

B.Sc. (CBCS Pattern) Semester - V
012C : Botany-I (Molecular Biology-I)

P. Pages : 2

Time : Three Hours



GUG/S/23/13097

Max. Marks : 50

- Notes : 1. All questions are compulsory and carry equal marks.
2. Draw well labelled diagram wherever necessary.

1. Write notes on: **5x2**
=10
- a) Griffith's experiment.
- b) Discovery of Nucleic acid. (Brief History)

OR

- Write short notes on: **2½x4**
=10
- c) Types of Nucleic Acid.
- d) Fraenkel – Conrats Experiment.
- e) Chemical nature of DNA.
- f) Hershey & Chase Experiment.

2. Write notes on: **5x2**
=10
- a) Watson-Crick Model of DNA Double helix.
- b) Types of Non-genetic RNA.

OR

- Write short notes on: **2½x4**
=10
- c) Cot-curve.
- d) Z-DNA
- e) Circular DNA.
- f) Clover-leaf model of t-RNA.

3. Write notes on: **5x2**
=10
- a) Nucleosome structure.
- b) Difference between Heterochromatin & Euchromatin.

OR

Write short notes on:

2½x4
=10

- c) Viral DNA.
- d) Plasmid DNA.
- e) Packaging of Bacterial chromosome.
- f) Prokaryotic chromosomal DNA.

4. Write notes on:

5x2
=10

- a) Enzymes involved in Prokaryotic DNA Replication.
- b) Semi-conservative DNA Replication.

OR

write short notes on:

2½x4
=10

- c) Rolling circle model of DNA Replication.
- d) Kornberg Enzyme.
- e) DNA Polymerases in Eukaryotes.
- f) DNA Polymerases in Prokaryotes.

5. Write **any ten** questions in one or two lines only (Diagrams are not necessary).

1x10
=10

- a) Nitrogen bases.
- b) Nucleotide.
- c) Chargaff's rule.
- d) 7-Methyl Guanosine Cap.
- e) Anticodon.
- f) siRNA.
- g) Chromatin.
- h) Histone Proteins.
- i) Linker DNA.
- j) Okazaki fragment.
- k) Primase.
- l) Topoisomerase.
