

## Loyola College, Kunkuri 496225, Jashpur, Chhattisgarh

## Annual report of Botany Department 2018-2019



## Department of Botany:

## **Introduction**

The self study documented focused on learning outcomes of students, detailed the requirements for student portfolios, and documented the efforts of the Botany Department to help students secure internship and develop meaningful careers. The section on support staff, facilities, equipment and library was detailed and extremely useful. The visiting committee members concur with the department in the validity and importance of these department goals.

## The role of Botany in the Academy

The success of Botany Department in forwarding botany as a distinct academic discipline is laudatory. Botany plays a key role in the history of Horodotus. The visiting committee members for maintaining botany as a viable and important program at the university.

## **Strengths of Botany Department**

The Botany Department is composed of teachers, who have a genuine desire for the students to learn botany and love plants. It was pleasing to the visiting committee to note that herbarium is contiguous to laboratory areas and the student lounge, facilitating easy exploration of plant diversity by students. The Department is highly efficient with very limited resources.

## Name of Department : Botany

Asst. Prof. Mrs. Sharda Singh

Name of Other Members : Dr.Fr. Telesphor Lakra (Principal)

Non Teaching Staff: Miss. Tikeshwari Anant (Lab Technician)

#### Name of Faculty Academic S.No. Teaching Teaching **Qualification Experience** Classes 9-12<sup>th</sup> Sangeeta Yadav M.Sc., DCA, **School** – 02 1. B.Ed., PGDCA, Years, 7 M.Phil, Ph.D.-Month. Going on . College -04 B.Sc.-I, II,III Sharda Singh M.Sc., PGDCA, 03 B.Sc.-I, 2. M.Phil II,III 3. Tikeshwari Anant M.A.(Sanskrit) 09 Practicals

## **Faculty Profile:**

## **Degree College Course:**

S.No.	Year	Course	Title	
		Code/Paper		
1.	B.Sc. FirstYear	26 A/ First	Diversity of microbes and	
		Paper	cryptogams	
2.	B.Sc. FirstYear	26 B/ Second	Cell biology and genetics	
		Paper		
3.	B.Sc. SecondYear	26 A/ First	Diversity of seed plants and	
		Paper	their systematics	
4.	B.Sc. SecondYear	26 B /	Structure, development and	
		Second Paper	reproduction in flowering	
			plants	
5.	B.Sc. Third Year	26 A/ First	Plant physiology, biochemistry	
		Paper	and biotechnology	
6.	B.Sc. Third Year	26 B/ Second	Ecology and utilization of	
		Paper	plants	
7.	All year students	26 P	Botany practical for all year	
		Practical	students related to their subject.	

- The syllabus is design by the University according to competitive exam like NET, SET, GATE, Research field, Forestry etc.
  - The course is designed such that majorly all the theoretical course are accompanied by practical classes to provide a hands-on experience to the students.

- ➤ This acquaints them with the necessary skills and professional understanding of the scientific concepts and helps them use this experience in real-life situations during their careers.
- The course is a combination of various papers and topic which help a student learn in detail the concepts related to botany.

Subject	Paper	Total marks	Min. marks
	First	50	່າາ
Botany	Second	50	} 33
	Practical	50	17

## Classes and subject wise marks distribution:-

## **Department Highlights:**

- ➤ Total No. Of Faculty member: 03
- ➤ Total no. of students in B.Sc. First:124
- ➤ Total no. of students in B.Sc. Second:117
- Total no. of students in B.Sc. Third:68
- Total no. of students in B.Sc.:309

## Workshop/Conference/ Seminar Attended:

Miss Sangeeta Yadav participated in International Conference on INNOVATIVE RESEARCH IN SCIENCE MANAGEMENT AND TECHNOLOGY Organized By Department of Computer Science & Application Bilaspur (C.G.) India. Dated on 4-5 August 2018.



Miss Sangeeta Yadav participated in the International Conference held at St. Xavier's College, Mumbai. Dated on 9-11 January 2019.



- Miss Sangeeta Yadav presented in Two Days National Workshop on Latest Trends in Biotechnology and Holistic Farming organized by Department of Life Science & Rural Technology held at Dr.C.V.Raman University Kargi Road Kota, Dist. Bilaspur. Dated on 4-5 February 2019
- Miss Sangeeta Yadav presented a research paper entitled Emerging Trends in Science Education in Chhattisgarh. The National Interdisciplinary Research Seminar cum Conference Bilaspur (C.G.). Sponsored by Chhattisgarh Council of Science and Technology, Raipur(C.G.). Dated on 13-14 January 2019.
- Miss Sangeeta Yadav presented a research paper titled Forest fire and related components in the Research Seminar on Haritage & Ecology Organized by the District Administration Jashpur, Chhattisgarh. Dated on 15-16 June 2019.
- Sharda Singh participated in the International Conference held at St. Xavier's College, Mumbai. Dated on 9-11 January 2019.
- B.Sc.I,II,III year students participated in the International Conference held at St. Xavier's College, Mumbai. Dated on 9-11 January 2019.
- Sharda Singh participated in Conference on Research methodology held at Morena M.P. Organized by Prof. Shivraj Singh Tomar. Dated on 9-10 September 2018.

## **Departmental Activities:**

Orientation for B.Sc. first year students. (9July)



- Classes of B.Sc.-I year's students started in (12July)
- Classes of B.Sc. II & III year's students started in (August)
- $\succ$  Theory with practical syllabus started with initiation of classes.

## (23August)

> Teachers have made practical to all year students by giving demos.





- ➢ B.Sc. first year students welcomed on 31/8/2018.
- ➢ Plantation in botany garden done by B.Sc. I, II, III year's students.







> Analysis of plant species done by B.Sc. III year's students under field work.



> Weekly twice practical classes were arranged in botany laboratory.

Herbarium made by B.Sc. II year according to their syllabus and locally available species.







- ➤ Monthly unit tests were conducted for students.
- ➤ Monthly each student's attendance was recorded.
- Motivational classes were provided for students by Asst. Prof. Sangeeta Yadav (HOD).



- Seminar for students was conducted in seminar hall and class room also.
- ➢ B.Sc. III year's students gave their seminar topics by power point presentation.







Completion of syllabus and practical.Photosession taken with teachers and students

(November) (November)



Departmental meeting was held on 29/11/2018.



➢ Botanical garden was maintained regularly.



## **Project Exhibitions**

> Departmental quiz competition was organized for students.

Models and projects regarded with their botany syllabus was prepared by students.

## **Students achievement**

Models, Working models, becoming a useful model from west material and projects were exhibited in science exhibition. (20 December)



Best of the models and projects were awarded I,II and III during annual function. (22 December)



In Jashpur district Debate compitions were held on the topic of Right to Equality in which some students (Pankaj Soni, Afrin Nisha, Nisha Chouhan and Group) came first and were honored by Collector Dr. Priyanka Shukla.



## **Study Tours**

In educational tour students were taken to international conference conducted in Mumbai by St. Xavier institute. (7-13 January).



The students of our department participate in NSS, Sports, Cultural activity and Blood Donation.





- ➢ Model examination was conducted from 17 January to 30 January.
- > Model exam results shown on 01/2/2019.
- Students are taken to One day Picnic Nageratuku local place this year botany department. This place enriched with lot of natural heritage and full of different plant species.



Revision of curriculum 2018-2019 This year the I,II and III year B.Sc.Botany Syllabus has been Revised.

## Purpose :

1. **Plantation :** enhancement of environment. To learn important of plant in our life. for beauty of nature. For healthy nature and environment. To teach students responsibility towards nature.



2. **Practical classes:** Each Year students for the better understanding of botany lively. To connect students to the botany. To experience them practical and applied botany. To increase interest toward botany.



3. **Field work :** to know about their surrounding and environment. To connect with their surrounding. Information of surrounding to use them in various ways such as medicine.



**B.Sc. III year students** 

4. Unit tests : for the practice of each year students for their main exams. To overcome their exam phobia. Revision of done syllabus unit. To practice more and more answer writing pattern. Experience enhancement of exam habit.



5. **Seminar by students :** To have some teaching experience to B.Sc. III year students. To overcome their stage phobia. To enhance their speaking skills. To improve their explain ability. To provide them opportunity and stage to show their talent and creativity , and to encourage them.



6. **Models and projects :** to express and represent their topics in innovative ways. To learn team works as to work together as team. To understand their classmates. And to encourage them to have more and more innovative ideas.



## **<u>Project exhibition:</u>**

7. **Quiz competition :** the competition is all about winning which encourage each year students to do their best. And to study more and more. And to

experience to deal with their nervousness during situation like in competition.

8. **Science exhibition :** to encourage student talent and excellence by others what they really deserve. To their ideas and thoughts to others to understand botany.



9. Educational tour Mumbai : to observe the educational things during all tour duration weather experience of other, some visual things, their ability to adjust in unfamiliar place, or to communicate with the people in unfamiliar place. To attract them toward the joy of being educated ,having good grades, knowledge, and having good carrier.



To know current competition level in education field. To know St. Xavier institution , through international conference.

To feel glory of Indian historical place in Elefenta cave.



Place like Nehru science center where they can feel the science around them.



And the beauty of the nature present in different locations in Mumbai .







- 10. **Model examination:** to provide a complete real experience of annual examination.
- 11. Practical exams were conducted on 12-13**February.**
- 12. Annual exam was conducted by university from month of March.

Head Of Department Assit. Prof. Sangeeta Yadav Loyola College Kunkuri

## LOYOLA COLLEGE KUNKURI

#### **DEPARTMENT OF BOTANY**

#### SESSION -2018-19

#### CLASS- B. Sc. I YEAR

HEAD OF DEPARTMENT	- Miss. SANGEETA YADAV
ASST. PROF.	- Mrs. SHARDA SINGH
LAB TECHNICIAN	- Miss. TIKESHWARI ANANT

#### **EXPERIMENT LIST:**

Object.1 To Study of the Microscope Compound Microscope and Dissecting Microscope.

#### ALGAE

Object.2 Study of Vegetative and Reproductive Structure of VOLVOX and its Identification on the Basis of Characters.

Object.3 Study of Vegetative and Reproductive Structure of VOUCHERIA and its Identification on the Basis of Characters.

Object.4 Study of Vegetative and Reproductive Structure of OEDOGONIUM and its

Identification on the Basis of Characters.

- Object.5 Study of Vegetative and Reproductive Structure of SARGASSUM and its Identification on the Basis of Characters.
- Object.6 Study of Vegetative and Reproductive Structure of ECTOCARPUS and its Identification on the Basis of Characters.
- Object.7 Study of Vegetative and Reproductive Structure of POLYSIPHONIA and its Identification on the Basis of Characters.

#### FUNGI

- Object.8 Study of Vegetative and Reproductive Structure of PHYTOPHTHORA and its Identification on the Basis of Characters.
- Object.9 Study of Vegetative and Reproductive Structure of CERCOSPORA and its Identification on the Basis of Characters.
- Object.10 Study of Vegetative and Reproductive Structure of PHYTHIUM and its Identification on the Basis of Characters.
- Object.11 Study of Vegetative and Reproductive Structure of MUCOR and its Identification on the Basis of Characters.

#### BRYOPHYTA

- Object.12 Study of Vegetative and Reproductive Structure of MARCHANTIA and its Identification on the Basis of Characters.
- Object.13 Study of Vegetative and Reproductive Structure of ANTHOCEROS and its Identification on the Basis of Characters.

#### PTERIDOPHYTA

- Object.14 Study of Vegetative and Reproductive Structure of EQUISETUM and its Identification on the Basis of Characters.
- Object.15 Study of Vegetative and Reproductive Structure of LYCOPODIUM and its Identification on the Basis of Characters.
- Object.16 Study of Vegetative and Reproductive Structure of MARSILEA and its Identification on the Basis of Characters.
- Object.17 Study of Vegetative and Reproductive Structure of SELAGINELLA and its Identification on the Basis of Characters.

Q.18 Preparation and Study of Slides for Mitosis using Aceto Orecein or Aceto Carmine

Technique from Onion Root Tips.

Object.19 To Study the Plants Diseases.

1. Late Blight of Potato	2. Tikka Diseases of Groundnut

- 3. Red Rod of Sugarcane 4. Mosaic Diseases of Tobacco
- 5. Citrus Canker Diseases 6. Leaf Curl Disease of Papaya

Object.20 To Study f the given Specimens .

1. Cara 2. Moss plant 3. Funaria 4 Lycopodium

5. Marchantia 6. Lichen 7. Polysiphonia 8. Anthoceros 9. Agaricus

Object.21 To Study f the given Permanent Slides.

#### ALGAE

- 1. Ectocarpus Plurilocular w.m. 2. Oedogonium Drart Male W.M.
- 3 Polysiphonia Cystocarp

#### FUNGI

- 1. Agaricus V.S. 2. Puccinia Uredo Spore 3. Peziza Apothecia V.S.
- 2. Saccharomyces W.M.

#### BRYOPHYTA

1. Moss Capsule 2. Marchantia Anthd. V.S. 3. Marchantia Gemma-Cup V.S.

4.Funaria Moss Antheridia V.S.

#### PTERIDOPHYTA

1. Pteris Rhizome 2. Ferm Rhizome T.S. 3. Pteris Root T.S.

4. Lycopodium Cone L.S. 5. Selaginella Leaf 6. Selaginella Cone L.S.

#### MITOSIS / MEIOSIS DIVISION

- 1. Interphase Stage 2. Prophase Leptotene Stage 3. Anaphase I Stage
- 4 Anaphase II Stage 5 Telophase I Stage 6 Telophase II Stage
- 7 Metaphase II Stage.

#### List of Instruments, Chemicals, Requirements, Plant Species, Permanent Slides and Specimens.

S.NO.	Name of Instruments	Quantity	Amount
1	Compound Microscope	15	NIL
2	Dissecting Microscope	6	NIL
3	Light Microscope	1	NIL
4	Balance Weighing Machine	Available in College	NIL

S.NO.	Name of Chemicals	Quantity	Amount
1	Safranin Stain	1	NIL

2	Glycerin	1	NIL
3	Alcohol	1	NIL
4	Aceto Carmine	1	NIL
5	Aceto Orcein Stain	1	NIL
6	Fast Green	1	NIL
7	Cotton Blue	1	NIL
8	Spirit Solvent	1 lit	NIL
9	Distilled Water	250 ml	NIL

S.NO.	Name of Requirements	Quantity	Amount
1	Slide	3 pkt	330
2	Cover slip	5 pic	700
3	Dropping Bottle	5	NIL
4	Dropper	1pkt	150
5	Watch Glass	25	NIL
6	Needle	25	NIL
7	Blade	1pkt	45
8	Spirit Lamp	6	NIL
9	Match Box	1pkt	70
10	Brush	25	250
11	Forcep	10 small x 10 big	NIL
12	Cotton	1	25
13	Filter Paper	3	NIL
14	Beaker	6	NIL
15	Test Tube (10ml)	70	NIL
16	Test Tube Rack	04	NIL

S.NO.	Name of Plant Species	Quantity	Amount
1	VOLVOX	1	NIL
2	VOUCHERIA	1	NIL
3	OEDOGONIUM	1	NIL
4	SARGASSUM	2	NIL
5	ECTOCARPUS	1	NIL
6	POLYSIPHONIA	10 tube	300
7	PHYTOPHTHORA	10 tube	300
8	CERCOSPORA	2	NIL
9	ASPERGILLUS	2	NIL
10	MUCOR	1	NIL
11	PHYTHIUM	1	NIL
12	MARCHANTIA	2	NIL
13	ANTHOCEROS	2	NIL
14	POLYTRICUM	2	NIL
15	MARSILEA	10 tube	300
16	EQUISETUM	10 tube	300
17	LYCOPODIUM	2	NIL
18	SELEGINELLA	2	NIL
19	Onion Root Tips	2 kg	60

S.NO.	Permanent Slides	Quantity	Amount
1	Ectocarpus Plurilocular w.m	1	NIL
2	Polysiphonia Cystocarp	1	NIL
3	Oedogonium Dwarf Male W.M.	1	NIL
4	Agaricus V.S.	1	NIL

5	Peziza ApotheciaV.S	1	NIL
6	Puccinia Uredo Spore	1	NIL
7	Peziza ApotheciaV.S.	1	NIL
8	Moss Capsule	1	NIL
9	Marchantia Gemma-Cup V.S.	1	NIL
10	Marchantia Antheridia. V.S.	1	NIL
11	Funaria Moss Antheridia V.S.	1	NIL
12	Pteris Rhizome	1	NIL
13	Lycopodium Cone L.S.	1	NIL
14	Fern Rhizome T.S.	1	NIL
15	Pteris Root T.S.	1	NIL
16	Selaginella Leaf	1	NIL
17	Selaginella Cone L.S.	1	NIL
18	Interphase Stage	1	NIL
19	Prophase Leptotene Stage	1	NIL
20	Anaphase I Stage	1	NIL
21	Anaphase II Stage	1	NIL
22	Telophase I Stage	1	NIL
23	Telophase II Stage	1	NIL
24	Metaphase II Stage	1	NIL
S.NO.	Specimens	Quantity	Amount
1	Cara	1	NIL
2	Moss plant	1	NIL
3	Funaria	1	NIL
4	Lycopodium	1	NIL
5	Marchantia	1	NIL
6	Lichen	1	NIL
7	Polysiphonia	1	NIL
8	Anthoceros	1	NIL
9	Agaricus	1	NIL

#### **DEPARTMENT OF BOTANY**

#### LOYOLA COLLEGE KUNKURI

#### **SESSION -2018-19**

#### CLASS- B. Sc. II YEAR

HEAD OF DEPARTMENT	- Miss. SANGEETA YADAV
ASST. PROF.	- Mrs. SHARDA SINGH
LAB TECHNICIAN	- Miss. TIKESHWARI ANANT

#### **EXPERIMENT LIST**

#### PLANT DISCRIPTION

Object.1 Description of Some Locally Available Plants and their Identification up to

MALAVACEAE FAMILY - CHINA ROSE

Object 2. Description of Some Locally Available Plants and their Identification up to

FABACEAE FAMILY – BAUHINIA VARIEGATA.

Object 3. Description of Some Locally Available Plants and their Identification up to

SOLANACEAE FAMILY – DATURA ALBA

Object 4. Description of Some Locally Available Plants and their Identification up to

APOCYNACEAE FAMILY - VINCA ROSEA.

Object 5.Description of Some Locally Available Plants and their Identification up to

LAMIACEAE FAMILY – OCIMUM SANCTUM.

Object.6 Description of Some Locally Available Plants and their Identification up to

ASCLEPIADACEAE FAMILY – CALOTROPIS PROCERA.

Object.7 Description of Some Locally Available Plants and their Identification up to

BRASSICACEAE FAMILY – BRASSICA CAMPESTRIS.

#### **GYMNOSPERM**

Object.8 Preparation and Study of the Temporary Slide of the V.S. of CYCAS LEAFLET.

Object.9 Preparation and Study of the Temporary Slide of the T.S. of CYCAS RACHIS.

Object.10 Preparation and Study of the Temporary Slide of the T.S. of PINUS NEEDLE.

Object.11 Preparation and Study of the Temporary Slide of the T.S. of OLDER STEM OF PINUS.

Object.12 Preparation and Study of the Temporary Slide of the T.L.S. of PINUS STEM . Object.13 Preparation and Study of the Temporary Slide of the R.L.S. of PINUS STEM .

Object.12 Preparation and Study of the Temporary Slide of the T.S. of OLDER STEM OF

EPHEDRA.

#### ANATOMY

Object .8 Preparation and Study of the Temporary Slide of the T.S. of SUNFLOWER STEM.

Object .9 Preparation and Study of the Temporary Slide of the T.S. of CUCURBITA STEM.

Object .10 Preparation and Study of the Temporary Slide of the T.S. of ZEA MAYS STEM.

#### EMBRYOLOGY

Object .11 To Study the Placentation in given Material .

Object .12 To Study of the given Specimens .

- 1. Pinus Male Cone 2 Pinus Female Cone 3 Cycas Seed
- 4. Ephedra Male Cone 5 Ephedra Female Cone 6 Ephedra Male Cone
- 7 Cycas Female Cone 8 Cycas Male Cone

Object .11 To Study of the given Slide.

- 1. Pinus Ovule V.S. 2. Pinus Female Cone 3. Cycas Ovule L.S.
- 4. Maize Root T.S. 5. Zea Mays Leaf V.S. 6. Cycas Root T.S.

7 Pinus Pollen Grains 8 Cycas Root Normal T.S.

List of Instruments, Chemicals, Requirements, Plant Species, Permanent Slides and Specimens.

S.NO.	Name of Instrument	Quantity	Amount
1	Compound Microscope	15	NIL
2	Dissecting Microscope	6	NIL
3	Magnifying Glass	2	NIL
4	Light Microscope	1	NIL
5	Balance Weighing Machine	Available in College	NIL

S.NO.	Name of Chemicals	Quantity	Amount
1	Safranin Stain	1	NIL
2	Glycerin	1	NIL
3	Alcohol	1	NIL

S.NO.	Name of Requirement	Quantity	Amount
1	Slide	3 pkt	NIL
2	Cover Slip	5 pic	NIL
3	Dropping Bottle	5	NIL
4	Dropper	6	NIL
5	Watch Glass	20	NIL
6	Needle	20	NIL
7	Blade	1pkt	45
10	Test Tube Brush	10	NIL
11	Forcep	10	NIL
12	Cotton	1	25
13	Filter Paper	3	NIL
14	Beaker	7	NIL

S.NO.	Name of Plant Species	Quantity	Amount
1	MALAVACEAE FAMILY – CHINA ROSE	Available in our	NIL
		College campus	
2	FABACEAE FAMILY – BAUHINIA VERIEGATA	Available in our	NIL
		College campus	
3	SOLANACEAE FAMILY – DATURA ALBA	Available in our	NIL
		College campus	
4	APOCYNACEAE FAMILY – VINCA ROSEA.	Available in our	NIL
		College campus	
5	LAMIACEAE FAMILY – OCIMUM SANCTUM.	Available in our	NIL
		College campus	
6	ASCLEPIADACEAE FAMILY – CALOTROPIS	Available in our	NIL
	PROCERA.	College campus	
7	BRASSICACEAE FAMILY – BRASSICA	Available in our	NIL
	COMPESTRIS.	College campus	
8	CYCAS LEAFLET	1	NIL
9	CYCAS RACHIS	1	NIL
10	PINUS NEEDLE	1	NIL
11	PINUS STEM	1	NIL
12	EPHEDRA STEM	1	NIL
13	SUNFLOWER STEM	1	NIL
14	CUCURBITA STEM	1	NIL
15	ZEA MAYS STEM	1	NIL

S.NO.	Permanent Slides	Quantity	Amount
1	Pinus Ovule V.S.	1	NIL
2	Pinus Female Cone	1	NIL
3	Cycas Ovule L.S.	1	NIL
4	Maiza Root T.S.	1	NIL
5	Zea Mays Leaf V.S.	1	NIL
6	Cycas Root T.S.	1	NIL
S.NO.	Specimens	Quantity	Amount
1	Pinus Male Cone	1	NIL
2	Pinus Female Cone	1	NIL
3	Ephedra Male Cone	1	NIL
4	Ephedra Female Cone	1	NIL
5	Cycas Seed	1	NIL

#### LOYOLA COLLEGE KUNKURI DEPARTMENT OF BOTANY SESSION -2018-19 CLASS- B.Sc. III YEAR

HEAD OF DEPARTMENT	-	Miss.	SANGEETA YADAV
ASST. PROF.	-	Mrs.	SHARDA SINGH
LAB TECHNICIAN	-	Miss.	TIKESHWARI ANANT

#### **EXPERIMENT LIST:**

#### Physiology

Object 1. Demonstration of Endosmosis By Osmoscope of Potato .

Object 2. Demonstration of Plasmolysis and Deplasmolysis in Plant cell.

Object 3. To Study the types of Stomata in the Epidermal peel of Leaves.

Object 4. Comparison of Stomatal and Cuticular transpiration by Four Leaf Method.

Object 5. Experiment to Measure the rate of transpiration by Ganong Potometer.

Object 6. Experiment to Prove that Oxygen gas is Released in the Process of Photosythesis.

Ecology

Object 7. Determination of Percentage Frequency of Plant species in a given Plant community

by Quadrate method.

# Object 8. Determination of Density of Plant species in a given Plant community by Quadrate

method.

Object 9. Determination of Abundance of Plant species by Quadrate method.

Object 10. Ecology Adaptation in Plant Group -

- 1. Hydrophytes External Marphology feature Hydrilla
- 2. Anatomical Characters- Hydrilla Stem T.S., Lotus Stem T.S.
- 3. Water Hyacinth Eichhornia

1 External Morphological Feature 2 V.S. of Leaf

#### **Utilization of Plants-**

Object 11. Utilization of Plants-

- 1. Food Plants Rice , Wheat , Maize , Potato , and Sugarcane.
- 2. Fibers- Cotton and Jute.
- 3. Vegetable Oils Groundnut , Mustard , and Coconut.
- 4. Sources of fire Wood Timber and Bamboo.
- 5. **Spices** –Ginger , Turmeric , Clove , Cumin , Black Pepper ,Cinnamon Lesser, Cardamom, Asafoetida,
- 6. Medicinal Plants- Belladonna, Opium, Tulsi, Aswagandha, Aconite, Quinnene.
- 7. Beverages Tea and Coffee.

#### **Biochemistry /Biotechnology**

Object 12. To test the Polysaccharide starch.

Object 13. To Perform Starch test in Leaves.

Object 14. To test the Presence of Monosaccharide in Plant tissue Fehling -A and Fehling -B

Moor's test.

- Object 15 To test the presence of Protein in Plant tissue.
  - A. Xanthoproteic test.
  - B. Biuret test.

Object 16. General test for Carbohydrates in Plant tissue.

Object 17. Prepare Glycerin Mount of Iodine Stained Thin Section of Potato tuber and Study

Leucoplast in their cells.

Object 18. To Study of the given Specimens.

1 Trapa 2. Typha 3. Oscillatoria 4. Eichhornia 5 Hydrilla

6 Asparagus 7 Opuntia 8 Pistia 9 Ceratophyllum.

Object 19. To Study of the given Permanent Slides .

- 1. Casuarina stem T.S.
- 2. Trapa stem T.S.
- 3. Asparagus stem T.S.
- 4. Nerium Leaf V.S.
- List of Instruments, Chemicals, Requirements, Plant Species, Permanent Slides and Specimens.

S.NO.	Name of Instrument	Quantity	Amount
1	Compound Microscope	15	NIL
2	Stop Watch	1	NIL
3	Vertical Stand	2	NIL
4	Ganong Potometer	5	NIL
5	Quadrate	8	NIL
6	Light Microscope	1	NIL
7	Balance Weighing Machine	Available in College	NIL

S.NO.	Name of Chemicals	Quantity	Amount
1	Safranin Stain	1	NIL
2	Glycerin	1	NIL
3	Alcohol	1	NIL
4	Salt Solution	1	NIL
5	Sucrose	1	NIL
6	Mom	2	10
7	Petroleum Jelly	1	NIL
8	Sodium Hypochlorite	1	NIL
9	Fehling Solution -A	1	NIL
10	Fehling Solution -B	1	NIL
11	Glucose	1	NIL
12	Iodine Solution	1	NIL
13	Sudan III	1	NIL
14	Osmic Acid	1	NIL
15	Nitric Acid	1	NIL
16	Sodium hydroxide	1	NIL
17	Biuret Reagent	2	NIL
18	Hydrochloric	1	NIL
19	Starch Solution	1	NIL
20	Silicon grease	1	NIL
21	Distilled water	250 ml	NIL

S.NO.	Name of Requirement	Quantity	Amount
1	Slide	3 pkt	330
2	Cover Slip	5 pic	700
3	Dropping Bottle	6	NIL
4	Dropper	6	150
5	Watch Glass	20	NIL
6	Needle	20	NIL
7	Blade	1pkt	45
10	Test Tube Brush	10	NIL

11	Forcep	10	NIL
12	Cotton	1	NIL
13	Filter Paper	3	NIL
14	Knife	1m	NIL
15	Paper pin	1pkt	NIL
16	Petri Dish	40	NIL
17	Thread	1	NIL
18	Wide mouthed Bottle	3	NIL
19	Test Tube (10ml)	70	NIL
20	Spirit Solvent	2 lit.	NIL
21	Test Tube Holder	20	NIL
22	Spirit Lamp	5	NIL
23	Candle	5	10
24	Test Tube Rack	5	NIL
25	Pencil	1	10
26	Paper	3	10
27	Scale	3	NIL
28	Note Book	1	NIL
29	Beaker (500ml)	6	NIL
30	Porcelain Evaporating Dish Big	1	NIL
31	Porcelain Evaporating Dish Small	1	NIL
32	Funnel	6	NIL
33	Measuring Cylinder Small	3	NIL
34	Measuring Cylinder Big	2	NIL

S.NO	Name of Plant Species	Quantity	Amount
•	Tradescantia Leaf	Available in our College campus	NII
2	Plant Twig	Available in our College campus	NIL
2	Different Plant	Available in our College campus	NII
<u> </u>	Cucurbita	Available in our College campus	NIL
5	Mustard	Available in our College campus	NIL
6	Ivora	Available in our College campus	NIL
7	Tulei	Available in our College campus	NIL
8	Palm	Available in our College campus	NIL
9	Doob Grass	Available in our College campus	NIL
10	Onion leaf	Available in our College campus	NII
10	Fresh Leaf	Available in our College campus	NIL
12	Potato	Available in our College campus	NII
13	Groundnut seed	Available in our College campus	NIL
13	Besan	Available in Shop	10 Rs
15	Rice	Available in our College campus	NIL
16	Wheat	Available in our College campus	NIL
17	Maize	Available in our College campus	NIL
18	Sugarcane	Available in our College campus	NIL
19	Cotton	Available in our College campus	NIL
20	Jute	Available in our College campus	NIL
21	Groundnut	Available in our College campus	NIL
22	Mustard	Available in our College campus	NIL
23	Coconut	Available in our College campus	NIL
24	Timber –Sal,Sagwan,Sheesam	Available in our College campus	NIL
25	Bamboo	Available in our College campus	NIL
26	Ginger	Available in our College campus	NIL
27	Asafoetida,	Available in our College campus	NIL
28	Cardamom,	Available in our College campus	NIL
29	Lesser	Available in our College campus	NIL

30	Cinnamon	Available in our College campus	NIL
31	Black Pepper	Available in our College campus	NIL
32	Black Pepper	Available in our College campus	NIL
33	Clove	Available in our College campus	NIL
34	Turmeric	Available in our College campus	NIL
35	Belladonna	Available in our College campus	NIL
36	Quinone	Available in our College campus	NIL
37	Aconite,	Available in our College campus	NIL
38	Aswagandha	Available in our College campus	NIL
39	Tulsi	Available in our College campus	NIL
40	Opium	Available in our College campus	NIL
41	Теа	Available in our College campus	NIL
42	Coffee	Available in our College campus	NIL

S.NO.	Permanent Slides	Quantity	Amount
1	Casuarina stem T.S.	1	NIL
2	Trapa stem T.S.	1	NIL
3	Asparagus stem T.S.	1	NIL
4	Nerium Leaf V.S.	1	NIL
5	Hydrilla Leaf V.S.	1	NIL
S.NO.	Specimens	Quantity	Amount
1	Trapa	1	NIL
2	Typha	1	NIL
3	Oscillatoria	1	NIL
4	Eichhornia	1	NIL
5	Hydrilla	1	NIL
6	Asparagus	1	NIL
7	Opuntia	1	NIL
8	Pistia	1	NIL
9	Ceratophyllum	1	NIL

Head of Department

Assist.Prof. Sangeeta Yadav

Loyola College Kunkuri

### LOYOLA COLLEGE KUNKURI DEPARTMENT OF BOTANY SESSION- 2018-2019

#### **Stock Material**

S.NO. PAR	TICULARS	Quantity	Rate	Amount
-----------	----------	----------	------	--------

1		1		
1	Plane Slide	12 pkt	110	1320
2	Cover Slip	1pkt	2800	2800
3	Dropper 6"	1 pkt	150	150
	Material			
4	Polysiphonia	10 tube	30	300
5	Phytophthora	10 tube	30	300
6	Marsilea Stem	10 tube	30	300
7	Equisetum Stem	10 tube	30	300
8	Polytrichum	10 tube	30	300
				1500
	Grand total			

Head of Department

Assist.Prof. Sangeeta Yadav

Loyola College Kunkuri