

**NAME: OLA-BABAYEMI QUEEN ITEOLUWAKIISI**

**DEPARTMENT: MEDICINE AND SURGERY**

**MATRIC NO: 17/MHS01/252**

**1a) Ethylbenzene (C<sub>8</sub>H<sub>10</sub>),**

**Phenylmethanone (C<sub>7</sub>H<sub>6</sub>O)**

**1b) The following are the importance of organic compounds**

- i) Generation of energy from coal and petroleum products
- ii) Production of synthetic fibres like terylene as substitute for natural fibres
- iii) Production of drugs, dyes, perfumes, cosmetics e.t.c
- iv) Production of soap, detergent and paper
- v) Production of explosives

**1c)**

<u>Homocyclic compound</u>	<u>Heterocyclic compounds</u>
The ring of homocyclic compounds is made up of carbon atoms only	The ring of heterocyclic compounds is made up of more than one kind of atoms
Examples include benzene, cyclohexane, toluene, cyclohexanol, etc.	Examples include pyran, azocine, thiocane, etc

**2a) Retardation factor = (distance moved by solute)/(distance moved by solvent)**

$R_f A = \frac{\text{Distance moved by b}}{\text{Distance moved by solvent front}}$

$R_f A = 0.1967$

$R_f B =$

$R_f B = 0.4590$

$R_f C =$

$R_f C = 0.7295$

Therefore, A and B are more attracted to the mobile phase than C

**2b) A is from the Aldehyde family.**

**B is from the Alkyne family.**

**2c) 2,4-Dinitrophenylhydrazine test is used to qualitatively test for carbonyl groups associated with aldehydes and ketones.**

**2d**

<u>Functional group</u>	<u>Examples</u>
Alkyl halides	Methyl chloride, butyl bromide
Alkanols	Methanol, ethanol
Ethers	Methoxyethane, phenoxybenzene
Aldehydes	Butanal, propanal
Ketones	2-butanone, diphenyl methanone
Alkanoic acid	Methanoic acid, ethanoic acid
Esters	Ethyl ethanoate, ethyl propanoate