

M.SC ZOOLOGY

SEMESTER -I

INVERTEBRATA & CHORDATA

AUTHORS

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BRIEF CONTENT

UNIT-1.

- A. Evolutionary time scale, Eras, Periods & Epoch - major events.
- B. Species concept, International code of Zoological nomenclature, Taxonomical procedures, New Trends in taxonomy.
- C. Patterns of feeding and digestion in lower metazoans.

UNIT-2.

- A. A. Acoelomata, Pseudocoelomata, Coelomata, Proterostomia and Deuterostomia.
- B. B. Structure of Gill, lungs, trachea and Mechanism of Respiration. Circulatory system in Annelids, Arthropods & Molluscs.
- C. Advanced nervous system- Annelida, Arthropoda and Mollusca.

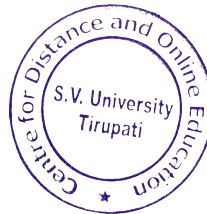
UNIT- 3.

- A. Vertebrate integument and derivatives.
- B. Comparative anatomy of heart
- C. Comparative anatomy of reproductive system.
- D. Comparative account of excretory system.

UNIT- 4.

- A. Comparative anatomy of respiratory organs
- B. Comparative anatomy of brain and spinal cord
- C. Organs of vision: structure of eye in different phyla
- D. Organs of Gustatory hearing and tactile responses


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DETAILED CONTENT

UNIT-1.

- 1.1. Evolutionary time scale, Eras, Periods & Epoch - major events.
- 1.2. Species concept, International code of Zoological nomenclature, Taxonomical procedures, New Trends in taxonomy.
- 1.3. Patterns of feeding and digestion in lower metazoans: Holozoic nutrition, Pinocytosis, Saprozoic Nutrition, Myxotrophic nutrition, Nutrition of parasites.
- 1.4. Feeding in Polychaeta, Mollusca, Echinodermata.

UNIT-2.

- 2.1 Acoelomata, Pseudocoelomata, Coelomata, Proterostomia and Deuterostomia.
- 2.2. Structure of Gill, lungs, trachea and Mechanism of Respiration. Circulatory system in Annelids, Arthropods & Molluscs.
- 2.3. Advanced nervous system- Annelida, Arthropoda and Mollusca.
- 2.4. Larval forms of Crustaceans: Larval forms: Nauplius, Metanauplius, Protozoa, Zoea, Cypris, Mysis, Megalopa, Phyllosoma, Alima, Significance of larval forms; Larval forms of Echinodermata: Asteroidea Bipinnaria Larva, Ophiuroidea, Echinoidea, Holothuroidea, Crinoidea Doliolaria Larva, Significance of Echinoderm larval forms.

UNIT- 3.

- 3.1 Vertebrate integument and derivatives: - Skin structure and functions - glands, scales, horns, claws, nails, hoofs, feathers and hair.
- 3.2 Comparative anatomy of heart: - Types - structure- blood circulation-aortic arches and portal system.
- 3.3 Comparative anatomy of reproductive system: - Organs of male reproductive system – organs of female reproductive system – functions.
- 3.4 Comparative account of excretory system.

UNIT- 4.

- 4.1 Comparative anatomy of respiratory organs: - Gills, trachea and lungs – types Structure-mechanism of respiration.
- 4.2. Comparative anatomy of brain and spinal cord: - structure, composition and functions
- 4.3. Organs of vision: structure of eye in different phyla - mechanism of vision, Photoreceptors-fishes, Amphibians, Reptiles, Birds and Mammals.
- 4.4. Organs of Gustatory hearing and tactile responses: - Structure of hearing organs in different Phyla - mechanism of hearing - tactile organs.

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