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**DEPARTMENT:** Nursing

**MATRIC NUMBER:** 19/MHS02/038

**COURSE CODE:** CHM 102

**Answers to the assignment on stereochenistry and functional group.**

**1 . Functional groups present in:**

**a . CH2=C(OH)HCHO-** Aldehyde, alkanols and alkene.

**b . C6H5CH(NH2)COCH3-** Amine and alkanone.

**c . CH3C=CHCH(OH)CHO-** Alkanol, aldehyde and alkene.

**2 . Calculation of the specific rotation of (2R,3R)-tartaric acid.**

**Answers:**

Parameters given:

Mass of sample of pure(2R,3R)-tartaric acid= 0.856g

Volume of diluted sample of pure(2R,3R)-tartaric acid=10cm3

Density of polarimeter tube= 1.0dm

Observed rotation= +1.0°

Specific rotation= ?

Specific rotation=

Observed rotation (degrees)

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(concentration g/cm3)×(path length of sample cell in dm)

Specific rotation= 1.0°

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(0.0856g/cm3)×(1dm)

.:. Specific rotation= 11.68g-1 cm3 dm-1

**3 . Possible geometric isomers of:**

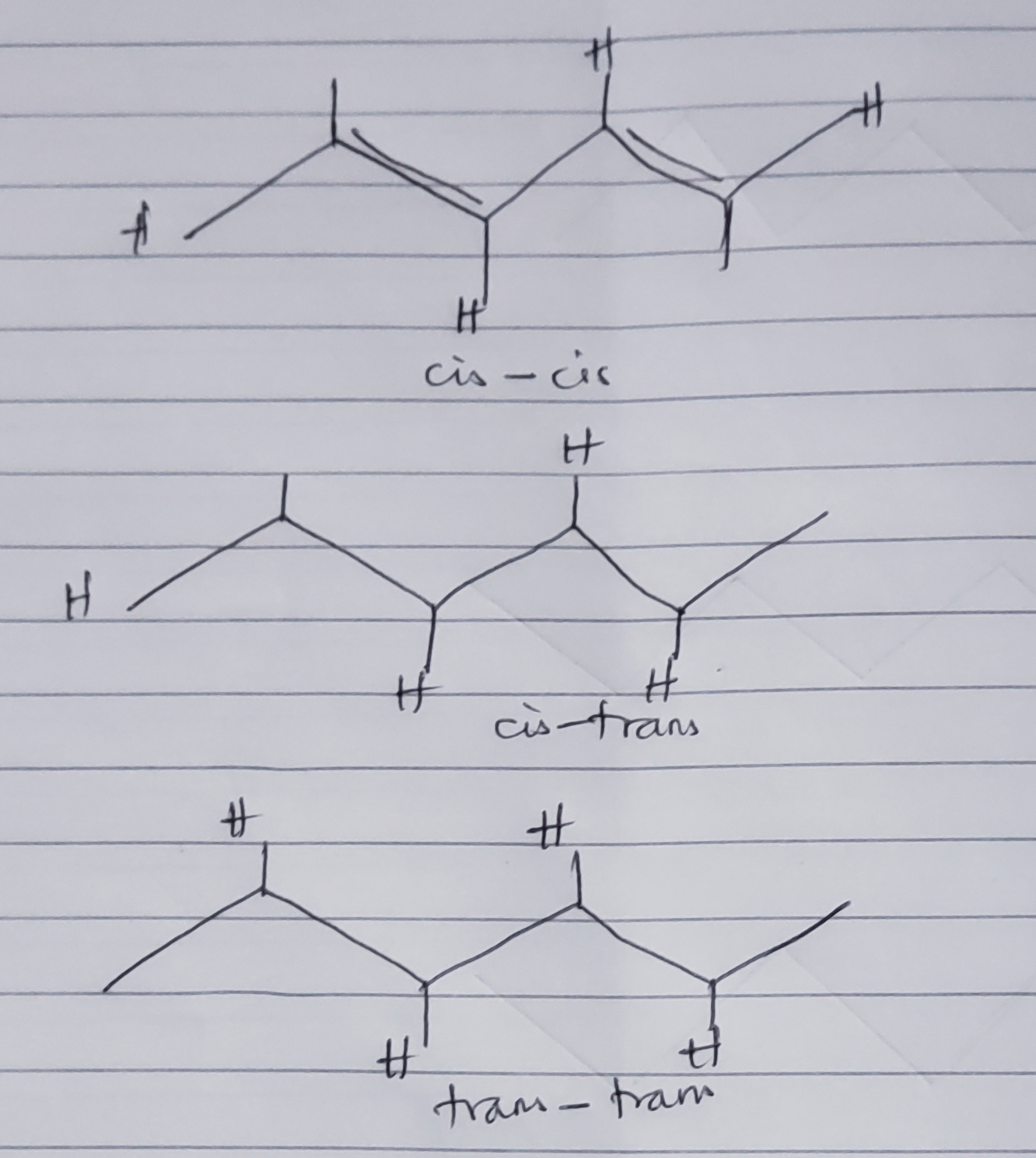
**a . Hexa-2,4-diene**

**b . 2,3-dimethylbut-2-ene**

**Answers:**

a . Molecular formula of hexa-2,4-diene is C6H10

Geometric isomers of hexa-2,4-diene:



b . Molecular rd of 2,,3-dimethylbut-2-ene is C6H12

Geometric isomers of 2,,3-dimethylbut-2-ene:

