

What is role of Carbohydrate and vitamins in the body? Discuss briefly. /5

## CARBOHYDRATES:

### ► Introduction to carbohydrates:

The word 'carbohydrate' literally mean 'hydrated carbon'. Carbohydrates are the abundantly occurring biomolecules in the living organisms. They are the key sources of energy for human body, providing 3.9 Calories of energy per gram.

Carbohydrates are chemically polyhydroxy Aldehydes or ketones. A complex substances that get on hydrolysis yields polyhydroxy aldehyde or ketone subunits.

### ► Role of carbohydrates in body:

- Carbohydrates are chief source of energy. In some animals, they are instant source of energy. Glucose is broken down by glycolysis / krebyde to yield ATP.
- Carbohydrate aid the regulation of nerve tissues and is energy source for brain.
- Carbohydrates are rich in fibre content so, it <sup>prevents</sup> ~~helps~~ from constipation.
- Carbohydrates are main constituents of connective tissue of animals.
- 100 gram of carbohydrates are needed by a person per day.
- Carbohydrates form structural and protective components, like in cell wall of plants and micro-organisms.

- Carbohydrates also get associated with lipid and protein to form surface antigens, receptor molecules, vitamins and antibiotics.

## VITAMINS:

### ▶ Introduction to Vitamins:

Vitamins are the organic compounds, which do not provide energy but are important for physiological and metabolic activities in the body.

There are 13 vitamins essential for the normal functioning of body.

### ▶ Role of Vitamins in body:

- Vitamins build up resistance of the body against diseases.
  - Vitamins prevents <sup>various</sup> diseases caused by deficiency.
  - Vitamins helps in digestion and utilization of mineral salts and carbohydrates in the body.
  - They help in maintaining epithelial tissues and enhancing immune system.
  - They also stimulates and strengthen the digestive and nervous system.
  - Vitamins supports normal growth and development.
  - Vitamins are important for carbohydrate, fat, energy, and nucleic acid metabolism.
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