

RAN-2503001305033001

B.Sc. (Biotechnology) (NCF-NEP) (Sem. V) Examination March - 2026
Molecular Genetics (Major -3)

Time: 1 Hour]
[Total Marks: 25

સૂચના : / Instructions (1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવહી પર અવશ્ય લખવી. Fill up strictly the above details on your answer book	Seat No.: <table border="1" style="width: 100%; height: 30px; border-collapse: collapse;"> <tr> <td style="width: 16.6%;"></td> <td style="width: 16.6%;"></td> <td style="width: 16.6%;"></td> <td style="width: 16.6%;"></td> <td style="width: 16.6%;"></td> <td style="width: 16.6%;"></td> </tr> </table> Student's Signature						

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| Q.1. | Short Question/One-Word Answer (Any 5 out of 6) | 05 |
| | a) Different types of Transposable Elements
b) What is Translesion synthesis?
c) Mutagenesis & SOS repair
d) What is the function of TLS polymerase?
e) What is tautomeric shift?
f) Give function of Ruv B and Ruv C enzymes. | |
| Q.2. | Short Note/Brief Answer (Any 2 out of 3) | 10 |
| | a) What is Ames test & how is it carried out?
b) Explain mechanism of Mismatch Repair system.
c) Describe detailed mechanism of Photoreactivation. | |
| Q.3. | Short Note/Brief Answer (Any 2 out of 3) | 10 |
| | a) Model for Homologous Recombination.
b) Biological roles of Site Specific recombination.
c) Explain the mechanism of Replicative Transposition | |