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MATRIC NO: 19/MHS11/105

DEPARTMENT: PHARMACY

COURSE CODE: CHE 102

ASSIGNMENT

1. i. CH2=C(OH)HCHO

Functional groups present

1. Alkene
2. Hydroxyl group
3. Alkanal

ii. C6H5CH(NH2)COCH3

Functional groups present

1. Phenyl group
2. Amine
3. Alkanone/Ketone

iii. CH3C=CHCH(OH)CHO

Functional groups present

a. Alkene

b. Hydroxyl group

c. Alkanal

2. Concentration (moldm-3) = conc. (gdm-3)/molar mass (gmol-1)

[α]ʎT= α / c.l O

Tartaric acid= OH OH OH

C - C - C - C = C4H6O6

 H H OH

 O

Molar mass= 150 g/mol

0.856g 10cm3

Xg 1000cm3

0.856 × 1000 = 85.6g/dm3

 10

Concentration in g/cm3 = concentration (g/dm3)

1000

=85.6 = 0.0856 g/cm3

 1000

[α]ʎT= α = +1.0 = 11.68°

c.l 0.0856×1

3. I. Hexa-2,4-diene-There are three possible isomers.

i. CH3-CH=CH-CH=CH-CH3

 CH3 H

C=C-C=C-H - cis hexa-2,4-diene

 H H CH3

 CH3 H

ii. C=C-C=C-CH3 - cis-trans hexa-2,4-diene

 H H H

 H H

iii. C=C-C=C - trans hexa-2,4-diene

 CH3 H H CH3

II. 2,3-Dimethylbut-2-ene

 H H

H-C - C = C - C-H

 H CH3 CH3 H

CH3 CH3

 C = C (Neo-butane)

CH3 CH3