



THE ANSWERS MUST BE ATTEMPTED ON THE ANSWER SHEET PROVIDED

Q.1. Answer the following short questions: (15x2=30)

- I. Briefly discuss glycosides.
- II. Why is DNA biologically important?
- III. Discuss hydrogen bonding in different pairs of nitrogenous bases in DNA.
- IV. Summarize the functions of guanosine nucleotide derivatives.
- V. Draw the structural formula of xanthine and uric acid.
- VI. Write 2 differences between DNA and RNA.
- VII. Draw the structure of Adenine & Guanine.
- VIII. Write down the main functions of carbohydrates.
- IX. Draw the structure of two SUGAR ACIDS.
- X. What are the conventional ways of explaining D and L configuration in carbohydrates?
- XI. Justify the statement that fructose is a reducing sugar.
- XII. Enlist two polysaccharides with structure.
- XIII. How denaturation of DNA occurs.
- XIV. Discuss functions of smooth endoplasmic reticulum.
- XV. Explain the term invert sugar.

Answer the following questions.

- Q.2. (a) Discuss the classification of carbohydrates in detail. (6)
(b) Describe the important functions of carbohydrates in a living system. (4)
- Q.3. (a) What is pH? Describe its role in the biological system. (5)
(b) Define and explain the term OSMOSIS and Osmotic Pressure? What are its possible effects on the structure of Cell (5)
- Q.4 (a) Write a note on the structure of DNA (5)
(b) Describe the structure and function of Three types of RNA. (5)