

4. (a) What is cell cycle? Explain the different phases of cell cycle with a suitable diagram. (8)
- (b) Discuss the laws of Inheritance given by Gregor J. Mendel. (7)
5. (a) Explain the different modes of Speciation. (8)
- (b) Diagrammatically explain the stages of Mitosis. (7)
6. Write short notes (**any three**) of the followings : (15)
- (i) Five kingdom of life
- (ii) Ecosystem
- (iii) Hardy Weinberg Principle
- (iv) Descent with modifications

[This question paper contains 4 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 4885 J

Unique Paper Code : 2234002002

Name of the Paper : GE- Introduction to Biology

Name of the Course : **GE-Zoology Theory Exam
May-June 2025**

Semester : IV (NEP-UGCF)

Duration : 2 Hours

Maximum Marks : 60

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt any **FOUR** questions in all, including Question No. 1 is compulsory.
3. **All** questions carry equal marks.
4. Draw well labelled diagram wherever necessary.

1. (a) Define (**any four**) the following terms : (4)

(i) Endosymbiosis

(ii) Sympatric Speciation

(iii) Oligosaccharides

(iv) Organic variation

(v) Species

(b) Differentiate between the following (**any three**) :

(6)

(i) Saturated and Unsaturated Fats

(ii) Mitosis and Meiosis

(iii) Genotype and Phenotype

(iv) Nucleus and Golgi apparatus

(c) Mention the contribution of the following scientists

(**any two**) :

(2)

(i) Robert Hooke

(ii) Wilhelm Weinberg

(iii) Aleksandr Oparin

(d) State whether the following statements are True or False : (3)

(i) All levels of protein structure contribute to its function.

(ii) Each nucleoside consists of a nitrogen-containing aromatic base attached to a pentose (five- carbon) sugar, which is in turn attached to a phosphate group.

(iii) Life can be possible to originate in early atmosphere as it was reducing.

2. (a) Discuss the different mechanism of speciation with a suitable diagram. (8)

(b) Briefly explain the process of evolution of eukaryotic cell. (7)

3. (a) Elaborate the four levels of Protein structure with brief note of protein folding. (9)

(b) Explain Darwin's concept of natural selection. (6)