Quadrant IV—Assessment (Module-wise)

Programme: Bachelor of Science (First Year)
Subject: Chemistry
Paper Code: CHC101
Paper title: Inorganic Chemistry and Organic Chemistry
Unit: Stereochemistry
Module Name: D and L ; Cis-Trans Nomenclature
Module No: 31
Name of the presenter: Ashvini Y. Pujari

Multiple Choice Question:

1.) For which of the following compounds given below are Cis-Trans isomers possible.

i) CH_3-CH=CH_2 ii) CH_3-CH=CH-CH_2-CH_3

iii) CH_3-CH=CH-CH_3

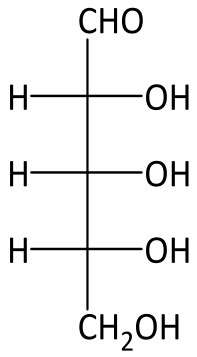
a) only ii b) both i and ii

c) both ii and iii d) all three

Short Answer - I (In 20 to 50 words)

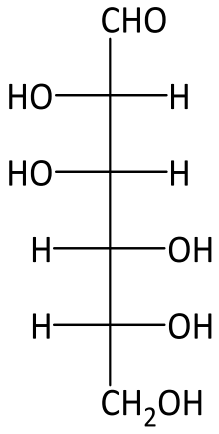
1. Discuss the D and L system of nomenclature with examples.
2. What are Cis-Trans isomers ? Give two examples of each.
3. Write Cis-Trans isomers of the following compounds.
   a) 2-Butene
   b) 2-Pentene
   c) Maleic acid
   d) Fumaric acid
4. Will trichloroethane exhibit geometrical isomerism? Give reason for your answer.
5. Assign D and L configuration to the following
   i) Cabohydrates.

a)



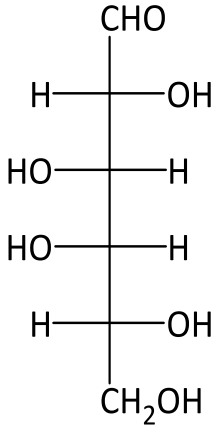
Ribose

b)



Arabinose

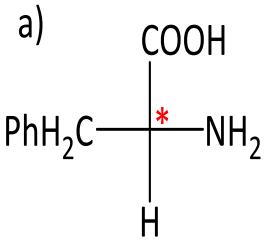
c)



Galactose

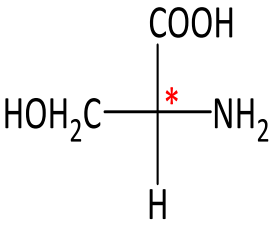
ii) Amino acids

a)



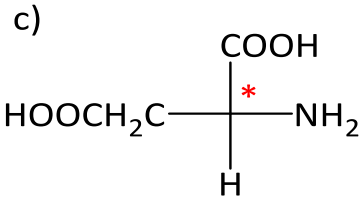
Phenylalanine

b)



Serine

c)



Aspartic Acid

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Quadrant IV—Unit End Assessment

Assignment:

1.) List out 5 known carbohydrates, amino acids and draw their two isomers in Fischer projection Formulae and assign their D and L configuration respectively.
2.) Give 5 examples of acyclic and cyclic compounds showing Cis – Trans Isomersim.

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