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**MATRIC NUMBER: 17/MHS01/027**

**CHEM 102 ASSIGNMENT.**

1a).105/12=8.75

 C5H45= (7\*12 + 45\*1) =105

 C6H33= (6\*12 + 33\*1) =105

1b).–Organic compounds are used in medicine to make drugs which cure diseases.

-Food materials are made up of organic compounds i.e carbohydrates, proteins and fats.

-Organic compounds are used to make cleansing agents which clear impurities.

-They are also used to make sterilizing agents.

-Organic compounds such as diamonds are very valuable, durable and can be used to make jewelries.

1c).

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| **HOMOCYCLIC COMPOUNDS** | **HETEROCYCLIC COMPOUNDS** |
| They are cyclic compounds having atoms of the same element as ring members. | They 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 |
| Contains atoms of the same elements bonded to each other forming a ring | Contain atoms of at least two different elements bonded to each other forming a ring |
| Examples include; benzene, cyclohexane, toluene, cyclohexanol ,etc. | Examples include; pyran, azocine, thiocane, etc. |

2a).Retention factor RF= distance moved by the solvent/distance moved by the solute

 Distance moved by solvent=12.2cm , distance moved by solute A=2.4cm B=5.6cm C=8.9cm

 RF of A=2.4/12.2=0.19

 RF of B= 5.6/12.2=0.46

 RF of C= 8.9/12.2=0.73

b). A=aldehydes, B=alkenes

c) Aldehydes and ketones.

d)

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|  | FUNCTIONAL GROUP | EXAMPLES |
| 1. | Alkane | Methane, ethane |
| 2. | Alkene | Propene, butane |
| 3. | Alkyne | Butyne, pentyne |
| 4. | Haloalkane | Chloropropane, bromobutane |
| 5. | Hydroxyl | Butanol, hexanol |
| 6. | Ketones | Butanone, hexanone |
| 7. | Carboxyl | Ethanoic acid, butanoic acid |