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**MATRIC NO: 17/MHS01/020**

**DEPARTMENT: MEDICINE AND SURGERY**

**COURSE: GENERAL CHEMISTRY**

ASIGNMENT.

QUESTION 1.

1. Molecular For - **M/Z 105 Is C6H5CO+**
2. I) Organic Compounds are used in the production of Antibiotics, Anticancer, Drugs, Painkillers, Anesthetic etc. used in the Medicine.

II) Organic compound are helpful in diagnosing aids to detect the organic part of the disturbed substance or deficiency e.g. Diabetics is associated with increased sugar level, Sugars have Aldehyde and Ketone groups. Checking for the Functional group can be used as a parameter in in diagnosing disturbed substances in the body.

III) Organic compounds help us study our food component and requirement of the body for various purposes like Pregnancy, Diseased condition and Body fitness.

IV) Organic compounds is used in clearing impurities for example in Drug extraction from plants the fatty matter from the pulp is removed using Petroleum ether.

V) Organic Compounds are used as Sterilizing agents and Disinfectants like Phenol, Formaldehyde etc.

VI) Diamonds, graphite and petroleum are found to be highly valuable, durable and hardest in the world.

3)

|  |  |
| --- | --- |
| HOMOCYCLIC COMPOUNDS | HETEROCYCLIC COMPOUNDS |
| Contains rings made up of only Carbon atoms. | Contains at least different types of atoms including Carbon in their rings. |
| Have 100% Carbon atoms in the rings. | Mainly Carbon and in addition , heteroatoms such as Nitrogen, Oxygen, and Sulphur are found in their ring. |
| Sub-divided into: | Sub-divided into: |
| 1. Alicyclic Homocyclic compound: Resemble alicyclic compound in most of their properties e.g Cyclohexane
2. Aromatic Homocyclic compound: contains one or more benzene rings. they be further classified into mono, bi, tri cyclic aromatic compound based on the number of benzene
 | 1. Alicyclic Heterocyclic compound: contains one or more heteroatoms in their rings e.g Tetrahydrofuran, Tetradrothiophene.
2. Aromatic Heterocyclic compound: contains one or more heteroatoms in their molecules e.g Furan, Thiophene.
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| Examples include Phenol, Toluene, Naphthalene, and Anthracene. | Examples include Furan, Pyrrole, Pyridine, Piperidine, Thiophene. |

QUESTION 2.

1. Distance of solvent front =12.2cm

Distances of the band are 2.4cm, 5.6cm and 8.9cm respectively.

Retardation factor (Rf) = Distance moved by substance

 Distance moved by solvent front.

Rf for 2.4cm band = 2.4

 12.2

 Rf= 0.19

Rf for 5.6cm band = 5.6

 12.2

 Rf =0.46

Rf for 8.9cm band = 8.9

 12.2

 Rf =0.73

1. A is an Aldehyde

B is a Alkene and Alkyne (Unsaturated compound)

1. Aldehyde and Ketone.
2. Functional Groups and examples each.
3. **Alkanol/Alcohol** – ROH- (i) Ethanol- C2H5OH (ii) Butanol- C4H9OH
4. **Ether**-ROR – (i) Dimethyl Ether-CH3OCH3 (ii) Dipropyl Ether –C3H7OC3H7
5. **Aldehyde/Alkanal**- RCHO (i) Methanal- CH3CHO (ii) Propanal- C3H7CHO
6. **Carboxylic acid**-RCOOR (i) Pentanoic acid- C5H11COOH (ii) Hexanoic acid- C6H14COOH
7. **Esters**-RCOOR’ (i) Dimethyl Ester- CH3COOCH3 (ii) Dipropyl Ester- C3H7COOC3H7
8. **Ketones/Alkanone**- RCOR’ (i) Propanone-CH3CH2OCH3 (ii) Ethanone-CH2CH2OCH2
9. **Amines**- RNH2 (i) Methyl amine CH3NH2 (ii) Propyl amine C3H7NH2