bromine to 1,3-butadiene gives:

a) 1,2-addition product only
b) 1,4-addition product only
c) Both 1,2 and 1,4-addition products
d) No reaction

15. R—COOH⟶RCH_2OH. This mode of reduction can be effected only by:

a) $NaBH_4$ b) Na + Alcohol c) $LiAlH_4$ d) All of these

16. A Wittig reaction with an aldehyde gives

a) Ketone compound b) A long chain fatty acid
c) Olefin compound d) Epoxide

17. Ethylene di bromide on heating with metallic sodium in ether solution yields

a) Ethene b) Ethyene c) 2-butene d) 1-butene

18. When alcoholic solution of ethylene dibromide is heated with granulated zinc, the compound formed is:

a) Ethane b) Ethylene c) Butane d) Isobutene

19. Octane number is:

a) Number of carbon atoms in octane
b) Number of molecules of octane formed in cracking of 1.0g of gasoline
c) Number of hydrogen atoms in octane
d) Number for representing standard rating of fuel

20. When an aqueous solution containing sodium acetate and sodium propionate is electrolysed we get:

a) Ethane b) Propane c) Butane d) All of these