12 Chemistry Chapter 08 + 09

Work Sheet

Engineer Bilal

The number of π – bonds present in acrylonitrile is:

a) 1 b) 2 c) 3 d) 4

Correct answer is 3

Baeyer’s reagent is a mixture of:

a) HCl & $ZnCl_2$

b) Alkaline $KMnO_4$

c) Aqueous Bromine

d) Mix. of Br_2 & $KMnO_4$

Correct answer is Alkaline $KMnO_4$

The most reactive compound is:

a) Benzene b) Ethane c) Ethene d) Ethyne

Correct answer is Ethene

Aromaticity of benzene ring is due to:

a) Presence of sigma bond

b) Delocalization of pi electrons

c) Ring structure

d) Three double bond

Delocalization of pi electrons is the correct answer

Reaction mechanism of alkanes with halogens is known as:

a) Addition
b) Free radical substitution
c) Elimination
d) Propagation

Free radical substitution is the correct answer

When 1 – butene reacts with bromine, the product formed will be:

a) 1, 3 – dihydroxy butane

b) 1,3 – dihydroxy butan- diol

c) But – 1, 2 – diol

d) 1, 2 – dibromo butane

1, 2 – dibromo butane is the correct answer

The addition of HCl to ethene gives:

a) Chloroethane
b) 1, 1 – dichloroethane
c) 1, 2 – dichloroethane
d) 2 - Chloroethane

Chloroethane is the correct answer

The carbon atoms of which compound show maximum electronegativity:

a) Ethene b) Ethyne c) Propene d) Benzene

Ethyne is the correct answer

When hydrogen atom is removed from benzene, group left is called:

a) Alkyl group b) Phenyl group

c) Benzyl group d) Methyl group

Phenyl group is the right answer

When CH_3 is attached with the benzene ring, it makes the ring:

a) Good electrophile
b) Good nucleophile
c) Resonance hybrid
d) Extraordinary stable

Good nucleophile is the correct answer

In conversion of alkene to alcohol, reagent is:

a) KOH
b) KCl
c) H_2SO_4
d) HNO_3

H_2SO_4 IS THE RIGHT ANSWER

Polymerization of ethane produces which of the following polymer?

a) Polyvinyl
b) polethyl
c) polyethylene
d) polyethoxy

Polyethylene is the correct answer

Which metal is used to form alkanes from alkyl haildes?

a) Zn b) N c) both a and b d) None of these

Zn is the right answer

The general formula of Methane Dichloride is:

a) CH_3Cl_2 b) CH_4Cl_2 c) CH_2Cl_2 d) None of these

CH_2Cl_2 is the right answer

Which of the following is saturated hydrocarbon?

a) Octane b) Nonane c) Decane d) All of these

All of these

Which one of the following has the least C – C bond length?

a) Benzene b) Ethane c) Ethene d) Ethyne

Ethyne is the correct answer

What is Lindlar Catalyst?

a) Fe_2O_3 and Al_2O_3

b) Al_2O_3, SiO_2, Cr_2O_3

c) Pd, $CaCO_3$ and lead salts

d) Charcoal

Pd, $CaCO_3$ and lead salts is the right answer

Which gas among the following cab be dried by bubbling in H_2SO_4:

a) Ammonia gas
b) HCl gas
c) Ethyne
d) Oxygen gas

HCl gas is the right answer

Boiling point of heptane is:

a) 140 b) 160 c) 200 d) 98

98

The IUPAC name of the compound having structural formula CH_3 - CH(OH) – COOH is:

a) 2 – hydroxy propanoic acid

b) Lactic acid

c) α – hydroxyl propanoic acid

d) Both a and b

2 – hydroxy propanoic acid

Fridel - Crafts reaction can be used for the preparation of:

a) Toluene b) Benzene c) Phenol d) PABA

Toluene

Which of the following is formula of Benzyl alcohol?

a) C_6H_5CHO

b) $C_6H_5CH_2O_2CC_6H_5$

c) $C_6H_5CH_2OH$

d) C_5H_5N

$C_6H_5CH_2OH$

How many Dewar structure of Benzene are present?

a) 2 b) 3 c) 4 d) Infinite

3

Which of the following statements is incorrect about benzene?

a) All of the carbon atoms are sp hybridized
b) The carbon – carbon bond lengths are all the same
c) It has delocalized electrons
d) The carbon hydrogen bond lengths are all the same
e) All twelve atoms lie in the same plane

a) All of the carbon atoms are sp hybridized

Which of the following hydrocarbon is in liquid state at room temperature?

a) Butane b) Hexane c) Ethene d) Ethane

Hexane

Which of the following has the highest boiling point?

a) n – octane
b) Iso – Octane
c) 2, 2, 3, 3 – Tetramethylbutane
d) n - butane

n – octane

Hydrocarbon with longer straight chain has high boiling point than that of with smaller chain and alkane having branch boils at a low temperature.

Which of the following method used to prepare alkane?

a) Dehydration of alcohol

b) Wolf Kishner Reduction reaction

c) Dehalogenation of tetrahalides

d) Dehalogenation of vicinal dihalides

Wolf Kishner Reduction reaction

Reaction of sodium ethanoate with soda lime produces:

a) Ethane b) Methane c) Propane d) Butane

Methane

Catalytic oxidation of Alkanes can produce:

a) Alcohols
b) Aldehydes
c) Carboxylic acid
d) All of these

All of these

Which of the following alkanes cannot be prepared by Kolbe's electrolysis?

a) Propane b) Ethane c) Hexane d) Butane

Propane

Which of the following alkenes is more stable?

a) 1 – Butene b) Isobutylene c) 2 – Butene

d) Trans – 2 - butene

Isobutylene

Mustard gas is a:

a) Low boiling liquid
b) High boiling liquid
c) Explosive gas
d) Low boiling gas

Low boiling liquid

Ozonolysis of Ethene yields:

a) Formaldehyde
b) Acetaldehyde
c) Propionaldehyde
d) Both a and b

Formaldehyde

Ethene is produced from Ethanol by:

a) Hydration
b) Dehydration
c) Dehalogenation
d) Dehydrohalogenation

Dehydration

Ethyl Chloride when treated with aqueous KOH produces:

a) Ethanol b) Ethane c) Ethyne d) All of these

Ethanol

Alkynes can be reduced to cis – alkenes by hydrogenation in the presence of:

a) Pd

b) Anhydrous $AlCl_3$

c) Lindlar's Catalyst

d) Raney Ni

Lindlar's Catalyst

Acetylene on reacting with ammonical silver nitrate yields:

a) Silver metal b) silver chloride

c) silver mirror d) Silver acetylide

Silver acetylide

Benzene can be regarded as a polymer of:

a) Acetylene b) Ethylene c) Ethane d) Methane

Acetylene

Which of the following is not the use of ethyne?

a) Preparation of benzene

b) Welding

c) Ripening of fruits

d) Formation of Mustard gas

Formation of Mustard gas

Which alkyne reacts with water to form aldehyde?

a) Ethyne
b) Propyne
c) 1 – Butyne
d) 2 - Butyne

Ethyne

Which one of the following reactions helps us to distinguish between alkene (e.g. ethane) and alkyne (e.g. ethyne)?

a) **Reaction with ammonical silver nitrate $AgNo_3$**
b) Reaction with alkaline $KMnO_4$
c) Reaction with bromine /CCl_4
d) Reaction with ozone

Synthetic rubber is made by polymerization of:

a) Cholroform
b) acetylene
c) Divinyl acetylence
d) chloropreence

Which one of the following gases is used in welding purpose ussallt?

a) Methane
b) ethane
c) Ethene
d) acetylene

The number of acidic hydrogen in 1-Butyne is:

a) 1 b) 2 c) 3 d) 4

All the alknes are colourless and odorless EXCEPT:

a) Acetylene

b) propyne

c) Butyne

d) pentyne

The resonance energy of benzence is:

a) 358.5Kj/mole

b) 152 Kj/mole

c) +150.5Kj/mole

d) 208 Kj/mole

Benzence undergoes catalytic oxidation at 500° C to give:

a) Acetylence
b) benzoic acid
c) Maleic acid
d) acetone

Aromatic compounds burn with soty flame because:

a) They have high % age of hydrogen
b) They have a ring structure
c) They have high % age of carbon
d) They resist reaction with air

Benzence cannot undergo:

a) Substitution reaction

b) oxidation reaction

c) Addition reactions

d) elimination reaction

Which of the following does not contain isolated rings

a) Biphenyl
b) diphenyl methane
c) Phenanthreene
d) tetraphenyl methane

Heating of sodium salt of benzoin acid with sada lime

a) Benzene

b) cyclohexane

c) Toluence

d) phenol

The nature of COOH graph is:

a) Ortho and para directing

b) meta direction only

c) Para directing only

d) ortho and mata direction

Oxidation of alkyl benzence by acidified $KMnO_4$ produces:

a) Benzoic acid

b) propanoic acid

c) Butanoic acid

d) benzal chloride

Benzene reacts with acetyl chloride in presence of catalyst $AlCl_3$ to give:

a) Aldehyde
b) benzyl chloride
c) Acetophenone
d) benzophenone