17/MHS06/024

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MEDICAL LABORATORY SCIENCE

CHM 102

QUESTION 1

1. N = 14amu 105- 14 =91

91 /12 = 7.5 ---- C7NH ?

7\* 12 = 84

1\*14 = 14

105-( 84 +14) = 7

Therefore 7 hydrogen gives C7NH7

Therefore ….( 2n + 2 – no of hydrogen)/2 = 5.25

Then add an oxygen atom

C7NH7….. C6NOH3

2(6.5)+2-3 )/2 = 5.5

1. They’re the main constituents of a lot of things used in our everyday life.
* Fibres in both food and clothes.
* Petroleum and coal for energy.
* Plastic materials.
* Soap and detergent for laundry.
1. Homocyclic compounds are cyclic compounds in which all the ring atoms are the same, while heterocyclic compounds are compounds made up of more kind of atoms.

QUESTION 2

1. Solvent font=12.2cm, band a= 2.4cm, band b=5.6cm band c=8.9cm.

 RF=$\frac{distance moved by band}{\begin{array}{c}distance moved by solvent font.\\\end{array}}$

A= 2.4cm÷12.2cm = 0.2

B = 5.6 ÷ 12.2cm = 0.5

C = 8.9 ÷ 12.2cm = 0.7

1. A is an alkanal, while b is either an alkene.
2. 2, 4- dinitrophenylhydrazine test is employed for aldehydes and ketones.
3.
4. Alkene; propene and ethene.
5. Alkyne; ethyne and butyne.
6. Alcohols; ethanol and propanol.
7. Alkanoic acid; methanoic acid and ethanoic acid.
8. Alkanoates; ethyl-ethanoate and propyl-ethanoate.
9. Aldehydes; methanol and ethanol.
10. Alkanone; propanone and butanone.