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MATRIC NO: 17/MHS05/019

DEPARTMENT: PHYSIOLOGY

COURSE CODE: CHM 102

LEVEL: 100 COLLEGE: M.H.S

ANSWERS

1a.) Step 1: define the max number of carbons

105÷12 = 8.75

C8H 9 = (12**×**8)+(9×1)

C7H 5O = (12×7) +(5×1) +(16×1)

bi.) They are used for generation of energy e.g coal, petrol, wood , natural gas,etc.

 ii.) Used in the production of drugs e.g penicillin.

 iii.) They are used in producing explosives e.g nitroglycerin, nitrocellulose, T.N.T ,etc.

 iv.) They are used in the production of synthentic fibres e.g terylene and nylon as substitutes for natural fibres.

c.)

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| No. | Homocyclic Compounds | Heterocyclic Compounds |
| 1. | Homocyclic compounds rings are made up of carbon atoms only. | Heterocyclic compounds are made up of more than one kind of atom. |
| 2. |  Examples are: toluene, phenol , naphthalene and anthracene. | Examples are: tetrahydrofuran, piperidine, pyridine ,furan and pyrrole.  |

2a.) Rf  =distance moved by band / distance moved by solvent

 Rf of band one =

 2.4cm ÷ 12.2cm = 0.197

 Rf of band two =

 5.6cm ÷ 12.2cm = 0.459

 Rf of band three =

 8.9cm ÷12.2 cm = 0.730

b.) The organic compound ‘A’ belongs to the ALDEHYDES family while the organic compound ‘B’ belongs to the ALKENE family.

 c.) 2,4- dinitrophenylhydrazine test is employed for ALDEHYDES and KETONES.

 d.)

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| No | Functional group | Examples |
|  i. | Alkyl halide | C2HIC3H 7Cl |
|  ii. | Alkanols | C2H5 OHCH3OH |
|  iii. | Carboxylic acid | CH3COOHC2H5COOH |
|  iv. | Alkanes | CH4C3H8  |
|  v. | Alkenes  | C2H4C3H6 |
|  vi. | Alkynes | C2H2C3H4 |
| vii. | Esters | CH3COOCH3CH 3COOC2H5 |