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DEPARTMENT: MEDICAL LABORATORY SCIENCE

LEVEL: 200

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1. Which of the following is not a function of triacylglycerol
2. Energy storage
3. Insulation
4. Shock absorption
5. Membrane structure

**ANSWER**

Membrane structure is not a function of triacylglycerol but is a function of phospholipids.

1. Fatty acids are carboxylic acids.

2.The sterol nucleus of steroid is called a gonane.

3.Chylomicrons transport dietary lipids from the intestine to peripheral tissues.

4.Write concisely on the functional characteristics of nucleus, mitochondria and endoplasmic reticulum.

**ANSWER**

**FUNCTION OF THE NUCLEUS**

1. Controls the hereditary characteristics of an organism
2. Responsible for protein synthesis, cell division, growth and differentiation
3. Stores hereditary material in the form of deoxy-ribonucleic acid strands.
4. Helps in the exchange of DNA and RNA between nucleus and in the rest of the cell.

**FUNCTION OF MITOCHONDRIA**

1. Synthesis of ATP
2. Helps in fatty acid oxidation
3. Energy conversion
4. Site for tricarboxylic fatty acids

**FUNCTION OF ENDOPLAMIC RETICULUM**

1. The rough endoplasmic reticulum functions in the biosynthesis of protein.
2. The smooth endoplasmic reticulum functions in the synthesis of steroid hormones and cholesterol. It is the site of the metabolism of certain drugs, toxic compounds and carcinogens.

5. Explain the various classes of glycolipids and draw one structure of each.

**ANSWER**

The classes of glycolipids are;

1. Cerebrosides: This is the simplest glycolipid in which there is only one sugar residue either glucose or galactose linked to ceramide and named as glucocerebroside and galactocerebroside.
2. Sulfatides: These are cerebrosides in which the monosaccharide contains a sulfate ester.
3. Globosides: It contains two or more sugar molecules attached to ceramide.
4. Ganglosides: Are complex glycolipids derived from glucocerebrosides.