



ST. ALOYSIUS COLLEGE(AUTONOMOUS), JABALPUR

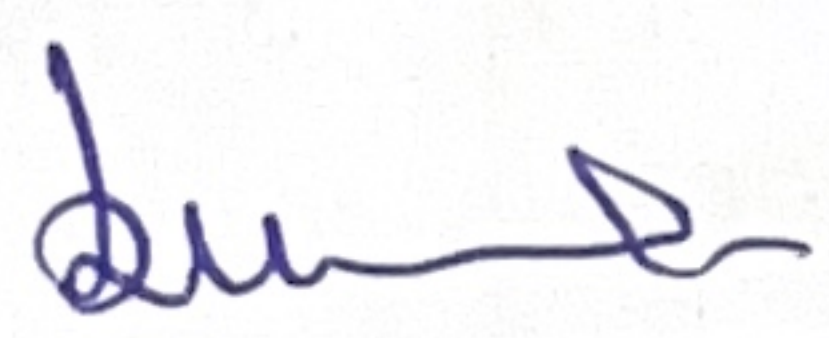
Reaccredited 'A++' Grade by NAAC(CGPA:3.58/4.00)

College with Potential for Excellence by UGC

DST-FIST Supported & STAR College Scheme by DBT

Part A – Introduction

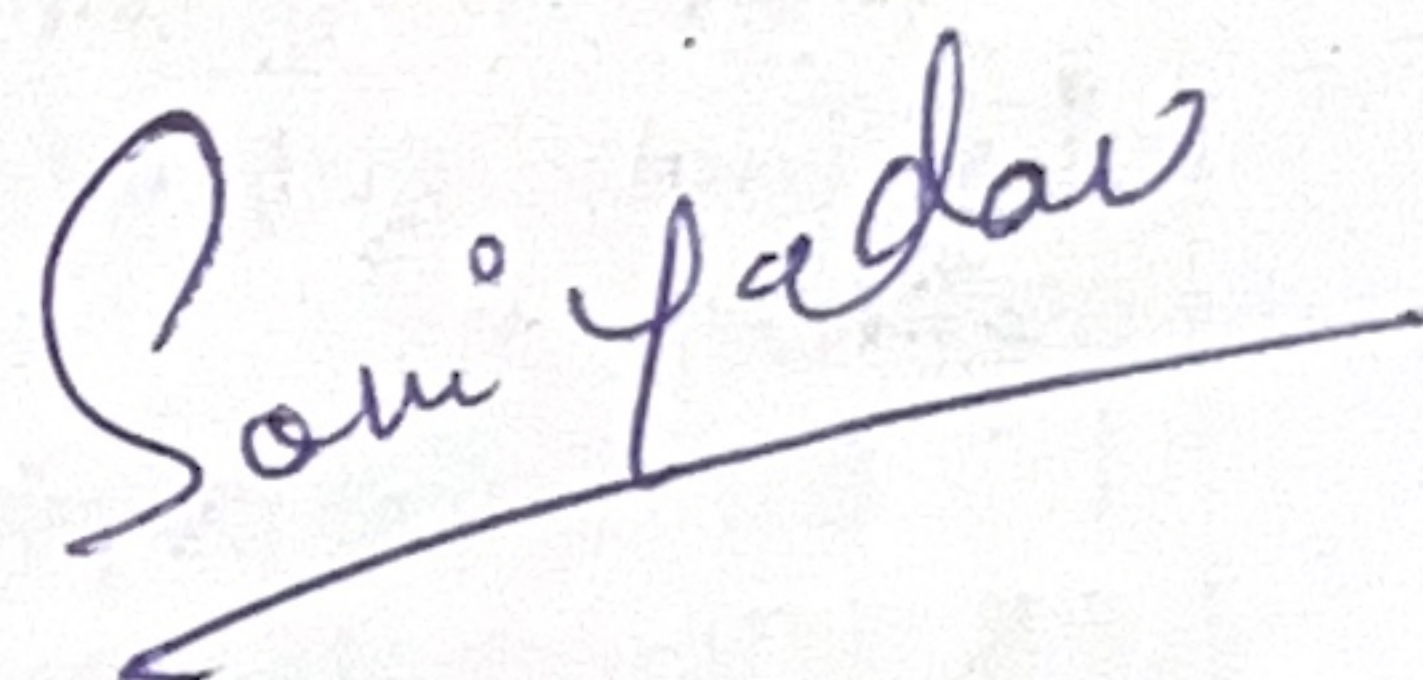
PROGRAMME: Diploma	Class: B.Sc.	2 Year/ III Semester	Session – 2026-27
Subject – Zoology			
1	Course Code		
2	Course Title	Basic of Endocrinology	
3	Course Type	Discipline Specific Elective - (DSE-1) -(B)	
4	Pre – requisite (if any)	To study this course, students must have had the subject Zoology in B. Sc I Year.	
5	Course Learning Outcomes (CLO)	Upon completion of this course, student will be able to gain knowledge about :- 1. Know the contributions of Indians scientists in endocrinology. 2. Understand internal structure of different glands. 3. Learn the disorders related with hormones.	
6	Credit Value	04	
7	Total Marks	Max. Marks: 70+30 =100	Min. Passing Marks: 35


5.8.2026




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Soni Yadav



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Part B- Content of the Course

Total No. of Lectures- Tutorials- Practical (in hour per week) : 3 hour per week L-T-P

Unit	Topics	No. of Lectures
I	1. Introduction to Endocrinology 1.1 History of endocrinology, 1.2 Definition, Importance of Hormones in Bhartiya gyan parampara (Ayurveda). 1.3 Contribution of Indian Scientists in Endocrinology- Dr. Ambrish Mithal, Dr. V. Mohan and Dr. Sivapatham Vittal 1.4 Classification, Characteristic and Transport of Hormones, 1.5 Neurosecretions and Neurohormones Suggested Activities: Prepare mini project report on contribution of Indian Scientist in Endocrinology. Key words: Endocrinology, Hormones, Neurosecretions, Neurohormones	10
II	1. Peripheral Endocrine Glands 1.1. Regulation of neuroendocrine glands, Feedback mechanisms 1.2. Structure of pituitary gland, Hormones and their functions, 1.3. Hypothalamo- hypophysial portal system, Disorders of pituitary gland. 2. Hypothalamo-hypophysial Axis 2.1. Structure of pineal gland, 2.2. Secretions and their functions of pineal gland in biological rhythms and reproduction. 2.3. Structure of hypothalamus, Hypothalamic nuclei and their function Suggested Activities: 1. Prepare chart of Pituitary gland and its hormones. 2. Prepare chart of Pineal gland and its hormones. Key words: Pineal gland, Biological rhythms, Hypothalamus, Pituitary gland	10

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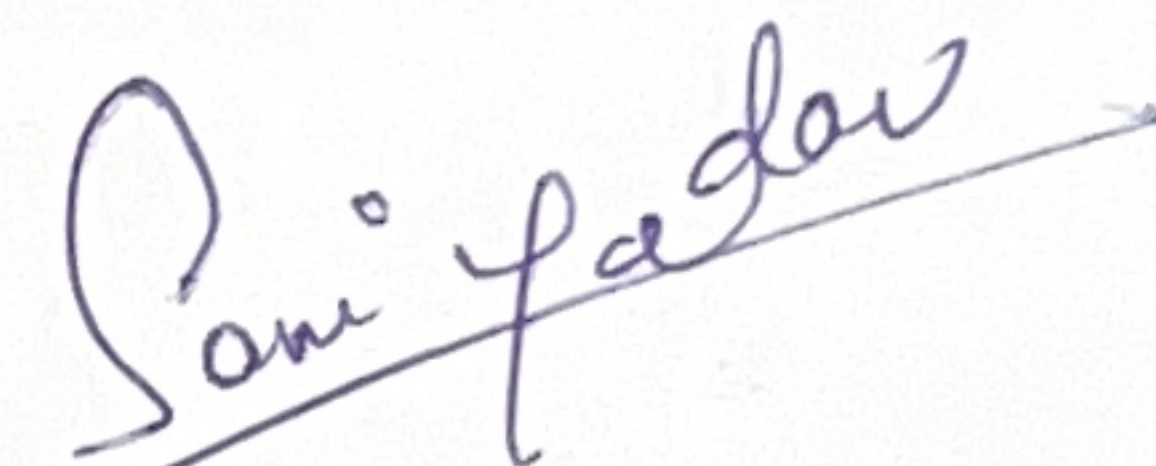
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III	• 1. Structure and Function of Glands. 1.1. Structure, Hormones, Functions and Regulation of Thyroid gland, Parathyroid, Thymus gland, Adrenal, Pancreas, Ovary and Testis. 1.2. Functions of hormones in homeostasis. 1.3. Disorders of endocrine glands. Suggested Activities: Prepare chart on different hormonal disorders. Key words: Thyroid gland, Parathyroid, Adrenal, Pancreas, Thymus gland	12
IV	• 1. Regulation of Hormone Action 1.1. Hormone action at Cellular level: Hormone receptors, transduction and regulation. 1.2. Hormone action at Molecular level: Molecular mediators, Genetic control of hormone action. Suggested Activities: Prepare list of hormone receptors. Key words: Hormone receptors, Hormone action, transduction.	13


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Practical syllabus

Part A – Introduction			
PROGRAMME: Diploma	Class: B.Sc.	2 Year/ III Semester	Session – 2026-27
Subject – Zoology			
1	Course Code		
2	Course Title	Practical of Basic of Endocrinology	
3	Course Type	Discipline Specific Elective - (DSE-1) -(B)	
4	Pre – requisite (if any)	To study this course, students must have had the subject Zoology in B.Sc. I Year.	
5	Course Learning Outcomes (CLO)	After completion of this course students will be able to 1. Understand internal structure of different glands. 2. Know hormonal disorders related with various glands. 3. Monitoring of hormones level.	
6	Credit Value	01	
7	Total Marks	Max. Marks: 70+30=100	Min. Passing Marks: 35

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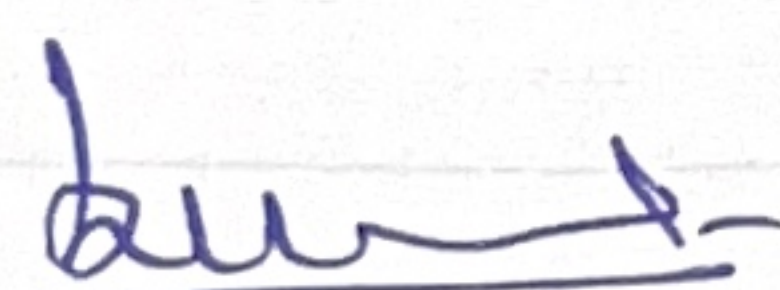
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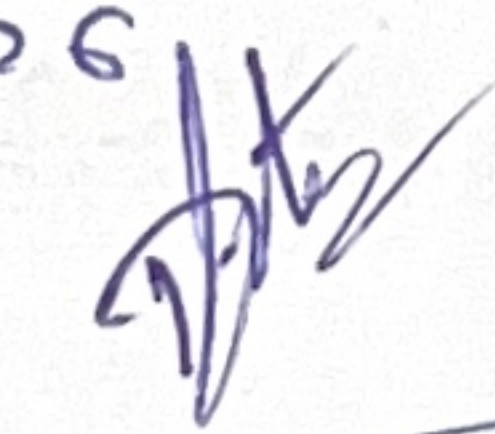
Part B- Content of the Course

Total No. of Lectures- Tutorials- Practical (in hour per week) : 3 hour per week L-T-P

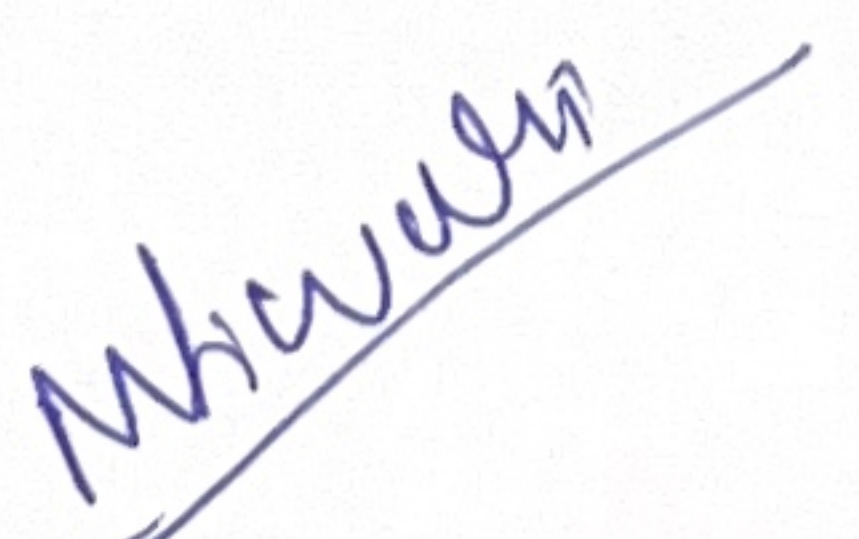
Unit	Topics	No. of Lectures
1	Dissect and display of Endocrine glands in rat. (By using Online Video)	02
2	L. S. of Pituitary gland	01
3	T. S. Thyroid gland, T. S. Parathyroid gland, T. S. Adrenal gland and T.S. of Pancreas	06
4	T. S. of Testis and T. S. of Ovary	05
5	Study hormonal disorders related with different glands.	08
6	Monitor blood sugar changes fasting and post meal (demonstrating insulin/glucagon feedback by using Glucometer)	04
7	Colorimetric Estimation of Urinary Estrogens by the Kober Reaction (Simplified Procedure)	02
8	Diagnosis of Pregnancy by the Presence of HCG in Urine (By Online Video)	02

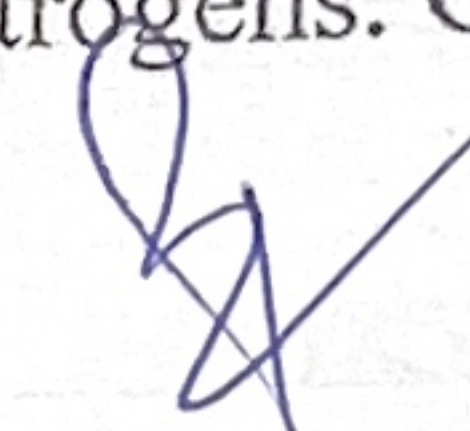
Keywords:- Endocrine glands, Hormonal disorders, Estrogens. Glucometer


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