Chemistry Worksheet Class 11 on Chapter 13 Hydrocarbons - Set 3

Q-1: Which of the following is the catalyst used to reduce an alkyne to alkene?
a) Raney Nickel
b) Platinum
c) Lindlar's catalyst
d) Iron

Q-2: Geometric isomers differ in
a) Position of functional group
b) Position of atoms
c) Spatial arrangement of atoms
d) Length of carbon chain

Q-3: The bond length of the connection between the central carbon atom and the other carbon atom is the shortest in
a) Propene
b) Propyne
c) Propane
d) All of them have the same

Q-4: Arrange the following in the order of their decreasing acidic character.
Ethyne, Propyne, But-2-yne

Q-5: Arrange the alkyl halides in the below list in the order of decreasing dehydrohalogenation reaction rate, that is, when heated in the presence of alcoholic KOH.
$CH_3CH_2CH_2Cl$, $CH_3CH_2CH_2Br$, $CH_3CH_2CH_2I$

Q-6: Can conformational isomers of ethane be separated? Why?

Q-7: How will you obtain the following conversions? Give the equations only.
i) Ethane from methane
ii) Ethyne from ethane

Q-8: Explain the following:
i) Why are alkenes more reactive than alkanes?
ii) Hex-3-ene shows geometrical isomerism, but hexene does not.

Q-9: Which Ethane-1,2-diol conformation is the most stable?
a) Gauche
b) Skew
c) Eclipsed
d) Staggered

Q-10: How can benzene be prepared from sodium benzoate?

Q-11: Which of the ethane molecule's conformations has the greatest and least torsional strain?

Q-12: Which concept did Kekule propose to account for forming just one ortho-disubstituted product?

Q-13: What do you mean by aromatisation?

Q-14: Why don't alkyl fluorides produce alkanes in a reduction reaction with zinc and hydrochloric acid?

Q-15: Which of the following alkanes is liquid?
a) Ethane
b) Propane
c) Hexane
d) Methane

Q-16: What mechanism does the reaction between HBr and asymmetrical alkenes use?
Q-17: Which is the first member of the alkyne series? What's its common name? Describe how it is used.

Q-18: What results from the cyclic polymerisation of two ethyne molecules and one propyne molecule when the mixture is passed through a hot iron tube?

Q-19: a) Which of the following are meta directors?
$-NO_2$, $-SO_3H$, -Cl, -OH, $-NH_2$, -CHO
b) Name an ortho-and para-directing deactivating group.

Q-20: How would you carry out the following conversions?
a) $CH_3CH_2CH{=}CH_2 \rightarrow CH_3CH_2CH_2CH_2OH$
b) $CH_3CH_2{-}CH{=}CH_2 \rightarrow CH_3CH_2CH(OH)CH_2OH$
c) $Br_2CHCHBr_2 \rightarrow CH{\equiv}CH$
d) $CH_3C{\equiv}CH \rightarrow CH_3COCH_3$