Chemistry - 12th Class Chemistry Chapter 7 Short Questions Preparation

Q1. Define Thermal cracking.

Ans 1: Breaking down of large molecule by heating at high temperature and pressure is called thermal cracking.It is particularly useful in the production of unsaturated hydrocarbons such as ethane and propene.

Q2. Define reforming of petroleum and give one example?

Ans 1: The octane number of gasoline is improved by a process is called reforming,It involved the conversion of straight chain hydrocarbons into branched chain by heating in the absence of oxygen and in the presence of catalyst.

Q3. 1-Butyne does not show geometrical isomerism but 2-Butene does .Give reasons?

Ans 1: The necessary and sufficient conditions for a compound to exhinit geomatric isomersim is that the two groups attached to the same carbon must be different,
In 1-Butene similar hydrogen atom are attached to the same carbon atom ,so it does not exhibit geometric isomerism.
But 2-Butene can exist in the form of cls and trans isomers.

Q4. What id Atomic Hybridization?

Ans 1: Mixing up of atomic orbitals to form new;y generated orbitals of same energy and same shape is called atomic orbital hybridization.For example : in carbon electron from the 2s orbital is promoted to an empty $2p_2$orbital giving electron configuration.

Q5. Define open chain compound.

Ans 1: Open chain may be branched or non branched .Open chain hydrocarbons are also called aliphatic compounds.
Branched chain compounds: Those organic compounds in which the carbon atom are attached on the side of the chain.

Q6. What is Vital force of theory?

Ans 1: Early scientist believe that the organic compound could be manufactured only by and within living thing and these compounds could be synthesized from inorganic material this theory was referred to as Vital force theory.

Q7. Write importance of cracking.

Ans 1: Besides increasing the yield of gasolines,cracking has also produced large amount of useful by products,such as 60 ethane,propane,butane and benzene.These are used for manufacturing drugs,plastic ,detergents ,synthetic fibres,fertilizers weed killer and important chemical like ethanol,phenol and acetone.

Q8. Why is restricted rotation necessary to show the geometrical isomerism?

Ans 1: Two carbons atom joined by a single bond are capable of free rotation about it.However when two carbon atom are joined are joined by a double bond they can not rotate freely,As a result the relative position of the various groups attached to these carbons atoms get fixed and give rise to cis-temperature.

Q9. Give idea about knocking in the internal combustion engine.

Ans 1: The gasoline fraction present in petroleum in generally not of good quality.When it burn in an automobile engine ,combustion can be initiated before the spark plug fire ,This produced a sharp metallic sound called knocking which greatly reduced the efficiency of an engine.

Q10. Define position isomerism.

Ans 1: The isomerism arises due to the difference in the position of the same functional group on the carbon chain,the arrangement of carbon atom remains the same.
