

1 (Sem-4) BV HPT 1

2025

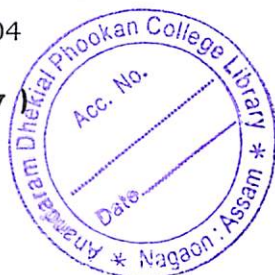
HERBAL PROCESSING TECHNOLOGY

Paper : HPT0400104

(**Herbal Chemistry**)

Full Marks : 45

Time : 2 hours



*The figures in the margin indicate full marks
for the questions*

1. Answer/Fill in the blanks (any five) : $1 \times 5 = 5$

- (a) The number of amino acids found in protein is ____.
- (b) The simplest amino acid is ____.
- (c) The most abundant biomolecule on the earth is ____.
- (d) The reserve food material of plants is ____.
- (e) Which is the smallest carbohydrate?
- (f) Name a hexose sugar.

(2)

- (g) The abbreviation of RNA is ____.
- (h) The backbone of the DNA structure is ____.

2. Answer the following questions (any five) :
2×5=10

- (a) What are essential amino acids?
- (b) Name two non-essential amino acids.
- (c) What is peptide bond?
- (d) Write the general formula of carbohydrates.

(e) Draw the structure of glucose.

(f) Give two examples of polyunsaturated fatty acid.

(g) Where and in which form are the fats stored in the body?

(h) Name two kinds of nucleic acids.

(i) What is DNA replication?

(j) What is the genetic code?

(3)

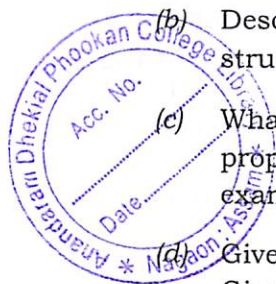
3. Answer/Write short notes on any four of the following :
5×4=20

- (a) What is the role of proteins in the body?
- (b) Give the names of all essential amino acids.
- (c) What is the role of carbohydrates in the body?
- (d) Structure and function of any one disaccharides
- (e) Define lipids and classify with suitable examples.
- (f) What is the role of nucleic acids in living organisms?
- (g) Structure of nucleosides and nucleotides
- (h) Show how many hydrogen bonds can form between the two strands in the short DNA segment shown below :
5'ATGCGACTA3' 3'TACGCTGAT5'

4. Answer any one of the following questions : 10

- (a) Draw the functional groups present in all amino acids.

(4)



(b) Describe the four levels of protein structure.

(c) What are monosaccharides? Write the properties of monosaccharides with examples.

(d) Give the classification of fatty acids. Give examples.

(e) Explain the Watson and Crick model of DNA.

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