Reg. No…….. Name…….. **26U239**

B A, B SC, B COM DEGREE END SEMESTER EXAMINATION - APRIL 2026

UGP (HONS.) SEMESTER - 2: DISCIPLINE SPECIFIC COURSE

COURSE: 24UZOODSC102: FOUNDATIONS OF LIVING SYSTEMS

(For Regular 2025 and Improvement/Supplementary 2024 Admission)

Time: 1.5 Hours Max. Marks - 50

PART A

Score a maximum of 10 marks from 12 questions, 10 marks

1. The supportive skeletal structures in the human external ear and nose are examples of CO3
2. Which is capacitation? CO4
3. Myelin sheath is derived from ---------- cells. CO5
4. Give the function of brown adipocyte tissues. CO4
5. Which vitamin deficiency causes Scurvy? CO6
6. Expand the abbreviations DNA and RNA CO5
7. Steroids are an example of —---------- lipids CO5
8. Draw the general structure of an amino acid CO5
9. Which scientist observed cork cells through a basic microscope CO1
10. _____ _____ publishes cell theory applying it to plants. CO1
11. Which organelle is said to be the suicidal bag? CO2
12. The level of organisation in flat worms. CO2

(1 x 10 = 10)

PART B

Match each term in Column A with the correct function from Column B and C

Each question carries 1.5 marks. (CO1, CO2, CO3, CO4, CO5, CO6)

	Column A	Column B	Column C
13	Glandular epithelium	cisternae	Rickets
14	Collagen	DNA	Structural support to tissue
15	Vitamin E	Bone formation	Fertility

16	Vitamin D	Antiageing factor	Packaging
17	Mitochondria	Fibroblast	Double membrane
18	Golgi	Pancreas	Secretion

(1.5 x 6 = 9)

PART-C

True or False Each question carries 1 mark

0.5 marks for correctly identifying True or False

0.5 marks for providing the correct reason

19. Chondrocytes are the cells in the bone tissue. CO3
20. Groups of cells with a common embryonic origin and function have been characterized as tissues. CO4
21. A peptide bond connects two amino acids by joining the hydroxyl group of one amino acid to the amino group of another, without releasing a water molecule. CO5
22. Enzymes are biological molecules that slow down chemical reactions in the body and are not essential for life. CO6
23. Centrioles are present in plant cells but absent in animal cells. CO2
24. Ribosomes are responsible for breaking down waste materials. CO2

(1 x 6 = 6)

PART -D

Short Answers- Quote example wherever required

Answer any five questions- Each carry 2 marks

25. Draw a neatly labelled diagram of a neuron. CO3
26. Give the major functions of Sertoli cells. CO4
27. How are enzymes classified according to the International Union of Biochemists (IUB)? CO6

28. Differentiate between essential and non-essential amino acids CO5
29. Explain the Fluid Mosaic Model of the plasma membrane CO1
30. Differentiate between rough and smooth endoplasmic reticulum. CO2

(2 x 5 = 10)

PART E

Answer in a paragraph
Answer any three questions- Each carry 5 marks

31. Define adipocytes and explain the different types of adipocytes. CO3
32. Explain the primary, secondary, and tertiary structures of proteins CO5
33. Explain the hierarchical organization of animal complexity from cells to organisms CO2
34. Explain the structure and function of different types of muscle tissue. CO3

(5 x 3 = 15)