

## NEET : CHAPTER WISE TEST-11

**SUBJECT :- CHEMISTRY**

**CLASS :- 11<sup>th</sup>**

**CHAPTER :- HYDROCARBON**

**DATE.....**

**NAME.....**

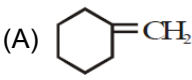
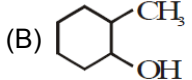
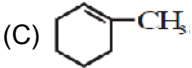
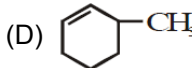
**SECTION.....**

### (SECTION-A)

1. Both ionic and free radical mechanism involve in the reaction -  
(A) Chlorination of alkane  
(B) Williamson's synthesis  
(C) Electrolysis of potassium acetate  
(D) Friedel-crafts reaction
2. Decarboxylation of isobutyric acid leads to -  
(A) Isobutane (B) Propane  
(C) Butane (D) None
3. The reaction,  

$$C_2H_5Br \xrightarrow[(ii)CuI]{(i)Li} [X] \xrightarrow{CH_3Br} [Y];$$
 is called-  
(A) Wurtz synthesis  
(B) Wolff-Kishner reduction  
(C) Corey-House synthesis  
(D) Kolbe's synthesis
4. Alkanes can be prepared from Grignard reagents by reacting with -  
(A) Alcohols  
(B) Primary amines  
(C) Alkynes  
(D) All of them
5. When isobutyl magnesium iodide is treated with water the product is -  
(A) Isobutane (B) n-Butane  
(C) Isobutene (D) Isobutyl alcohol
6. Alkyl halides on reduction with Zn-Cu couple and alcohol give -  
(A) Alkanes  
(B) Alkenes  
(C) Alkynes  
(D) Cyclic compounds
7. Which reagent can be used to convert, halide alcohols, carbonyl compounds, acids, etc., to alkane?  
(A) Zn-Hg / HCl (B) Red P + HI  
(C) LiAlH<sub>4</sub> (D) None of these
8. Photochemical chlorination of alkane is initiated by a process of -  
(A) Pyrolysis (B) Substitution  
(C) Homolysis (D) Peroxidation
9. A positive reaction of n-Butane is possible with the reagent -  
(A) F<sub>2</sub> in the dark  
(B) Cl<sub>2</sub> in the dark  
(C) Br<sub>2</sub> in the dark  
(D) Iodine in the dark
10. The number of possible enantiomer pairs that can be produced during monochlorination of 2-Methylbutane is  
(A) 2 (B) 3 (C) 4 (D) 1
11. On pyrolysis n-Butane gives -  
(A) Butene-1 (B) Butene-2  
(C) Ethene & Ethane (D) All
12. Propene when heated with chlorine at about 500°C forms -  
(A) CH<sub>2</sub>ClCH=CH<sub>2</sub>  
(B) CH<sub>3</sub>CHClCH<sub>2</sub>Cl  
(C) CH<sub>2</sub>ClCHClCH<sub>2</sub>Cl  
(D) All the three
13. In Reed's reaction alkane reacts with Cl<sub>2</sub> and SO<sub>2</sub> in the presence of -  
(A) UV light (B) IR light  
(C) Visible light (D) Dark
14. The thermal decomposition of alkanes in the absence of air is known as -  
(A) Oxidation (B) Combustion  
(C) Hydrogenation (D) Pyrolysis
15. Alkene can be formed from carbonium ion by  
(A) Combination of proton  
(B) Elimination of hydride ion  
(C) Elimination of proton  
(D) First combination of H then removal of H
16. A carbocation undergoes following reactions except -  
(A) Combination with a nucleophile  
(B) Rearrangement to form a less stable carbocation  
(C) Rearrangement to form a high stable carbocation  
(D) Elimination of a proton to form C = C
17. Propyl bromide on reaction with alcoholic KOH gives -  
(A) Propane (B) Propene  
(C) Butane (D) Acetylene
18. The catalyst used in kharasch reaction, is -  
(A) Only halogenated compound  
(B) Any peroxide  
(C) Al<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub>  
(D) TiCl<sub>4</sub>

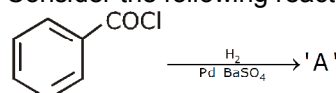
19. Baeyer's reagent is –  
 (A) Alkaline permanganate solution  
 (B) Acidified permanganate solution  
 (C) Neutral permanganate solution  
 (D) Aqueous bromine solution
20. Ethylene reacts with osmium tetroxide to form an osmic ester which on hydrolysis gives  
 (A) Ethyl alcohol + Osmic acid  
 (B) Glyoxal + Osmic acid  
 (C) Ethylene glycol + H<sub>2</sub>SO<sub>4</sub>  
 (D) Glycolic acid + H<sub>2</sub>SO<sub>4</sub>
21. Ozonolysis of 2-Methyl but-2-ene yields –  
 (A) Only aldehyde  
 (B) Only ketone  
 (C) Both aldehyde and ketone  
 (D) None
22. Unbranched alkenes on ozonolysis give –  
 (A) Only ketone  
 (B) Only aldehydes  
 (C) Aldehydes & ketone  
 (D) All of the above
23. Westrosol is a solvent & it is prepared by –  
 (A) CH≡CH + 2Cl<sub>2</sub>  
 (B) CH≡CH + 2HCl & then Ca(OH)<sub>2</sub>  
 (C) CH≡CH + 2Cl<sub>2</sub> & Ca(OH)<sub>2</sub>  
 (D) None of these
24. Reaction of alkenes and alkynes with hypochlorous acid is called –  
 (A) Hydroxychlorination  
 (B) Chlorohydroxylation  
 (C) Chlorination  
 (D) Hydroxylation
25. An alkyne which gives two moles of acetic acid on ozonolysis is –  
 (A) 1-Butyne  
 (B) 2-Butyne  
 (C) Methyl acetylene  
 (D) 3-Methyl-1-butyne
26. 2-Butyne and 1-Butyne show resemblance in all except  
 (A) Both decolourise alkaline KMnO<sub>4</sub>  
 (B) Both turn bromine water colourless  
 (C) Both undergo addition reaction  
 (D) Both form white precipitate with Tollen's reagent
27. Heating a mixture of sodium benzoate and soda lime gives –  
 (A) Methane (B) Phenol  
 (C) Calcium benzoate (D) Benzene
28. Benzene on treatment with a mixture of conc. HNO<sub>3</sub> and conc. H<sub>2</sub>SO<sub>4</sub> at 100°C gives  
 (A) Nitrobenzene  
 (B) m-Dinitrobenzene  
 (C) p-Dinitrobenzene  
 (D) o-Dinitrobenzene
29. Sulphonation of benzene differs from most of the electrophilic aromatic substitution reactions. Which one of the following statement is correct ?  
 (A) is reversible  
 (B) requires the presence of Lewis acid as catalyst  
 (C) takes place with explosive violence  
 (D) requires elevated temperature
30. Benzene reacts with fuming sulphuric acid to give –  
 (A) Sodium benzene sulphonate  
 (B) Benzene sulphonic acid  
 (C) Sodium benzoate  
 (D) All the above
31. Ozonolysis of toluene gives –  
 (A) Two molecule of glyoxal  
 (B) Three molecule of glyoxal  
 (C) Two molecule of glyoxal and one molecule of methyl glyoxal  
 (D) Two molecule of methyl glyoxal and one molecule of glyoxal
32. Which of the following alkyl halides gives a mixture of alkenes on dehydrohalogenation?  
 (A) n-Propyl halide  
 (B) Isopropyl halide  
 (C) s-Butyl bromide  
 (D) t-Butyl bromide
33. The major product in the following reaction is  

$$\text{Cyclohexane-CH}_2\text{-OH} \xrightarrow{\text{H}^+} ?$$
 (A)  (B)   
 (C)  (D) 
34. Isobutylene on hydroboration oxidation gives  
 (A) p-alcohol (B) s-alcohol  
 (C) t-alcohol (D) dihydric alcohol
35. The pH of solution in Kolbe's electrolysis  
 (A) increase with time  
 (B) decrease with time  
 (C) remains constant  
 (D) nothing can be said

**(SECTION-B)**

36. Which of the following alkenes can exist in stereoisomeric forms?  
 (A)  $\alpha$ -Butylene (B) Propylene  
 (C)  $\beta$ -Butylene (D) Isobutylene
37. Nitration of benzene is  
 (A) nucleophilic substitution  
 (B) nucleophilic addition  
 (C) electrophilic substitution  
 (D) electrophilic addition
38. The compound with the highest boiling point is  
 (A) n-Hexane  
 (B) n-Pentane  
 (C) 2,2-Dimethyl propane  
 (D) Propane
39. **Assertion** : - Increasing order of heat of hydrogenation is  
 $\text{CH}_2=\text{CH}-\text{CH}_3 < \text{CH}_3-\text{CH}=\text{CH}-\text{CH}_3 < \text{CH}_3-\text{C}=\text{C}-\text{CH}_3$   
 $\begin{array}{c} | \quad | \\ \text{CH}_3 \quad \text{CH}_3 \end{array}$   
**Reason** : - Highly substituted alkenes have less stability.  
 (A) A (B) B (C) C (D) D
40. **Assertion** : - Benzene does not decolourise  $\text{Br}_2$ -water.  
**Reason** : - Benzene is stabilized by aromaticity and no addition of  $\text{Br}_2$ .  
 (A) A (B) B (C) C (D) D
41. **Assertion** : - Acetylene gives glyoxal on reductive ozonolysis while benzene does not give glyoxal.  
**Reason** : - Benzene does not show reductive ozonolysis reaction  
 (A) A (B) B (C) C (D) D
42. Benzene reacts with  $\text{CH}_3\text{Cl}$  in the presence of anhydrous  $\text{AlCl}_3$  to form :  
 (A) Chlorobenzene (B) Benzylchloride  
 (C) Xylene (D) Toluene
43. The reaction of toluene with  $\text{Cl}_2$  in presence of  $\text{FeCl}_3$  gives 'X' and reaction in presence of light gives 'Y'. Thus, 'X' and 'Y' are :  
 (A) X = Benzal chloride, Y = o-Chlorotoluene  
 (B) X = m-Chlorotoluene, Y = p-Chlorotoluene  
 (C) X = o-and p-Chlorotoluene, Y = Trichloromethyl benzene  
 (D) X = Benzyl chloride, Y = m-Chlorotoluene

44. Consider the following reaction :

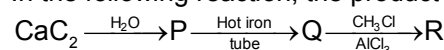


The product 'A' is

- (A)  $\text{C}_6\text{H}_5\text{Cl}$  (B)  $\text{C}_6\text{H}_5\text{CHO}$   
 (C)  $\text{C}_6\text{H}_5\text{OH}$  (D)  $\text{C}_6\text{H}_5\text{COCH}_3$

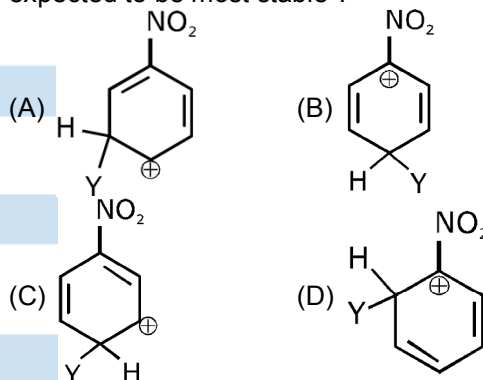
45. The treatment of benzene with iso-butene in the presence of sulphuric acid gives.  
 (A) Isobutyl benzene  
 (B) tert-Butyl benzene  
 (C) n-Butyl benzene  
 (D) No reaction

46. In the following reaction, the product 'R' is



- (A) Benzene  
 (B) Ethylbenzene  
 (C) Toluene  
 (D) n-Propylbenzene

47. Which of the following carbocations is expected to be most stable ?



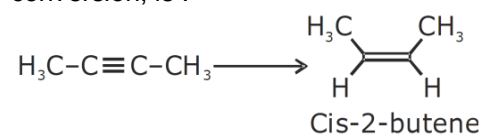
48. Hydrocarbon (A) reacts with bromine by substitution to form an alkyl bromide which by Wurtz reaction is converted to gaseous hydrocarbon containing less than four carbon atoms (A) is:

- (A)  $\text{CH}_3-\text{CH}_3$  (B)  $\text{CH}_2=\text{CH}_2$   
 (C)  $\text{CH}\equiv\text{CH}$  (D)  $\text{CH}_4$

49. Which oxide of nitrogen is not a common pollutant introduced into the atmosphere both due to natural and human activity ?

- (A)  $\text{N}_2\text{O}$  (B)  $\text{NO}_2$   
 (C)  $\text{N}_2\text{O}_5$  (D)  $\text{NO}$

50. The most suitable reagent for the following conversion, is :



- (A)  $\text{Zn}/\text{HCl}$   
 (B)  $\text{Hg}^{2+}/\text{H}^+, \text{H}_2\text{O}$   
 (C)  $\text{Na}/\text{liquid NH}_3$   
 (D)  $\text{H}_2, \text{Pd}/\text{C}, \text{quinoline}$