SUMMARY

All the forms of life and life processes have a biochemical basis. Biochemists explore the chemical structure of living matter and the chemical reactions occurring in living cells. Cell is the basic unit of all forms of life. It is a store house of multiple informational biomolecules responsible for bio-actions. Although it is not known with accuracy how first cell was formed, but there are many evidences which suggest that a number of physical and chemical processes going on in the universe led to the formation of simple biomolecules representing the cellular structure. These biomolecules interacted in a number of ways resulting in the formation of more complex biomolecules and ultimately formed a concrete unit which expressed itself in the form of life.

Living cells are made of a number of biomolecules like carbohydrates, proteins, lipids, vitamins and minerals and they are in constant need of these biomolecules as fuels that provide energy for performing the functions of life. The topic is well covered under food biochemistry that studies the production of energy from the breakdown of food in the cell. Nutrients are used by the cell to produce energy, and vitamins and minerals are essential for proper metabolic processes. The nutrients are carbohydrates, lipids, and proteins. The carbohydrate molecules are composed of mostly carbon, oxygen, and hydrogen. Lipids are primarily made up of carbon, hydrogen and oxygen, and Proteins consist of carbon, hydrogen, oxygen, and nitrogen, and they form chains of amino acids. Vitamins and minerals are necessary for the body's metabolic functions. Major minerals are calcium phosphorus, magnesium, sodium chloride, sulfur, and potassium, and are necessary for proper function. Trace elements are also important, but they are needed in smaller doses; trace elements are iron, zinc, iodine, fluoride, copper, selenium, chromium, manganese and molybdenum.