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**QUESTION 1**

* **-**Ethylbenzene (C8H9) -Phenylmetamine (C7H7N) -Phenylmetanone (C7H5O) -Pyran-3-carbonitrite (C6H3NO)

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| **Homocyclic compounds** | **Heterocyclic compounds** |
| Homocyclic compounds are cyclic compounds having atoms of the same element as ring elements  | Heterocyclic compounds are cyclic compounds having atoms of different elements as ring members including carbon atoms |
| Ring contains atoms of the same element | Ring contains atoms of different elements |
| They contain atoms of the same element | Contain atoms of at least two different elements bonded to each other forming a ring |
| examples include benzene, cyclohexane, toluene, cyclohexanol, etc | Examples include pyran, azocine, thiocane, etc |

* Organic compounds are important as they help in making cloths. –They are important in making fuels like natural gases and petrol. -They are important in making medicines like penicillin, morphine, cocaine,etc. -They are important in making insecticides. -They are important in making dyes. - They are important in making explosives.

**QUESTION 2**

* Distance of Solvent front: 12.2cm, distance of band A: 2.4cm, distance of band B: 5.6cm, distance of band C: 8.9cm. Retardation factor of band A= 2.4cm/12.2cm =0.1967 Retardation factor of band B= 5.6cm/12.2cm = 0.4590 Retardation factor of band C= 8.9cm/12.2cm = 0.7295
* The labeled compound A belongs to the family of aldehydes while the labeled compound B belongs to the family of alkenes.
* 2, 3-Dinitrophenylhydrazine test is employed for ketones and aldehydes.
* -**alkanoic acids**  examples: propanoic acid and butanoic -**Alcohols** examples: ethanol and methanol -**Alkanes**  examples: butane (CH3CH2CH2CH3), pentane (CH3CH2CH2CH2CH3) -**Alkenes**  examples: octene and methene -**Aldehydes**  example: ethanal and propanal -**Ketones** examples:acetoneand propanone **-Amines** examples**:** diethylamineand aniline