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MATRIC NUMBER: 17/MHS01/248

DEPARTMENT:MEDICINE&SURGERY

COURSE:CHEMISTRY102

1.A. Beryllium sulphate,1-chloro-2-azidoethane,nitrourea,cyanopyrazine

B. IMPORTANCE OF ORGANIC COMPOUNDS:

* In nucleic acids: Nucleic acids are essential biopolymers for all life forms(DNA is included in this category).They are composed of many elements but mainly coal and hydrogen,although there are also oxygen atoms in their sugars.

Nucleic acids are the most important of all biomolecules. They are found in abundance in all living things, where their function is to create and encode, and then to store information in the nucleus of all living organisms on earth.

* In carbohydrates: A carbohydrate is a biological molecule consisting of carbon,hydrogen,and oxygen. In biochemistry, the term is synonymous with a group of elements that may include sugars,celluloses, and starch.

Carbohydrates play an important role in living organisms.polysaccharides serve to store energy and as

structural components in plants and arthropods, for example; A type of saccharide is important in the molecules that makeup the DNA.

* As the basis of food: Food materials are created from carbon compounds via carbohydrates, proteins and fats. All the food we consume is reconstituted material and extracts of plants or animals.

Organic molecules makeup a large portion of the human diet and are found in all food consumed by an individual.

 It requires a large number of organic molecules needed to keep cells and tissues healthy.

* In lipids: A lipid is a term used to define substances of biological origin that are soluble in solvents.

It consists of a group of molecules that occur in nature like fats, waxes, sterols, monoglycerides and triglycerides, among others. The main functions of lipids include; storing energy, signaling lipid and acting as a structural component of cell membranes.

* In metabolism: The three main purposes of metabolism are energy/fuel conversion as energy for cellular processes, energy/fuel conversion to build blocks for proteins,lipids,nucleic acids, and some carbohydrates, as well as the elimination of nitrogenous waste.

These reactions allow organisms to grow and reproduce,

maintain their structures and respond to the environment.

* In proteins: One type of organic molecule that must be present in every human's diet is protein. Proteins are composed of chains of organic molecules called amino acids.
* Hydrocarbons: Hydrocarbons are organic compounds that are made up entirely of hydrocarbon and carbon.

1c. Homocyclic compounds are cyclics compounds having atoms of the same elements as ring members while, Heterocyclic compounds are cyclic compounds having atoms of different elements as ring members including carbon atoms.

2a.2.4/12.2 =0.1967, 5.6/12.2 =0.4590, 8.9/12.2=0.7295

b. A-Is an aldehyde.

 B-Is an unsaturated compound e.g alkene or alkyne.

c. 2,4- Dinitrophenylhydrazine test is employed for testing aldehydes and ketones.

d.

* Alkanes- Methane, ethane
* Alkenes- Propene,Octene
* Alkynes-Ethyne, hexyne
* Alkyl halides- Ethylchloride, propyliodide
* Ethers- Dimethylether, methylethyether
* Esters- Ethylpropanoate, Propylmethanoate
* Carboxylic acids- 2-bromobutanoic acid, chloropropionic