XI Chemistry Worksheet

Time: 30 min **Ch#13: Hydrocarbons-02** **Full Marks: 20**

Instructions:

1. All questions are compulsory.

2. Please give the explanation for the answer where applicable.

Q1 - What do you mean by structural isomerism?

(1 Mark)

Q2 - Define hydrocarbons.

(1 Mark)

Q3 - Calculate the number σ a π bonds i≡ N C-Cl≡C N.

(1 Mark)

Q4 - Name the acid whose sodium salt is required for the preparation of propane? Write chemical equation for the reaction.

(2 Marks)

Q5 - Draw the Newman's projection of ethane.

(2 Marks)

Q6 - What do you understand by torsional angle? Which of the conformations of ethane has the maximum and the minimum torsional strain?

(2 Marks)

Q7 - Write the conditions which are necessary for a compound to show geometrical isomerism. Will butene exhibit geometrical isomerism, if yes draw its geometrical isomers?

(3 Marks)

Q8 - (i)Convert ethene into benzene.
(ii)Why HF forms hydrogen bonding with ethyne even though it is non-polar in nature?

(5 Marks)

Q9 - (a) How will you convert ethanoic acid into methane?
(b) Write the name of the products and the chemical reactions involved for the following reaction:
(i) Hex-1-ene reacts with HBr - in the absence of peroxide.
(ii) Hex-1-ene reacts with HBr – in the presence of peroxide.

(3 Marks)