

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

***Annual report of Zoology Department 2020-2021***

***Department of Zoology:*** Loyola College, Kunkuri is one of the popular colleges in India. Department of zoology was established in 2005 it is one of the conveted department for pursuing further studies in the field of animal sciences for biology students. Laboratory staff of the department provides an easy and interactive atmosphere conducive for learning and personality development of the students. The Loyola college of Kunkuri has all necessary equipments, slides, specimen, skeleton and all different types of wall charts and practical books which are required for the students.



***“Introducing about Zoology lab by Mr. Chandrashekhar Prasad”***

***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.	15 October 2020	Welcome of first year Students	Orientation Virtual lecture by Principal Dr. Fr. Oscar S. Tirkey.
2.	Progressive from October to February	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 November to January	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.
6.	December	Education Tour	The department went to “Coconut bagan” for educational tour with life science students for environment purpose.
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 one day National Webinar on “COVID-19 Pandemic and Online Education Issues” organized by Computer Science department at Loyola College, Kunkuri (C.G.)
2. Mr. Chandrashekhar Prasad attended one day National Webinar on “COVID-19 Pandemic and Online Education Issues” organized by Computer Science department at Loyola College, Kunkuri (C.G.)
3. Mrs. Reshma Jain attended one day National Webinar on “ How to reduce Carbon Footprint” organized by K.G. Arts and Science College, Raigarh (C.G.)
4. Mrs. Reshma Jain attended one day National Webinar on “ Psychological and Mental impact of COVID-19” organized by K.G. Arts and Science College, Raigarh (C.G.)
5. Mrs. Reshma Jain Attended one day National Webinar on “Way to protect us from Black Fungus.
6. Mrs. Reshma Jain Participated and Presented Full length paper two days International Conference on “Environment, Agriculture, Human and Animal Health.
7. Mrs. Reshma Jain attended one day workshop on “How to prepare a research proposal and apply for International Ph. D. And Post Doctoral position (IFDP-2021).
8. Mrs. Reshma Jain attended one week workshop on “International Faculty Development Programme” organized by Govt. V. V. T. PG. Autonomous College, Durg.

## 3. Students Achievement:

1. Miss Eblin lakra, Miss Rimjhim Jain and Miss Nisha gupta B.Sc. first year zoology Participated and got prize in grow plant and best selfie with plant.
2. Miss Jharna oraon and Miss Rimjhim jain B.Sc. first year zoology students got second prize in online Virtual painting contest.

3. Miss Anisha mahto and Miss Preeti gupta B.Sc. first year zoology students got fourth prize in online Virtual painting contest.
4. Miss Rimjhim sahu and Miss Deepika yadav B.Sc. first year and third year zoology students got fifth prize in online Virtual painting contest.
5. Miss Eblin lakra B.Sc. first year zoology got first prize in online written test organized by under the Aegis Yashasvi, Jashpur (C.G.).
6. Miss Saba noori B.Sc. first year zoology got second prize in online written test organized by under the Aegis Yashasvi, Jashpur (C.G.).
7. Miss Rimjhim jain B.Sc. first year zoology got fourth prize in online written test organized by under the Aegis Yashasvi, Jashpur (C.G.).
8. Miss Eblin lakra, Miss Pallavi minj B.Sc. first year zoology and Arpana tigga B.Sc. second year zoology got prize in painting competition.

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

- We have organized Science Exhibition in the month of December and all students have participated and given their best performance and prepared different types of models for laboratory.
- Our departmental faculty members had arranged seminar for our students in the month of January and students had presented seminars by PPT.

#### 5. *Faculty Profile:*

S. No.	Name of Faculty	Academic-Qualification	Teaching-Experiences	Teaching Classes
1.	Reshma Niyariya	M.Sc., M.Phil	11	B.Sc. I, II, III
2.	Chandrashekhar Prasad	M.Sc.	8	B.Sc. I, II, III
3.	Ajay Jangde	B.Sc.	13	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. : 51
- Total no. of Students in B.Sc. Second Zoo. : 62
- Total no. of Students in B. Sc. Third Zoo. : 37

- The department is planning to promote research in the area of sericulture, pisciculture, 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. Hirudénaria
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 Permanent Slide of Frog embryology

1. Gastrula
2. Blastula

**Object 5.** – Study of the Permanent Slide of Chick embryology.

**Object 6.** – Study of the Permanent Slide of Mitosis and Meiosis.

**Object 7.** – Study of the Permanent Slide of Invertebrate.

**Object 8.** - Preparation and Study of Slides for Mitosis/ Meiosis using Aceto Orecein or Aceto Carmine technique from Onion Root Tips.

**Object 9.** – To Dissect out of the Alimentary system of Earthworm and study the various parts of Alimentary system by Dissecting.

**Object 10.** - 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	Safranin	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 Arbaren
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. Pectoarl girdle of rabbit
2. Radio ulna
3. Lower jaw
4. Humerus
5. Pelvic girdle
6. Tibio fibula

**Object 7..** Applied Zoology- Study the like cycle of Silkworm.

**Object 8.** Instinctive behaviour of animal.

**Object 9.** Evolution of Homologous and Analogous organ.

**Object 10.** 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	Safranin	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 Orcein or Aceto Carmine technique from Onion Root Tips.

#### LIST OF REQUIREMENT, 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	Quadrat	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 orcein	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		



*Welcome of first year with Virtual meeting*



*Students doing practical in zoology lab*



*Taking online classes by Mrs. Reshma Jain*



*Students doing practical*



*Coconut Bagan*



*Staff and Students meeting*



*Painting Competition*



*World Environment Day*