

Bachelor of Science (B.Sc.) Fourth Semester
B.Sc. 2442 - Botany Paper-II (Molecular Biology and Biotechnology)

P. Pages : 2

Time : Three Hours



GUG/W/18/1283

Max. Marks : 50

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- Notes : 1. All questions are compulsory and carry equal marks.
2. Illustrate your answers with suitable examples and draw well labelled diagram wherever necessary.

1. Write in detail about Replication of DNA. 10

OR

Write notes on

- a) Genetic code. 5
b) Transcription. 5

2. Write in detail about Lac operon concept. 10

OR

Write notes on.

- a) Differentiation and Morphogenesis. 5
b) Somatic Embryogenesis. 5

3. Write short notes on:
- a) Structure of DNA. 2½
b) Satellite DNA. 2½
c) Restriction enzyme. 2½
d) Chemical sterilization. 2½

OR

- e) m-RNAS. 2½
f) Wobble hypothesis. 2½
g) Jumping gene. 2½
h) Banana micropropagation. 2½

4. Write short notes on
- a) Nucleosome model. 2½
 - b) Satellite DNA. 2½
 - c) Plasmid 2½
 - d) Artificial Androgenesis. 2½

OR

- e) Hershey and chase Experiment. 2½
 - f) RNA splicing. 2½
 - g) Agrobacterium. 2½
 - h) Protoplast culture. 2½
5. Write in two or three lines only **any ten** diagrams are not necessary. **10**
- a) Nucleotide.
 - b) Okazaki fragment.
 - c) Uracil
 - d) Repetitive DNA
 - e) Translation
 - f) Termination codon
 - g) Endonuclease
 - h) Bacteriophage
 - i) Recombinant DNA
 - j) Totipotency.
 - k) Autoclave
 - l) Incubation.
