

K. T. S. P. Mandal's
Hutatma Rajguru Mahavidyalaya, Rajgurunagar.
Department of Zoology
Syllabus Completion Report (A.Y.2024–2025)

T.Y. B. Sc. (Zoology)
Course Title: Developmental Biology
Course code: ZO 355

Sr. No	Month	Topics	Teacher
1	July	1. Fundamentals of Developmental Biology: 1.1 Definition and scope. 1.2 Concepts in Developmental Biology: Growth, Differentiation, Dedifferentiation, Cell determination, Cell communication, Morphogenesis, Induction and Regeneration.	DRB
2	July	2. Theories of Developmental Biology: 2.1 Preformation. 2.2 Pangenesis. 2.3 Epigenesis. 2.4 Axial gradient. 2.5 Germplasm.	DRB
3	Aug	3. Gametogenesis: 3.1 Spermatogenesis & Structure of sperm with respect to human. 3.2 Oogenesis & Structure of ovum with respect to human. 3.3 Types of eggs.	DRB
4	Aug & Sept	4. Fertilization: 4.1 Concept and types. 4.2 Chemotaxis. 4.3 Sperm penetration: Acrosome reaction, Capacitation & Decapacitation. 4.4 Activation of ovum: Fertilization cone. 4.5 Prevention of polyspermy: Fast block & Slow block. 4.6 Significance of fertilization.	DRB
5	Sept	5. Cleavage and Blastula: 5.1 Planes and symmetry of cleavage. 5.2 Types of cleavage. 5.3 Significance of cleavage. 5.4 Definition and types of Blastula.	DRB
6	Oct	6. Gastrulation: 6.1 Definition and Concept. 6.2 Basic cell movements in gastrulation: Epiboly, Emboly, Convergence, Invagination, Ingression & Involution with reference to frog. 6.3 Concept of Organizer : Primary, Secondary and Tertiary.	DRB

7	Oct	7. Chick Embryology: 7.1 Structure of Hen's egg. 7.2 Fertilization and cleavage in Chick. 7.3 Formation of primitive endoderm. 7.4 Primitive streak development. 7.5 Head process and regression of Primitive streak.	DRB
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As per mention above 100% syllabus of Semester V is completed.

DRB

Prof. D. R. Borhade



T. Y.B. Sc. Zoology
Course Code: ZO – 352
Course Title:- Histology

Sr. No.	Month	Topics	Teacher
1.	July	1. Introduction: Definition and Scope of Histology. Definitions and Review of Types of Tissues: 2.1 Epithelial tissue. 2.2 Connective tissue. 2.3 Nervous tissue. 2.4 Muscular tissue.	DRB
2.	Aug	3.Histological study of following mammalian organs: 3.1 Skin (V. S.), 3.2 Tooth (V. S.). 3.3 Tongue (C. S.) with reference to mucosa papillae and taste buds 4.Histological study of Alimentary canal and Liver: 4.1 Oesophagus (T. S.),4.2 Stomach (T. S.). 4.3 Duodenum (T. S.). 4.4 Rectum (T. S.). 4.5 Liver (C. S.).	DRB
3.	Sept	5.Histological study of Respiratory organs: 5.1 Trachea (T. S.). 5.2 Lung (C. S.).	DRB
4.	Sept	6. Histological study of Excretory organs: 6.1 Kidney (L. S.). 6.2 Juxta glomerular complex.	DRB
5.	Oct	7.Histological study of Reproductive organs: 7.1 Testis (T. S.) with reference to Seminiferous Tubules and Cells of Leydig. 7.2 Ovary (C. S.).	DRB
6.	Oct	8. Histology of Endocrine glands: 9. 8.1 Pituitary gland. 8.2 Thyroid gland. 8.3Adrenal gland. 8.4 Pancreas (C. S.) including both exocrine and endocrine components.	DRB

As per mention above 100% syllabus of Semester V is completed.

DRB

Prof. D. R. Borhade



