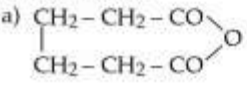
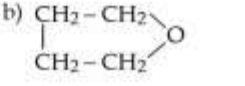
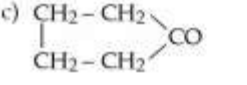
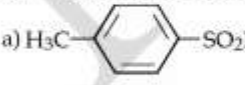
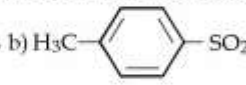
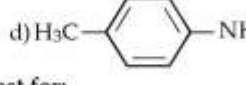


QAD Series

Hydrocarbon, Aromaticity, Alkyl halide, Carboxylic acid & Nitrogen containing compound

- In the complete combustion of alkane, the no. of oxygen moles required is
a) $\frac{3}{2}nO_2$ b) $\left(\frac{n+1}{2}\right)O_2$ c) $\left(\frac{3n+1}{2}\right)O_2$ d) $\left(\frac{n-1}{2}\right)O_2$
- The product of acid catalyzed hydration of 2-phenyl propene is
a) 3-phenyl, 2-propanol b) 1-phenyl, 2-propanol
c) 2-phenyl, 2-propanol d) 2-phenyl, 1-propanol
- Propene reacts with Cl_2 at $400 - 600^\circ C$ to give
a) 1, 2-dichloropropane b) allyl chloride
c) polyvinyl chloride d) no reaction
- Octane number is
a) no. of carbon atoms in octane
b) no. of molecules of octane formed in cracking of 1.0g of gasoline
c) no. of hydrogen atoms in octane
d) no. of representing standard rating of fuel
- The dehydrohalogenation of neopentyl bromide with alc. KOH gives mostly
a) 2-methyl-1-butene b) 2, 2-dimethyl-1-butene
c) 2-methyl-2-butene d) 2-butene
- Fischer-Tropsch process is used in the manufacture of
a) synthetic petrol b) ethanol
c) benzene d) ethanoic acid
- Halogenation of alkanes is an example of
a) Electrophilic substitution b) Nucleophilic substitution
c) Free radical substitution d) Oxidation
- Out of the following fraction of petroleum the one having the lowest boiling point is
a) kerosene b) diesel oil c) gasoline d) heavy oil
- A fuel contain 25% n-heptane & 75% iso-octane. Its octane no. is
a) 50 b) 75 c) 100 d) 25
- Grignard reagent gives alkane with
a) H_2O b) C_2H_5OH c) $C_2H_5NH_2$ d) all
- The hydrocarbon which decolourise alk. $KMnO_4$ solution but does not give any ppt with ammonical silver nitrate is
a) benzene b) acetylene c) propyne d) butyne-2
- Electrophile in the case of chlorination of benzene in presence of $FeCl_3$ is?
a) Cl^+ b) Cl^- c) Cl d) $FeCl_3$
- The decreasing order of electro negativity of the hybrid orbital is:
a) $sp > sp^2 > sp^3$ b) $sp^3 > sp^2 > sp$
c) $sp^2 > sp^3 > sp$ d) $sp^2 > sp > sp^3$
- Toluene contains
a) 15σ and 3π -bonds b) 6σ and 3π -bonds
c) 9σ and 3π -bonds d) 9σ and 6π -bonds
- The reaction; $CH_2 = CH - CH_3 + HBr \rightarrow CH_3CH(Br)CH_3$ is:
a) nucleophilic addition b) electrophilic addition
c) electrophilic substitution d) free radical addition
- The conditions of aromaticity is:
a) molecule must contain $(4n + 2)\pi$ electrons
b) molecule must have clouds of delocalised π - electrons
c) both a and b
d) presence of benzene ring
- Which of the following is Aromatic?
a) Cyclopropane b) cyclopropenylcation
c) cyclopropene d) cyclopropenyl anion
- Benzene reacts with Cl_2 in sunlight to give a final product?
a) C_6H_5Cl b) $o - C_6H_4Cl_2$ c) $C_6H_6Cl_6$ d) $p - C_6H_4Cl_2$
- A mixture of ethyl iodide and n-propyl iodide is subjected to Wurtz reaction. The hydrocarbon that will not be formed is:
a) n-butane b) n-propane c) n-pentane d) n-hexane
- Which of the following compounds has been given an octane number 100?
a) Neopentane b) n-hexane c) Neo octane d) Iso octane
- The dehydrohalogenation of neopentyl bromide with alc. KOH mainly gives:
a) 2 - methyl - 1 - butene b) 2 - methyl - 2 - butene
c) 2, 2 - dimethyl - 1 - butene d) 2 - butene
- When Arsenic chloride is reacted with acetylene gas, compound which is produced is used as an antimalarial drug. It is:
a) westrosol b) westron
c) β -chlorovinyl dichloroarsine d) Atkins compound
- When an alkyl halide is heated with dry Ag_2O , it produces
a) ester b) ether c) ketone d) an alcohol
- A mixture of C_2H_6 , C_2H_4 and C_2H_2 is passed through ammoniacal $AgNO_3$. The gases which remain unreacted are :
a) C_2H_2 b) C_2H_2 and C_2H_4
c) C_2H_6 d) C_2H_4 and C_2H_6
- Halogenation of alkanes is an example of
a) free radical addition rxn b) free radical substitution rxn
c) nucleophilic substitution rxn d) nucleophilic addition rxn
- Insecticide Gammexane is
a) DDT b) BHC c) Chloral d) None of these
- Unpleasant smell of carbonylamine is obtained when chloroform and alcoholic KOH are heated with
a) any aromatic amine b) any primary amine
c) any amine d) any aliphatic amine
- Which of the following represents Freon?
a) acetylene tetrachloride b) trichloroethylene
c) dichlorodifluoromethane d) ethylene dichloride
- Slow oxidation of chloroform in air leads to
a) Formyl chloride b) $HCOOH$ c) $COCl_2$ d) Trichloroacetic acid
- Propyne and propene can be distinguished by :
a) dil. $KMnO_4$ b) conc. H_2SO_4
c) $AgNO_3$ in ammonia d) Br_2 in CCl_4
- The complete combustion of CH_4 gives:
a) $CO + H_2$ b) $CO + N_2$ c) $CO_2 + H_2O$ d) $CO + N_2O$
- A fruity smell is obtained by the reaction of ethanol with
a) PCl_5 b) CH_3COCH_3 c) CH_3COOH d) PCl_3
- When CH_3COOH reacts with CH_3MgX :
a) CH_3CO is formed b) hydrocarbon is formed
c) acetone is formed d) alcohol is formed
- The compound formed by the reaction of acetamide with bromine in presence of a base is:
a) CH_3NC b) $CH_3CH_2NH_2$ c) CH_3NH_2 d) CH_3CN
- For the reaction, $CH_3COCl \xrightarrow{H_2/Pd} X$, then X is:
a) CH_3CHO b) CH_3COOH
c) CH_3COCH_3 d) CH_3CH_2OH
- Which one of the following can produce hydrogen when treated with metallic sodium?
a) $(CH_3)_2NH$ b) CH_3NH_2 c) $C_6H_5NH_2$ d) CH_3CONH_2
- $CH_3CH_2Br \xrightarrow{alc. KCN} \xrightarrow{H_3O^+} X$, then X is :
a) acetic acid b) propionic acid c) butyric acid d) formic acid
- The compound which on reaction with aqueous nitrous acid at low temperature produces an oily nitrosoamine is:
a) methylamine b) ethylamine
c) triethylamine d) diethylamine

39. Primary amines are identified by:
a) Hofmann's reaction b) Carbylamine reaction
c) Friedel-Crafts reaction d) Biuret reaction
40. Amines are more basic than:
a) alcohols b) ethers c) esters d) all of these
41. Which of the following compounds caused tragedy of Bhopal?
a) CH_3CNS b) CH_3NCO c) CH_3NCS d) None
42. Function of red P in HVZ is:
a) catalyst b) promoter
c) reducing agent
d) convert carboxylic acid to acid chloride
43. Reduction of nitrobenzene with tin-HCl (acidic medium) gives:
a) Aniline b) Azoxybenzene
c) Phenylhydroxyamine d) Azobenzene
44. When a secondary nitroalkane is treated with nitrous acid, the main product will be:
a) Nitrolic acid b) Pseudonitrol
c) 1° amine d) 1° alcohol
45. Phospholipids and glycolipids are:
a) Simple lipids b) Complex lipids
c) Derived lipid d) Lipoproteins
46. Which one of the following is the weakest base?
a) Triethylamine b) Diethylamine
c) Ethylamine d) Ammonia
47. The acid showing salt like structure in aqueous solution is:
a) acetic acid b) benzoic acid
c) formic acid d) α -amino acetic acid
48. One mole of alkene on ozonolysis gives 2 moles of butanone. The alkene is
a) 3,4-dimethyl hex-2-ene b) 2, 3-dimethyl hex-3-ene
c) 3, 4-dimethyl hex-3-ene d) 2, 3-dimethyl hex-2-ene
49. AgNO_3 does not give precipitate with CHCl_3 because
a) AgNO_3 is chemically inert
b) CHCl_3 is chemically inert
c) CHCl_3 does not ionize in water
d) CHCl_3 is an organic compound
50. Pure chloroform may be prepared by
a) Chlorination of methane
b) Partial reduction of CCl_4
c) The action of bleaching powder and alkali on ethanol
d) Distilling chloral hydrate with conc. aq. alkali solution
51. $\text{CH}_3\text{C}=\text{CH} \xrightarrow[\text{HgSO}_4]{\text{H}_2\text{SO}_4} \text{(B)} \xrightarrow[\text{NaOH}]{\text{CHCl}_3} \text{(C)}$. Compound (C) can be used as
a) an anaesthetic b) an insecticide
c) a solvent d) a hypnotic
52. The nature of hydrogen atom in chloroform is
a) neutral b) acidic
c) basic d) amphoteric
53. The weakest base among the following is
a) $\text{C}_2\text{H}_5\text{NH}_2$ b) $\text{C}_6\text{H}_5\text{NH}_2$ c) CH_3CONH_2 d) NH_3
54. o-Methoxybromobenzene is treated with sodamide and then with ammonia. The product formed is
a) o-Methoxyaniline b) Aniline
c) Methoxybenzene d) m-Methoxyaniline
55. Which of the following product is formed when adipic acid is heated?
a)  b) 
c)  d) 
56. Oxalic acid when reduced with Zinc and H_2SO_4 gives:
a) glyoxalic acid b) glyoxal
c) glycolic acid d) glycol
57. Urea on heating gives
a) Phenyl hydrazine b) Semicarbazide
c) Acetylurea d) Biuret
58. Allyl chloride on dehydrochlorination gives
a) Propadiene b) Allyl alcohol
c) Acetone d) Propylene
59. Addition of bromine to buta-1, 3-diene gives
a) 1, 2-addition product only
b) 1, 4-addition product only
c) both 1, 2 and 1, 4-addition product
d) No reaction
60. Methyl bromide reacts with NaI /acetone to give methyl fluoride and AgBr . The reaction is called
a) Finkelstein reaction b) Fittig reaction
c) Swart reaction d) Wurtz reaction
61. Iodoform can be prepared from all except
a) isopropyl alcohol b) 3-methyl-2-butanone
c) isobutyl alcohol d) ethyl methyl ketone
62. Which of the following is not undergo Volhard Zelinsky reaction?
a) CH_3COOH b) $\text{CH}_3\text{CH}_2\text{COOH}$
c) $(\text{CH}_3)_2\text{CHCOOH}$ d) $(\text{CH}_3)_2\text{CCOOH}$
63. The best reagent to convert 1, 2-dichloropropane to propyne as
a) Alc. KOH b) NaNH_2 in liq. NH_3
c) Alc. NaNH_2 d) Zn dust
64. Which of the following alkyl benzene more readily oxidise to form benzoic acid with strong oxidising agent?
a) Methyl benzene b) Ethyl benzene
c) Isopropyl benzene d) Tertiary butyl benzene
65. Which of the following is soluble in sod. hydroxide?
a)  b) 
c)  d) 
66. The melting point is highest for:
a) primary amines b) secondary amines
c) tertiary amines d) quaternary amines
67. When a mixture of secondary amines is heated with diethyl oxalate, secondary amine gives
a) solid oxamic ester b) liquid oxamic ester
c) gaseous oxamic ester d) none
68. Formic acid and acetic acid may be differentiated by reaction with
a) dil. acidified KMnO_4 b) Na
c) $\text{C}_2\text{H}_5\text{ONa}$ d) 2, 4-DNP
69. Which of the following is saturated fatty acid?
a) Stearic acid b) Oleic acid
c) Linoleic acid d) Linoleic acid
70. Which of the following will have maximum dipole moment?
a) CH_3F b) CH_3Cl c) CH_3Br d) CH_3I
71. $\text{CH}_3\text{C}=\text{CH}$ reacts with HCl to give
a) 2, 2-dichloropropane b) 1, 1-dichloropropane
c) 1, 2-dichloropropane d) 1-chloropropane
72. Which of the following has maximum acidic strength?
a) o-nitrobenzoic acid b) m-nitrobenzoic acid
c) p-nitrobenzoic acid d) p-nitrophenol