NAME: OPARA RAYMOND NNAMDI

COLLEGE/DEPT: CHEMICAL ENGINEERING

MATRIC NO: 17/ENG01/024

COURSE: CHM 102 (ASSIGNMENT)

(a) C7H5O

C7H7N

C6H3NO

(b) - Organic compounds contained in crude oil are refined in gasoline, kerosene, diesel and natural gas so cars heating systems can work.

- Organic compounds serve as the basis of all crbon-based life on earth, an element that all living organisms contain.

- Organic compounds are contained in carbohydrate which provide life forms with the energy needed to maintain cellular functions in the body.

- Organic elements create energy production in biological life, depletion of atmosphere and release energy from hydrocarbons.

(c)

|  |  |
| --- | --- |
| HOMOCYCLIC COMPOUNDS | HETEROCYCLIC COMPOUNDS |
| Homocyclic compounds are cyclic compounds which contain atoms of the same element bonded to each other forming a ring. | Heterocyclic compounds are cyclic compounds which contain atoms of at least two different elements bonded to each other forming a ring. |
| Some examples of homocyclic compounds include benzene, cyclohexane, toluene, cyclohexanol etc. | Some examples of heterocyclic compounds include pyran(contains oxygen), azocine(contains carbon and nitrogen), thiocane(contains carbon and sulphur) etc. |

QUESTION 2

(a) 12.2cm/2.4cm=5.08cm

12.2cm/5.6cm=2.18cm

12.2cm/8.9cm=1.37cm

(b) A-Aldehydes

B-Alkenes

(c) Aldehydes and Ketones

(d)

|  |  |  |
| --- | --- | --- |
| S/N | FUNCTIONAL GROUPS | EXAMPLES |
| (i) | -OH | Methanol, propanol |
| (ii) | -COH | Methanal, ethanal |
| (iii) | -C=O | Propan-2-one, butan-2-one |
| (iv) | -C=O-OH | Ethanoic acid, propanoic acid |
| (v) | -C=O-O-R’ | Methyl methanoate, methyl ethanoate |
| (vi) | -C=O-NH2 | Ethanamide, butanamide |
| (vii) | -NH2 | Methylamine, ethylamine |