

Biology (New Book) - 9th Class Biology Urdu Medium Chapter 6 Preparation

Q1. Compare the energy level of carbohydrates, Proteins and lipids.

Ans 1: Proteins:

- 1) One gram of protein has 4 Kcal of energy
- 2) Proteins can also be used for gaining energy

Ans 2: Lipids:

One gram of lipids provides 9.1 Kcal energy which is double than carbohydrates or proteins.
Lipids act as energy storage in fat, cells, liver and blood.

Ans 3: Carbohydrates:

4 Kcal per gram of energy is released when glucose is broken down in the cell
Carbohydrates are a major source of useable and stored energy in the cells of living organisms.

Q2. What are different plant sources of proteins.

Ans 1: Plant seeds are most common source of proteins like beans, lentils, peas, nuts.

Q3. Which monosaccharides make a sucrose molecule.

Ans 1: Sucrose is made of two monosaccharides i.e. glucose and fructose.

Q4. Difference between glycine and Alanine

Ans 1: Glycine:

i. It is an amino acid in which R group is H

Ans 2: Alanine:

It is an amino acid in which the R group is CH₃

Q5. Briefly describe the function of DNA.

Ans 1: DNA contains the hereditary information. This information in the form of a sequence determines the order of amino acids during protein synthesis. The segment of DNA in which the sequence of nucleotides determines the synthesis of a protein is called a gene. During reproduction, DNA is passed from one generation to the next. In this way, DNA carries the hereditary information to the next generation.

Q6. Difference between Monosaccharides and Disaccharides.

Ans 1: Monosaccharides:

Monosaccharides are made of single sugar molecule. They are easily soluble in water and have sweet taste. They may have 3 to 7 carbon atoms. Pentoses (5C) and hexoses (6C)

Ans 2: Example: Ribose and deoxyribose pentoses

Glucose, fructose, and galactose and hexoses

Ans 3: Disaccharides.:

They are made of two monosaccharides units. they are less soluble in water and are less sweet in taste.

Example:

Sucrose is made of two monosaccharides i.e. Glucose and fructose.

Maltose is made of two glucose molecules.

Q7. Give an example of storage polysaccharide in plants.

Ans 1: Starch is a storage polysaccharide found in plants. It is composed of glucose units.

Q8. Structure of DNA and RNA

Ans 1: DNA: DNA is made of deoxyribo nucleotides and ribo nucleotides.

In this nucleotide the pentose sugar is deoxyribose while nitrogenous base may be adenine or thymine (T), cytosine (C) or guanine (G)

Ans 2: Structure of RNA:

RNA is single stranded its strand consists of ribonucleotides.

A ribonucleotide contains ribose sugar instead of deoxyribose. In a ribonucleotide, the nitrogenous base may be adenine or uracil (U) cytosine (C) or guanine (G)

Q9. How do the three groups of carbohydrates differ in taste.

Ans 1: Monosaccharides have sweet taste, disaccharides are less sweet in taste while polysaccharides are tasteless. Therefore the sweetness decreases as the complexity of carbohydrates increases

Q10. Difference between Glycogen and Starch

Ans 1: Glycogen:

Glycogen is the animal starch mainly stored in liver and muscles.

It is broken down into glucose when energy is needed.

Ans 2: Starch:

Starch is a storage polysaccharide stored in plants.

It is composed of glucose units.
