



Loyola College, Kunkuri

496225, Jashpur, Chhattisgarh

Annual report of Botany Department 2020-2021



Department of Botany

Vision: To develop interest and enthusiasm among the students towards the subject. To attain excellence in teaching in Botany in general and Research in particular. To enrich the students through knowledge and Botanical information.

Mission : To apply conventional and non conventional tools to understand plant process. To establish collaboration with eminent institutes for betterment of the students.

About Botany : The study of botany is vital as plants are a fundamental part of life on Earth. A three-year bachelor's degree program in Botany provides the foundation for prospective botanists to pursue a graduate level education or find an entry-level career.

About Botany Lab : Botany lab is well equipped for undergraduate students to perform various botany practical which are necessary for the study of the structure, properties, and biochemical processes of all forms of plant life, as well as plant classification, plant diseases, and the interactions of plants with their physical environment.

Objectives :

- The aim is to impart knowledge and training to equip students in plant science.
- To empower students with information and quality education.

- To apply the botanical knowledge to solve the present day to day problems.
- To encourage the students to attend and present in the National seminars.
- To empower the students in handling the laboratory tools.

Name of Department : **Botany**

Name of Incharge: Dr. Ignace Kindo (Dean of Science)
Assit.Prof. Miss. Sangeeta Yadav (H.O.D.)

Asst. Prof. Mrs. Sharda Singh

Name of Other Members : Dr.Oscar S. Tirkey S.J. (Principal)

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

Faculty Profile:

S.No.	Name of Faculty	Academic Qualification	Teaching Experience	Teaching Classes
1.	Dr.Ignace Kindo	M.Sc., M.Phil., Ph.D.,M.A. Education, B.Ed.	School-12 College-01	B.Sc.-I, II,III
2.	Sangeeta Yadav	M.Sc., DCA, B.Ed.,PGDCA, M.Phil, Ph.D- Going on .	School – 02 Years, 7 Month. College -06	9-12 th B.Sc.-I, II,III
3.	Sharda Singh	M.Sc., PGDCA, M.Phil, B.Ed.	5	B.Sc.-I, II,III
4.	Tikeshwari Anant	M.A.(Sanskrit)	11	Practicals

Degree College Course:

S.No.	Year	Course Code/Paper	Title
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1.	B.Sc. FirstYear	26 A/ First Paper	Bacteria, Viruses, Fungi, Lichens and Algae
2.	B.Sc. FirstYear	26 B/ Second Paper	Bryophytes, Pteridophytes, Gymnosperms and Palaeobotany
3.	B.Sc. SecondYear	26 A/ First Paper	Plant taxonomy, economic botany, plant anatomy and embryology
4.	B.Sc. SecondYear	26 A/ Second Paper	Ecology and plant physiology
5.	B.Sc. Third Year	26 A/ First Paper	Plant physiology, biochemistry and biotechnology
6.	B.Sc. Third Year	26 B/ Second Paper	Ecology and utilization of plants
7.	All year students	26 P Practical	Botany practical for all year 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.

Classes and subject wise marks distribution:-

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

Department Highlights:

- Total No. Of Faculty member: 04
- Total no. of students in B.Sc. First:155
- Total no. of students in B.Sc. Second:90
- Total no. of students in B.Sc. Third:67
- Total no. of students in B.Sc.:312

RESEARCH PAPERS PUBLISHED

- I Published Paper DISTRIBUTION PATTERN OF SOME ETHNO MEDICINAL PLANTS OF KUNKURI IN JASHPUR DISTRICT under International Journal of Current Research.
- I Published Paper ETHNOBOTANICAL USES OF SOME MEDICINAL PLANTS IN JASHPUR DISTRICT CHHATTISGARH under International Journal Of Botany and Research (IJBR).

Workshop/Conference/ Seminar/ Webinar Attended:

- Dr. Ignace Kindo has presented papers in national and international conference and seminar sponsored by UGC, DBT and DST. He was awarded with Rajiv Gandhi national fellowship in 2014-2015.
- Was speaker at Dr.Ignace Kindo International Conference on Sickle Cell disease.
- Miss Sangeeta Yadav participated in National Webinar on Covid-19 Pandemic & Online Education Issued organized by Department of Computer Science & Application held at Loyola College Kunkuri, Dist. Jashpur. Dated on 17 October 2020.
- Mrs.Sharda Singh participated in National Webinar on Covid-19 Pandemic & Online Education Issued organized by Department of Computer Science & Application held at Loyola College Kunkuri, Dist. Jashpur. Dated on 17 October 2020.
- Miss Sangeeta Yadav participated in International webinar titled “ International Day of Biological Diversity” organized by ENVIS RP AT WWF AND ENVIS RP AT WII. Dated on 22 May 2021.

- Miss Sangeeta Yadav participated in NATIONAL ASSESSMENT AND ACCESSMENT AND ACCREDITATION COUNCIL BENGALURU, INDIA International Webinar on for “Assuring and Enhancing quality: JUAA and QA Scheme in Japan”. Dated on 23 April 2021.
- Miss Sangeeta Yadav attend in Webinar “Soil Analysis”organized by PG. Department of Botany, ST. THOMAS COLLEGE BHILAI. Dated on 17 May to 31 May 2021.
- Miss Sangeeta Yadav attend in Webinar Quality Issues in Higher Education:Nepal’s Jouy to QAA. Dated on 19 May 2021.
- Miss Sangeeta Yadav attend in National Webinar on “Attempt to communicate” Organized by Gender Sensitizing Cell, C.M. Dubey Post Graduate College, Bilaspur(C.G.). Dated on 24 May 2021.
- Miss Sangeeta Yadav attend in International Webinar on ‘Way to Protect us from Black Fungus’.By Prof. Dr. S. Sudhakar, Dept.of Biotechnology, Manonmaniam Sundaranar University,Tirunelveli. Dated on 31 May 2021.
- Miss Sangeeta Yadav Participated in Online Workshop on Riveting Story of Molecular Modeling held on 7-8 June 2021,Organized by C.M. Dubey Post Graduate College, Bilaspur(C.G.).
- Miss Sangeeta Yadav Participated in One day International Conference on Changing Global Perspective on Investments-Carrers, Financial Statements and Sustainability” Organized by Amar Sewa Mandal’s GOVINDRAO WANJARI COLLEGE OF ENGGINEERING & TECHNOLOGY, NAGPUR DEPARTMENT OF MANAGEMENT STUDIES & RESEARCH in association with INTERNAL QUALITY ASSURANCE CELL. Dated on 12 June 2021.
- Miss Sangeeta Yadav Presented a Research Paper in International Conference on Environment, Agriculture, Human and Animal Health 05-06 June 2021.

- Miss Sangeeta Yadav have Award of Excellence in ICEAAH 2021.
- Miss Sangeeta Yadav Participated in two days International Conference on Environmental, Agriculture, Human and Animal Health 12 June 2021 Organized by Voice of Indian Concern for the Environment in association with Phycospectrum Environment Research Centre.
- Miss Sangeeta Yadav Participated in Webinar on GAP- C.V. RAMAN University Bilaspur Chhattisgarh- Online Faculty Development program on ‘ Research Pro’-A Complete Research Methodology 24-30 May 2021.
- Miss Sangeeta Yadav Participated in two days workshop on NAAC , Internal Quality Assurance Cell (IQAC) Organized by Sant Gahira Guru Vishwavidyalaya Sarguja Ambikapur Chhattisgarh from 28th May to 29th May 2021.
- Miss Sangeeta Yadav Participated in International faculty and Researcher Development Program IFRDP June 12, 2021 “Workshop on Art of Writing Research/Reviewed articles and publishing in per reviewed journals.”
- Miss Sangeeta Yadav Participated in Conference Special Discussion On Water Conservation, Biodiversity Conservation & Other Immediate issues. Dated on 19, June 2021.
- Miss Sangeeta Yadav Participated in National Webinar on Building Bridges Between Mathematics And Computer science Organized by Department of Mathematics Loyola College Kunkuri. Dated on 07, June 2021.
- Mrs. Sharda Singh Participated in Conference Special Discussion On Water Conservation, Biodiversity Conservation & Other Immediate issues. Dated on 19, June 2021.
- Sharda Singh participated in NATIONAL ASSESSMENT AND ACCESSMENT AND ACCREDITATION COUNCIL BENGALURU, INDIA International Webinar on for “Assuring and Enhancing quality: JUAA and QA Scheme in Japan”. Dated on 23 April 2021.

- All students Participated in Conference Special Discussion On Water Conservation, Biodiversity Conservation & Other Immediate issues. Dated on 19, June 2021.
- Miss Sangeeta Yadav Participated in International Conference on Recent Advances in Chemical, Physical and Biological Sciences, RACPBS- 2021 Organized by Department of Chemistry, Nabira Mahavidyalaya, Katol and Association of Chemistry Teacher, Mumbai. Dated on 30 June 2021.
- Miss Sangeeta Yadav attend in National Webinar Series on Job Opportunities in Rural Development Organized By Xavier Institute of Development Action & Studies, Jabalpur. Dated on 10th July 2021.

Staff and Students Achievement :

- Webinar organized in our college on Covid-19 Pandemic & Online Education Issues. Staff and students had participated.

(17 October)



- Organized our college National Webinar on “Building Bridges Between Mathematics And Computer Science” By Department of Mathematics. Staff and B.Sc. students had participated.

(7 June)



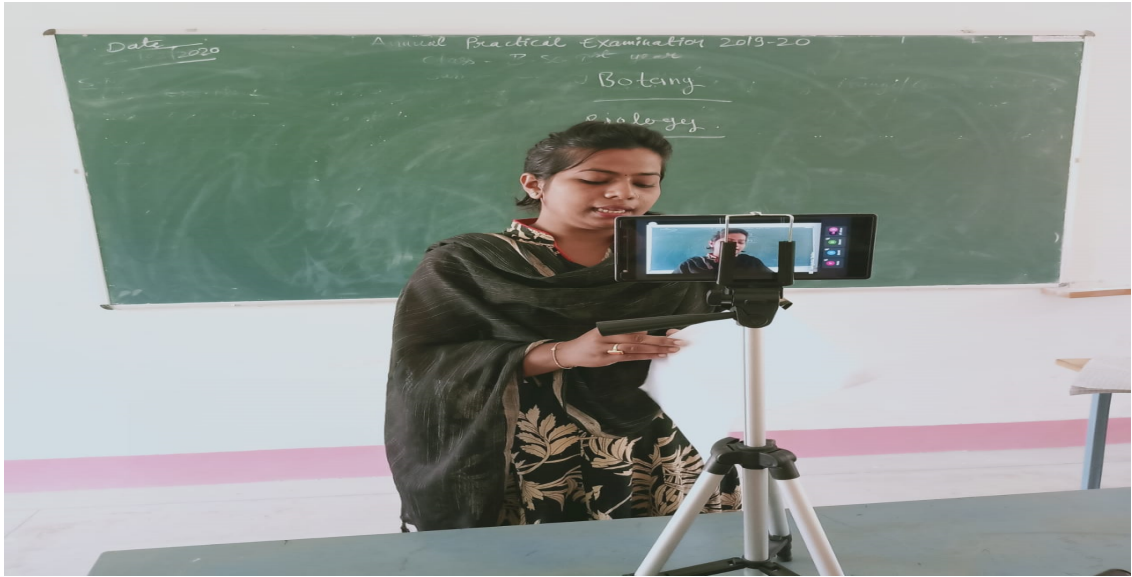
- Miss Sangeeta Yadav Presented a Research Paper in International Conference on Environment, Agriculture, Human and Animal Health 05-06 June 2021.

Departmental activities :

- Admission of Regular students was 155, 90 and 67 in B.Sc. I, II, III year respectively and total no. of student were 312 in session 2020-2021.
- B.Sc. First year students online Meeting/ Inogartion was done through Google Meet App. (15 October)



- Classes of B.Sc. I year's students started in Online Google Meet App. **(16 October)**



- Classes of B.Sc. III year's students started in Online Google Meet App. **(21 December)**
- Theory syllabus started with initiation of B.Sc. I,II and III year classes in offline mode. **(28 December)**





- Practical syllabus started with initiation of B.Sc. I, II and III year classes. **Practical classes** : 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.

(29 December)





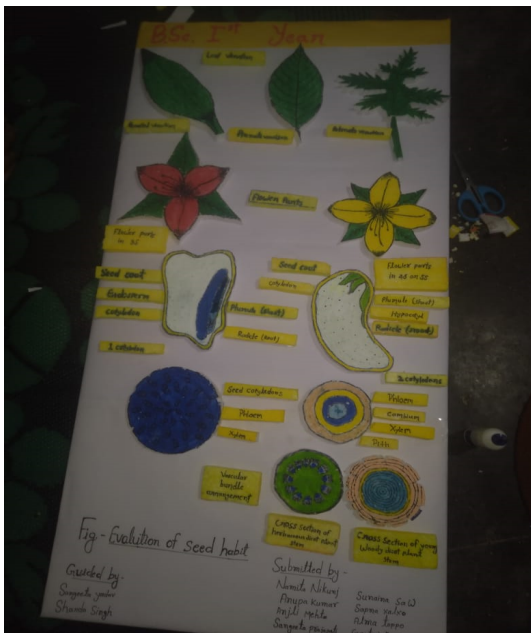
- Departmental meeting organized in every month and all staff members have a meeting with the principal.



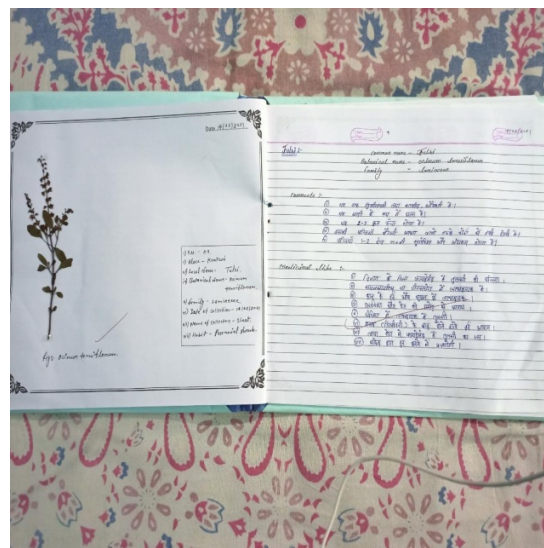
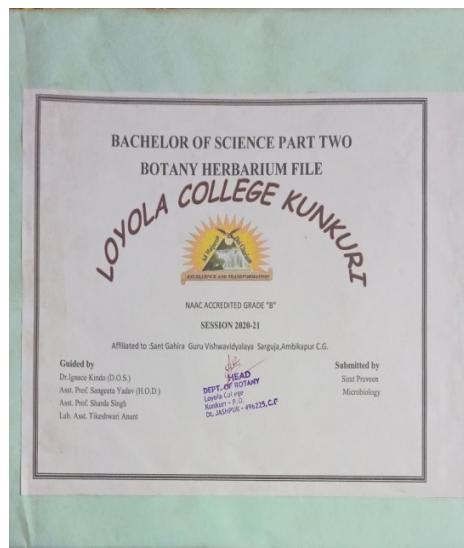
- Women and child welfare program was done on 10th March.
- Departmental meetings are held with the students. **(08 February)**



- On 11 January 2021 topics were allotted for Assignment, Model, Poster, project and PPT presentation of all years.
- Models made by B.Sc. First year students.



- **Herbarium** made by B.Sc. II year students according to their syllabus and locally available species. Weekly twice practical classes were arranged in botany laboratory.



- **Unit tests** : B.Sc. I, II and III year for the practice of 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. Monthly unit tests were conducted for students.



- **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. Analysis of plant species done by B.Sc. II and III year's students under field work.



- Monthly each student's (B.Sc. I, II and III Year) attendance was recorded.

- Motivational classes, Carrier guidance and Monitoring classes were provided for B.Sc. I, II and III year students each Saturday by Dr. Oscar Tirkey S.J. (Principal), Dr. Ignace Kindo (Dean of science), Asst. Prof. Sangeeta Yadav (HOD), Asst. Prof. Sharda Singh, Dr. Teleshphor Lakra (Vice Principal).



- **Seminar by B.Sc.I, II and III year students** : to have some teaching experience to 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. Seminar for students was conducted in seminar hall and class room also.



- B.Sc. III year students gave their seminar topics Plant tissue culture, Cloning vector, C DNA and Genomic library, Vectors for gene Delivery by power point presentation.



- B.Sc. first year students get PPT presentation on Gymnosperm topic was given by Afrin Nisha B.Sc. third year student.



- Botanical garden was maintained by students in Two month.
(January to February)



- On 26 January SDM Mr. Ravi Rahi and Nayab Tahsildar Mr. Avinash Chauhan came to our college and hoisted the flag.



- Motivational classes, Carrier guidance were provided for B.Sc. I, II and III year students by SDM Mr.Ravi Rahi and Nayab Tahsildar Mr.Avinash Chauhan. **(06 February)**



- The students of our department participate in NSS, Sports, Cultural activity and Blood Donation.
- Urmila Lakra Councilor of Kunkuri and Alderman had come in our college and motivated the students who distributed prizes to the students who were winners in Sports, Dance and NSS in District level. **(27 February)**



- Completion of syllabus and practical.

(February)

❖ **Project Exhibitions :**

- Quiz competition organized for all the students. (13 February)



- Penting, Botanical Rangoli competition organized for all the students. (20 February)



❖ Local Visits :

- B.Sc. Second year students were given one day Education Visit to Loyola College Campus Kunkuri. **(8 March)**



- B.Sc. third year students were given one day Education Visit to Loyola College Campus Kunkuri. **(10 March)**



- Women and child welfare program was done on 10th March.
- The Commissioner (Sarguja Division) Ms. Geneviva Kindo had come and visited our college and our department. **(13 March)**



- Online classes of B.Sc. I,II and III year students were conducted continuously with the help of Online Google Meet App.

(March-April)

- Departmental meeting held on 18/06/2021 regarding practical Exam with Principal.



- **Revision of curriculum 2020-2021**

This year the I,II and III year B.Sc.Botany Syllabus has been Revised.

- Practical exams were conducted on 1st July of B.Sc I,II and III year.
- Annual exam started from 12 July.

Sangeeta Yadav H.O.D.
Assistant Professor
Loyola College Kunkuri

LOYOLA COLLEGE KUNKURI
DEPARTMENT OF BOTANY
SESSION -2020-21
CLASS- B. Sc. I YEAR

DEAN OF SCIENCE	- Dr. IGNACE KINDO S.J.
HEAD OF DEPARTMENT	- Miss. SANGEETA YADAV
ASST. PROF.	- Mrs. SHARDA SINGH
LAB TECHNICIAN	- 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.

FUNGI

Object.4 Study of Vegetative and Reproductive Structure of ALBUGO and its Identification on the Basis of Characters.

Object.5 Study of Vegetative and Reproductive Structure of ALTERNARIA and its Identification on the Basis of Characters..

Object.6. Study off Gram Positive and Gram Negative Bacteria by the Method of Grams Staining.

BRYOPHYTA

Object.7 Study of Vegetative and Reproductive Structure of MARCHANTIA and its Identification on the Basis of Characters.

Object.8 Study of Vegetative and Reproductive Structure of PELIA and its Identification on the Basis of Characters.

PTERIDOPHYTA

Object.9 Study of Vegetative and Reproductive Structure of LYCOPODIUM and its Identification on the Basis of Characters.

Object.10 Study of Vegetative and Reproductive Structure of EQUISETUM T.S. of Stem and its Identification on the Basis of Characters.

Object.11 Study of Vegetative and Reproductive Structure of SELAGINELLA and its Identification on the Basis of Characters.

GYMNOSPERM

Object.12 . Study of Vegetative and Reproductive Structure of CYCAS LEAFLET and its Identification on the Basis of Characters.

Object.13 . Study of Vegetative and Reproductive Structure of PINUS NEEDLE and its Identification on the Basis of Characters..

Object.14 . Study of Vegetative and Reproductive Structure of EPHEDRA STEM and its Identification on the Basis of Characters.

Object.15 To Study f the given Specimens .

1. Sphagnum 2. Lichen 3. Lycopodium 4 Funaria
5. Cycas Seed 6. Ephedra Female Cone 7. Cara 8. Agaricus

Object.16 To Study f the given Permanent Slides.

1. Oedogonium Dwarf Male
2. Aspergillus W.M.
3. Marchantia Gemmae W.M.
4. Marsilea Sporocarp L.S.
5. Pinus Ovule V.S.
6. Cycas Rachis T.S.

❖ **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	Iodine Solution	2	NIL
5	Crystal Violet	1	100
6	Curd	250 Gram	20
7	Cotton Blue	1	NIL
8	Spirit Solvent	1lit	120
9	Fast Green	1	525
10	Distilled Water	250 ml	NIL

S.NO.	Name of Requirements	Quantity	Amount
1	Slide	3 pkt	NIL
2	Cover slip	5 pic	NIL
3	Dropping Bottle	5	NIL
4	Dropper	20	400
5	Watch Glass	25	NIL
6	Needle	05	250
7	Blade	1pkt	45
8	Spirit Lamp	6	NIL
9	Match Box	1pkt	NIL
10	Brush	25	NIL
11	Forcep (Big+Small)	10	650
12	Cotton	1	25
13	Filter Paper	3	NIL
14	Beaker	6	NIL
15S	Petridish Plate	10	680

S.NO.	Name of Plant Species	Quantity	Amount
1	VOLVOX	1	38
2	VOUCHERIA	1	38
3	ALBUGO	2	NIL
4	ALTERNARIA	2	NIL
5	MARCHANTIA	1	NIL
6	PELLIA	10 tube	NIL
7	ANTHOCEROS	10 tube	NIL
8	LYCOPODIUM	2	NIL

9	EQUISETUM STEM	2	38
10	SELEGINELLA	1	38
11	CYCAS LEAFLET	1	NIL
12	PINUS NEEDLE	2	NIL
13	EPHEDRA STEM	1	38

S.NO.	Permanent Slides	Quantity	Amount
1	Oedogonium Draft Male	1	NIL
2	Aspergillus W.M.	1	35
3	Marchantia Gemmae W.M.	1	35
4	Marsilea Sporocarp L.S.	1	NIL
5	Pinus Ovule V.S.	1	NIL
6	Cycas Rachis T.S.	1	NIL
S.NO.	Specimens	Quantity	Amount
1	Cara	1	245
2	Lichen	1	NIL
3	Lycopodium	1	245
4	Agaricus	1	245
5	Cycas Seed	1	NIL
6	Ephedra Male Cone	1	NIL
7	Sphagnum	1	NIL
8	Funaria	1	NIL

DEPARTMENT OF BOTANY

SESSION -2020-21

CLASS- B. Sc. II YEAR

DEAN OF SCIENCE	- Dr. IGNACE KINDO S.J.
HEAD OF DEPARTMENT	- Miss. SANGEETA YADAV
ASST. PROF.	- Mrs. SHARDA SINGH
LAB TECHNICIAN	- Miss. TIKESHWARI ANANT

EXPERIMENT LIST:

PLANT TAXONOMY

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

MALVACEAE FAMILY – *CHINA ROSE*

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

RUBIACEAE FAMILY – *IXORA PARVIFLORA*.

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

ROSACEAE FAMILY – *ROSA INDICA*

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*.

ANATOMY

Object .7 Preparation and Study of the Temporary Slide of the T.S. of SUNFLOWER STEM.

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

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

ECONOMIC BOTANY

Object.10 Identification and Comment on the Plant and Products Belonging to Different Economic use Categories.

PHYSIOLOGY

Object 11. Experiment to Prove that Oxygen gas is Released in the Process of Photosynthesis.

Object 12. Experiment to Demonstrate Transpiration by Four – Leaf Experiment.

Object 13. Demonstration of Endosmosis by Osmoscope of Potato.

Object 14. To study and Demonstrate Various phase of Mitosis by Preparing a mount of Onion Root tip cells.

Object 15. Demonstration of Plasmolysis and Deplasmolysis in Plant Cells.

Object 16. Determination of Percentage Frequency of Plant species in a given Plant community by Quadrant method.

Object 17. Determination of Density of Plant species in a given Plant community by Quadrant method.

Object 18. Determination of Abundance of Plant species by Quadrant method.

Object 19. Study of Anatomical Structure and Hydrophytic Adaptations found in the stem of Hydrilla.

Object 20. Study of Structure and Anatomical Xerophytic Adaptation in the Needle of Pinus.

Object 21. Preparation of Herbarium of Local wild Plants.

Object .22 To Study of the given Specimens .

1. Pinus Male Cone 2 Pinus Female Cone

3. Red rod of Sugarcane 4. Nymphaea Potiole

5. Echinochloa 6. Hydrilla

7. Casuarina 8. Ganong Potometer

Object .23 To Study of the given Slides.

1. Asparagus Stem T.S.

2. Casuarina Stem T.S.

3. Trapa Stem T.S.

4. Nerium Leaf V.S.

5. Metaphase

6. Telophase

❖ **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	Ganong Potometer	5	NIL
5	Quadrant	6	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	Light Green	1	NIL
5	Grease	1	NIL
6	Salt Solution	1	15
7	Hydrochloric Acid	1	NIL
8	Aceto Carmine	1	NIL
9	Aceto Orcein Stain	1	NIL
10	Alcohol	1	NIL
11	Sucrose	1	NIL
12	Fast Green	1	525
13	Distilled Water	250 ml	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	10	200
5	Watch Glass	20	NIL
6	Needle	20	NIL
7	Blade	1pkt	45
10	Test Tube Brush	10	NIL
11	Forcep	05	260
12	Cotton	1	25
13	Filter Paper	3	NIL
14	Beaker	7	NIL
15	Scissor	2	NIL
16	Stand	2	NIL
17	Thread	1	10

18	Test Tube	6	NIL
19	Funnel	6	NIL
20	Beaker	6	NIL
21	Paper Pin	1	NIL
22	Knife	2	NIL
23	Note Book	1	25
24	Pen	1	20
25	Pencil	1	5
26	Brush	6	NIL
27	Test Tube Rack	6	NIL
28	Pipettes	2	NIL
29	Spatula	2	NIL

S.NO.	Name of Plant Species	Quantity	Amount
1	MALVACEAE FAMILY – <i>CHINA ROSE</i>	Available in our College campus	NIL
2	RUBIACEAE FAMILY – <i>IXORA PARVIFLORA</i>	Available in our College campus	NIL
3	ROSACEAE FAMILY – <i>ROSA INDICA</i>	Available in our College campus	NIL
4	APOCYNACEAE FAMILY – <i>VINCA ROSEA.</i>	Available in our College campus	NIL
5	LAMIACEAE FAMILY – <i>OCIMUM SANCTUM.</i>	Available in our College campus	NIL
6	ASCLEPIADACEAE FAMILY – <i>CALOTROPIS PROCERA.</i>	Available in our College campus	NIL
7	PINUS NEEDLE	1	NIL
8	SUNFLOWER STEM	1	NIL
9	CUCURBITA STEM	1	NIL
10	ZEA MAYS STEM	1	NIL
11	HYDRILLA STEM	1	38
12	PLANT LEAF	Available in our College campus	NIL
13	Rice	Available in our College campus	NIL
14	Wheat	Available in our College campus	NIL
15	Maize	Available in our College campus	NIL
16	Sugarcane	Available in our College campus	NIL
17	Cotton	Available in our College campus	NIL
18	Jute	Available in our College campus	NIL
19	Groundnut	Available in our College campus	NIL
20	Mustard	Available in our College campus	NIL
21	Coconut	Available in our College campus	NIL
22	Timber	Available in our	NIL

		College campus	
23	Bamboo	Available in our College campus	NIL
24	Ginger	Available in our College campus	NIL
25	Asafoetida	Available in our College campus	NIL
26	Cardamom	Available in our College campus	NIL
27	Lesser celandine	Available in our College campus	NIL
28	Cinnamon	Available in our College campus	NIL
29	Black Pepper	Available in our College campus	NIL
30	Black Pepper	Available in our College campus	NIL
31	Clove	Available in our College campus	NIL
32	Turmeric	Available in our College campus	NIL
33	Belladonna	Available in our College campus	NIL
34	Quinone	Available in our College campus	NIL
35	Aconite	Available in our College campus	NIL
36	Aswagandha	Available in our College campus	NIL
37	Tulsi	Available in our College campus	NIL
38	Opium	Available in our College campus	NIL
39	Tea	Available in our College campus	NIL
40	Coffee	Available in our College campus	NIL
41	Potato	Available in Shop	20
42	Echhornia	1	38

S.NO.	Permanent Slides	Quantity	Amount
1	Asparagus Stem T.S.	1	NIL
2	Casurina Stem T.S.	1	NIL
3	Trapa Stem T.S.	1	NIL
4	Nerium Leaf V.S.	1	NIL
5	Metaphase	1	NIL
6	Telophase	1	NIL
S.NO.	Specimens	Quantity	Amount
1	Pinus Male Cone	1	NIL
2	Pinus Female Cone	1	NIL
3	Red rod of Sugarcane	1	NIL

4	Nymphaea Potiole	1	250
5	Echornia	1	NIL
6	Hydrilla	1	NIL
7	Casurina	1	250
8	Ganong Potometer	1	NIL

LOYOLA COLLEGE KUNKURI
DEPARTMENT OF BOTANY
SESSION -2020-21

CLASS- B.Sc. III YEAR

DEAN OF SCIENCE	- Dr. IGNACE KINDO S.J.
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. To Study the types of Stomata in the Epidermal peel of Leaves.
- Object 3. Comparison of Stomatal and Cuticular transpiration by Four Leaf Method.
- Object 4. Experiment to Prove that Oxygen gas is Released in the Process of Photosynthesis.

Ecology

- Object 5. Determination of Percentage Frequency of Plant species in a given Plant community by Quadrature method.
- Object 6. Determination of Density of Plant species in a given Plant community by Quadrature method.
- Object 7. Determination of Abundance of Plant species by Quadrature method.
- Object 8. Ecology Adaptation in Plant Group –

1. Hydrophytes – External Morphology 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 9. Study of 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, Quinone.
7. **Beverages** – Tea and Coffee.

Biochemistry / Biotechnology

Object 10. To Test the Polysaccharide Starch .

Object 11. To test the Presence of Monosaccharide in Plant tissue Fehling –A and Fehling –B
Moor's test.

Object 12 To test the presence of Protein in Plant tissue.

- A. Xanthoproteic test.
- B. Biuret test.

Object 13. 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 14. 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.
5. Hydrilla 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	Quadrant	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	100
4	Salt Solution	1	10
5	Sucrose	1	NIL
6	Mom	2	10
7	Petroleum Jelly	1	NIL
8	Sodium Hypochlorite	1	100
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	Silicon grease	1	NIL
20	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	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	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 Stand	4	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
35	Pipette	2	NIL
36	Spatula	2	NILS

S.NO .	Name of Plant Species	Quantity	Amount
1	Tradescantia Leaf	Available in our College campus	NIL
2	Plant Twig	Available in our College campus	NIL
3	Different Plant	Available in our College campus	NIL
4	Cucurbita	Available in our College campus	NIL
5	Mustard	Available in our College campus	NIL
6	Ixora	Available in our College campus	NIL
7	Tulsi	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	NIL
11	Fresh Leaf	Available in our College campus	NIL
12	Potato	Available in our College campus	NIL
13	Groundnut seed	Available in our College campus	NIL
14	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, Sheesham	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	Tea	Available in our College campus	NIL
42	Coffee	Available in our College campus	NIL
43	Hydrilla Stem	1	38
44	Eichhornia	1	38

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
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

Assis.Prof. Sangeeta Yadav

Loyola College Kunkuri

LOYOLA COLLEGE KUNKURI
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Stock Material

S.NO.	PARTICULARS	Quantity	Rate	Amount
	Chemical			
1	Spirit Solution	2 Bott.	120	240
2	Ethanol	5 Bott.	390	780
3	Glass Dropper	36 pic	20	720
4	Forcep	18	65	1170
5	Needle(big x small)	20	50	1000
6	Sodium Hypochlorite	2 x500ml	100	200
7	Lactophenol	1 x500ml	354	354
8	BOD Bottle	6 x300ml	649	3894
9	Biuret	6 pic	275	1650
10	Biuret Stand	6 pic	560	3360
11	Petridish	10 pic	68	680
	Material			
11	Selaginella Stem	1 Bott.	38	38
12	Equisetum Stem	1 Bott.	38	38
13	Marsilea Stem	1 Bott.	38	38
14	Anthoceros	1 Bott.	38	38
15	Volvox	1 Bott.	38	38
16	Vaucheria	1 Bott.	38	38
17	Pinus Stem	1 Bott.	38	38
18	Ephedra Stem	1 Bott.	38	38
19	Hydrilla Stem	1 Bott.	38	38

20	Nerium	1 Bott.	38	38
21	Nymphea	1 Bott.	38	38
22	Eichhornia	1 Bott.	38	38
	Chemical			
23	Fast Green solution	1 x500ml	525	525
	Specimens			
24	Nymphea	1	250	250
25	Casuarina	1	250	250
26	Nerium	1	250	250
	Grand Total			750

