

<b>UG-C-2326</b> <b>BZOO3-3X</b>
----------------------------------

**U.G. DEGREE EXAMINATION —  
DECEMBER 2023**

*Zoology*

**Third Year**

**CELL BIOLOGY**

**Time : 3 hours**

**Maximum marks : 70**

**PART A — (3 × 3 = 9 marks)**

**Answer any THREE questions out of Five questions in  
100 words.**

**All questions carry equal marks.**

1. Describe the structure of Eukaryotic cell.
2. Explain the chemical coupling hypothesis.
3. Give the functions of lysosomes.
4. What is a nucleosome and solenoid?
5. Explain the mitotic phase in cell cycle.

PART B — ( $3 \times 7 = 21$  marks)

Answer any THREE questions out of Five questions in 200 words.

All questions carry equal marks.

6. Differentiate between prokaryotic and eukaryotic cell.
7. Describe the structure of mitochondria.
8. Enlist the functions of endoplasmic reticulum.
9. Write a brief account on giant chromosome.
10. What are the characteristic features of cancer cell?

PART C — ( $4 \times 10 = 40$  marks)

Answer any FOUR questions out of Seven questions in 500 words.

All questions carry equal marks.

11. Explain the various models of plasma membrane.
12. Give a detailed account on oxidative phosphorylation in mitochondria.
13. Describe the structure of golgi complex and endoplasmic reticulum.

14. Discuss the structure and functions of nucleus.
  15. Write an account on theories of carcinogenesis.
  16. Discuss the structure and functions of ribosomes.
  17. Give a brief account on various stages in cell cycle.
-

**UG-C-2329**

**BZOO3-6X**

**U.G. DEGREE EXAMINATION –  
DECEMBER, 2023.**

**Zoology**

**Third Year**

**ANIMAL PHYSIOLOGY**

**Time : 3 hours**

**Maximum marks : 70**

**PART A — ( $3 \times 3 = 9$  marks)**

**Answer any THREE questions out of Five questions in  
100 words.**

**All questions carry equal marks.**

**Write short notes on:**

- 1. Essential Amino Acids**
- 2. Cardiac cycle**
- 3. Ammonotelic animals**
- 4. Organ of Corti**
- 5. Insulin**

PART B — ( $3 \times 7 = 21$  marks)

Answer any THREE questions out of Five questions in  
200 words.

All questions carry equal marks.

6. Give a brief account on water soluble vitamins.
7. Discuss the composition of human blood.
8. Describe the structure of a nephron.
9. Describe the structure of human eye.
10. Discuss the hormonal regulation of insect metamorphosis.

PART C — ( $4 \times 10 = 40$  marks)

Answer any FOUR questions out of Seven questions in  
500 words.

All questions carry equal marks.

11. What are digestive enzymes? Discuss the role of different enzymes in digestion.
12. Write an essay on transport of gases.
13. With neat diagram explain the structure of skeletal muscle.

14. Explain the mechanism of nerve impulse conduction.
  15. Give a detail account on the hormones of pituitary glands.
  16. Explain-Glycolysis.
  17. Describe the structure and types of neurons.
-

<b>UG-C-2330</b>	<b>BZOO3-7X</b>
------------------	-----------------

U.G. DEGREE EXAMINATION –  
DECEMBER, 2023.

Zoology

Third Year

ENVIRONMENTAL BIOLOGY AND  
BIOTECHNOLOGY

Time : 3 hours

Maximum marks : 70

PART A — ( $3 \times 3 = 9$  marks)

Answer any THREE questions out of Five questions in  
100 words.

All questions carry equal marks.

Write short notes on :

1. Abiotic Factors
2. Ecological Succession
3. National Parks
4. Human Genome Project
5. Serum Free media

PART B — ( $3 \times 7 = 21$  marks)

Answer any THREE questions out of Five questions in  
200 words.

All questions carry equal marks.

6. Comment on inter-specific animal associations.
7. Give a brief account on renewable energy resources.
8. Discuss the role of government agencies in environmental monitoring.
9. Write short notes on genomic library.
10. Give the applications of transgenic animals.

PART C — ( $4 \times 10 = 40$  marks)

Answer any FOUR questions out of Seven questions in  
500 words.

All questions carry equal marks.

11. Write in detail about sedimentary cycles.
12. List the characteristics of a population.
13. Discuss the environmental effects of deforestation and urbanization.
14. Explain the process gene transfer technique.



15. Give a detail account on the facilities required for establishment of animal cell culture laboratory.
  16. Write an essay on natural resource management.
  17. Discuss the role of environmental laws in environment protection.
-