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DEPARTMENT: MBBS

COURSE: GENERAL CHEMISTRY 2(CHM 102)

ASIGNMENT.

QUESTION 1.

1. Molecular Formula - M/Z 105 Is C7H5O
2. I) Organic Compound is used in medicine for the production of penicillin, streptomycin, Chloromycetin, morphine, aspirin, iodoform, etc.

II) Organic compound are helpful in diagnosing aids to detect the organic part of the disturbed substance or deficiency.

III) Organic compounds are used for the production of fuels e.g. coals, wood, natural gas, petrol, etc.

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

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

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

VII) Organic compounds is used in the production of household and other common articles like soaps, cosmetics, perfumes, detergents, paper, rubber, plastics, leather, resin, inks, paints, varnishes, photographic films, etc.

VIII) Organic compounds is used in the production of explosives like nitroglycerine, nitrocellulose, t.n.b, etc.

3)

* Homocyclic compounds are cyclic compounds having atom of the same element as ring member while heterocyclic compounds are cyclic compounds having atom of different elements as ring members including carbon atom.
* Homocyclic compounds contains atom of same element bounded to each other forming a ring. While heterocyclic compounds contains atom of at least two different elements bounded to each other forming a ring.
* Homocyclic compounds include, benzene, cyclohexane, toluene, cyclohexanol, etc. while heterocyclic compounds include, pyran, azocine, thiocane,etc.

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 an Unsaturated compounds (Alkenes and alkynes)

1. 2, 4-dinitrophenylhydrane is also called Brady test which is used to quantitatively detect the carboxyl functionality of a Ketones or Aldehyde functional group. A positive test is signalled by the formation of a yellow, orange or red precipitate
2. Functional Groups.
3. Alkanol/Alcohol= Ethanol, Methanol
4. Ether= Methoxy ethane, Methoxy Propane
5. Aldehyde/Alkanals=Decanal, Octanal
6. Carboxylic acid= Propanoic Acid,Butanoic Acid
7. Esters=Ethyl Ethanoate, Propyl Hexanoate
8. Ketones/Alkanones=Pentanone, Hexanone
9. Amines=3 Amino -1- Pentanoic Acid, 2 Amino -1- Hexanoic Acid