

HALOALKANES AND HALOARENES

classmate

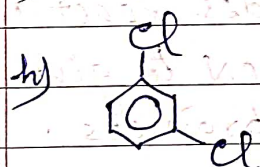
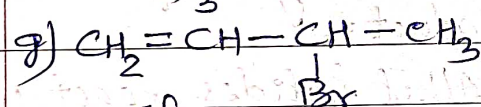
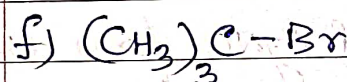
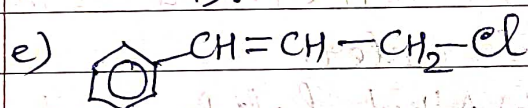
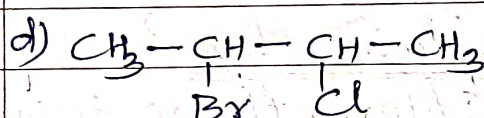
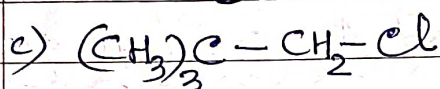
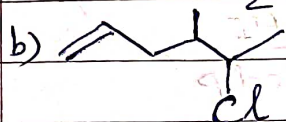
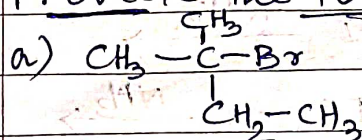
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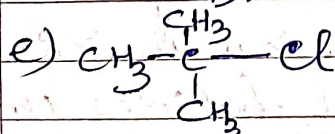
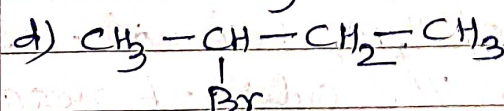
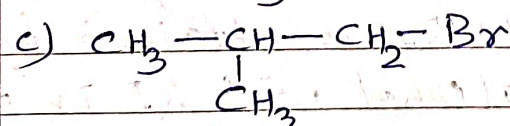
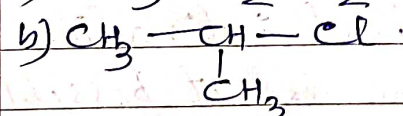
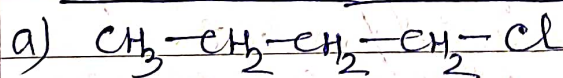
By: S.K. Samal

Very short Answer Type questions:

① Provide the IUPAC name -



② Write the common name -



③ Fill in the blanks.

a) The metal used to prepare Grignard reagent is _____.

b) 3-Bromo-2,2-dimethylbutane heated with alc. KOH to give _____.

c) preparation of chlorobenzene from BDC with Cu/HCl is called _____.

d) Lindane is another name of _____ and used as _____.

e) Chlorobenzene reacts with _____ in presence of conc. H_2SO_4 to give DDT.

f) Benzene reacts with Cl_2 in presence of sunlight to give _____.

g) CCl_4 is used as a fire extinguisher under the name _____.

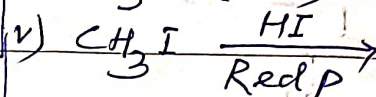
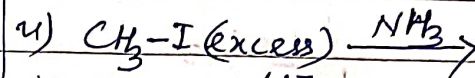
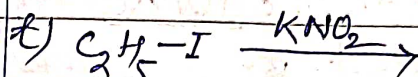
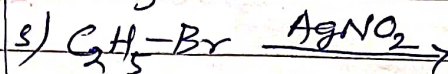
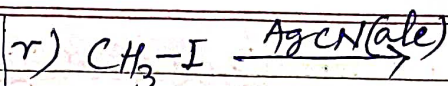
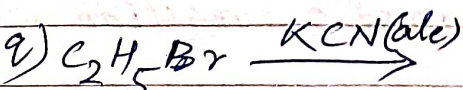
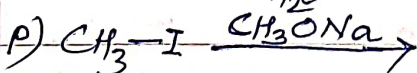
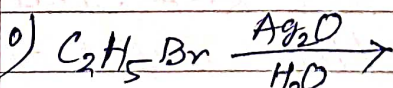
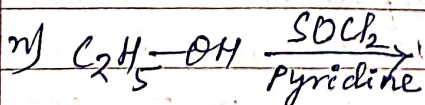
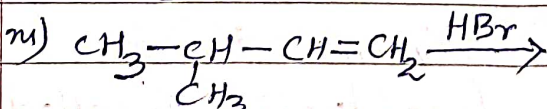
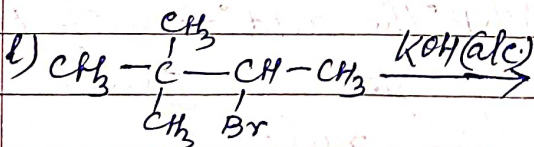
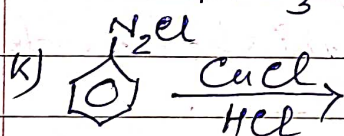
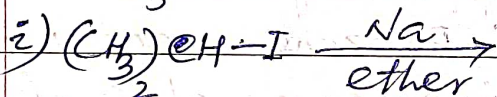
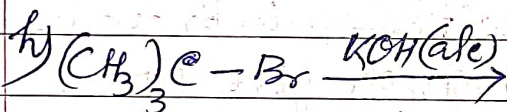
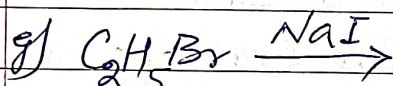
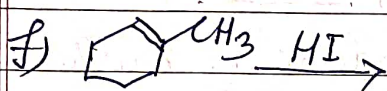
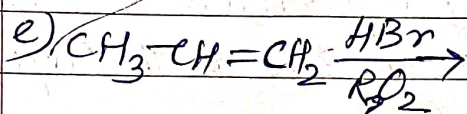
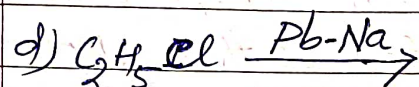
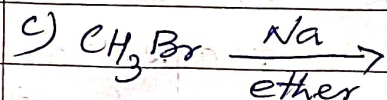
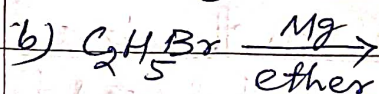
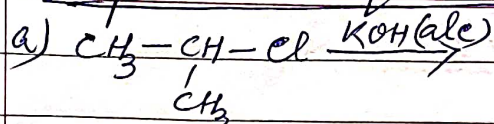
h) The addition of HBr to propene is guided by _____ rule.

i) Gamma-isomer of benzene hexafluoride is called as _____.

j) R-Cl reacts with AgF to give R-F . This reaction is called as _____.

k) In SN^1 mechanism _____ is formed as reaction intermediate.

4) Complete the equation :-



Short Answer type questions

5) Explain, why?

a) Chloroethane is insoluble in water.

b) Alkyl halides heated with KNO_2 and AgNO_2 form different products.

c) Alkyl halides react with KCN and AgCN to give different products.

d) propene reacts with HBr giving 2-bromopropane as major product.

e) Direct iodination of alkane is not possible.

f) RI is obtained by heating alcohol with KI in presence of H_3PO_4 but not with H_2SO_4 .

g) The order of reactivity is $\text{R-I} > \text{R-Br} > \text{R-Cl}$.

h) Alkyl halides undergo nucleophilic substitution reaction.

i) Aryl halide is less reactive than alkyl halide.

j) Inversion takes place in SN^2 reaction, while racemisation in SN^1 reaction.

k) Alkyl halide is not prepared in laboratory from alkane by halogenation.

l) Chlorobenzene on nitration forms p-nitrochlorobenzene.

m) Wurtz reaction is carried in presence of etheral solution.

n) 2-Bromopentane with alc. KOH forms pent-2-ene as major product.

o) 2-Bromopropane with sodium tertiary butoxide forms propene, but with sodium ethoxide forms 2-ethoxypropane.

p) Chloroform is stored in brown coloured bottle.

q) Ethyl iodide results ethyl alcohol with aq. KOH but ethylene with alc. KOH.

r) $SOCl_2$ is preferred to PCl_5 for preparation of alkyl chloride from alcohol.

s) peroxide effect is only applicable for addition of HBr to unsymmetrical alkene.

t) Direct iodination of benzene is not possible.

6) What happens when?

a) Butane undergoes halogenation in presence of light.

b) Toluene is treated with Cl_2 in presence of light.

c) Silver acetate is treated with bromine.

d) HBr is added to propene in presence of benzoyl peroxide.

e) HCl is added to propene.

f) HCl is added to propene in presence of organic peroxide.

g) Methyl bromide is treated with $AgNO_2$.

h) Ethyl iodide is treated with KNO_2 .

i) Methyl iodide is treated with KCN solution.

j) Methyl bromide is treated with AgCN solution.

k) Methyl bromide is treated with bromobenzene in presence of sodium-dry ether.

l) Methyl iodide is treated with sodium ethoxide.

m) Ethyl iodide is boiled with aqueous alkali.

n) Ethyl bromide is treated with alcoholic KOH.

o) Methyl iodide is treated with zinc in dry ether.

1) Chlorobenzene is treated with sodium metal in dry ether.

2) Ethyl alcohol is treated with PCl_5 .

3) Isopropyl alcohol is heated with Lucas reagent.

4) Ethyl alcohol is heated with iodine in presence of red phosphorus.

5) Ethyl chloride is treated with HgF_2 .

6) Toluene is treated with N-bromosuccinimide in presence of light.

7) Ethyl iodide is heated with excess ammonia.

8) Methyl iodide is heated with HI in presence of Red P.

9) Ethyl iodide is treated with magnesium metal in dry ether.

10) Chlorobenzene is heated with chloral in presence of conc. H_2SO_4 .

11) Benzene diazonium chloride is heated with fluoroboric acid.

7) Write notes on -

a) Saytzeff rule

b) Markownikoff's rule

c) Peroxide effect

d) Wurtz reaction

e) Fittig reaction

f) Wurtz-Fittig reaction

g) Swart's reaction

h) Finkelstein reaction

i) Frankland reaction

j) Williamson ether

Synthesis reaction

k) Hunsdiecker reaction

l) SN^1 and SN^2 reaction

m) Freons

n) Gammexane

o) Sandmeyer's reaction

p) Gatterman's reaction

q) Ullman reaction.

8) Do the conversion:

a) n-propyl iodide to isopropyl iodide

b) Ethanol to ethyl fluoride

c) Toluene to benzyl alcohol

d) isopropyl bromide to n-propyl iodide

e) Benzene to Biphenyl

f) Benzene to p-bromonitrobenzene

g) Ter-butyl bromide to iso-butyl bromide

h) But-1-ene to n-Butyl iodide