

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

P. Pages : 2

Time : Three Hours



GUG/S/25/13097

Max. Marks : 50

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1. a) Describe the Fraenkel-Conrat's Experiment. 5
b) Griffith's Experiment of Bacterial Transformation. 5

OR

- c) Types of Nucleic acid. 2½
d) Nucleic acid discovery. 2½
e) Harshey & Chase Experiment. 2½
f) Chemical Nature of DNA. 2½
2. a) Watson & Crick Model of DNA double helix. 5
b) Describe the various types of RNA. 5

OR

- c) Cot curve. 2½
d) Single stranded DNA & Circular DNA. 2½
e) A form of DNA. 2½
f) Z-DNA 2½
3. a) Write a detail note on Euchromatin & Heterochromatin. 5
b) Plasmid DNA 5

OR

- c) Nucleosome model of DNA packaging. 2½
d) Chromosomal DNA in Prokaryotes. 2½
e) Viral DNA. 2½
f) Histone proteins. 2½
4. a) What is DNA replication. Describe proposed methods of DNA replication. 5
b) Explain the various models of DNA Replication. 5

OR

- c) Kornberg's Discovery. 2½
- d) DNA polymerases in Prokaryotes. 2½
- e) Initiation of DNA replication in Linear DNA. 2½
- f) DNA polymerases in Eukaryotes. 2½

5. Write **any ten** questions in one or two lines only (Diagram are not necessary) **10**

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|---------------------|----------------------|
| a) Purine bases | b) Deoxyribose sugar |
| c) Glycosidic bond. | d) B-DNA. |
| e) Anticodon | f) Backbone of DNA |
| g) Solenoid | h) 10 nm Fibre |
| i) Chromosome | j) Lagging strand |
| k) Ligases | l) Replication fork |
