Test - Level 1 | Chemistry XI | Hydrocarbons | Marks- 30 | Time -1.5h

Q.1. How do you account for the formation of ethane during chlorination of methane? **(3)**

Q.2. An alkene 'A' on ozonolysis gives a mixture of ethanal and pentan-3-one. Write the structure and IUPAC name of 'A'. **(2)**

Q.3. An alkene 'A' contains three C—C, eight C—H, a-bonds, and one C—C n-bond. 'A' on ozonolysis gives two moles of an aldehyde of molar mass 44 u. Write the IUPAC name of'A'. **(3)**

Q.4. How will you convert benzene into (i) p-nitrobromobenzene (ii) m-nitrochlorobenzene (iii) p-nitrotoluene (iv) acetophenone? **(4)**

Q.5. Addition of HBr to propene yields 2-bromopropane, while in presence of benzoyl peroxide, the same reaction yields 1-bromopropane. Explain and give mechanism. **(4)**

Q.6. How will you convert the following compounds into benzene?

(i) Ethyne (ii) Ethene (iii) Hexane **(3)**

Q.7. Suggest the name of another Lewis acid instead of anhydrous aluminium chloride which can be used during ethylation of benzene. **(1)**

Q.8. What is decarboxylation? Give an example **(1)**

Q.9. What happens when ethanol is heated with cone. H_2SO_4? **(2)**

Q.10. Explain the following with examples:

(i) Wurtz reaction

(ii) Kolbe's electrolysis **(3)**

Q.11. What happens when benzene is treated with

(i) Mixture of cone. H_2SO_4 and conc. HNO_3 at 330 K

(ii) Ethanoyl Chloride in presence of anhydrous $AlCl_3$

Write the mechanism also. **(4)**