RAN-2503001302046002

RAN-2503001302046002

B.Sc. (BIO TECH) (NCF-NEP) (Sem.–II) Examination April - 2026

BT-MDC-201-Evolutionary Biology

Time: 2 Hours] **[Total Marks: 50**

સૂચના : / Instructions

(1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fill up strictly the above details on your answer book

(2) Figures to the right indicate full marks.

(3) Draw neat and labelled diagrams wherever necessary.

Seat No.:

Student's Signature

Q.1. Short Question/One-Word Answer (Any 10 out of 12) **10**

a. Which classic example is cited by Lamarck to explain neck elongation in giraffes?
b. What is meant by "survival of the fittest"?
c. What type of fossil preserves only the impression of an organism?
d. Who proposed the principle of uniformitarianism?
e. What is genetic drift?
f. What was the conclusion of the tail-cutting experiment in mice?
g. Who proposed the Mutation Theory of evolution?
h. Define Population.
i. Define Density.
j. Write-down the equation of Population size
k. Define vermiform appendix.
l. Define Homology.

Q.2. Brief Answer (Any 2 out of 3) **10**

a. Discuss the merits and demerits of Lamarck's theory of inheritance of acquired characters.
b. Explain industrial melanism as evidence supporting natural selection.
c. Describe Weismann's tail-cutting experiment and its significance in evolutionary biology.

Q.3. Brief Answer (Any 2 out of 3) **10**

a. Describe the process of fossilization with suitable examples.
b. Describe major eras of the geological time scale and characteristic life forms.
c. Discuss radiometric dating methods used in paleontology.

Q.4. Brief Answer (Any 2 out of 3) **10**

a. Describe homology in animal and plant.
b. Describe evidences from comparative physiology and biochemistry.
c. Write note on comparative embryology.

Q.5. Short Note (Any 2 out of 3) **10**

a. Patterns of Population Dispersion and Age Structure.
b. Population size and density explain in details.
c. Survivorship curves.