

Bs/ZOO/C4(T)

2025

(FYUGP)

(2nd Semester)

ZOOLOGY

(MAJOR)

Paper : ZOO/C4(T)

(Cell Biology)

Full Marks : 75

Pass Marks : 40%

Time : 3 hours

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

- 1. Illustrate the differences between a prokaryotic and a eukaryotic cell. Add a note on Mycoplasma. 10+5=15**

Or

What are cell junctions? Explain, in detail, the different types of cell junctions. 3+12=15

(2)

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

(a) Golgi apparatus

(b) Lysosomes

Or

Give a detailed account on the endomembrane transport system. 15

3. Explain the structure of mitochondria with a well-labelled diagram. Give reasons to support the semi-autonomous nature of mitochondria. $8+7=15$

Or

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

(a) Chemiosmotic hypothesis

(b) Peroxisomes

4. With the help of proper diagrams, explain the structure of nuclear pore complex. Add a note on nucleus. $10+5=15$

Or

What is chromatin? Explain the process of packaging of DNA in nucleosome. $3+12=15$

5. Explain meiotic cell division with the help of proper diagrammatic representation. 15

Or

What is cytoskeleton? Describe, in detail, the structure and the functions of microfilaments. 3+12=15

★ ★ ★