Department of Zoology

Govt. V.Y.T. PG Autonomous College, Durg (C.G.)

Session 2025-26

Learning Outcome Based curriculum for M. Sc. Zoology

Program Specific Outcome (PSO): M. Sc. Zoology

The programme enables the students:

- To comprehend knowledge of biology in a diversity of organisms encompassing different ecosystem levels
- To develop practical skills and ability to perform experiments and analysis through appropriate application of statistical tools and technologies to obtain accurate results and thus gain the ability to solve problems.
- To develop cognitive and hands-on skills in advanced scientific methods and their uses in applied and advanced zoological sciences
- To connect, comprehend and apply the value of the diversity and complexity of animal life as revealed through studies on morphology, physiology, cellular and molecular biology and biochemistry.
- Acquire knowledge and critical analytical skills on different scientific arenas such as immunology, endocrinology, microbiology and genetics
- Be proficient at critical thinking, annotation and communication of scientific information and able to succeed in competitive examinations and interviews.

Name & Signature of Members of Board of Studies

Chair person/HOD: Dr. Usha Sahu	**Departmental Members**
Subject Expert	1. Dr. Divya K. Minj
Subject Expert	2. Dr. Neeru Agrawal
VC Nominee	3. Ms. Mausumi Dey
Member of other Department	4. Dr. Sanju Sinha
Industrial Representative	5. Dr. Alka Mishra
Student Nominee	6. Mr. Sudesh Sahu
	7. Mr. Anurag Mishra

Syllabus for M. Sc. Zoology by the Members of Board of Studies for session 2025-26

(MZO 101) Paper I: Biosystematics and Taxonomy	**(MZO 102) Paper II: Structure and Functions in Invertebrates**
(MZO 103) Paper III: Endocrinology	**(MZO 104) Paper IV: Cell and Molecular Biology**
MZOL 01, Lab Course I: Based on Paper I and II	**MZOL 02,Lab Course II: Based on Paper II I and IV**

Semester II

(MZO 201) Paper I: Population Genetics and Evolution	**(MZO 202) Paper II: Reproductive Biology**
(MZO 203) Paper III: Tools and Techniques in Biology	**(MZO 204) Paper IV: Environmental Physiology**
MZOL 03, Lab Course I: based on paper I and II	**MZOL 04, Lab Course II: Based on paper III and IV**

Semester III:

(MZO 301) Paper I: Comparative Anatomy of Vertebrates	**(MZO 302) Paper II: Biostatistics**
(MZO 303) Paper III: Ichthiology	**(MZO 304) Paper III B: Animal Behaviour**
MZOL 05, Lab Course I: Based on Paper I and II	**MZOL 06, Lab Course II: Based on Paper III and IV**

Semester IV:

(MZO 401) Paper I: Insect Biology	**(MZO 402) Paper II: Animal Physiology**
(MZO 403) Paper III : Population Ecology	**(MZO 404A) Paper IV A: Fisheries and Aquaculture (Elective)**
(MZO 404B) Paper IV B: Parasitology (Elective)	**(MZO 404C) Paper IV C: Economic Zoology (Elective)**
(MZO 404D) Paper IV C: Sericulture (Elective)	
MZOL 07, Lab Course I: Based on Paper I, II and III	**MZOL 08, Lab Course II: Project Work**
Any one elective course to be selected as paper IV	

Project Work: A project work to be done by each student based on theoretical and experimental works under allotted supervisor from the department. The project work shall be initiated at the beginning of semester IV.

Evaluation of Project work: The project report shall be submitted to the department with duly signed by the supervisor and the Head of the institution within stipulated time. Evaluation of the projects shall be done by external examiner through power point presentation by the students.

The Syllabus for M. Sc. Zoology is hereby approved for the sessions 2025-26

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GENERAL INSTRUCTIONS FOR STUDENTS

1. The candidate has to obtain minimum 20% marks in each theory paper and internal assessment separately.
2. The candidate has to secure minimum 36% marks as an aggregate in order to pass that semester examination.
3. The internal assessment shall include class test, home assignment and seminar presentation.
4. In internal assessment, the marks taken into consideration will be the average of two tests (i.e. the class test and the home assignment) for each paper and shall of 20 marks.
   a. The seminar shall be in lieu of class test and home assignment combined and shall be of 20 marks.
   b. There shall be one seminar in each semester.
   c. The marking of seminar shall be in terms of hard copy submission (10 marks) and presentation and open discussion (10 marks).

DIRECTIVES FOR STUDENTS, FACULTY AND EXAMINERS

1. There shall be three sections (Section A, B, and C) in each theory paper.
2. Section A shall contain very short answer type questions (One or two line answer) or objective type questions (fill in the blank, **not multiple choice questions).**
3. Section B shall contain short answer type questions with the limit of 250 words.
4. Section C shall contain long answer/ descriptive type questions. The students are required to answer precisely and the answer should not exceed the limit of 450 words.
5. The students are required to study the content mentioned in the curriculum exhaustively.

EVALUATION PATTERN

- **Theory 80 marks = 04 Credits**

Question Pattern	Unit I	Unit II	Unit III	Unit IV
Very short answer type questions. (2 Questions from each Unit without internal choice). Maximum in two sentences.	2X2 = 4 Marks	2X2 = 4 Marks	2X2 = 4 Marks	2X2 = 4 Marks
Short answer type question. Attempt one question from each unit with internal choice Word limit 200-250	1X4 = 4 Marks	1X4 = 4 Marks	1X4 = 4 Marks	1X4 = 4 Marks
Long answer type question. Attempt one question from each unit with internal choice. Word limit 400-450	1X12 = 12 Marks	1X12 = 12 Marks	1X12 = 12 Marks	1X12 = 12 Marks

Internal Assessment 20 marks = 01 credit

- Unit test – One class test in each theory paper comprising 20 marks. (containing two short answer type questions of 05 marks each and 05 objective type questions of 10 marks).
- Home assignments – Two long answer type questions from each theory paper containing 10 marks each. The answer should be prepared with the help of standard reference books. (The titles of those books, authors, year of publication and publishers details should be mentioned in an appropriate way, at the end of each assignment).
- Seminar presentations (Power point) – Comprising 20 marks.

  Each student has to be prepare one seminar in each semester. The marking of seminar shall be in terms of hard copy submission (10 marks) and presentation and open discussion (10 marks).

- **Practical 200 marks = 08 credits**

  Two practicals of 100 marks each

CREDIT ALLOTMENTS

- Theory Paper = 05 credits (04+01)
- Practical = 04/ 08 credits

TOTAL CREDITS/ SEMESTER

- Science Subjects with 04 theory papers (100 each) and one /two practical (100 each) – 20 + 08 = 28 credits
- Science Subjects with 05 theory papers (no practical-Maths) – 25 credits
- Arts Subjects with 04 theory papers – 20 credits
- Arts Subjects with 05 theory papers – 25 credits
- Commerce subject with 05 theory papers – 25 credits

TOTAL CREDITS / PROGRAMME

- 16 Theory + 08 Practical + Project work – 80 + 32 + 08 = 120 credits
- 20 Theory – 100 credits (Maths)
- 20 Theory – 100 credits (Arts and Commerce)
- 16 Theory – 80 credits (Arts)

Name & Signature of Members of Board of Studies

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DEPARTMENT OF ZOOLOGY
GOVT. V.Y.T. PG AUTONOMOUS COLLEGE DURG
Approved syllabus for M. Sc. ZOOLOGY by the members of Board of Studies for the Sessions 2025 - 26
Syllabus and Marking Scheme for IIIrd Semester (2025 - 26)

Paper No.	Title of the Paper	Marks Allotted in Theory		Marks Allotted in Internal Assessment		Credits
		Max	Min	Max.	Min.	
I	**MZO 301/COMPARATIVE ANATOMY OF VERTEBRATES**	80	16	20	04	05
II	**MZO302/BIOSTATISTICS**	80	16	20	04	05
III	**MZO 303/ICHTHYOLOGY**	80	16	20	04	05
IV	**MZO 304/ANIMAL BEHAVIOUR.**	80	16	20	04	05
	MZOL 05, Lab Course I VERTEBRATES & BIOSTATISTICS.	100	33			04
	MZOL 06, Lab Course II ICHTHYOLOGY & ANIMAL BEHAVIOUR.	100	33			04
	Total	**520**		**80**		**28**

04 Theory papers - 320

04 Internal Assessment - 80

02 Practical - 200

Total Marks - 600

Credits - 28

GOVT. V.Y.T. PG AUTONOMOUS COLLEGE DURG
M. Sc. ZOOLOGY
Semester - III (2025-26)
Paper –I
Course Code – MZO 301
COMPARATIVE ANATOMY OF VERTEBRATES

Max.M.- 80
Min. M.-16

UNIT –I

- Origin of Chordates.
- Diversity and Evolution of Vertebrates.
- Classification of Amphibia, Reptilia, Aves and Mammals (up to orders).

UNIT –II

- Hard and Soft derivatives of skin.
- Comparative account on skin structure in vertebrates.
- Comparative account of Skeletal System of Vertebrates.

UNIT –III

- Evolution of heart in vertebrates.
- Evolution of Aortic Arches and Portal System.
- Comparative account on circulatory systems.
- Comparative account of respiratory organs in vertebrates.

UNIT –IV

- Comparative account of brain of vertebrates.
- Comparative account of Sense organs of Vertebrates.
- Comparative account of urino-genital system of vertebrates.

SUGGESTED READING MATERIALS - (ALL LATEST EDITION)

1. **Vertebrate life**: William N. Ferland, F. Harvey pough, Tom J Gode, John B. Heiser, Collier MacNillem International edition.
2. **Chordate morphology**: Malcom Jollie, Reinhold Publishing Corporation NewYork.
3. **Chordate –Structure & Function**: Arnold G. Khage, B.E. Fry Johanson, Mc Millan Publishing Co. INC. NewYork.
4. **Comparative Animal Physiology**: Orosser, Satish Book Enterprises, Agra.
5. **The Vertebrate Body: -** Alfred Sherwood RomerVakils, Feffer & Simons Publications Ltd.

Course Outcomes

After successful completion of these courses the student would be able:

- To conceptualize the origin, diversity and evolution of vertebrates.
- To understand the comparative account of skin derivatives and skeletal sysetem of vertebrates.
- To explain the evolution of heart and make comparison of circulatory and respiratory organs of vertebrates
- To understand the comparative account of sense organs and urino-genital systems og vertebrates.

EVALUATION PATTERN

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The syllabus for Paper I (M. Sc. ZOOLOGY, Sem. - III) is hereby approved for theSession 2025 -26

Name & Signature of Members of Board of Studies

Chair person/HOD: Dr. Usha Sahu	**Departmental Members**
Subject Expert	1. Dr. Divya K. Minj
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GOVT. V.Y.T. PG AUTONOMOUS COLLEGE DURG
M. Sc. ZOOLOGY
Semester - III
SESSION 2025-2026
PAPER- II
Course Code - MZO 302
BIOSTATISTICS

Max.M.- 80
Min. M.-16

UNIT –I

MANAGEMENT OF DATA

Classification of data

- Objectives of classification.
- Rules for classification.
- Methods of classification.

Tabulation of data

- Distinction between classification & tabulation.
- Rules & parts of table.
- Types of table.

Diagrammatic presentation of data

- General rules for constructing diagram.
- Kinds of diagrams.

Graphical presentation of data

- Technique for construction of graph, rules for construction of graph.
- Histogram.
- False base line, Gantt chart, Silhouette graph, zone graph.
- Zee chart – histogram of two different scales.
- Graph of frequency distribution.

UNIT –II

CENTRAL TENDENCY, DISPERSION & SKEWNESS

Mean

- Arithmetic mean – individual series, discrete series, continuous series
- Geometric mean
- Harmonic mean

Median

- Individual series, discrete series, continuous series

Mode

- Individual series, discrete series, continuous series
- Standard deviation & standard error.

UNIT –III

TEST OF SIGNIFICANCE

Test of significance based on t-distribution

- Test of significance of sample mean – t-test
- Test of significance of difference between two sample means. The difference test paire sample.

Fisher Z-test

- Test of significance between the observed & calculated values of – r Variance-ratio test – f-test

Chi-square (X^2) test

- Test of goodness of fit
- Characteristic of chi-square (X^2) test
- Special properties of chi-square (X^2) test

UNIT –IV

ADVANCE METHODS FOR VALIDATION OF DATA

Analysis of Variance (ANOVA)

- One way analysis of variance.
- Two way analysis of variance.
- Nuerovariate statistics

Probability –

- Sampling distribution.
- Calculation of probability.
- Events.
- Addition theorem.
- Multiplication theorem.
- Parametric and non parametric statistics.

Correlation –

- Types of correlation.
- Degree of correlation.
- Different methods to find out correlation.

Regression –

- Linear regression.
- Regression coefficient.

SUGGESTED READING MATERIALS - (ALL LATEST EDITION)

1. **Fundamentals of Biostatistics:** Khan & Khanum, Ukaaz Publications (1 January 1994)
2. **Fundamentals of Mathematical Statistics: S.C.** Gupta & V.K. Kapoor, Sultan Chand and Sons, New Delhi.
3. **Fundamentals of Statistics** –by D.N. Elhance, Veena Elhance and B.M. Agrawal, Kitab Mahal
4. **Biostatistics**: Robert R. Sakal and F. James Rohlf, DOVER PUBLICATIONS, INC. Mineola, New York
5. **Biostatistics**: P. Ramakrishnan, Saras Publication

Course Outcomes

After successful completion of these courses the student would be able:

- To use the best data analysis methods in their research projects
- To understand the application of biostatistics, Data Classification and Graphical presentation of frequency distribution
- To gains knowledge about statistical methods like measures of central tendencies, dispersion like computation of arithmetic mean, mode and median, Standard Deviation, Standard error of mean and student's 't' test and Chi-square test
- To understand the hypothesis testing and inferential statistics
- To understand the advanced methods of data validation like ANOVA, Probability, correlation and regression by problem-solving methods

EVALUATION PATTERN

- **Theory 80 marks = 04 Credits**

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The syllabus for Paper II (M. Sc. ZOOLOGY, Sem. - III) is hereby approved for the Session2025 - 26

Name & Signature of Members of Board of Studies

Chair person/HOD: Dr. Usha Sahu	**Departmental Members**
Subject Expert	1. Dr. Divya K. Minj
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GOVT. V.Y.T. PG AUTONOMOUS COLLEGE DURG
M. Sc. ZOOLOGY
Semester - III
SESSION 2025-2026
PAPER- III
Course Code - MZO303
ICHTHYOLOGY

Max.M.- 80
Min. M.-16

UNIT –I

General characters, classification & phylogeny of

- Ostracoderms.
- Chondrichthys (Elasmobranches).
- Holocephali.
- Teleostomi (Crossopterygii & Actinopterygi) and Dipnoi (Lung fishes).
- Geographical distribution of fishes.

UNIT –II

Integumentary system

- Skin, scales and glands.
- Fins: Paired & Unpaired fins, Origin of paired fins.

Locomotion in fishes

Skeletal system:

- Axial and appendicular skeleton.

Digestive System

- Teeth, tongue, buccal cavity, pharynx, oesophagus, stomach, intestine and pyloric caeca.

UNIT –III

Respiratory system

- Gills, gill clefts, pseudobranchs, holobranchs and hemibranchs, histology of gill filaments.
- Breathing by gills.
- Accessory organs of respiration.

Blood vascular system

- Heart and blood vessels.

Excretory system

- Kidney, trunk kidney, fresh water glomerular nephron, marine water aglomerular nephron.
- Osmoregulation and ionic balance.

UNIT –IV

Nervous system and sense organs

- Luminous organs, acoustic, lateral line system, photoreceptor and electric organs.
- Central nervous system and peripheral nervous system

Reproductive system

- Male reproductive system
- Female reproductive system

SUGGESTED READING MATERIALS - (ALL LATEST EDITION)

1. **An Introduction to Fishes:** S.S. Khanna, Central Book Depot, Allahabad.
2. **An Intriduction to study of fishes:** Albert G.L. Gunther, Atlantic Publishers & distri.
3. **The Physiology of Fishes:** I Margaret Brown, Acadmic Press inc. publishers, Newyork.
4. **Icthyology:** Karl F. Lagler & Robert Miller, John Willey & Sons Inc. Newyork.
5. **Classification of Fishes (both recent & fossil):** Leo Berg, A.J. Reprints agency, New Delhi.
6. **History of Fishes:** H. Greenwood, Earnst bean limited, London.

Course Outcomes

After successful completion of these courses the student would be able:

- To gain knowledge in the areas of distribution, characterization and classification of ostracoderms, chondricthys, Teleost and holocephali
- To explain the integumentary system, locomotion, skeletal and digestive system
- To understand the respiratory, blood vascular and excretory system
- To understand the nervous system and sense organs and reproductive system.

EVALUATION PATTERN

- **Theory 80 marks = 04 Credits**

Question Pattern	Unit I	Unit II	Unit III	Unit IV
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The syllabus for Paper III (M. Sc. ZOOLOGY, Sem. III) is hereby approved for theSession 2025 -26

Name & Signature of Members of Board of Studies

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Subject Expert	1. Dr. Divya K. Minj
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GOVT. V.Y.T. PG AUTONOMOUS COLLEGE DURG
M. Sc. ZOOLOGY
Semester - III
SESSION 2025-2026
PAPER- IV
Course Code - MZO304
ANIMAL BEHAVIOR

Max.M.- 80

UNIT –I Min. M.-16

Ethology as a branch of biology

Innate behaviour

- Properties of Innate behavior.
- Key stimulus or releasers.

Neural control of behaviour:

- Reflexes & behavior.
- Role of Prosencephalon in controlling behavior.
- Role of mid-brain & hind-brain.

Limbic system.

Reticular activating system.

Hormonal Control of behaviour:

- Adrenal, Pituitary & gonadal hormones & their effect on behavior.

UNIT –II

Genetic components in the development of behaviour

- Single gene & behaviour.
- Polygenic inheritance of behavior.

Environmental influence on behaviour

- Physiology & behavior of changing environment (Tolerance, Acclimatization & Hibernation)
- Homeostasis & behavior.
- Juvenile behavior.

Ecological aspects of behaviour

- **Aggression** – Crowding & aggression (attach & escape threat displays), endogenous factors of aggression, external stimulus & reduction of aggression.
- **Territoriality** – Size & boundary territory, foraging territory, breeding, Inter-specific territoriality, territorial conflict, Individual distance.
- **Food selection** – Feeding strategies, feeding pattern in Fishes, Birds & Cattle, body weight & feeding, feeding & social behavior.
- **Defense & Anti-predator** – Hiding in hole, use of crypsis, mimicry, defense by warning the predator, vigilance, group defense, mobbing (withdraw to retreat), flight & evasion (avoidance).
- Fainting behaviour (simulation to death), retaliation.

UNIT-III

Social Behavior: -

- Properties of organized society.
- Advantages of being social
- Schooling in fishes,

Kin selection, Altruism (Self-sacrifice) & Reciprocal Altruism.

Social organization - Insects and Primates.

Reproductive Behavior

- Mating strategies (Monogamy, Polygamy & Polyandry)
- Sexual selection (Courtship and Sperm competition, male rivalry and female choice).

UNIT – IV

Biological Rhythms: -

- Circadian and circanual rhythms.
- Orientation (sum compass – Honey bee language, Kinesis & taxes)
- Migrations in fishes – cause & types, importance of migration, factors influencing migration.
- Migration in birds – cause, advantage, types and navigation.

Learning and Memory: -

- Imprinting.
- Habituation.

Conditioning – classical conditioning, Instrumental conditioning.

Insight and Cognition learning.

SUGGESTED READING MATERIALS - (ALL LATEST EDITION)

1. **Animal Behavior:** Mc Farland (English Language Book Society).
2. **Animal Behavior:** Arora M.P. (Himalaya Publishing House, Mumbai).
3. **Animal Behavior:** Reena Mathur (Rastogi Publications, Meerut).

Course Outcomes

After successful completion of these courses the student would be able:

- To explain neural and hormonal control of animal behavior.
- To understand the environmental influence and ecological aspects of behavior.
- To gain knowledge on social and reproductive behavior.
- To explain the concept of biological rhythm and Insight and cognition learning
- To understand Animal behavior and response of animals to different instincts.

EVALUATION PATTERN

- **Theory 80 marks = 04 Credits**

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Very short answer type questions. (2 Questions from each Unit without internal choice). Maximum in two sentences.	2X2 = 4 Marks	2X2 = 4 Marks	2X2 = 4 Marks	2X2 = 4 Marks
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The syllabus for Paper IV (M. Sc. ZOOLOGY, Sem. - III) is hereby approved for theSession 2025 -26

Name & Signature of Members of Board of Studies

Chair person/HOD: Dr. Usha Sahu	**Departmental Members**
Subject Expert	1. Dr. Divya K. Minj
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M. Sc. ZOOLOGY

SEMESTER – III (2025-26)

MZOL 05, LAB COURSE-05

1. Study of museum specimen of chordates.
2. Study of histological slides of chordates.
3. Study of osteology of chordates.
4. Preperation of permanent slides.
5. Exercise based on biostatistics. (mean, mode, median, frequency, density, co-relation etc.).
6. Application of microsoft excel in biostatistics
7. Application of SPSS in biostatistics

EXAMINATION SCHEME

S.NO.	EXERCISES	MARKS
1.	SPOTTING	30
2.	SLIDES PREPERATION	15
3.	EXERCISE BASED ON BIOSTATICS	20
4.	VIVA	15
6.	SESSIONAL	20
	TOTAL	**100**

Course Outcomes

After successful completion of these courses the student would be able:

- To understand the key concepts of vertebrates with their identification and conservation methods.
- To imparts knowledge about quantitative estimation of Vertebrate animals.
- To acquire skills in explaining the structural and functional features of invertebrate life forms.
- To acquire skill to use the best data analysis methods in their research projects
- To explain the application of biostatistics, Data Classification and Graphical presentation of frequency distribution
- To understand the advanced methods of data validation like ANOVA, Probability, correlation and regression by problem-solving methods

M. Sc. ZOOLOGY
SEMESTER – III (2025-26)
MZOL 06, LAB COURSE - 06

1. Study of meusium specimen (fish).
2. Study of histological slides.
3. Study of osteology (fish).
4. Permanent mounting.
5. Study of animal behaviour.
6. Phototaxis behaviour.
7. Gulping behaviour in fishes/activity of fishes.
8. Study of insects behaviour under various environmental conditions.
9. Field work:
    - Colour change (pigment dispersion) behaviour in *calotes*.
    - Nesting behaviour in birds.

EXAMINATION SCHEME

S.NO.	EXERCISES	MARKS
1.	Spotting	20
2.	Permanent slides.	15
3.	Two experiments on animal behaviour	30
4.	Viva	15
5.	Sessional	20
	Total	**100**

Course Outcomes

After successful completion of these courses the student would be able:

- To understand the histological characteristics of various vertebrate animals.
- To acquire skills in preparation of Permanent slides.
- To understand the osteology of vertebrates/fishes
- To gain command on experiments based on animal behaviour.

The syllabus for lab. Course M. Sc. ZOOLOGY, Sem. - III is hereby approved for thesession 2025 -26

Name & Signature of Members of Board of Studies

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3. Section B shall contain short answer type questions with the limit of 250 words.
4. Section C shall contain long answer/ descriptive type questions. The students are required to answer precisely and the answer should not exceed the limit of 450 words.
5. The students are required to study the content mentioned in the curriculum exhaustively.

EVALUATION PATTERN

- **Theory 80 marks = 04 Credits**

Question Pattern	Unit I	Unit II	Unit III	Unit IV
Very short answer type questions. (2 Questions from each Unit without internal choice). Maximum in two sentences.	2X2 = 4 Marks	2X2 = 4 Marks	2X2 = 4 Marks	2X2 = 4 Marks
Short answer type question. Attempt one question from each unit with internal choice Word limit 200-250	1X4 = 4 Marks	1X4 = 4 Marks	1X4 = 4 Marks	1X4 = 4 Marks
Long answer type question. Attempt one question from each unit with internal choice. Word limit 400-450	1X12 = 12 Marks	1X12 = 12 Marks	1X12 = 12 Marks	1X12 = 12 Marks

Internal Assessment 20 marks = 01 credit

- Unit test – One class test in each theory paper comprising 20 marks. (containing two short answer type questions of 05 marks each and 05 objective type questions of 10 marks).
- Home assignments – Two long answer type questions from each theory paper containing 10 marks each. The answer should be prepared with the help of standard reference books. (The titles of those books, authors, year of publication and publishers details should be mentioned in an appropriate way, at the end of each assignment).
- Seminar presentations (Power point) – Comprising 20 marks.
  Each student has to be prepare one seminar in each semester. The marking of seminar shall be in terms of hard copy submission (10 marks) and presentation and open discussion (10 marks).

- **Practical 200 marks = 08 credits**

Two practicals of 100 marks each

CREDIT ALLOTMENTS

- Theory Paper = 05 credits (04+01)
- Practical = 04/ 08 credits

TOTAL CREDITS/ SEMESTER

- Science Subjects with 04 theory papers (100 each) and one /two practical (100 each) – 20 + 08 = 28 credits
- Science Subjects with 05 theory papers (no practical-Maths) – 25 credits
- Arts Subjects with 04 theory papers – 20 credits
- Arts Subjects with 05 theory papers – 25 credits
- Commerce subject with 05 theory papers – 25 credits

TOTAL CREDITS / PROGRAMME

- 16 Theory + 08 Practical + Project work – 80 + 32 + 08 = 120 credits
- 20 Theory – 100 credits (Maths)
- 20 Theory – 100 credits (Arts and Commerce)
- 6 Theory – 80 credits (Arts)
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The syllabus (M. Sc. ZOOLOGY, Sem. - III) is hereby approved for theSessions 2025 -26

Name & Signature of Members of Board of Studies

Chair person/HOD: Dr. Usha Sahu	**Departmental Members**
Subject Expert	1. Dr. Divya K. Minj
Subject Expert	2. Dr. Neeru Agrawal
VC Nominee	3. Ms. Mausumi Dey
Member of other Department	4. Dr. Sanju Sinha
Industrial Representative	5. Dr. Alka Mishra
Student Nominee	6. Mr. Sudesh Sahu
	7. Mr. Anurag Mishra