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DEPARTMENT: Pharmacy

MATRIC NO.: 19/MHS11/021

COURSE: CHEMISTRY (CHM 102)Assignment

1. Name the functional groups present in each of the following molecules

(i) CH2=C(OH)HCHO = alkene, alkanol and aldehyde

(ii) C6H5CH(NH2)COCH3= ketone and amine

(iii) CH3C=CHCH(OH)CHO = alkene, aldehyde and alkanol

2. A 0.856 g sample of pure (2R, 3R)-tartaric acid was diluted to 10cm3 with water and placed in a 1.0 dm polarimeter tube. the observed rotation at 200 C was +1.00. Calculate the specific rotation of (2R, 3R)-tartaric acid.

Specific rotation= observed rotation/ [concentration]\*[pathlength]

Observed rotation= +1.0, concentration= 0.0856g/cm3, pathlength= 1dm

Specific rotation= 1/[0.0856\*1]

 = 11.682cm3g-1dm-1

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

(i) Hexa-2,4-diene – there are 3 possible geometric isomers

Cis-cishexan-2,4-diene, trans-transhexan-2,4-diene, cis-transhexan-2,4-diene



(ii) 2,3-Dimethylbut-2-ene- there are no possible isomers because all the alkyl groups attached are equal