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MATRIC NUMBER: 19/sci03/009

DEPARTMENT: BIOCHEMISTRY

ASSIGNMENT

1.Is vitamin C a coenzyme?

Most water-soluble vitamins act as coenzymes or are required for the synthesis of coenzymes. Ascorbic acid is a common enzymatic cofactor in mammals used in the synthesis of collagen, as well as a powerful reducing agent capable of rapidly scavenging a number of reactive oxygen species. So yes, it is a coenzyme.

2. Phospholipids consist of a glycerol molecule, two fatty acids and a phosphate group that is modified by an alcohol. The fatty acid chains are the uncharged, non-polar tails which are hydrophobic and face inside the cell, away from the water and meet in the inner region of the membrane. The phosphate group is a negatively charged head making it polar and hydrophilic and are thus attracted to the water molecules in their environment. Phospholipids are components of the cell membrane forming a bi layer which acts as the semipermeable part of the membrane.

3.

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| Characteristic | Phospholipid | Glycolipid |
| Definition | Lipids containing phosphate groups | Lipids containing carbohydrates |
| Compositions | Lipid residue and phosphate group | Lipid residue and carbohydrate moiety |
| Structure | Hydrophilic head and two hydrophobic tails | Hydrophilic head and hydrophobic tail |
| Occurrence | Cell membrane, lysosomal membrane, mitochondrial membrane, endoplasmic reticulum membrane, Golgi apparatus membrane. | Cell membrane |