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**COLLEGE: ENGINEERING**

**DEPARTMENT: CIVIL**

**MATRIC NO: 17/ENG03/017 COURSE: CHM 102**

1. (a) C7H5O, C6H14F, C6H10Na

(b)I. They are the main constituents of food

 II. They make up fuels

 III. They are used in the production of medicines/drugs/insecticides

 IV. They make up the human body

 V. They are used in the production of explosives

(c) A homocyclic compound ring contains only one type of atom while a heterocyclic compound ring contains at least two types of atoms including carbon

1. (a) For 2.4, Rf = 0.2

 For 5.4, Rf = 0.46

 For 8.9, Rf = 0.72

(b) A is an Aldehyde while B is an Alkene

(c) 2,4-dinitrophenyhydrazine is a test for ketones/aldehydes

(d) Alkane – Methane, Ethane

 Alkene – Ethene, Propene

 Alkyne – Ethyne, Propyne

 Alkyl halides – Chloroethane, Bromoethane

 Alkanones/ketones – Propanone, Pentanone

 Alcohols – Ethanol, Propanol

 Esters – Methyl ethanoate, Ethyl ethanoate