

**Loyola College, Kunkuri**  
**Kunkuri-496225, Jashpur, Chhattisgarh**

***Annual report of Zoology Department 2018-2019***

***Department of Zoology:*** As Loyola College is established in the centre of the region with the miles and miles stretch of untouched forest along with the dense biodiversity yet to be revealed, the Badalkhol Sanctuary, the smallest of its kind in the State of Chhattisgarh is situated in Jashpur District, not far from Kunkuri. Hence special emphasis on the well-developed Zoology laboratory is well justified. Zoology lab is established in the year of 2005. Presently the department supports the students who are not yet graduated by the University. This department has all necessary equipments which are needed for it, it has a small zoology lab but it has excellent infrastructure.



***Zoology lab introducing by Mrs. Reshma Jain***

***Mission:***

- To provide a strong foundation in the concepts of animal structure, function and behaviour.
- To provide practical skills and knowledge,
- To provide a strong foundation for a better understanding of current advances in zoology and its practical significance.
- To create an attractive department where students want to come and study.
- To involve the department in community-based and outreach programme, activities, whenever and wherever possible.
- To constantly improve the quality of both our teaching and research also.

***Vision:***

- Our department focused on to make able and confident students. From our department, students will make their future bright and will successful after studying in this college

The department has qualified, experienced, energetic faculty members who are passionate about teaching profession. In order to develop interest about zoology in students mind and to motivate them to gain the knowledge, we conducted various activities in every academic year.

**NAME OF DEPARTMENT: ZOOLOGY**

**NAME OF INCHARGE: Mrs. RESHMA JAIN (HOD)**

**NAME OF OTHER MEMBERS: Mr. CHANDRASHEKHAR PRASAD**

**NON-TEACHING STAFF: Mr. AJAY JANGDE**

### 1. Activities conducted:

S. No.	Date	Activity	Details
1.	10 July 2018	Welcome of first year Students	Orientation lecture by Principal Dr. Fr. Telesphore Lakra.
2.	Progressive from July to January	Unit wise test, Quarterly exam, Half yearly exam	The department had conducted “unit wise test, quarterly exam, Half yearly exam” for all year students.
3.	Progressive from September to December	Seminar	The department had conducted to topic wise seminar for all students in presence of teaching staff and guest.
4.	October	Parents meeting	The department had conducted parents meeting for attendance, test and another exam.
5.	January	Education Tour	The department went to “Mumbai” for educational tour.
6.	January	Education Tour	The department went to “Sericulture department, Nursery, Bricks, Bamboo and Poultry farm” for educational tour with life science students for environment purpose.
7.	Progressive from January to February	Model exam	Department had organized model exam for all year students for their good performance in main annual exam.
8.	February	Remedial Classes	The department had organized remedial classes in order to build up zoology reading, writing and English skills.

### 2. Workshop/conference Attended:

1. Mrs. Reshma Jain attended two days National Seminar on “Faculty Development Programme” from 18/6/2018 to 19/6/2018 organized by XIDAS, Jabalpur (M.P.).
2. Mr. Chandrashekhar Prasad attended two days National Seminar on “Faculty Development Programme” from 18/6/2018 to 19/6/2018 organized by XIDAS, Jabalpur (M.P.).
3. Mrs. Reshma Jain attended and presented a Poster three days International Science Conference in “From Health to Well being: An Interdisciplinary Approach” from 09/1/2019 to 11/1/2019 organized by St. Xavier’s College Mumbai.
4. Mr. Chandrashekhar Prasad participated three days International Science Conference in “From Health to Well being: An Interdisciplinary Approach” from 09/1/2019 to 11/1/2019 organized by St. Xavier’s College Mumbai.

### 3. Students Achievement:

1. Mr. Ankit toppo, Miss. Anupam rosy minj, Miss Ansi keshar lakra, Miss Anuradha sahu, Miss Nikhat parveen, Miss Farhat mobin, and Miss Riya khaton of B.Sc. third year zoology students got first prize and certificate in model competition.

2. Miss Nauseen parveen, Mr. Harinand chakresh, Miss Roshleen lakra, Miss Puja, Miss Cicil toppo of B.Sc. third year zoology students got second prize and certificate in model competition.

3. Miss Arpana tirkey, Miss Megha singh sidar, Miss Versha Painkra, Mr. Anil kr. Yadav, Mr. Jeevan ekka, Mr. Alamgir uddin of B.Sc. third year zoology students got third prize and certificate in model competition.

#### 4. **Any other Innovative practices:**

- During teaching them about environment students had also participated in plantation in which contribution of staff was also valuable.
- We had organized Science Exhibition in the month of December and all students had participated and given their best performance and prepared different types of models for laboratory.

#### 5. **Faculty Profile:**

S. No.	Name of Faculty	Academic-Qualification	Teaching-Experiences	Teaching Classes
1.	Reshma Niyariya	M.Sc., M.Phil	9	B.Sc. I, II, III
2.	Chandrashekhhar Prasad	M.Sc.	6	B.Sc. I, II, III
3.	Ajay Jangde	B.Sc.	11	Practical's

#### 6. **Degree College Course:**

S. No.	Year	Paper	Title
1.	First Year	First paper	Cell Biology & Invertebrates
2.	First Year	Second paper	Vertebrates and Embryology
3.	Second Year	First paper	Anatomy and Physiology
4.	Second Year	Second paper	Vertebrate Endocrinology, Reproductive Biology Behaviour, Evolution and Applied Zoology
5.	Third Year	First paper	Ecology, environmental-biology, Toxicology, Microbiology and Medical Zoology
6.	Third Year	Second paper	Genetics, Cell Physiology, Biochemistry, Biotechnology and Bio techniques
7.	All year students	Practical	Zoology practical for all year students related to their subject.

- The syllabus designed by the university according to competitive exam like NET, SET, and GATE etc.
- Each paper contains five units with numerical and practical's related to the subject so the students get deep knowledge about the theory.

#### 7. **Department Highlights:**

- Total no. of Faculty members: 03
- Total no. of Students in B.Sc. First Zoo. : 124
- Total no. of Students in B.Sc. Second Zoo. : 87
- Total no. of Students in B. Sc. Third Zoo. : 68
- The department is planning to promote research in the area of sericulture, pisciculture and bee keeping etc.
- Zoology is a branch of classical biology that deals with the study of wonderful life of animals, hence also known as "Animal sciences".

## **8. Practical list of B.Sc. First year**

**Object 1.** – Introduction to Zoology Laboratory.

**Object 2.** – Study of the Microscope: - 1. Compound Microscope  
2. Dissecting Microscope  
3. Binocular Microscope

**Object 3.** – Study of the Invertebrate Phylum:- (Protozoa, Porifera, Coelentrata, Platyhelminthes, Nematohelminthes, Annelida, Arthropoda, Mollusca, Echinodermata)

1. Protozoa: - 1. Amoeba 2. Paramoecium 3. Euglena 4. Opalina
2. Porifera: - 1. Sycon 2. Chalina 3. Spongilla 4. Leucosolenia
3. Coeentrata: - 1. Tubipora 2. Aurelia 3. Physalia 4. Hydra
4. Platyhelminthes: - 1. Taenia Solium 2. Fasciola
5. Nematohelminthes: - 1. Ascaries Male 2. Ascaries Female
6. Annelida: - 1. Aphrodite 2. Neries 3. Hirudendaria
7. Arthropoda: - 1. Limulus 2. Crab 3. Peripanta 4. Moth
8. Mollusca: - 1. Aplysia 2. Sepia 3. Octopus 4. Chiton
9. Echinodermata: - 1. Echinus 2. Antedon 3. Asterias

**Object 4.** – Study of the Vertebrate phylum: - chordate

1. Squarrel
2. Parrot
3. Russel Viper
4. Toad
5. Rana Tigrina
6. Labeo
7. Anabas
8. House Lizard
9. Hippocampus
10. Petromyzon

**Object 5.** - Study of the Permanent Slide

1. Kidney
2. Stomach
3. Skin
4. Gastrula
5. Blastula

**Object 6.** – Study of the Mammal Permanent Slide

1. Kidney
2. Pancreas
3. Skin
4. Ovary
5. Liver

**Object 7.** - Study of the Frog Bones

1. Pelvic Girdle of Frog
2. Radio Ulna
3. Eight Vertebrae
4. Ninth Vertebrae
5. Pectoral Girdle of Frog

**Object 8.** – Study of the Rabbit Bones

1. Pectoral Girdle of Rabbit
2. Radio Ulna
3. Lower Jaw
4. Humerus
5. Pelvic Girdle of Rabbit

**Object 9.** - Preparation and Study of Slides for Mitosis/ Meiosis using Aceto Orecein or Aceto Carmine technique from Onion Root Tips.

**Object 10.** – To Dissect out of the Alimentary system of Earthworm and study the various parts of Alimentary system by Dissecting.

**Object 11.** - To Dissect out of the Nervous System of Pila by Dissecting.

#### LIST OF REQUIRMENT, INSTRUMENT, CHEMICAL

S. No.	Name of Instrument	Quantity
1	Compound Microscope	07
2	Dissecting Microscope	05
3	Binocular Microscope	1pic
4	Dropper	3 pkt
5	Dissection Box	5 pic
6	Cotton	1 pkt
7	Alpin	2 pkt
8	Beaker	1 pkt
9	Incubator	1pic
10	Centrifuge	1pic
11	Dissection Try	200

S. No.	Name of chemical	Quantity
1	Glycerin	2 Bott.
2	Alcohol	2 Bott.
3	Safranine	4 Bott.
4	N-HCl	2 Bott.
5	Aceto Carmine	3 Bott.
6	Aceto Orcenine	2 Bott.

S. No.	Name of Requirement	Quantity
1	Dropping Bottel	1 Bott.
2	Staining Rack	15 pic
3	Slide and Cover Slip	6 pkt & 1 pkt
4	Watch Glass	1 pkt
5	Needle	2 pkt
6	Knife	1 pic
7	Blade	1 pkt
8	Spirit lamp	20 pic
9	Machine	1 pic

#### 9. *Practical List of B.Sc. Second year*

**Object 1.** Study of the Microscope: - 1. Compound Microscope

2. Dissecting Microscope
3. Binocular Microscope

**Object 2.** Study of the Vertebrate Phylum Chordate:-

1. Hyla Arborea
2. Toad
3. Rana tigrina
4. Torpedo
5. Labeo
6. Tetradon
7. Exocoetus
8. Trygon
9. Hippocampus
10. Petromyzon
11. Pristis
12. Herdmania
13. Parrot
14. Squirrel
15. Bat
16. Viper
17. Rat
18. Calotes
19. Python
20. Scoliodon
21. House Lizard
22. Anabas
23. Tiger Shark

**Object 3.** Study of the Frog Permanent Slide:-

1. Kidney
2. Stomach
3. Skin
4. Gastrula
5. Blastula

**Object 4.** Study of the Mammal Permanent Slide:-

1. Stomach
2. Pancreas
3. Skin
4. Ovary
5. Liver

**Object 5.** Study of the Frog Bones:-

1. Pelvic girdle of frog
2. Radio ulna
3. Eight Vertebrae
4. Ninth vertebrae
5. Pectoral girdle of frog

**Object 6.** Study of the Rabbit Bones:-

1. Pectoral girdle of rabbit
2. Radio ulna
3. Lower jaw
4. Humerus
5. Pelvic girdle

## 6. Tibio fibula

**Object 7.** To dissect out of the Scoliodon Cranial Nerve, Internal ear, Placoid scale by Dissecting.

### LIST OF REQUIRMENT, INSTRUMENT, CHEMICAL

S. No.	Name of Instrument	Quantity
1	Compound Microscope	07
2	Dissecting Microscope	05
3	Binocular Microscope	1pic
4	Dropper	3 pkt
5	Dissection Box	5 pic
6	Cotton	1 pkt
7	Alpin	2 pkt
8	Beaker	1 pkt
9	Incubator	1pic
10	Centrifuge	1pic
11	Dissection Try	200

S. No.	Name of chemical	Quantity
1	Glycerin	2 Bott.
2	Alcohol	2 Bott.
3	Safranine	4 Bott.
4	N-HCl	2 Bott.
5	Aceto Carmine	3 Bott.
6	Aceto Orcenine	2 Bott.

S. No.	Name of Requirement	Quantity
1	Dropping Bottel	1 Bott.
2	Staining Rack	15 pic
3	Slide and Cover Slip	6 pkt & 1 pkt
4	Watch Glass	1 pkt
5	Needle	2 pkt
6	Knife	1 pic
7	Blade	1 pkt
8	Spirit lamp	20 pic
9	Machine	1 pic

### 10. Practical list of B.Sc. Third Year

**Object 1.** Study of the Microscope: - 1. Compound Microscope  
2. Dissecting Microscope  
3. Binocular Microscope

**Object 2.** Determination of percentage *Frequency* of Animal Species by Quadrature Method.

**Object 3.** Determination of percentage *Density* of Animal Species by Quadrature Method.

**Object 4.** Determination of percentage *Abundance* of Animal Species by Quadrature Method.

**Object 5.** Identify of Human Blood Group.

**Object 6.** Staining of the Gram Negative and Gram Positive Bacteria.

**Object 7.** Find out of the Haemoglobin in Human Blood.

**Object 8.** Counting of the R.B.C. in Haemocytometer slide from Human Blood.

**Object 9.** Counting of the W.B.C. in Haemocytometer slide from Human Blood.

**Object 10.** Preparation of Haematin Crystal from Human Blood.

**Object 11.** To study the present of Carbohydrate from given sample.

**Object 12.** To study the present of Protein from given sample.

**Object 13.** To study the present of Lipid from given sample.

**Object 14.** To study of the Permanent slide of Parasites Disease.

1. Giardia
2. Entamoeba histolytica
3. Entamoeba coli
4. Trypanosoma
5. Blantidium
6. Plasmodium
7. Ascaris lumbricoides
8. Diarrhoea

**Object 15.** Preparation and study of slides for Mitosis/ Meiosis using Aceto Orescin or Aceto Carmine technique from Onion Root Tips.

#### **LIST OF REQUIRMENT, INSTRUMENT, CHEMICAL**

S. No.	Name of Instrument	Quantity
1	Compound microscope	07
2	Dissecting microscope	05
3	Binocular microscope	1
4	Dropper	3 pkt
5	Cotton	1 pkt
6	Alpin	2 pkt
7	Beaker	1 pkt
8	Incubator	1 pic
9	Centrifuge	1 pic
10	Dissection tray	200
11	Quadrant	8 pic
12	Haemoglobin meter	5 pic
13	Haemocytometer	5 pic
14	RBC Pipette	5 pic
15	WBC Pipette	5 pic
16	Test tube	1 pkt
17	Glass slide with counting chamber	5 pic
18	Dissection box	5 pic



S. No.	Name of Chemical	Quantity
1	Glycerine	2 bott.
2	Alcohol	2bott.
3	Safranine stain	4 bott.
4	N-HCL	2 bott.
5	Aceto carmine	3 bott.
6	Aceto orcenine	2 bott.
7	Antiserum A, B, D	2 pkt.
8	Crystal violet	2 bott.
9	Gram iodine solution	2 bott.
10	N/10 HCL	1 bott.
11	Distilled water	1 lit.
12	RBC diluting fluid	2 bott.
13	WBC diluting fluid	2 bott.
14	Spirit	1 bott.
15	Glucose	1 bott.
16	Sucrose	1 pkt.
17	Molish's reagent	1 bott.
18	Sulfuric acid	1 bott.

S. No.	Name of requirement instrument	Quantity
1	Dropping bottle	1 bott.
2	Staining rack	15 pic
3	Slide and Cover slip	6 pkt and 1 pkt
4	Watch glass	1 pkt
5	Needle	2 pkt
6	Knife	1 pic
7	Blade	1 pkt
8	Spirit lamp	20 pic
9	Machine	1 pic
10		



*Jabalpur Trip with Staff Members*



*Prepared Model by B.Sc. Third Year Group and won First Prize*



*Environment Educational trip "Sericulture Department", Kunkuri*



*Mumbai Educational Trip "St. Xavier College"*



*Students giving seminar with their power point presentation*



*“Zoology Students”*

