

**Dr. Babasaheb Ambedkar Marathwada
University, Aurangabad.**



New Syllabus

B.Sc. (Zoology) Semester System

First Year

(First Semester and Second Semester 2009-2010)

Second Year

(Third Semester and Fourth Semester 2010-2011)

Third Year

(Fifth Semester and Sixth Semester 2011-2012)

Effective from June 2009-10



Dr. Babasaheb Ambedkar Marathwada University, Aurangabad.

B.Sc. Zoology Pattern in Semester System

B. Sc. I Year Zoology

Semester	Course Code	Paper No.	Title of Paper	Marks
I	ZOL-101	Paper – I	Protozoa to Annelida	50
	ZOL-102	Paper – II	Cell Biology	50
	ZOL-103	Paper – III	Practical based upon Paper I	50
	ZOL-104	Paper – IV	Practical based upon Paper II	50
II	ZOL-201	Paper – V	Arthropoda to Echinodermata And Protochordata	50
	ZOL-202	Paper – VI	Genetics - I	50
	ZOL-203	Paper – VII	Practical based upon Paper V	50
	ZOL-204	Paper – VIII	Practical based upon Paper VI	50

B. Sc. II Year Zoology

III	<u>ZOL-301</u>	<u>Paper – IX</u>	<u>Vertebrate Zoology</u>	50
	ZOL-302	Paper – X	Genetics- II	50
	ZOL-303	Paper – XI	Practical based upon Paper IX	50
	ZOL-304	Paper – XII	Practical based upon Paper X	50
IV	ZOL-401	Paper – XIII	Animal Physiology (Special Emphasis On animals)	50
	ZOL-402	Paper – XIV	Biochemistry & Endocrinology	50
	ZOL-403	Paper – XV	Practical based upon Paper XIII	50
	ZOL-404	Paper – XVI	Practical based upon Paper XIV	50

B. Sc. III Year Zoology

V	ZOL-501	Paper -XVII	Ecology	50	
	ZOL-502	Pape XVIII (Elective)	A	Fishery sciences -I	50
			B	Animal culture -I	
			C	Entomology-I	
			D	Parasitic protozoa & helminthes-I	
			E	Computer Application & Laboratory Technology-I	
			F	Biotechnology-I	
			G	Dairy sciences -I	
			H	Poultry Sciences -I	
ZOL-503	Paper XIX	Practical based upon Paper XVII		50	
ZOL-504	Paper XX	Practical based upon Paper XVIII		50	
VI	ZOL-601	Paper XXI	Evolution		
	ZOL-602	Paper XXII	A	Fishery sciences -II	50
			B	Animal culture -II	
			C	Entomology-II	
			D	Parasitic protozoa & helminthes-II	
			E	Computer Application & Laboratory Technology-II	
			F	Biotechnology-II	
			G	Dairy sciences -II	
			H	Poultry Sciences -II	
ZOL-603	Paper XXIII	Practical based upon Paper XXI		50	
ZOL-604	Paper XXIV	Practical based upon Paper XXII		50	

B.Sc. III Semester

**Course Code - ZOL- 303
PAPER XI**

VERTEBRATE ZOOLOGY (Practical)

- | | |
|---|-----------|
| 1. Museum study of vertebrates. (At least 20).
(Identification, classification, sketches, General characters and biological importance) | 05 |
| 2. Dissection of Scoliodon / Labeo <ul style="list-style-type: none">➤ Afferent and efferent,➤ Cranial Nerves.➤ Brain | 03 |
| 3. Dissection of Rat/ Frog ; <ul style="list-style-type: none">➤ Urinogenital system,➤ Arterial system,➤ Venous System,➤ Brain of Rat.➤ | 05 |
| 4. Mounting of Placoid, Cycloid and Ctenoid scales of fish | 01 |
| 5. Study of Embryological development of chick according to hours of incubation. | 01 |
| 6. Visit to Zoological museum/Zoo Park is compulsory and Submission of report | |
| 7. Write a report on common birds/mammals in your locality, scientific names and economic importance. | |

Total Practical periods: - 15



Course Code - ZOL- 303
PAPER XI

VERTEBRATE ZOOLOGY (Practical)

- | | |
|---|-------------------------|
| 8. Museum study of vertebrates. (At least 20).
(Identification, classification, sketches, General characters and biological importance) | 05 |
| 9. Dissection of Scoliodon / Labeo <ul style="list-style-type: none">➤ Afferent and efferent,➤ Cranial Nerves.➤ Brain | 03 |
| 10. Dissection of Rat/ Frog ; <ul style="list-style-type: none">➤ Urinogenital system,➤ Arterial system,➤ Venous System,➤ Brain of Rat.➤ | Dissection
05 |
| 11. Mounting of Placoid, Cycloid and Ctenoid scales of fish | Mounting
01 |
| 12. Embryological development of chick according to hours of incubation. | Study of
01 |
| 13. Visit to Zoological museum/Zoo Park is compulsory and Submission of report | |
| 14. Write a report on common birds/mammals in your locality, scientific names and economic importance. | |

Total Practical periods: - 15



B.Sc. V Semester

Course Code - ZOL- 503

PAPER - XIX

ECOLOGY (PRACTICAL)

1. Estimation of productivity of pond ecosystem using white and dark bottle method. **02**
2. Determine the following parameters of soil. **04**
 - pH
 - Alkalinity
 - Chlorinity
 - Salinity
 -
3. Analysis of DO, CO₂, Salinity, Chlorinity of water sample. **04**
4. Study of animal association ship with example (Charts/photo) -Competition, mutualism, parasitism, predation and commensalisms. **01**
5. Estimation of population density by Quadrature method on field and by Simulation method. **04**
6. Preparation of permanent slides of following
Spirogyra, Verticella, Odogonium, Daphnia, Cyclops, Mysis, Cypris, keretella
7. Project report: - Forest or fresh water ecosystem.

Total practical periods: - 15

B.Sc. V Semester

Course Code - ZOL- 504

PAPER XX - A

**FISHERY SCIENCE – I (PRACTICAL)
(Elective Paper)**

- | | | |
|----|---|-----------|
| 1. | Study of freshwater fishes.
Major carps
Other carps.
Cat fishes
Clupoides | 03 |
| 2. | Study of brackish water fishes.

<i>Hilsa hilsa, Chanos chanos (milkfish), Latis calcarifer, Tilapia</i> | 02 |
| 3. | Study of marine ware fishes.
Oil sardine
Mackerel
Ribbon -fish
Bombay-duck
Pomfret
Sole
Polynemus | 03 |
| 4. | Water analysis | 05 |
| 5. | Visit to local or any reservoir and marine fish landing centre and student should be submit a project report at the time of practical examination | 02 |

Total practical periods: - 15

B.Sc. VI Semester Course

**Code - ZOL- 604
PAPER XXIV – A**

**FISHARY SCIENCE – II (PRACTICAL)
(Elective Paper)**

1.	Primary productivity of ponds (plankton studies).	02
2	identification, classification and culturable significance of following. Catla, rohu, mrigal, catfishes, exotic canoj	03
3	Collection and identification of fish parasites and worms.	04
4	Removal of fish pituitary gland and preparation of pituitary extract	02
5	Identification of crafts and gears. Gill net, Rampanni, Satpalti, Machwa, Catamaran.	02
6.	A visit to fish farm and fish processing centre is compulsory.	02
Total Practical Periods		15