18/MHS06/044
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MEDICAL LABORATORY SCIENCE
BCH 202

1 State 4 Importance of cholesterol

Answers

a It builds the structure of cell membranes

b It makes hormones like oestrogen, testosterone and adrenal hormones.

c It helps your metabolism work efficiently, for example, Cholesterol is essential for your body to produce Vitamin D.

d It produces bile acids, which help the body digest fat and absorb important nutrients.

2. Differentiate between globosides and gangliosides.

	Globoside	Ganglioside
1	It has more than one sugar as the side chain of ceramide	It has one or more salic acid linked on the sugar chain.
2	The head group of globoside atomic has low pH	The head group of ganglioside atomic is pH 7.
3	They help in the determinants of the A, B, O blood group system.	The function of gangliosides as specific determinants suggests its important role in the growth and differentiation of tissues as well as in carcinogens.

3 Methylated form of phosphatidyl ethanol amine is known as ~~lipid methyl transferase~~.

4 [illegible] of cholesterol molecule [illegible]

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4 Which of the Cholesterol molecule contains a double bond?
There is a double bond between the carbon 5 and carbon 6 in the ring B.

5 Properties of Phosphoglycerides
i They are amphiphilic i.e they have both hydrophobic and hydrophilic parts
ii They have negative charge at phosphate group at around pH 7.0 and are therefore known as polar lipids
iii They are hygroscopic and mix well with water to form cloudy colloidal solution

6 In a tabular form, differentiate between triacylglycerol and phosphoglyceride.

Triacylglycerol	Phosphoglyceride.
- It is a lipid that is composed of a glycerol backbone attached to three fatty acid chain	It is a lipid composed of a phosphate group attached to a glycerol backbone.
- It is composed of 3 fatty acid chains	it is composed of 2 fatty acid chain.
- It has no phosphate groups attached to the glycerol backbone	It is composed of a phosphate group attached to the glycerol backbone.

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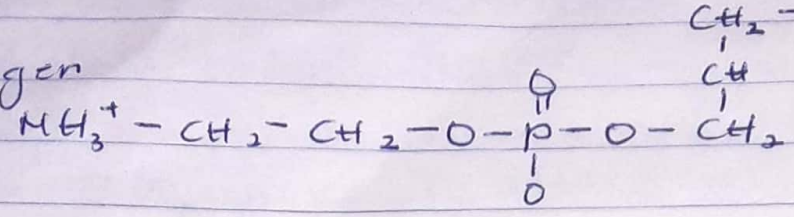
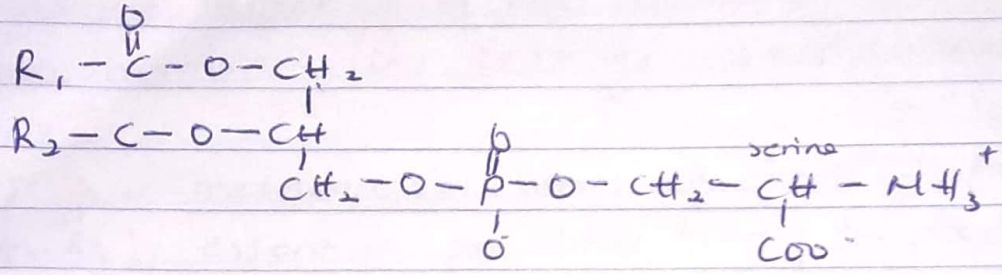
Examples and Structures of phosphoglyceride

1 Plasmogen



2 Phosphatidylserine



3 Phosphatidylethanolamine (Lecithin)