2022
BOTANY
[HONOURS]
(CBCS)
(B.Sc. First Semester End Examinations-2022)
PAPER-C2T

Full Marks: 40   **Time: 02 Hrs**

The figures in the right hand margin indicate marks
Candidates are required to give their answers in their own words as
far as practicable
Illustrate the answers wherever necessary

Group - A

1. **Answer any five of the following:**   5x2=10

   a) Mention the function of endoplasmic reticulum.

   b) Define apoenzyme and Co-enzyme.

   c) What down the general formula of amio acids.

   d) Among hydrogen bond and covalent bond, which is the strongest bond?

   e) What is the difference between nucleoside and nucleotide?

   f) DNA replication occurs in which period of the cell cycle.

   g) In which stage of meiosis, synapsis occur?

   h) What are the difference between active and passive transport?

Group – B

2. **Answer any four of the following:** 4x5=20

a) Write down the difference between eukaryotic and prokaryotic cells. Explain the role of ATP as energy currency. 3+2

b) Write a short note on endosymbiotic theory (with proper diagram). Differentiate between B-DNA and Z-DNA. 3+2

c) Explain in detail the lock and key hypothesis and induced fit theory of enzyme substrate reaction. 2.5+2.5

d) Give an overview of primary, secondary, tertiary and quaternary structures of protein. Give two examples each of monosaccharides and disaccharides 3+2

e) Mention the types of RNA. Write a short note on tRNA 1+4

f) Write hort notes on

i) Protein folding. (2.5+2.5)

ii) Protein segregation.

Group – C

3. **Answer any ene of the followings:** 1x10=10

a) Write a short note on Phosphoglycerides. What are essential fatty acides. Give two examples. Mention the major differences between DNA and RNA. What are co-factors, co-enzyme and prosthetic groups? (3+2+1+2+2)=10

b) Mention the significance of meiosis. Write down the difference between anaphase A and anaphase B. With the help of proper

diagram, mention the types of microtubule of metaphase spindle. What are kinetochore? What are homologous Chromosomes? (2+2+3+2+1) = 10