



**SARVODAYA KELAVANI SAMAJ MANAGED,
SHREE MANIBHAI VIRANI & SMT. NAVALBEN VIRANI SCIENCE
COLLEGE**

AN AUTONOMOUS COLLEGE- AFFILIATED TO SAURASHTRAUNIVERSITY, RAJKOT

Re-accredited at the 'A' Level (CGPA 3.28) by NAAC
'STAR' College Scheme & Status by MST-DBT
A College with Potential for Excellence - CPE (Phase-II) by UGC
UGC-DDU KAUSHAL Kendra
Accredited at the G-AAA Highest Grade 'A-1' Level by KCG, Govt. of Gujarat
UGC-DDU KAUSHAL Kendra
GPCB-Government of Gujarat approved Environment Audit Centre

Enclosure I (E)

**DSE – Allied ZOOLOGY
SEMESTER – I**

(With Microbiology)

19UMBDA101	Zoology	3Hrs/Week	3 Credit
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Objectives:

- To provide keen knowledge about classical zoology and animal diversity with derived forms, its important and roll for nature.
- To enhance the students regarding to human system, its structureal organization, anatomy, histology, physiology etc.

Unit -I: Systematic of Chordate animals

(09 Hrs)

- An introduction to Invertebrate animals.
- Outline classification of Chordate animals.

- Type study : Scoliodon- Morphology and Digestive system.
- Type study : Scoliodon- Arterial system and Reproductive system.
- Type study : Scoliodon- Morphology of Brain.

Unit-II: Histology of Mammals (09 Hrs)

- Integumentary glands.
- Histology of Stomach.
- Histology of Pancreas.
- Histology of Liver.
- Histology of Thyroid gland.

Unit-III: Digestive system & Respiratory system in human (09 Hrs)

- Structural organization of Digestive track.
- Mechanical digestion.
- Chemical digestion.
- Structural organization of Respiratory system.
- Internal anatomy of Lung.

Unit-IV: Circulatory system & Excretory System in human (09 Hrs)

- Structure and function of Blood vessels.
- Morphological and internal structure of Human Heart.
- Cardiac cycle.
- Morphology and histology of Kidney.
- Structure of Nephron.

Unit-V: Co-ordinatory system. (09 Hrs)

- Structure and types of Nerve cell.
- Morphological structure of Human Brain
- Endocrine secretion and its function of Pituitary gland.
- Endocrine secretion and its function of Adrenal gland.

- Endocrine secretion and its function of Ovary and Testis.

Text Books:

- Jain A. K., Textbook of Physiology, Avichal Publishing Company, 6th edition.(for Unit 2 to 5)
- Vander A, Sherman J. and Luciano D. (2014). Vander's Human Physiology: The Mechanism of Body Function. XIII Edition, Mcgraw Hills.(for Unit 2 to 5)
- Jordan E.L. and Verma P.S., Textbook of Chordates, S. Chand Publication, New Delhi.(for Unit 1)

Reference Books:

- Tortora, G.J. & Grabowski, S. (2006). Principles of Anatomy & Physiology. XI Edition John Wiley & sons.
- Victor P. Eroschenko. (2008). diFiore's Atlas of Histology with Functional correlations. XII Edition.Lippincott W. & Wilkins.

PRACTICALS:

19UMBDA102	Zoology Practical	6 Hrs/Week	2 Credit
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Objective

- To provide keen knowledge about classical zoology and animal diversity with derived forms, its important and roll for nature in form of Practicals.
- To enhance the students regarding to human system, its structural organization , anatomy, histology, physiology by charts, models, specimen, slides and laboratory facilities.

1. Identification and classification of Invertebrate animals Part I.
2. Identification and classification of Invertebrate animals Part II.
3. Identification and classification of Chordate animals part I.
4. Identification and classification of Chordate animals part II.
5. Study of Scoliodon system - Digestive system.

6. Study of Scoliodon system - Arterial system.
7. Study of Scoliodon system - Reproductive system.
8. Study of Scoliodon system - Brain.
9. Study of temporary mounting in Scoliodon.
10. Histological structure of mammalian organs.
11. Structural organization of Human Digestive system.
12. Digestion of starch by salivary Amylase.
13. To determine the presence of Lipid by qualitative test.
14. Comparative study of Mammalian Stomach.
15. Structural organization of Human respiratory system and T.S. of Lung.
16. Morphological and internal structure of Heart.
17. Comparative study of Heart in higher chordates.
18. Comparative study of Aortic-arch in higher chordates.
19. Morphological and internal structure of Kidney.
20. Comparative study of Kidney in higher chordates.
21. Structure of Nerve cell and Brain in human.
22. Internal anatomy of some endocrine glands.
23. Study of Mitosis.
24. Study of Meiosis.

Reference:

- Jain A. K., Textbook of Physiology, Avichal Publishing Company, 6th edition.(for Unit 2 to 5)
- Vander A, Sherman J. and Luciano D. (2014). Vander's Human Physiology: The Mechanism of Body Function. XIII Edition, Mcgraw Hills.(for Unit 2 to 5)
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