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NEPWT—71—2024

FACULTY OF SCIENCE

M.Sc. (Second Year) (Third Semester) EXAMINATION

NOVEMBER/DECEMBER, 2024

(NEP-2020)

BOTANY

SBOTC-502

(Molecular Biology and Biostatistics)

(Thursday, 12-12-2024)

Time : 2.00 p.m. to 5.00 p.m.

Time—3 Hours

Maximum Marks—80

N.B. :— (i) Question No. 1 is compulsory.

(ii) Of the remaining, attempt any three questions.

(iii) Draw neat and labelled diagrams wherever necessary.

1. Write brief notes on the following (All modules) : 20
 - (a) Cot curves
 - (b) Exons and Introns
 - (c) 5'-Cap formation
 - (d) Mean and Median.

2. Write brief notes on the following :
 - (a) Structure and chemical properties of nucleic acid. 10
 - (b) Prokaryotic transcription. 10

P.T.O.

3. Write brief notes on the following :
- (a) Mechanism of eukaryotic DNA replication. 10
 - (b) Operon concept and types. 10
4. Write brief notes on the following :
- (a) Processing of *t*RNA. 10
 - (b) Post-translational modifications. 10
5. Write brief notes on the following :
- (a) Measures of central tendency. 10
 - (b) Difference between parametric and non-parametric statistics. 10
6. Write brief notes on the following : 20
- (a) Thermal properties of nucleic acids
 - (b) Origin of replication
 - (c) Genetic code
 - (d) Normal Distribution.