19/MHS06/033

MLS

BCH 202

ANSWER Q1

(I) Cholesterol is essential for making a number of critical hormones, including the stress hormone cortisol.

(II)) Cholester**ol** is also used to make the sex hormones testosterone, progesterone, and estrogen.

(III) The liver also uses cholesterol to make bile, a fluid that plays a vital role in the processing and digestion of fats.

(IV) Cholesterol is essential for your body to produce vitamin D.

ANSWER Q2

A globoside is a type of [glycosphingolipid](https://en.wikipedia.org/wiki/Glycosphingolipid%22%20%5Co%20%22Glycosphingolipid) with more than one [sugar](https://en.wikipedia.org/wiki/Sugar%22%20%5Co%20%22Sugar) as the side chain (or [R group](https://en.wikipedia.org/wiki/Side_chain%22%20%5Co%20%22Side%20chain)) of [ceramide](https://en.wikipedia.org/wiki/Ceramide%22%20%5Co%20%22Ceramide). The sugars are usually a combination of *[N](https://en.wikipedia.org/wiki/N-Acetylgalactosamine%22%20%5Co%20%22N-Acetylgalactosamine)*[-acetylgalactosamine](https://en.wikipedia.org/wiki/N-Acetylgalactosamine%22%20%5Co%20%22N-Acetylgalactosamine), [D-glucose](https://en.wikipedia.org/wiki/Glucose%22%20%5Co%20%22Glucose) or [D-galactose](https://en.wikipedia.org/wiki/Galactose%22%20%5Co%20%22Galactose). A glycosphingolipid that has only one sugar as the side chain is called a [cerebroside](https://en.wikipedia.org/wiki/Cerebroside%22%20%5Co%20%22Cerebroside).

WHILE

A **g**angliosid**e** is a molecule composed of a [glycosphingolipid](https://en.wikipedia.org/wiki/Glycosphingolipid%22%20%5Co%20%22Glycosphingolipid) ([ceramide](https://en.wikipedia.org/wiki/Ceramide%22%20%5Co%20%22Ceramide) and [oligosaccharide](https://en.wikipedia.org/wiki/Oligosaccharide%22%20%5Co%20%22Oligosaccharide)) with one or more [sialic acids](https://en.wikipedia.org/wiki/Sialic_acid%22%20%5Co%20%22Sialic%20acid) (e.g. [n-acetylneuraminic acid](https://en.wikipedia.org/wiki/N-acetylneuraminic_acid%22%20%5Co%20%22N-acetylneuraminic%20acid), NANA) linked on the [sugar chain](https://en.wikipedia.org/wiki/Sugar_chain%22%20%5Co%20%22Sugar%20chain). NeuNAc, an acetylated derivative of the carbohydrate sialic acid, makes the head groups of gangliosides anionic at [pH](https://en.wikipedia.org/wiki/PH%22%20%5Co%20%22PH) 7, which distinguishes them from [globosides](https://en.wikipedia.org/wiki/Globosides%22%20%5Co%20%22Globosides).

ANSWER Q3

Methyl transferase

ANSWERQ4

Lipid.

ANSWER Q5

(I) Phosphoglycerides are amphiphilic

(II) They are hydrophobic (fears water)

(III) They are also hydrophilic (loves water) parts and the head groups of phosphoglycerides are hydrophilic.

ANSWER Q6

|  |  |
| --- | --- |
| Phosphoglycerides | Triaglycerol  |
| Is a lipid composed of a phosphate group attached to a glycerol backbone | Is a lipid that is composed of a glycerol backbone attached to three fatty acids chains. |
| Composed of two fatty acid chains | Composed of three fatty acid chains |
| Composed of phosphate group attached to the glycerol backbone | Has no phosphate groups attached to the glycerol backbone |
| In the formation of a molecule, two water molecules are released as by products of each molecule | In the formation of a molecule, three water molecules are released as byproducts of each molecule |
| Make up the cell membrane of cells | Acts as the fat storage in our body |

Examples of Phosphoglycerides

I Plasmalogens

Ii Phosphatidates

Iii Phosphatidylcholines

Examples of Triaglycerol

I saturated,fatty acids.

Ii monounsaturated fatty acids.

Iii polyunsaturated fatty acids.



Structure of phophoglyceride



 Structure of Triaglyceride