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MATRIC NO: 17/MHS01/175

COLLEGE: MHS

DEPT: MBBS

 CHEMISTRY TUTORIAL QUESTIONS

QUESTION 1

1. Some possible formulas for molecular ion 105

C8H9, C7H5O, C6HO2, C4HN4, C6H5N2, C7H7N, C5H3N3, C6H3NO

1. Importance of Organic Compounds
* Food: carbohydrates, proteins, fats and vitamins.
* Clothes: cotton, silk, wool, nylon, rayon and Dacron.
* Fuels: coal, natural gas, petrol, etc.
* Medicine: penicillin, streptomycin, chloromycetin, aspirin, cocaine, etc.
* Explosives: nitroglycerine, nitrocellulose, T.N.B., T.N.B., etc.
* Dyes: indigo, malachite, green, etc.
* Insecticides: D.D.T., malathion, etc
* Household and other common articles: soaps, cosmetics, perfumes, detergents, paper, rubber, photographic films, etc.
* All living organisms contain carbon.
* Exchange of carbon between plants and animals in photosynthesis and cellular respiration.
* Unique bonding properties that allow carbon molecules to form long chains called polymers or compact well organized rings.
* Diamonds are composed of a carbon compressed under great pressure.

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| HOMOCYCLIC COMPOUNDS | HETEROCYCLIC COMPOUNDS |
| Cyclic compounds having atoms of the same elements as ring members | Cyclic compounds having atoms of different elements as ring members including carbon atoms |
| ring contains atoms of the same element | Rings contain atoms of different elements |
| Contain atoms of the same element bonded to each other forming a ring | Contain atoms of at least two different elements including carbon and any other atom bonded to each other forming a ring |
| Examples include: benzene, cyclohexane, toluene, etc | Examples include: pyran, thiocane, etc |

QUESTION 2

1. Distance of solvent front: 12.2cm

Distance of band 1: 2.4cm

Distance of band 2: 5.6cm

Distance of band 3: 8.9cm

Retardation factor = $\frac{distance moved by substance}{distance moved by the solvent front}$

Retardation factor of band 1 = $\frac{2.4}{12.2}$ =0.196

Retardation factor of band 2 = $\frac{5.6}{12.2}$ = 0.459

Retardation factor of band 3 = $\frac{8.9}{12.2}$ = 0.729

1. A= ketone

B = alkene

1. Ketone and aldehyde
2. 7 functional groups with 2 examples each:
* Alkanes: propane, butane
* Alkenes: ethene, propene
* Alkanones: propanone, butanone
* Alkanals: propanal,butanal
* Alkanoic acid: propanoic acid, butanoic acid
* Amides: propanamide, butanamide
* Amines: propylamine, butylamine