

SECOND YEAR T. D.C. SCIENCE
ZOOLOGY

The second year TDC examination shall consist of three theory papers, each of three hours duration and a practical examination of five hours duration.

	<u>Marks</u>
Paper-I:Life and Diversity of Animals-II (Vertebrates)	50
Paper-II : Genetics and Biotechnology	50
Paper-III :Applied Zoology and Microbiology	50
Practical :	75

Pattern of question paper in the annual examination and distribution of marks:

Each theory paper in the annual examination shall have three sections i.e. A,B, and C. In section A, total 10 questions will be set in the paper, selecting at least two from each unit. These questions to be answered in a word or so. All questions are compulsory. Each question carries 0.5 mark, total 05 marks.

In section B, there shall be total 10 questions, selecting two questions from each unit, five questions to be answered by the student selecting at least one from each unit. Answer should be given in approximately 250 words. Each question carries 05 marks, total 25 marks.

In section C, 04 descriptive type questions will be set in the examination paper from five units of the syllabus of the paper, selecting not more than one question from a unit. Each question may have two sub divisions. Students are required to answer any two questions approximately in 500 words. Each question is of 10 marks, total 20 marks.

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PAPER-I LIFE AND DIVERSITY OF ANIMALS-II (VERTEBRATES)

Duration : 3 hours

M.M. : 50

UNIT-I

- 1 Characteristics and classification of Protochordates and Agnatha upto orders with examples emphasizing their biodiversity, economic importance and conservation.
- 2 Type study- *Herdmania*.
- 3 Affinities of *Amphioxus* and importance of Ammocoete larva.

UNIT-II

- 4 Characteristics and classification of Pisces (after Berg) and Amphibia upto orders with examples emphasizing their biodiversity, economic importance and conservation.
- 5 Type study- *Scoliodon*, Fish Migration, Parental care in Amphibian.

UNIT-III

- 6 Characteristics and classification of Reptiles upto orders with examples emphasizing their biodiversity, economic importance and conservation.
- 7 Type study- *Calotes*. Identification of poisonous and non-poisonous snakes, venom, antivenom, medicinal significance of venom.
- 8 *Sphenodon*: Characteristics and affinities.

UNIT-IV

- 9 Characteristics and classification of Aves upto orders with examples emphasizing their biodiversity economic importance and conservation.
- 10 Type study - *Columba*, flight adaptations, perching mechanism, types of feathers.
- 11 Bird migration.

UNIT-V

- 12 Characteristics and classification of Mammalia upto orders with examples emphasizing their biodiversity, economic importance and conservation.
- 13 Type study – *Rattus*, (Digestive, respiratory and urinogenital systems only).
- 14 Dentition, hair and thermoregulation; integumentary derivatives.