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Question1

1. C7H5O and C3H7SNO
2. Organic chemistry is important because it is the study of life and all of the chemical reactions related to life. Organic chemistry plays a part in the development of common household chemicals, foods, plastics, drugs, fuels and most of the chemicals that are part of our daily life.

In medicine, organic chemistry is used create drugs such as antibiotics, anti-depressants, anesthetics, anti cancer drugs, etc. which can be used to cure diseases.

It is also used to study diseases and diagnose diseases.

Organic chemistry is used in the manufacture of food.

It serves as valuables to humans e.g. diamonds.

It can be used in the creation of cleansing agents.

1. The **difference** between homocyclic compounds and heterocyclic compounds is that in homocyclic compounds,**the ring of homocyclic compounds is contains only carbon atoms on their rings, whereas that of heterocyclic compounds contains more than one kind of atoms on their ring, that is at least one non-carbon atom.**

**Question 2**

1. **Retardation factor= Distance moved by bands/Distance moved by solvent front.**

**Rf for 1st band= 2.4/12.2= 0.197**

**Rf for 2nd band= 5.6/12.2= 0.459**

**Rf for 3rd band= 8.9/12.2= 0.729**

1. Dark grey precipitate shows the presence of aldehyde functional group.

The decolourization of bromine shows that it is an unsaturated hydrocarbon.

1. 2,4-Dinitrophenylhydrazine is used to test for presence of aldehyde functional group.
2. Alkane - C2H5 ethane, CH4 methane

Alkene - C3H6 propene, C4H8 Butene

Alkyne - C2H2 Ethyne, C5H10 Pentyne

Carboxylic acid- CH3COOH, Ethanoic acid, C2H5COOH, Propanoic acid

Alcohol- CH3OH ,methanol C2H5OH, Ethanol

Esters- C4H8O2 ethyl ethanoate, C6H12O2, Propyl propanoate.