

Roll No. :

Total No. of Questions : 11]

[Total No. of Printed Pages : 3

BPP-1076

M.Sc. (Previous) Examination, 2022

ZOOLOGY

Paper - III

(Molecular Biology, Cytogenetics and Techniques)

Time : 3 Hours]

[Maximum Marks : 75

Section-A

(Marks : 2 × 10 = 20)

Note :- Answer all *ten* questions (Answer limit **50** words). Each question carries **2** marks.

Section-B

(Marks : 5 × 5 = 25)

Note :- Answer all *five* questions. Each question has internal choice (Answer limit **200** words). Each question carries **5** marks.

Section-C

(Marks : 10 × 3 = 30)

Note :- Answer any *three* questions out of five (Answer limit **500** words). Each question carries **10** marks.

Section-A

1. Attempt all questions :

- (i) Define Split Gene.
- (ii) What do you mean by DNA Chips ?

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- (iii) Define concept of Neutral Evolution.
- (iv) What is Tata Box ?
- (v) List *two* applications of Cryopreservation.
- (vi) What do you understand by Mismatch Repair (MMR) ?
- (vii) Define Western Blotting Technique.
- (viii) What is Microsatellite ?
- (ix) Define Genome.
- (x) What do you mean by semi-conservative method of DNA Replication ?

Section-B

2. Explain role of Sigma and Rho factor in transcription.

Or

Write a short note on Lac Operon Concept.

3. Write a short note on Cancer.

Or

Give a brief idea about Transgenic Organisms.

4. Describe Viral Genomics.

Or

Write a short note on PD-Loop Techniques.

5. Illustrate the methodology of Electrophoresis.

Or

Explain PCR techniques and its significance.

6. Give a brief idea about Drosophila Genome.

Or

Describe molecular tools used in Phylogeny.

Section-C

7. Write an essay on DNA replication in Eukaryotes.
8. Discuss Genetic Engineering and its application in detail.
9. Describe in detail about DNA fingerprinting and its applications.
10. Explain briefly about Radioimmunoassay (RIA).
11. Write an essay on Automated DNA Sequencing.