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**MATRIC NUMBER: 17/MHS01/243**

**COLLEGE: MEDICINE AND HEALTH SCIENCES**

**DEPARTMENT: MEDICINE AND SURGERY**

 **CHM102 ASSIGNMENT**

1a) C4H11NO2

 C3 H7NO3

b) Organic compounds are the constituent of food we eat.

 They are used in manufacturing cosmetics.

 They are also used in manufacturing insecticides and dyes.

 Ethene acid helps in the ripening of fruits.

 Organic compounds are part of organisms.

c)

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| HOMOCYCLIC COMPOUNDS | HETEROCYCLIC COMPOUNDS  |
| Homocyclic compounds are cyclic compounds having atoms of the same element as ring members. | Heterocyclic compounds are cyclic compounds having atoms of the different elements as ring members including carbon atoms. |
| Ring contains atoms of the same element | Ring contains 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 bonded to each other forming a ring. |
| Examples are benzene, cyclohexane, toluene, cyclohexanol etc. | Examples include pyran, azocine, thiocane, etc |

2a) Retardation factor = distance moved by substance

 Distance moved by solvent front

Rf Let first substance distance(a)= 2.4cm

 Second substance distance(b)=5.6cm

 Third substance distance (c) =8.9cm

Solvent front =12.2cm

RF(a) =2.4/12.2 =0.1967

Rf(b) =5.6/12.2 =0.4590

Rf(c)=8.9/12.2 =0.7295

Retardation Factor →first band= 0.1967

 Second band= 0.4590

 Third band= 0.7295

b) The family of the organic compound A is Aldehyde (Alkanal).

 While B is an Alkene.

C) 2,4-Dinitrophenylhydrozine test is used for Ketones and Aldehydes.

 d)

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| FUNCTIONAL GROUP | HOMOLOGOUS SERIES |
| C=C | Alkane |
| C-O-O-H | Carboxylic acid |
| CH3 | Methyl /alkane  |
| CΞC | Alkyne |
| C-OH | Alkanol |
| C-H-O | Alkanal |
| NH2 | Amine |
| R-O-R | Ether |