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1) B

1. 2) Fatty acids are \_monocarboxylic\_acids.
2. The sterol nucleus of steroid is called a \_cyclopentano perhydro phenathrene ring.
3. Chylomicrons transport \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from the \_intestine \_ to \_muscles\_\_ and \_peripheral tissues\_
4. Write concisely on the functional characteristics of Nucleus, Mitochondria and Endoplasmic reticulum.

Nucleus: the nucleus is mostly found in prokaryotic organisms. It is the main part of cell organisms and contain genetic materials (genes)that can lead to replication or transcription of the cell.

Mitochondria: this is referred to as the power house of the cell and carries out aerobic metabolism( synthesis of ATP) therefore releasing energyfor the cell or tissue.

Endoplasmic reticulum: They are sets of interconnected tubular and flat

vascular structures which serve as a connection between the nucleus and the cell membrane. There are two types of ER. There are

Smooth and rough ER

Rough ER contains ribosomes and help in the synthesis of protein

While smooth ER have no ribosomes and help in metabolism of lipids, sterols, cholesterols and carcinogens.

1. Explain the various classes of glycolipids and draw the structure of one.

Cerebrosides: they are the simplest forms of glycolipids and have only 1 sugar (either glucose or galactose) and linked to ceramide

Sulphatides: they are glycolipids that contain Sulphate ester in their monosaccharide.

Globosides: They are more complex than cerebrosides containing 2 or more sugar residues attached to ceramide. They help in determination of the ABO Blood system.

Gangliosides: they are glycolipids that contain oligosaccharides with 1 or more molecule of sialic acid. They are derived from glucocerebrosides. 