

CHM 102 Assignment

Stereochimistry and functional group

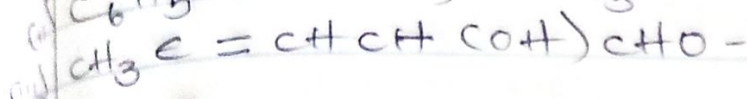
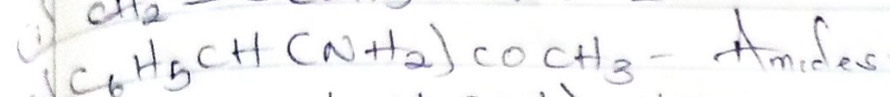
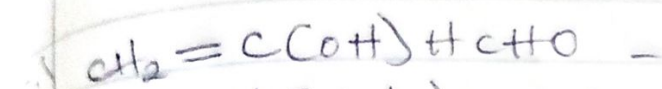
Name: Amuku Creatness Eyangufu

Date: 9th May 2020

Dept: Medicine and Surgery

Matric no: 191mthsol1092

1) Name the functional groups present in each of the following molecules:



2) A 0.865g sample of pure (2R,3R)-tartaric acid was diluted to 10cm<sup>3</sup> with water and placed in a 1.0dm polarimeter tube. The observed rotation at 20°C was +1.0°, calculate the specific rotation of 2R,3R-tartaric acid.

Soln.

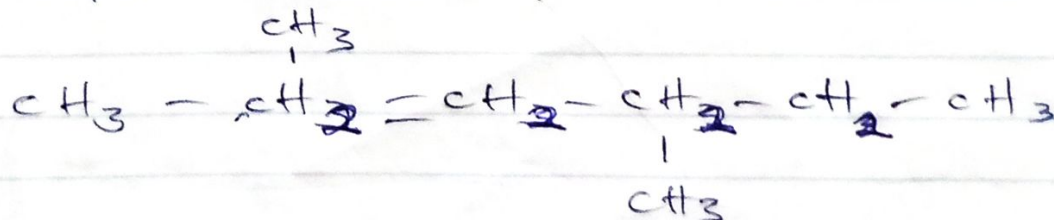
$$\text{Specific rotation} = \frac{\text{Observed rotation (in degrees)}}{(\text{conc g/cm}^3) \times \text{path length of sample cell in dm}}$$

$$\text{Specific rotation} = \frac{1.0^\circ}{(0.0865 \text{ g/cm}^3) (1 \text{ dm})}$$

$$= 11.56^\circ \text{ g}^{-1} \text{ cm}^3 \text{ dm}^{-1}$$

3) Draw the possible geometric isomers (where possible) for each of the following compounds.

(i) Hepta-2,4-diene.



(a) 2,3-Dimethyl but-2-ene

