

B.Sc. Sem-IV
B.Sc. 2442 - Botany Paper-II
(Molecular Biology and Biotechnology)

P. Pages : 2

Time : Three Hours



GUG/W/19/1283

Max. Marks : 50

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

1. Describe process of replication of DNA. 10

OR

Write notes on :

a) RNA processing. 5

b) Characteristics of genetic code. 5

2. Describe structure of prokaryotic and eukaryotic gene. 10

OR

Write notes on:

a) Artificial androgenesis. 5

b) Micropropagation in Banana. 5

3. Write short notes on :

a) B form of DNA. 2½

b) Satellite DNA. 2½

c) Restriction enzymes. 2½

d) MS-media. 2½

OR

e) Z-form of DNA. 2½

f) Translation. 2½

g) AC/DS elements in Maize. 2½

h) Morphogenesis. 2½

4. Write short notes on :-
- a) m-RNA. 2½
 - b) Transcription. 2½
 - c) Plasmid. 2½
 - d) Surface sterilization. 2½

OR

- e) Packaging of DNA. 2½
 - f) Repetitive DNA. 2½
 - g) Bacteriophage. 2½
 - h) Micropropagation in Eucalyptus. 2½
5. Write answers in two or three lines only **any ten**. Diagrams are not necessary. **1x10**
=10
- a) Nucleotide.
 - b) t-RNA.
 - c) 3' end.
 - d) Nonsense codon.
 - e) 70s ribosome.
 - f) Amino acids.
 - g) Ligases.
 - h) Barbara McClintock.
 - i) Genome.
 - j) Callus.
 - k) Murashige and Skoog.
 - l) White nutrient medium.
