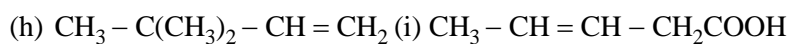
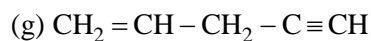
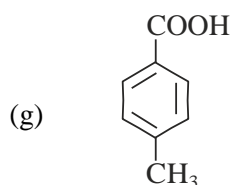
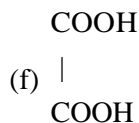
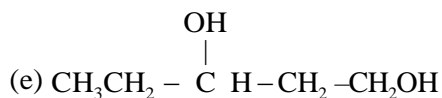
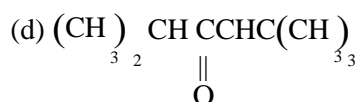
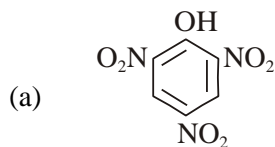


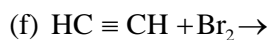
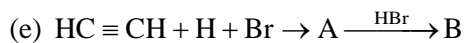
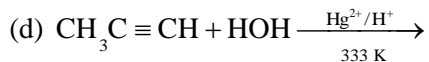
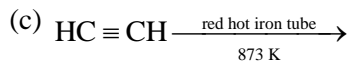
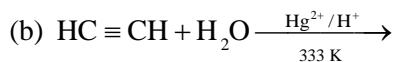
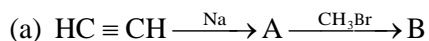
SBOA SCHOOL AND JUNIOR COLLEGE, CHENNAI-101
CHEMISTRY ASSIGNMENT -2

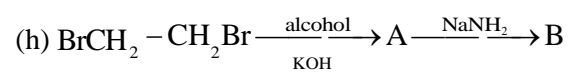
TOPIC: HYDROCARBONS

1. Write IUPAC names of the following organic compounds :

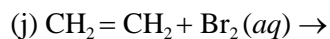
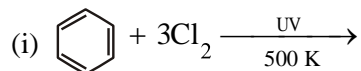
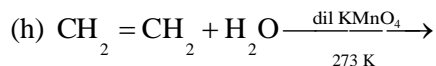
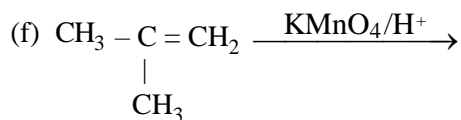
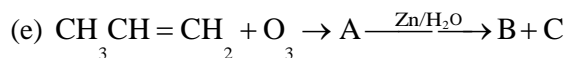
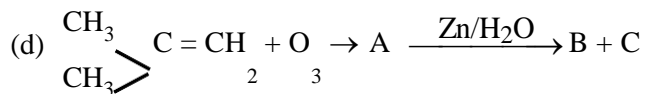
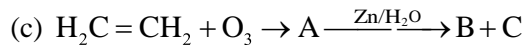
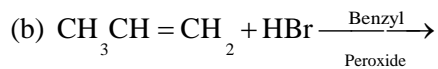
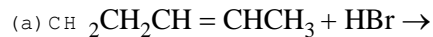


2. Complete the following equations :





3. Complete the following reactions :



4. How will you carry out following conversions :

(a) Ethyne into propyne

(b) Ethyne into benzene

(c) Benzene into 4-nitrobromobenzene

(d) Benzene into *n*-nitrochlorobenzene

(e) But-2-ene into ethanol

(f) Benzene into acetophenone

(g) Benzene into 4-nitrotoluene

(h) Ethane into ethyne

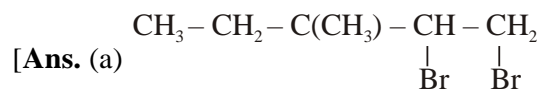
- (i) Ethanoic acid into methane
 - (j) Methane into ethane
5. Give reasons :
- (a) AlCl_3 is used as catalyst in Friedal-Craft reaction.
 - (b) Wurtz reaction is carried in dry ether.
 - (c) Wurtz reaction is not preferred for the preparation of alkanes containing odd number of carbon atoms.
 - (d) C-C bond length in benzene ring is 139 pm which is in between C-C single bond 154 pm and C=C double bond 133 pm.
 - (e) Benzene is extra ordinarily stable although it constants three double bonds.
 - (f) trans-2-butene has higher m.p. than cis-isomer.
 - (g) Chlorobenene is less reactive towards electrophilic aromatic substitution than benzene.
 - (h) Ethyne is more acidic than ethene and ethane.
 - (i) Kharasch effect is spontaneous with HBr only.
 - (j) $-\text{OH}$ is activating group while halogens are deactivating group, however, both are *o*-/*p*-director.
6. Give one chemical test to distinguish between compounds of the following pairs:
- (a) Ethane and ethene
 - (b) Ethene and ethyne

(c) Benzene and cyclohexene

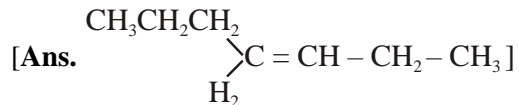
(d) But-1-yne and But-2-yne

(e) But-1-yne and Buta-1, 3-diene

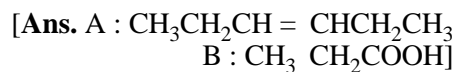
7. An alkyl dihalide A, $C_6H_{12}Br_2$ on dehydrobromination with $NaNH_2$ gave compound B. C_6H_{10} . 'B' on hydration gave 3-methylpentan-2-one. Suggest suitable structural formulae for compound A and B.



8. An alkene C_8H_{16} on ozonolysis form ozonide which on hydrolysis with Zn dust form an aldehyde and pentan-2-one as products. Draw the structure of alkene and write the chemical reaction involved.



9. A hydrocarbon 'A' adds on mole of hydrogen in presence of Pt catalyst to form n-hexane. When 'A' is oxidised with $KMnO_4$, a single carboxylic acid 'B' containing three carbon atoms is obtained. Identity 'A' and 'B'.



10. A hydrocarbon C_5H_{10} does not react with chlorine in dark but gives a single monochloro compound C_5H_9Cl in bright sunlight. Identify the hydrocarbon.