BCH 202 assignment

18/SCI/03/008

1. Importance of cholesterol

* It serves as the precursor for a variety of important product, for example; bile acids, hormones and vitamin D.
* It is a major structural constituent of cell membranes and plasma lipoproteins.
* It aids in the protection, insulation of nerve fibers, and also ensures more efficient conduction of nerve impulses.
* Cell membrane permeability: It is essential for determining the molecules that can pass in and out of the cell.

1. Differences between globosides and gangliosides

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| S/N | GLOBOSIDES | GANGLIOSIDES |
| 1 | They lack sialic acid (N-acetyl neuraminic acid) | They possess sialic acid (N-acetyl neuraminic acid) |
| 2 | They are not derived from glucocerebrosides. | They are derived from glucocerebrosides |

1. Phosphatidyl choline.
2. Ring B.
3. A. they are amphiphatic i.e, they are hydrophilic and hydrophobic.

B. they are amphoteric i.e, they have polar and non Polar Regions.

C. they are glycerol based phospholipids that contain 2 molecules of fatty acids, a phosphate group and an alcohol.

6. Differences between triacylglycerides and phosphoglycerides.

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| S/N | TRIACYLGLYCERIDES | PHOSPHOGLYCERIDES |
| 1. | They contain 3 fatty acid molecules. | They contain 2 fatty acid molecules. |
| 2. | They lack an alcohol group. | They possess an alcohol group. |
| 3. | They lack a phosphate group. | They possess a phosphate group. |
| 4. | Examples are a triacylglycerol containing lauric acid, palmitic acid, and lignoceric acid. And a triacylglycerol containing oleic acid, cerstic acid and arachidic acid. | Examples are cephalin (phosphatidylethanolamine) and lechitin (phosphatidylcholine) |
| 5. | IMG_20200513_090034_4.jpg | IMG_20200513_090043_3.jpg |