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**MATRIC NO: 17/MHS07/014**

**QUESTION 1**

a) Ethylbenzene (C8H10),

 Phenylmathanone (C7H5O)

b. The following are the importance of organic compounds

* Generation of energy from coal and petroleum products
* Production of synthetic fibres like terylene as substitute for natural fibres
* Production of drugs, dyes, perfumes, cosmetics e.t.c
* Production of soap, detergent and paper
* Production of explosives

c)

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| **Homocyclic compound** | **Heterocyclic compounds** |
| 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 |

**QUESTION 2**

1. Retardation factor = (distance moved by solute)/(distance moved by solvent)

Rf A =

Rf A = 0.1967

Rf B =

Rf B = 0.4590

Rf C =

Rf C = 0.7295

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

b) A is from the Aldehyde family.

B is from the Alkyne family.

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

d

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| **Functional group** | **Examples**  |
| 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 |