



**DR B.R.AMBEDKAR OPEN UNIVERSITY, HYDERABAD.
FACULTY OF SCIENCES, STML BUILDING
DEPARTMENT OF ZOOLOGY
M.Sc., FIRST YEAR, ZOOLOGY (2022-23)**

Max. Marks:15

Min. Marks: 06

COURSE-I, ASSIGNMENT-1 (ANIMAL DIVERSITY AND ECOLOGY)

Section – A (10 marks)

- I. Answer any one of the following in about 30 lines (Draw diagrams, flow charts wherever necessary)
1. Explain evolution of coelom in animal kingdom from lower organisms to higher organisms.
 2. Detail about role of integument in animals.

Section – B (5 marks)

- II. Answer any one of the following in about 15 lines (Draw diagrams, flow charts wherever necessary)
1. Explain how echinoderm larvae paved in evolution of chordates.
 2. Details role of blood pigments role in transport of gases.

Max. Marks:15

Min. Marks: 06

COURSE-I, ASSIGNMENT-2 (ANIMAL DIVERSITY AND ECOLOGY)

Section – A (10 marks)

- I. Answer any one of the following in about 30 lines (Draw diagrams, flow charts wherever necessary)
1. Explain role of excretory organs in eliminating nitrogenous products from animal body.
 2. Explain how biodiversity is important for existence of mankind.

Section – B (5 marks)

- II. Answer any one of the following in about 15 lines (Draw diagrams, flow charts wherever necessary)
1. What is the role of National parks in India?
 2. Differentiate sanctuaries and national parks.



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COURSE-2, ASSIGNMENT-1 (CELL & MOLECULAR BIOLOGY)

Section – A (10 marks)

- I. Answer any one of the following in about 30 lines (Draw diagrams, flow charts wherever necessary)
1. Detail how cell communication and signaling helps in animal behavior.
 2. Explain how cell organs function for an organism.

Section – B (5 marks)

- II. Answer any one of the following in about 15 lines (Draw diagrams, flow charts wherever necessary)
1. What is the role of transcription in protein synthesis?
 2. Mention how gene transfer method helps in modern genetics.

Max. Marks:15

Min. Marks: 06

COURSE-2, ASSIGNMENT-2 (CELL & MOLECULAR BIOLOGY)

Section – A (10 marks)

- I. Answer any one of the following in about 30 lines (Draw diagrams, flow charts wherever necessary)
1. Explain role of genetic code in protein synthesis.
 2. How cell cycle is vital in cell division? Explain.

Section – B (5 marks)

- II. Answer any one of the following in about 15 lines (Draw diagrams, flow charts wherever necessary)
1. What is gene regulation? Explain.
 2. How do you justify cell membrane functions in survival of a cell?



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**COURSE-3, ASSIGNMENT-1
(ANIMAL PHYSIOLOGY & PHYSIOLOGICAL CHEMISTRY)**

Section – A (10 marks)

- I. Answer any one of the following in about 30 lines (Draw diagrams, flow charts wherever necessary)
1. Detail how nutrition and digestion of macromolecules helps in protection from diseases.
 2. Explain role of water in body physiology.

Section – B (5 marks)

- II. Answer any one of the following in about 15 lines (Draw diagrams, flow charts wherever necessary)
1. What is the role of proteins?
 2. Mention how lipids are also vital in body physiology.

Max. Marks:15

Min. Marks: 06

**COURSE-3, ASSIGNMENT-2
(ANIMAL PHYSIOLOGY & PHYSIOLOGICAL CHEMISTRY)**

Section – A (10 marks)

- I. Answer any one of the following in about 30 lines (Draw diagrams, flow charts wherever necessary)
1. Explain role of muscles in body physiology.
 2. Explain how energy cycles are important in body physiology.

Section – B (5 marks)

- II. Answer any one of the following in about 15 lines (Draw diagrams, flow charts wherever necessary)
1. What is the role of vitamins?
 2. What is immune system, how it function?



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**COURSE-4, ASSIGNMENT-1
(HUMAN CYTOGENETICS AND DEVELOPMENTAL BIOLOGY)**

Section – A (10 marks)

- I. Answer any one of the following in about 30 lines (Draw diagrams, flow charts wherever necessary)
1. Detail the role of germinal layers in human development.
 2. Explain role of cleavage in womb development.

Section – B (5 marks)

- II. Answer any one of the following in about 15 lines (Draw diagrams, flow charts wherever necessary)
1. What is the role of amnion in embryo development?
 2. Explain how body axis is important for conduction of physiological activities.

Max. Marks:15

Min. Marks: 06

**COURSE-4, ASSIGNMENT-2
(HUMAN CYTOGENETICS AND DEVELOPMENTAL BIOLOGY)**

Section – A (10 marks)

- I. Answer any one of the following in about 30 lines (Draw diagrams, flow charts wherever necessary)
1. Explain reasons for genetic disorders in humans.
 2. Explain techniques for preparation of slides, staining.

Section – B (5 marks)

- II. Answer any one of the following in about 15 lines (Draw diagrams, flow charts wherever necessary)
1. Explain features of sperm to favor fertilization.
 2. How do you do karyotyping of human chromosomes?