Chapter- 09

BIOMOLECULES

VERY SHORT ANSWER QUESTIONS (1 mark)

01. Name the inorganic compounds found in cells.

02. Which classes of organic compounds occur in cells?

03. Which lipid can cause heart ailments?

04. Name the simplest amino acid.

05. What are peptides?

06. Name the monosaccharides found in nucleic acids.

07. Name the organisms which can synthesize essential amino acids and fatty acids.

08. Name two common homopolysaccharides.
09. Which is the most abundant carbohydrate in nature?
10. Two which class of macromolecules does the snake venom belong?

SHORT ANSWER TYPE QUESTIONS (2 marks)

11. Which is the most abundant component of living matter and why?
12. What is the difference in the chemical structure of starch and cellulose?
13. What is the difference in the chemical structure of starch and cellulose?
14. Where is the starch stored in the plant cells?
15. Can a chemical reaction occur without an enzyme? Explain.
16. An enzyme makes life possible. Comment on this statement.
17. Define nucleotide and nucleoside. Give examples of each.

SHORT ANSWER TYPE QUESTIONS (3 marks)

18. Where are the following found : (a) Glycosidic bond (b) Ester bond (c) Peptide bond (d) Energy bond (d) Doubles bonds.

19. How is a peptide bond formed?
20. Name the chemical constituents of the peptide bond.
21. Define chemical elements or compounds.
22. Oil does not dissolve in water. Explain.
23. Mention one example each of basic, acidic, and neutral amino acid.
24. Give the importance of the tertiary structure of the protein.

LONG ANSWER TYPE QUESTIONS (5 marks)

25. Describe the role of carbohydrates in the cells.
26. What are the functions of amino acids?
27. Tabulate differences between saturated and unsaturated fatty acids.

HOTS/ MODEL QUESTIONS:

01. What provides roughage (fibre) in our diet?
02. Why are the nucleic acids so named?
03. What are enzymes?
04. What is a holoenzyme?
05. How are enzymes named?
06. What are ligases?
07. Name the principle on which the enzymes work.
08. What basis is generally used in enzyme classification?
09. Name the chemical nature of enzymes.
10. What are optimum temperature and pH for the enzymes to act best?
11. What is the name given to that part of the enzyme where catalytic work is carried out?
12. Name the common protein in the animal world.
13. Name the common protein in the biosphere.
14. What is fibrin?
15. Name the protein which is known as the defence molecule of the body.
16. Give two similarities and two differences between inorganic catalyst and biocatalyst.
17. What is the role of temperature in the preservation of food?
18. What are enzyme inhibitors?
19. Name the two types of control mechanisms that regulate enzyme action.
20. Why are starch and glycogen molecules suitable as storage products?
21. List the properties of polysaccharides or proteins.
22. List four functions of proteins and name one protein that performs each function.

23. Distinguish between the primary, secondary, tertiary, and quarternary structure of the protein.