

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

Q1. What are different plant sources of proteins.

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

Q2. Difference between Saturated Fatty acids and Unsaturated Fatty Acids

**Ans 1:** Saturated Fatty Acids:

Saturated fatty acids have internal carbon atoms bonded with maximum number of hydrogen atoms. They do not have double bonds between carbon atoms. Saturated fatty acids are solid at room temperature.

Example: Palmitic acid.

**Ans 2:** Unsaturated Fatty Acid:

Unsaturated fatty acids have one or more double bonds between carbon atoms. They are liquid at room temperature.

Example:

Oleic acid.

Q3. 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 major source of useable and stored energy in the cells of living organisms.

Q4. Difference between transcription and translation.

**Ans 1:** Transcription:

It is a process in which specific sequence of DNA nucleotides is copied in the form of messenger RNA it takes place in the nucleus.

**Ans 2:** Translation:

The mRNA carries the sequence of its nucleotides to ribosomes. Ribosomes read this sequence and joins specific amino acids according to which proteins are synthesized. It takes place in the cytoplasm.

Q5. Why are lipids insoluble in water.

**Ans 1:** Lipids are organic compounds made up of carbon, hydrogen and oxygen. They have little or no affinity for water in due to the presence of mostly hydrocarbons. That is why they are insoluble in water but soluble in organic solvents such as alcohol.

#### Q6. Difference between Fats and Oils.

**Ans 1:** Fats:

Fats contain saturated fatty acids and so are solid at room temperature e.g. animal fats.

**Ans 2:** Oils:

Oils contain unsaturated fatty acids and so are liquid at room temperature e.g. plant oils such as olive oil, corn oil, and coconut oil.

#### Q7. 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 until 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.

#### Q8. 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.

#### Q9. What are the types of RNA? Write their functions.

**Ans 1:** There are three types of RNA.

a. Messenger RNA : Carries the genetic information from DNA to the ribosomes during protein synthesis

**Ans 2:** b. Transfer RNA : Transfers specific amino acids to the ribosomes, ensuring the correct sequence during protein synthesis.

**Ans 3:** c. Ribosomal RNA: Constitutes the structural and functional components of ribosomes. the cellular machinery for protein synthesis.

#### Q10. Define Gene.

**Ans 1:** Small piece of huge DNA molecule in the chromosome is called gene.  
genes actually store and control the hereditary information. Each chromosome is made up of a large number of genes.

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