**GIME WELSAID ADOGU**

**COLLEGE OF ENGINEERING**

**CIVIL ENGINEERING**

**17/ENG03/005**

1a. ....

bi. Production of insecticides e.g. D.D.T, Grammexane, Malathion etc.

ii. In the making of medicines e.g. Penicillin, Streptomycin, Morphine, Aspirin, Iodoform, Cocaine etc

iii. Household and other common articles: Soaps, Cosmetics, Perfumes, Detergents, Paints, Paper etc

ci. Homocyclic compounds are cyclic compounds having atoms of same element as ring members WHILE Heterocyclic compounds are cyclic compounds having atoms of the different elements as ring members including carbon atom.

ii. In Homocyclic, ring contains atoms of the same element WHILE In Heterocyclic, ring contains atoms of different elements.

iii. Homocyclic compounds contain atoms of the same element bonded to each other forming a ring WHILE Heterocyclic compounds atoms of at least two different elements bonded to each other forming a ring.

iv. Examples of Homocyclic include benzene, cyclohexane, toluene, cyclohexanol etc WHILE Heterocyclic include pyran, azocine, thiocane etc.

2a. Rf = migration distance of substance / migration distance of solvent front

= (5.6 × 8.9) / (12.2 × 2.4)

= 49.84 / 29.28

= 1.70

b. Aldehyde

c. Test for Aldehyde and Ketone

di. Functional group Name Example

| Alkane CH3CH2CH2 , C4H9 (Propane, Butane)

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ii. C=C Alkene CH3CH=CH2 , C5H10 (Propene, Pentene)

iii. F, Cl, Br Alkyl halide CH3Br, CH2CH3F (Methyl bromide, ethyl flouride)

iv. -OH Alcohol CH3CH2OH, C3H8OH ( Ethanol, Propanol)

v. -O- Ether CH3OCH3 , CH3CH2-O-CH2CH3

vi. O Amide CH3NH2 ( Acetamide)

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- C – NH3

viii. O Aldehyde CH3CHO , CHOCH2CH2H3C

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- C - H