**CHEMISTRY ASSIGNMENT**

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Subject: CHM102

Matric No: 17/ENG02/064

Department: Mechanical Engineering

**Question 1**

1. C7H5O
2. i. Organic compounds have versatile bonding patterns and are all art of organisms.

ii. They serve as the basis for all carbon-based life on earth.

iii. It is used in the production of Drugs for medication

iv. It plays a vitale role in forming and maintaining cell walls and structures

v. They can be used in the production of insecticides eg. ethyline dibromine

vi. They are used in the treatment of water.

vii. They can used as bleeching agents in the textile industry.

c. Homocylic Compounds are molecules that contains, ring structures that consists only of carbon atoms within the ring eg. bezene (which has six carbon atoms bonded togeether in a hexagonal ring, with one hydrogen atom bonded to each of the six carbons.while;

Heterocyclic compounds are compounds that have atoms of at least two different elements as members of its ring(s) eg. All of the nucleic acids, the majority of drugs.

**Question 2**

1. i. Retardation factor of band one = 12.2/12.2= 1

ii. Retardation fatcor of band two= 2.4/12.2= 0.2

iii. Retardation factor of band three= 5.6/12.2= 0.46

iv. Retardation fatcor of band four= 8.9/12.2= 0.73

**b.** A- Aldehydes

 B- Alkenes

**c.** 2,4-Dinitrophenylhydrazine test is employed for Ketones and Aldehydes

**d.**  i. Alkane- Butane, Iodothane

 ii. Alkyl halide- Methyl chloride, Butyl bromide

 iii. Alkanol- Ethanol, Propanol

 iv. Carboxylic acid­- ethyl ethanoate, potassium butanoate.

 v. Esthers- Ethyl acetate, Propyl ethanoate

 vi. Aldehydes- Butyraldehyde (Butanal), Acetaldehyde (Ethanal)

 vii. Alkene- Ethene, Propene