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Civil Engineering

Chem 102

17/ENGE03/042

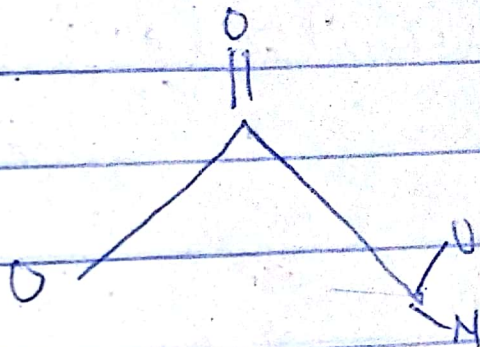
Engineering College.

bi $105 = (16 \times 3 + 4)$

$$105 - 62 = 43$$

$$\frac{43}{12} = 3 \text{ remains } 7$$
$$= C_3H_7NO_3$$

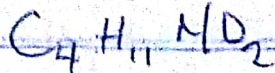
$$H.D. = \frac{2 \times 3 + 2 - 7 + 1}{2} = \frac{2}{2} = 1$$



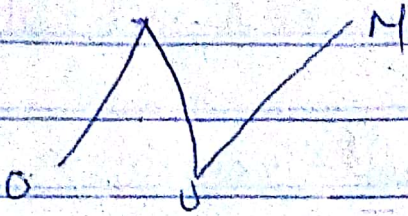
$$105 - (16 \times 2 + 14)$$

$$105 - 46 = 59$$

$$\frac{59}{12} = 4 \text{ \& \#x27; remains } 11$$



$$1415 - \frac{2 \times 4 + 2 - 11 + 1}{2} = 0$$



1b) They are used to make up human diet

i) They make up hydrocarbons.

ii) They are the basis of food

iii) They are used in the production of nucleic acids

iv) They are constituents of carbohydrates

c Homocyclic

i: This compound have 100%
Carbon atom in their ring

ii: This compound ring contains only
one type of atom.

Heterocyclic

This compound has carbon atom
and ether atoms like nitrogen,
Oxygen and Sulphur in the ring.

This compound ring contains at least
two different types of atoms including
Carbon.

20 R.F = $\frac{\text{Distance of the band}}{\text{Distance moved by solvent front}}$

$$= \frac{2.4}{12.2}, \frac{5.6}{12.2}, \frac{8.9}{12.2}$$

$$= 0.20 \text{ cm}, 0.50 \text{ cm}, 0.73 \text{ cm}$$

Aldehydes

Alkenes.

2,4-Dinitrophenylhydrazine - Aldehydes / Ketones.

- di Alkanol ($\text{C}-\text{OH}$) e.g. Methanol and Ethanol
- ii Alkane ($\text{C}-\text{C}$) e.g. Methane and Butane
- iii Alkanoic acid ($\text{C}(\text{OH})=\text{O}$) e.g. Propanoic acid and Butanoic acid
- iv Ketone ($\text{C}(\text{R})=\text{C}$) e.g. Acetone and Hexanone
- v Amine ($\text{C}-\text{NH}_2$) e.g. Diphenylamine and Methylamine
- vi Alkene ($\text{C}=\text{C}$) e.g. Ethene and Butene
- vii Alkyne ($\text{C}\equiv\text{C}$) e.g. Ethyne and Propyne