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DEPT:MBBS

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COURSE CODE: CHM 102

COURSE TITLE: GENERAL CHEMISTRY II

1. **NAME THE FUNCTIONAL GROUPS PRESENT IN EACH OF THE FOLLOWING MOLECULES.**

**I) CH2=C(OH)HCHO**

**ANSWER**

**Functional group: Aldehyde, Alcohol and Alkene.**

**II)C6H5CH(NH2)COCH3**

**ANSWER**

**Functional group: Amide**

**III)CH3C=CHCH(OH)CHO**

**ANSWER**

**Functional group: Aldehyde, Alcohol and Alkene**

1. **A 0.856g 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 20oC was + 1.0o. Calculate the specific rotation of (2R, 3R)- tatrtaric acid.**

**ANSWER**

**Specific rotation = observed rotation (degrees)**

 **(concentration g/cm3) path length of sample33**

**Specific rotation= 1**

**0.856/10cm 13**

**= 11.7g-1 cm3dm-1**

1. **Draw the possible geometric isomers where possible for each of the following compounds:**

**I)Hexa -2,4 -diene (CH3.CH=CH-CH=CH-CH3)**

**H H**

 **C=CH-CH=C**

**CH3 CH3**

**Cis Hexa -2-4-diene**

**CH3  H**

 **C =CH-CH= C**

**H CH3**

**Trans Hexa -2-4-diene**

**ii)2,3-Dimethyl 2 ene [CH3C(CH3)=C(CH3)CH3**

**CH3 CH3**

 **C = C**

**CH3  CH3**

**Geometric Isomerism is not possible in 2,3 Dimethyl but 2 ene**