

This question paper contains **3** printed pages]

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S. No. of Question Paper : **6637**

Unique Paper Code : **2234002002**

Name of the Paper : **GE-6 : Introduction to Biology**

Name of the Course : **GE- Zoology**

Semester : **II (NEP-UGCF)**

Duration : **2 Hours**

Maximum Marks : **60**

(Write your Roll No. on the top immediately on receipt of this question paper.)

Attempt any *four* questions in total,

including Question No. **1**, which is compulsory.

1. (a) Differentiate between the following (any *two*) : 2×2=4

(i) Animal cell and Plant cell

(ii) Lysosome and Peroxisome

(iii) Triacylglycerols and Phospholipids.

(b) Fill in the blanks : 1×5=5

(i) Lactose consists of joined to by a
 β -1, 4-glycosidic linkage.

P.T.O.

- (ii) The bonds that link amino acids are called bonds.
- (iii) Breeding an organism of unknown genotype with recessive homozygote is called a because it can reveal the genotype of that organism.
- (iv) The is known as the kitchen of the cell.
- (c) True or False : 1×3=3
- (i) Oleic acid is an unsaturated fatty acid.
- (ii) During cytokinesis, a cleavage furrow is not formed in a plant cell.
- (iii) Fructose is an aldose sugar.
- (d) Define the following (any *three*) : 1×3=3
- (i) RNA
- (ii) Stromatolites
- (iii) Ecosystem
- (iv) Biological species concept.
2. (a) Differentiate between mitosis and meiosis. Describe the various phases of a somatic cell cycle in an animal cell. 3+7=10
- (b) Explain codominance with a suitable example. 5

3. (a) Define the term reproductive isolation. Explain the various prezygotic barriers with suitable examples. 1+9=10
- (b) Write a note on Miller-Urey experiment. 5
4. (a) Describe Watson and Crick model of DNA. 9
- (b) Write about double membrane organelles found in an animal cell (any *two*). 6
5. (a) Discuss the storage and structural properties of polysaccharides, giving *one* example of each. 6
- (b) Define the term model organism. Give suitable examples and explain why we use model organisms in research. 1+8=9
6. Write short notes on the following (any *three*) : 3×5=15
- (a) Incomplete dominance
- (b) Key events in the history of life
- (c) Functions of proteins
- (d) Domain Archaea
- (e) Natural selection.