

2026

(FYUGP)

(2nd Semester)

ZOOLOGY

(MAJOR)

Paper : ZOO/C4

(Cell Biology)

Full Marks : 75

Pass Marks : 40%

Time : 3 hours

The figures in the margin indicate full marks for the questions.

1. Describe the various models of plasma membrane. Explain the fluid mosaic models with proper illustrations. 7½+7½=15

Or

Explain the various mechanisms of transport across cell membranes. 15

2. With a proper diagram, explain the structure and functions of endoplasmic reticulum. 15

Or

Explain the role of Golgi apparatus and lysosomes in intracellular transport.

3. Discuss the endosymbiotic hypothesis of mitochondria with illustrations wherever necessary. 15

Or

Describe the mitochondrial respiratory chain in detail.

4. With the help of a proper diagram, explain the structure of nuclear envelope. Add a note on its functions. 12+3=15

Or

Write notes on the following : $7\frac{1}{2} \times 2 = 15$

(a) Euchromatin

(b) Heterochromatin

5. Define mitosis. Explain mitotic cell division with proper diagrammatic representations. 2+13=15

Or

With proper diagrams, describe the structure and functions of microtubules in detail. 15

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