





SUPPORTING DOCUMENTS FOR 1.3.3

Number of Students Undertaking Project work/Field work/ Internships







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Department of Geography: Visit to Manoli Toki Village, Haryana on 24.03.2024

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То	1 1107d:18-03-24.
The Principal Shivaji College, Unoiversity of Delhi	A.O. A.O. AL MANUEL 18-03-24.
Sub: Permission for one days academ	
Respected Sir	8.7
Project Report of Shivaji College outreach programme to Manoli Toki the part of their academic curriculum 53 Students and 3 Faculty Member Kumar Mishra, Dr. Usha Rani) are p	
Kindly grant permission to for the sa	ame.
Thanking You!	
Yours Sincerely*	
Prof. Tejbir Singh Rana Department of Geography	<i>i</i> .
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Department of Geography: List of Student's Visited to Manoli Toki Village, Haryana



संदर्भ संo/Ref. NeShi (Mar) 714 24

दिनांक/Dated 19/03/2024

TO WHOMSOEVER IT MAY CONCERN

The students of B. A. (Hons.) Geography, Semseter VI, Paper- Disaster Management Based Project Report of Shivaji College is going to field visit (study tour) as one day excursion outreach programme to Manoli Toki Village, Sonepat Halyana on 20/03/24 (Wednesday). This is the part of their academic curriculum and provide opportunity for experiential learning. There are 53 Students and 3 Faculty Members (Prof. Tejbir S. Rana: Tour Incharge and Dr. Prabuddh Kumar Mishra, Dr. Usha Rani) are participating in this study tour.

S No.	College Roll no.	Exam Roll No	Student's Name	Signature
1	21/31072	21071513001	Akshera Mehrotra	White popular
2	21/31060	21071513002	Alka Mishra	ALD.
3	21/31063	21071513003	Aman kr Yadav	Amani
4	21/31052	21071513004	Anamika Yadav	Larida
5	21/31016	21071513005	Angel	
6	21/31089	21071513006	Anirudhdha Yadav	Deale
7	21/31056	21071513007	Anshul Kumar	dustent.
8	21/31015	21071513008	Apurva	ZIPVINA
9	21/31012	21071513009	Ashika Oran	Ashita
10	21/31040	21071513010	Ashish Kumar	Armen Yada
11	21/31051	21071513011	Ayush Yadav	DATE LOGO

Page 1 of 4

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राजा गार्डन, रिंग रोड, नई दिल्ली-110027/Raja Garden, Ring Road, New Delhi - 110027 - ऑफिस/Off.: 011-25116644 टेलीफैक्स/Telefax: 011-25155551 • ई-मेल/E-mail: shivajicollege.ac@gmail.com • येव/Website ; www.shivajicollege.ac.in







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	शिलाजी कॉलेज (दिल्ली विश्वविद्यालय) Shivaji College (University of Delhi) NAAC ACCREDITED "A" GRADE COLLEGE	
	(University of Delhi) NAAC ACCREDITED "A" GRADE COLLEGE	
संवर्ग संव/Ref. No	दिनांक/Da	ted

S No.	College Roll no.	Exam Roll No	Student's Name	Signature
12	21/31012	21071513012	Bharti	Chards.
13	21/31025	21071513013	Deeksha	Satthe
14	21/31013	21071513014	Druv Chandra	alle
15	21/31027	21071513015	Dimple	Sirke
16	21/31042	21071513016	Gauri Arora	gauri
17	21/31045	21071513017	Gourav	Gorman
18	21/31004	21071513018	Guhjan	of-
19	21/31001	21071513019	Kulvinder Dahiya	Rust.
20	21/31074	21071513020	Manohar Kumar	- Amount
21	21/31021	21071513021	Mritika Mondal	Muthyprobal
22	21/31065	21071513022	Muskan	War-
23	21/31024	21071513023	Naksharatract	Anni
24	21/31039	21071513024	Nandini	Mandini
25	21/31059	21071513025	Neha Yadav	Notes
26	21/31006	21071513026	Niranjan Baro	Hiragen.
27	21/31010	21071513027	Nituraj Bania	

Page 2 of 4

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राजा गार्डन, रिंग रोड, नई दिल्ली-11902//Raja Garden, Ring Road, New Delhi - 119027 • ऑफिस/Off.: 011-25116644 टेलीफैक्स/Telefax: 011-25155551 • ई-मेल/E-mail: shivajicollege.ac@gmail.com • वेय/Website : www.shivajicollege.ac.in







Contd..

S No.	College Roll no.	Exam Roll No	Student's Name	Signature
44	21/31017	21071513045	Shrishti	Scialiti'
45	21/31031	21071513046	Stanzin Yangdon	Speng
46	21/31070	21071513047	Subham Kumar Mallick	Rullan:
47	21/31008	21071513048	Sweta Mathur	Burks.
48	21/31091	21071513049	Utkarsh Mishra	the.
49	21/31055	21071513050	Vedanshi Singh	Joseph Samuel
50	21/31005	21071513051	Vibhabri	(July
51	21/31071	21071513052	Yash Raj	Youle Ris
52	21/31035	21071513053	Yashwant	Vashward
53	21/31044	21071513054	Abhay Soni	Maria
ارتبط بين	na.e.			Prof! Virender Bhar Prin







Department of Geography: Photographs of Manoli Toki Village, Haryana, Visit











Department of Business Economics: Industrial Visit to Mother Dairy Plant









SHIVAJI COLLEGE

(UNIVERSITY OF DELHI)

DETAILS OF THE EVENT

TITLE OF THE EVENT:	INDUSTRIAL VISIT – MOTHER DAIRY PLANT
DATE AND TIME:	15 FEB 2024, 10:00 a.m.
NATURE:	OFFLINE
VENUE:	Mother Dairy Plant - Patparganj
DEPARTMENT/COMMITTEE/SOCIETY:	forBES – The Business Economics Society
TIC/CONVENER NAME:	Dr. Suman Kharbanda
NUMBER OF PARTICIPANT:	43
FINANCIAL ASSISTANCE (IF ANY):	NO

the

Dr. Suman Kharbanda Tic, Department of Business Economics







Department of Business Economics: Report of Industrial Visit to Mother Dairy Plant

Introduction:

The Department of Business Economics at Shivaji College, University of Delhi, embarked on an insightful industrial visit to the Mother Dairy Plant in Patparganj, New Delhi, on February 15th, 2024, under the vision of Dr. Suman Kharbanda ma'am. The visit aimed to provide students with a firsthand understanding of the intricate processes involved in dairy production, from sourcing raw milk to packaging the final products. This report encapsulates the educational journey and experiences of the business economics students during the visit.

Company Profile:

Mother Dairy is a renowned dairy company known for its commitment to quality and sustainability. With a presence across India, it plays a significant role in ensuring a steady supply of fresh dairy products.

Objectives:

- Gain practical insights into the dairy production industry.
- Understand the operational processes involved in milk processing and packaging.
- Explore the principles of precision and sustainability in dairy production.
- Identify the economic factors influencing the dairy business.







Contd..

Itinerary:

- Arrival and Welcome: The students arrived at the Mother Dairy Plant and were warmly welcomed by the company representatives.
- Presentation: An introductory presentation provided an overview of the company's history, mission, and operations.
- Plant Tour: Guided tours were conducted through various sections of the plant, showcasing the milk processing units, packaging facilities, and quality control measures.
- Interaction: Students had the opportunity to interact with plant managers and workers, gaining insights into their roles and responsibilities.
- Q&A Session: A question-and-answer session allowed students to clarify doubts and delve deeper into specific aspects of dairy production.
- Departure: The visit concluded with a debriefing session and expressions of gratitude to the Mother Dairy team for their hospitality.

Learning Outcomes:

- Students gained practical insights into the dairy production process, enhancing their understanding of supply chain dynamics and operational management.
- The visit reinforced the importance of precision, hygiene, and sustainability in the dairy industry, aligning with principles of business economics.









Contd..

Interaction with industry professionals provided valuable career guidance and networking opportunities for students interested in the dairy sector.

Memorable Moments:











Contd..



The industrial visit to Mother Dairy proved to be an enriching experience for the business economics students, offering invaluable insights into the dairy production industry's intricacies. The visit underscored the importance of experiential learning in complementing classroom education and preparing students for future endeavors in the dynamic world of business economics.

This report serves as a testament to the educational significance of industrial visits and expresses gratitude to Mother Dairy for their hospitality and contribution to student learning.

Industrial Visit Attendance



Dr. Suman Kharbanda TIC, Department of Business Economics





Business Economics: Attendance of Mother Dairy Visit

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Department of English: Excursion to Amrit Udyan

Excursion to Amrit Udyan and President's Estate

On March 9, 2024, the English Department of Shivaji College organized a captivating excursion to Amrit Udyan in Delhi, complemented by a museum tour of the President's Estate quarters. Guided by faculty members, students explored the lush greenery of Amrit Udyan, gaining insights into its botanical marvels and historical significance. Additionally, we embarked on an enlightening journey through the President's Estate quarters, delving into the rich heritage and architectural splendor of this esteemed residence. This holistic experience fostered a deeper understanding of both nature's bounty and the cultural heritage of our nation's capital, leaving participants enriched and inspired.

Learning Outcome- It was a tremendous learning experience for all of us to take a glimpse of the wild and domestic flowers in India and additionally walk through the corridors of history right from Independence to the current times, to understand the political heritage of our country right from the drafting of the constitution to it's current reverence in the minds of the polity.











Department of English: Photograph and Attendance of Amrit Udyan Visit



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Department of Botany: Educational Visit to Neela Hauz Biodiversity Park developed by DDA in South Delhi (31/10/2023)

Students of B.Sc. (H) Botany, 2nd year were taken for the Educational Visit to Neela Hauz Biodiversity Park developed by DDA in South Delhi, on 31/10/2023. This Educational visit is a part of the curriculum. Neela Hauz- an exemplary model of Urban Rejuvenation and a home for all the different kinds of Flora and Fauna. Students were apprised of the natural and existing science of wastewater treatment by filter bed of Integrated Constructed Wetland System with zero energy input and high efficiency. Facilitated by Dinesh Albertson, who shared his knowledge and experiences which enabled students to have an upright grasp of this natural science. Students witnessed the Natural Water Treating System that includes in situ remediation of sewage water by two Oxidation ponds, a Filtration zone and Aquatic plants. Students were made aware of all the native and medicinal plants along with the resident and migratory birds, Dragonflies, and all the components of an active wetland area that contributes to the ecological health of Neela Hauz Biodiversity Park. Dr Smita Tripathi, Dr Misha Yadav and Dr Anurag Maurya from the Department of Botany accompanied the students.







Department of Botany: Attendance sheet of Educational Visit to Neela Hauz Biodiversity Park developed by DDA in South Delhi (31/10/2023)

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	3	22/090	09	GARGI KATARIA JANVI	Ab		-	
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15	1	22/01	2081	Vadav Akash	1-	Part Contract	Agrany2	
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Department of Botany: Photographs of Educational Visit to Neela Hauz Biodiversity Park developed by DDA in South Delhi (31/10/2023)







Department of Botany: Educational Visit to Department of Biochemical Engineering and Biotechnology, IIT Delhi (15.04.2024)



WEST HO / Ref. No. SHI A DT 1926 24

दिनांक/Dated < 7 | 04 | 24

TO WHOM IT MAY CONCERN

This is to certify that the mentioned 26 students of B.Sc. (H) Botany – VI Semester from Shivaji College, University of Delhi went on an educational field visit to the Department of Biochemical Engineering and Biotechnology, IIT Delhi, on April 15, 2024 (Monday). This visit provided students an opportunity to deepen their understanding of the fermentation process, as they observed the operation of laboratory-scale fermenters in the Bioprocess laboratory and UG laboratory. They explored cutting-edge research facilities, including TOC analyser, HPLC-MS, GC-MS, and ion exchange chromatography housed in the Instrumentation Lab and Lotus Advanced Analytical Lab. They were introduced to methods and instruments for metagenomics research and the culture of soil microbes concerning plant health in the Environmental Genomics Laboratory. Dr Anurag Maurya and Dr Pawan Kumar were the conveners of this visit.

S. No.	Roll No.	Name of Student	S. No.	Roll No.	Name of Student
1.	21/09002	Jyoti	2.	21/09046	Manvi Chaudhary
3.	21/09004	Kundan Singh	4.	21/09047	Manisha
5.	21/09012	Priya Nautiyal	6.	21/09048	Palak Gupta
7.	21/09019	Kanak Bhardwaj	8.	21/09049	Sneha Goyal
9.	21/09022	Deepali Singh	10.	21/09050	Aayushi Mehra
11.	21/09025	Khushi V. B. Singh	12.	21/09051	Sanjivani Jaglan
13.	21/09026	Jeorus M. Singh	14.	21/09052	Aditya Bardhan
15.	21/09027	Anisha Singh	16.	21/09053	Anurita
17.	21/09028	Sandhya Yadav	18.	21/09055	Saniya Praveen
19.	21/09038	Nikita	20.	21/09056	Ayushi Yadav
21.	21/09042	Sanwari Jain	22.	21/09059	Supriya
23.	21/09043	Sakshi Singh	24.	21/09062	Harshita Tanwar
25.	21/09044	Mahima Sharma	26.	21/09064	Ansh Kumar

Prof. Virender Bhardwaj Principal

4

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Department of Botany: Photographs of Educational Visit to Department of Biochemical Engineering and Biotechnology, IIT Delhi (15.04.2024)









Department of Botany: Field Visit to IARI (16.04.2024)

DEPARTMENT OF BOTANY

Field Visit – INDIAN AGRICULTURE RESEARCH INSTIUTE- ICAR

Pusa, New- Delhi

Date- 16/04/2014

The students of B.Sc Life science IV sem who opted for Applied Phycology paper as discipline specific element course were taken on a visit to the Department of microbiology, PUSA on 16/04/2024. "The purpose of this visit was to observe and identify algae, and it was also helpful in gaining knowledge about their applied aspects. The students were accompanied with Dr. Priyanka Ojha.

The students gathered near ICAR and were then taken to the National Centre for Blue-Green Algae. Dr. Abraham, Principal Scientist at IARI, guided the students and provided essential information about the Azolla-Anabaena association and the use of algae as a biofertilizer. Additionally, the students had the opportunity to observe various herbarium specimens at NBPGR.

"The permission letter for the visit, geotagged photos, and the attendance of students have been attached."





Department of Botany: List of Students to Field Visit to IARI (16.04.2024)



TO WHOM IT MAY CONCERN

This is to certify that the mentioned 15 students of B.Sc. LS IV semester from Shivaji College, University of Delhi went on an educational field visit to the Indian Agricultural Research institute, ICAR, New Delhi on April 16, 2024 (Tuesday). This visit provided students an opportunity to observe and identify algae, and it was also helpful in gaining knowledge about the applied aspects of algae. Additionally, students had the chance to observe different kinds of herbarium specimens in NBPGR. The visit was purely academic in nature. Priyanka Ojha was the convenor of this visit.

Sr. No.	Name	Roll No.
1	Anjali Verma	22/23014
2	Anuj Bansal	22/23016
3	Isha Rawat	22/23032
4	Jiya Singh	22/23038
6	Nikita	22/23050
7	S. Gautam	22/23065
8	Sarthak	22/23068
9 Saumya Jha		22/23069
10 Shaurya		22/23071
11	Ashna Kalra	22/23095
12 Akshita Yadav		22/23099
13 Abhishek		22/23006
14	Priya Pandey	22/23060
15	Swaymbhoo	22/23077

Prof. Virender Bhardwaj Principal







Department of Botany: List of Students to Field Visit to IARI (16.04.2024)

	DSE- Applied	
LS IV SEMESTER	Phycology	
Name	Roll no. Before Visit After Visit	
1 Anjali Verma	22/23014 Aug 10:20 Aug 2	0
2 Anuj bansal	22/23016)
3 Isha Rawat	22/23032 2 Com 10:20 The 2:30	0.
4 Jiya Singh	22/23038 Timery 10:20 Type 2	
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6 Nikita	22/23050 Mikill 10:20 Mikila 2:3	, ,
7 Pooja Saini	22/23055	2:3
8 S.Gautam	22/23065 S. Garte 10:20 Grand	7. 1
9 Sarthak	22/23068 Southal 10:24 Southale &	31
10 Saumya Jha	22/23069 Laumya, 10:20 Saumya 2	. 30
11 Shaurya	22/23071	30
12 Simran Raj	22/23073	* *
13 Ashna Kalra	22/23095 Klaus, 10:20 Sthe 2	10
14 Akshita Yadav	22/23099 Abstratogram 11:01 Abstraction 2	:29
15 Abhishek	22/23006 Astribut, 10:20 4/1-04 16	19
16 Swamybhoo	22/23077 Cephe 0 10:23 Subles 2:	35
17. Priya Pandey	22/23060 Priva Pauly, 10:20 / high /m	2.26





Department of Botany: Photographs of Students to Field Visit to IARI (16.04.2024)









Field Visit Report: Plant Tissue Culture Laboratory, University of Delhi

On 30th April 2023, a field visit was organized for 50 students from the Botany Department of Shivaji College, University of Delhi, enrolled in the Skill Enhancement Paper on Plant Tissue Culture of Semester IV by Dr. Pawan Kumar and Dr. Devender Singh Meena as conveners. The students visited the Plant Tissue Culture Laboratory in the Department of Botany at the University of Delhi. The students were hosted by Prof. Sandeep Das in his lab, where they observed advanced tissue culture techniques. The visit commenced in the Arabidopsis Culture Room, where students observed the controlled conditions essential for plant growth, including specific temperature, light, and humidity settings required for cultivating Arabidopsis thaliana. Following this, they proceeded to the Plant Tissue Culture Room, where Dr. Ekta Bhardwaj, a PhD student, provided a detailed demonstration of the tissue culture process, explaining each critical step from medium preparation and sterilization to the delicate inoculation procedures necessary for successful tissue propagation. The students were able to see firsthand how plant tissues are cultured under sterile conditions to promote growth and development. Dr. Bhardwaj's insights were invaluable, highlighting not only the technical steps but also the applications and significance of plant tissue culture in research and biotechnology. The session concluded with an engaging Q&A, where students discussed the real-world applications and challenges of plant tissue culture, gaining a comprehensive understanding of its importance in modern botanical research. Overall, the visit provided a unique and enriching experience that deepened the students' practical knowledge and appreciation for plant tissue culture techniques. This handson exposure was particularly beneficial for the students, as it reinforced classroom concepts and introduced them to real-world applications of plant tissue culture. They were able to observe the meticulous process required to maintain contamination-free environments, critical for the successful cultivation of plant tissues. Such experiences are instrumental in motivating students to explore further studies and careers in plant biotechnology and related fields. Overall, the visit provided a unique and enriching experience that deepened the students' practical knowledge and appreciation for plant tissue culture techniques, leaving them inspired to apply these insights in their own academic projects and future research endeavors.

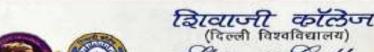


हिल्ला विश्वविद्यालय) Shivaji College



(University of Delhi)
NAAC ACCREDITED "A" GRADE COLLEGE

Field Visit Report: Plant Tissue Culture Laboratory, University of Delhi



Shivaji College



HERT HO / ROT. No Stylandon 11663/24

12/08/2024

TO WHOM IT MAY CONCERN

This is to certify that the below-mentioned 50 students of the Sem IV of SEC paper, Plant Tissue Culture, went on an educational field visit to the Plant Tissue Culture Laboratory, Department of Botany, North Campus, University of Delhi on 30th April 2024 (Tuesday). This field visit was organised by the Department of Botany, Shivaji College, University of Delhi. This visit allowed students to deepen their understanding of various tools and techniques of Plant Tissue Culture. Dr Pawan Kumar and Dr Devender Singh Meena were conveners of this visit.

SN	College Rall No.	Name	Course		
1	22/49076	Naserm Shaft	B.A. (Program)		
2	22/49209	Seumy Komar	B.A. (Program)		
3	22/4/09/5	Chetas Meera	B.A. (Program)		
4	22:49073	Diya Falusiya	B.A. (Program)		
5	22/49153	Annath	B.A. (Program)		
6	22/49071	Ayush Gautam	B.A. (Program)		
7	22/49066	Aadnya K. Yadav	B.A. (Program)		
5	22:49152	Amrit Raj	B.A. (Program)		
9	22/49(83	Ruschour:	B.A. (Program)		
10	22/33001	Aditys	B.A. (Hoss) Hind		
11	22/06013	Mansi	B.Sc. (H) Hiochemistry		
12	22/06012	Gayathry Krishna	B.Sc. (H) Biochemistry		
13	22/09004	Angati	B.Sc.(H) Botany		
14	22/09022	Telberi	B.Sc.(H) Botany		
15	22/09006	Ayush KChruthary	B-Sc.(H) Botany		
16	22/09015	Rakorsh	B Sc.(H) Botany		
17.	22/09014	Hajan Kumar	B.Sc.(H) Bittany		
18	22/09018	Saloni	B.Sc.(FI) Botany		
19	22/09008	Deepika	B.Sc.(H) Betany		
20	22/09005	Ankit Kumar	B-Sc (H) Botany		
21	22/99001	Aisloougu	B.Sc.(H) Betany		
22	22/09012	Nitroh Singh	B.Sc (H) Betate		
23	22.99028	Neha Pandey	B.Sc.(H) Betany		
24	22.09025	Omji Yadav	B.Sc.(H) Betany		
25	22/22017	Sonali	B.Sc (Hons.) Zoology		

SN.	College Roll No.	Name	Course		
26	22/22003	Bhanu Gautam	B. Sc. (H) Zoology		
27	22/72019	Vivek Singh	B.Sc(H) Zoology		
28	22/22031	Saheli Kanrar	B.Sc.(H) Zoology		
29	22/22023	Priyaranjan Delucy	B-Sc (H) Zoology		
30	22/22034	Sonam Singh	B. Sc. (H) Zoology		
31	22/22033	Maskan Gupta	B. Sc. (H) Zoology		
32	23/23037	Jitendry Singh	B.Sc. (Prog.) Life Sciences		
33	22/23022	Dabita	B.Sc. (Prog) Life Sciences		
34	22/23045	Mond Hasem	B.Sc. (Prog) Life Sciences		
35.	22/23036-	Jatin	B-Sc. (Prog) Life Sciences		
36	22/23030	Humair Ansari	B.Sc. (Prog) Life Sciences		
37	22/23977	Swayumbhoo	B.Sc. (Prug) Life Sciences		
38	22/23064	Rohit Kumar	B.Sc. (Prog) Life Sciences		
10	22/23086	Yash K Sharma	B.St. (Prug) Life Sciences		
40	22/23039	Karan Pont.	B.Sc. (Prog) Life Sciences		
41	22/23029	Hafin Azmi	B.Sc. (Prog) Life Sciences		
42	22/23945	Moddela Salvamar	B.Sc. (Prog) Life Sciences		
43.	22/23950	Nikita.	B.Sc. (Prog) Life Sciences		
44	22/23018	Anustika Shanna	B.Sc. (Prog) Life Sciences		
45.	22/27095	Ashea Kolra	II.Sc. (Prog) Life Sciences		
46.	22/23101	Suuminh Pandey	B.Sc. (Prog) Life Sciences		
42	22/00011	Nisha Rawat	B.Sc.(H) Betany		
48	22/99926	Dolly Chawla	B Sc.(H) Betany		
40	22/09033	Anshika Singh	B Sc.(H) Betany		
50	22/99011	Janei	B.Sc.(H) Betany		

Prof. Virender Bhardwaj Principal

राजा गार्डन, रिंग रोड, नई दिल्ली⊢110027/Raja Garden, Ring Road, New Delhi - 110027 * ऑफिस∪Oft.: 011-25116644 टेलीफैस्स/Telefax: 011-25155551 * ई–मेस/E-mail: shivajicollege.ac@gmail.com * येथ/Website : www.shivajicollege.ac.in







Photographs of Field Visit Report: Plant Tissue Culture Laboratory, University of Delhi

NAAC ACCREDITED "A" GRADE COLLEGE



Some photographs of the field visit to plant tissue culture lab at Department of Botany, North Campus, University of Delhi.





Department of Botany: DPSRU Visit on 24.6.2024





संदर्भ सं0/Ref. No Stelades/1520/24

दिनांक/Dated 2 4/07/2024

TO WHOM IT MAY CONCERN

This is to certify that the below-mentioned 24 participants of the Summer Training Programme went on an educational field visit to the Delhi Pharmaceutical Sciences and Research University (DPSRU). Delhi on 24th June 2024 (Monday). The training programme entitled, "Methods of Quality Control for Medicinal Herbs and Preparations" was organised by the Department of Botany, Shivaji College, University of Delhi under the aegis of the DBT Star College Scheme, from June 18-26, 2024. This visit allowed students to deepen their understanding of medicinal herbs, their cultivation, harvesting, storage, advanced techniques for phytochemical analyses, and the methods for making herbal formulations. It provided exposure to the procedures for checking the effect of herbal drugs on animal physiology and behaviour, and to the next-generation DNA sequencing technology. Dr Anurag Maurya and Dr Pawan Kumar were conveners of this visit.

Participant's Name	Course	College Name**	S. No.	Participant's Name	Course	College Name**
Aayush Kumur	B. Sc. (H) Biochemistry	SHC	13.	Uday	B. Sc. (Life Science)	SHC
Prachi	B. Sc. (H) Biochemistry	SHC	14.	Anusha	B. Sc. (Life Science)	SHC
Rishabh Singh B. Sc. (H) Rishabh Singh Biochemistry		SHC	15.	Ankit	B. Sc. (Life Science)	SHC
Vishesh kushwaha	B. Sc. (H) Biochemistry	SHC	16.	Anushka Gautam	B. Sc. (Life Science)	SHC
Shubham	am B. Sc. (H) Botany		17.	Kashish	B. Sc. (Life Science)	SHC
Neha Pandey	B. Sc. (H) Botany	SHC	18.	Lucky	B. Sc. (Life Science)	SHC
Aishwarya Yaday			19.	Santosh Singh	B. Sc. (Life Science)	SHC
Anjali	B. Sc. (H) Botany	SHC	20.	Simran	B. Sc. (Life Science)	SHC
Ankit Kumar	B. Sc. (H) Botany	SHC	21.	Niharika Das	B.Sc. (H) Biomedical Science	BCAS
Nitesh Singh	Nitesh Singh B. Sc. (H) Botany		22.	Jyotsna Chatterjee	B.Sc. (H) Biomedical Science	BCAS
Omji Yadav	B. Sc. (H) Botany	SHC	23.	Sudheer Gautam	B.Sc. (H) Biomedical Science	BCAS
Rakesh	B. Sc. (H) Botany	SHC	24.	Suhani Prasad	B.Sc. (H) Biomedical Science	BCAS
	Name Aayush Kumar Prachi Rishabh Singh Vishesh kashwaha Shubham Neha Pandey Aishwarya Yadav Anjali Ankit Kumar Nitesh Singh Omji Yadav	Name Course Aayush Kumar B. Sc. (H) Biochemistry Prachi B. Sc. (H) Biochemistry B. Sc. (H) Rishabh Singh B. Sc. (H) Rishabh Singh B. Sc. (H) Rishabh Singh B. Sc. (H) Biochemistry Vishesh B. Sc. (H) Biochemistry Shubham B. Sc. (H) Botany Neha Pandey B. Sc. (H) Botany Aishwarya Yadav Anjali B. Sc. (H) Botany Ankit Kumar B. Sc. (H) Botany Nitesh Singh B. Sc. (H) Botany Nitesh Singh B. Sc. (H) Botany Omji Yadav B. Sc. (H) Botany	Name Aayush Kumar B. Sc. (H) Biochemistry Prachi B. Sc. (H) Biochemistry B. Sc. (H) Biochemistry B. Sc. (H) Biochemistry Biochemistry SHC Neashwarya Biochemistry SHC Neah Pandey B. Sc. (H) Botany SHC Anish Kumar B. Sc. (H) Botany SHC Nitesh Singh B. Sc. (H) Botany SHC Omji Yadav B. Sc. (H) Botany SHC	Name	Name	Name

^{**} SHC = Shivaji College, University of Delhi; BACS= Bhaskaracharya College of Applied Sciences, University of Delhi

Prof. Virender Bhardwaj

Principal

ताजा गार्डन, रिग तोड, नई दिल्ली-110027/Raja Garden, Ring Road, New Delhi - 110027 • ऑफिस/Off.: 011-25116644 टेलीफैक्स/Telefax: 011-25155551 • इं-मेल/E-mail: shivajicollege.ac@gmail.com • वेब/Website : www.shivajicollege.ac.in







Department of Zoology: Permission Letter to Sanjay Van Visit

The Principal 18/10/15 bale: 11/10/2023 Shingi College 11 direction for formation Part fronts Rajo Garden New Delhi - 110027 Subject: Great of permission to visit Saujay Van On 07/11/2023 Respected Sir, and Is Night due respect, I. Prof. Swita Grapha wish to State; that the Studiet of BSc. (Hous.) Night of State; that the Studiet of BSc. (Hous.) Night of State; that the Studiet of BSc. (Hous.) Night of Academic visit mentioned in the syllabus of the practical paper Concepts of Europyt CNEP). The date for visit is 07/11/2023 at 9.00am. The Studiets will be reaching the venue on their own. All studiets will be submitting the duely Signed consent form their parents! I guardian. The Studiets will be accompared by mayelf, Dr. Nidhi Grang and Dr. Ralech Roshay. Thanking You. Your faithfully, Prof. Swita Grapta (Teacher In-charge) Department of Zoology, Shivaji College		
New Delhi-110027 Subject: Grant of permission to visit Saujay Van on 07/11/2023 Respected Sir, and to Night due respect, I. Prof. Sunita Grupta. wish to state that the Students of BSc. (Hous.) wish to state that the Students of BSc. (Hous.) Zoology, Semester I will be taken to Saujay Van Zoology, of Academic visit municipated in the as part of Academic visit municipated in the Syllabus of the practical paper Concepts of Eurlogy Syllabus of the practical paper Concepts of Eurlogy Syllabus of the practical paper Concepts of Eurlogy CREP). The date for visit is 07/11/2023 at 9.00am. The Students will be reaching the venue on their own. All students will be submitting the durchy Signed consent form fireir parents of guardian. The Students will be encompared by myself, Ds. Nidhi Grang and Ds. Raketh Rosham. Thanking You. Your faithfully, Prof. Sunita Grupta	(1 To! P19357419	
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Department of Zoology Shivaji College	TO THE POLY OF THE PROPERTY OF THE PROPERTY OF THE POLY OF THE POL	
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Department of Zoology: Report of Sanjay Van Visit

Event completion report -Visit Report on an Excursion to Biodiversity Park

Date of Visit: 07:11: 2023

Time: 09:00 A.M

Venue: Sanjay Van (DDA City Van) Course: B.Sc. (H) Zoology NEP UGCF

Subject: Concepts of Ecology

Purpose of Visit: To understand, explore and observe the diversity of fauna and flora and

Teacher Co-ordinator: Dr. Nidhi Garg and Dr Rakesh Roshan

The 25 students of B.Sc. (H) Zoology, Semester I, of Shivaji College, University of Delhi were accompanied by their teachers, Dr. Nidhi Garg, and Dr. Rakesh Roshan on a visit to Sanjay Van, a DDA city forest. The purpose of this visit was to provide students with firsthand exposure to a natural habitat and to enhance their understanding of biodiversity and ecological



Overview of Sanjay Van: Sanjay Van, located within the heart of the city, is a Delhi Development Authority (DDA) city forest that serves as a green lung. It encompasses a diverse range of flora and fauna, providing an oasis of nature amidst the urban landscape.

Activities and Observations: During the visit, students engaged in various activities, including guided nature walks, bird watching, and observation of plant and animal species. The







Department of Zoology: Attendance of Sanjay Van Visit

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SHEETAL	Priyanshi Kumari	Nusrat Fatma	Mehak Suyal	MARIAM	Kim Mondal	Edrasha Dubey	Daksh	ARCHANA SINGH KAUSHIK	Ansh Pathak	AAFREEN	Vishakha Garg	Student's name
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Department of Zoology: Permission Letter to visit RB Organic Poultry Farms

P/15/2/24

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The Principal Shivaji College University of Delhi Raja Garden New Delhi -110027

Subject: Permission to visit RB Organic Poultry Farms Nizamuddin, New Delhi with the students of B.Sc. Zoology (H) IV & VI semester students as a part of their curriculum.

Respected Sir,

We are organizing an educational field visit on 20th March 2024 (Wednesday) to RB Organic Poultry Farms Nizamuddin, New Delhi, for the students of B.Sc. Zoology (H) IV & VI semester students as part of the academic curriculum in the paper named-Developmental Biology. The students need to submit a report of their visit, which will be evaluated for their Internal Assessment.

The students of B.Sc. Zoology (H) IV & VI semester along with few teachers from the Department of Zoology (Ms. Nimita Kant, Dr. Deepika Yadav & Dr. Ankita Dua) will accompany the students and will follow all the necessary code of conduct.

The students are also asked to submit their parent's consent before the field visit. The students and teachers will directly reach the RB Organic Poultry Farms Nizamuddin, New Delhi by 9:30am. The complete lecture and poultry farm exploration will take around 2-3 hours. Proper attendance will be maintained for the visit along with the geo-tagged photos.

Kindly grant us the permission.

Thanking you

Ms. Nimita Kant

Associate Professor Dept. of. Zoology Shivaji college, D.U. Dr. Ankita Dua

Assistant Professor Dept. of. Zoology Shivaji college, D.U. Dr. Deepika Yaday

Associate Professor Dept. of. Zoology Shivaji college, D.U.

[Prof. Swite Capia]

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Department of Zoology: Photographs of RB Organic Poultry Farms visit









Department of Zoology: Attendance of RB Organic Poultry Farms visit

				f their curriculu		, Zoology (H) IV & VI s	AND THE PERSON NAMED IN
			DATE: 8	darch 20th, 2024			
s.NO.	ROLL NO.	NAME OF STUDENT	COURSE	SEMESTER	ATTENDANCE SIGNATURES	FEED	BACK
1	22/23013	Priyaronjan Dehwy	6-sc(Hons) Zobway	Ind.	16ge	How was your experience today?	Would you like to take part to such visits in future?
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5.	21/22014	Lakshay	BSC (H) Znalezy		9	Magnificent	Yes.
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t.	21/22061	Kamal	BSE (H) Zonly	312 year	del	n Infoliation	Yes
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-2.	21/22067	Himanshu	B. Sr. (Hon) Inology	VI th.	- Hearings.	How was your experience today?	Woods
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Department of Zoology: Permission Letter to visit National Zoological Park

	1943/24	Date: 09/04/24
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Cheverety of Delhi	()	Six
Raja Garden New Delni-110027		#101412M
Subject: Permission for	educationa	COSIF TO DECK
Zoological Park for o	for B.S. (M)	Zoology semester
and their behaviour	rein syllabu	o. "J
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Kespected Sir, As per the sy	elabus of	B.Sc(H) Zoology
somes ter VI (Wild life and somester IV (And	Conservation	and Management)
and semester IV (An	mal Behavio	ur) the students
need to visit Deen	Loological	rour and submit
wild animals	to plan a ti	p to the 200
a report. We have	I will be	accompanied by
Dr. Aestina Nigam, Dr.	Rakesh Rosh	ran and
Dr. Aleshina Majarini	ncial assistance	to be availed from
Dr. Aeshna Nigam, Dr. Dr. Saumya Das. No fina colly we will be of permission for the a	seiged if you	e grant us
permission for the a	ц.	Janila .
Thanking You.		[Pay Smile Cuple)
Yours sincerely,	Raph	Sarya Das
Aestrua Nigam	· DAMESH ROSHAN	DR. SAUMYA DAS
CAR ACCUALA NIGAMI LO	k. Kirkelii	S. Julius IB
No francial Typhanton in duct	The Bush	7/2/4/14 lelon







Department of Zoology: Report of National Zoological Park Visit

Report on visit to Zoological Park

Visit to National Zoological Park B.Sc.(H) Zoology Semester IV Animal Behaviour

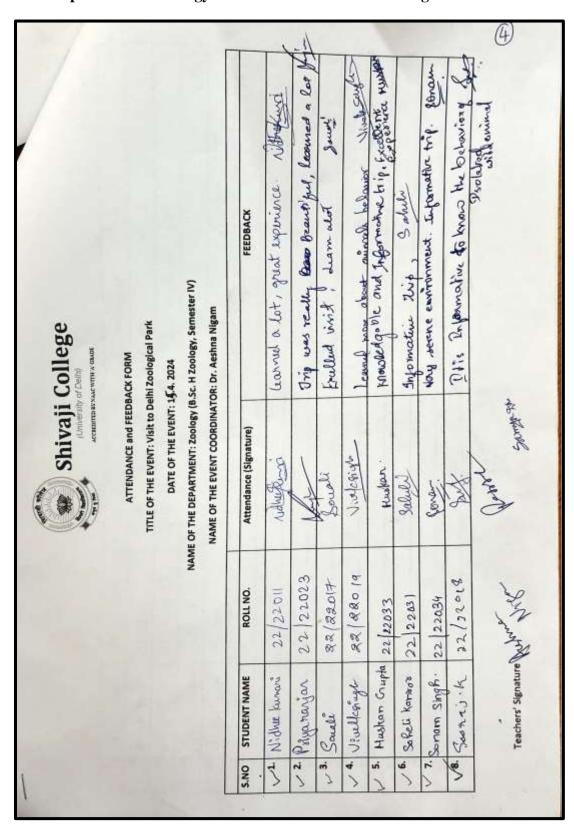
The students of B.Sc. (H) Zoology semester V of Shivaji College, University of Delhi along with teachers Dr. Aeshna Nigam and Dr. Rakesh Roshan and Dr. Samya Das went for an educational tour to National Zoological Park, New Delhi on 15.4.2024. The visit was a part of the curriculum of the paper Animal Behaviour. This was an exercise which helped students to practically observe the behavioral changes observed due to animals held captive. Captivity tends to dull the instincts of the animals which are very important for survival in the wild. The animals in zoo are provided with food daily at the same time so there was no competition or exhibition of predator prey interaction. Moreover, since single or two members of a species were kept together social behavior was not apparent. Understanding the behavior also helps in conservation efforts specifically for breeding and propagation of endangered animals. Few of the animals observed were crocodile, gharial, hooting monkey, white tiger, lion, Asiatic and African elephants, black swan, peacock, silver pheasant and many more. Since it was summer so the snakes were out of hibernation and they observed python, Indian cobra and others.





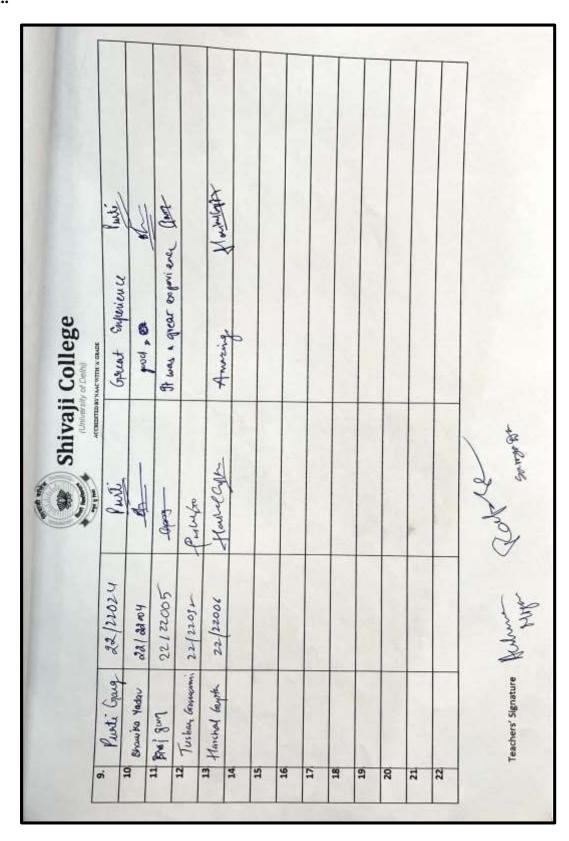


Department of Zoology: Attendance of National Zoological Park Visit











हिर्वाजी कॉलेज (विल्ली विश्वविद्यालय) Shivaji College



(University of Delhi)
NAAC ACCREDITED "A" GRADE COLLEGE

Department of Zoology: Permission Letter for Visit

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	ivaji college. Delvi u ja Garden, New Delvi	nivereity of in
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	Corport to received	Department of Toology





Department of Zoology: Report of National Zoological Park Visit

Visit to National Zoological Park
B.Sc.(H) Zoology: Semester VI
Wildlife Conservation and Management (VI sem_LOCF_ZH-DSC-11)

The students of B.Sc. (H) Zoology semester V of Shivaji College, University of Delhi along with teachers Dr. Aeshna Nigam and Dr. Rakesh Roshan and Dr. Samya Das went for an educational tour to National Zoological Park, New Delhi on 15.4.2024. The visit was a part of the curriculum of the paper Wildlife conservation and management (VI Sem_LOCF_ZH-DSC-11). This was an exercise which helped students to practically observe and Identification of mammalian fauna, avian fauna, herpeto-fauna through direct evidences due to animals held captive. Few of the animals observed were crocodile, gharial, hooting monkey, white tiger, leopard lion, Asiatic and African elephants, black swan, peacock, silver pheasant and many more. Since it was summer so the snakes were out of hibernation and they observed python, Indian cobra and others. Captivity tends to dull the instincts of the animals which are very important for survival in the wild. The animals in zoological park are provided with food daily at the same time so there was no competition or exhibition of predator prey interaction. Understanding the behavior also helps in conservation efforts specifically for breeding and propagation of endangered animals.



Dr. Rakesh Roshun

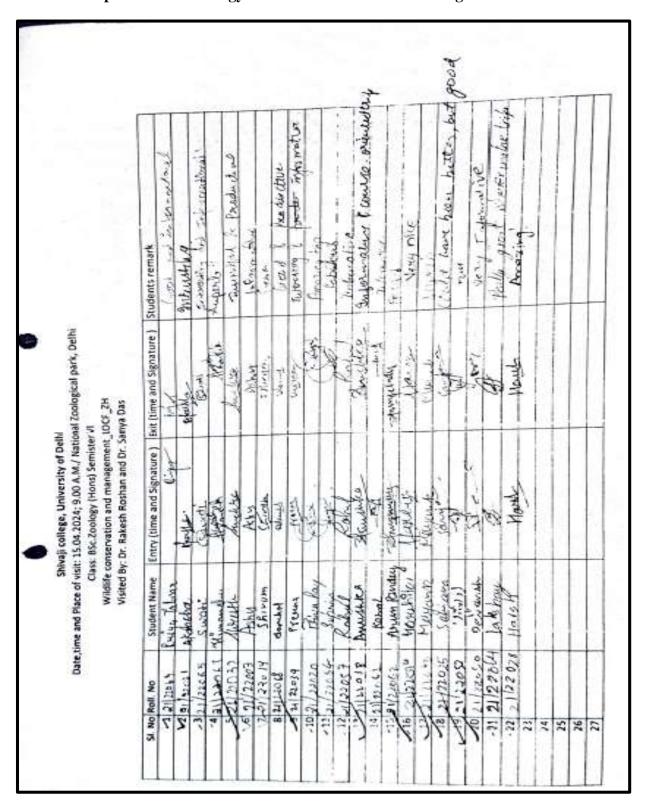
Dr. Rakesh Roshun Assistant Professor Dept. of Zoology Garyaga,

Dr. Samya Das Assistant Professor Dept. of Zoology





Department of Zoology: Attendance of National Zoological Park Visit







Department of Zoology: Permission Letter for ICMR

P/21/4/24

To,

The Principal Shivaji College University of Delhi Raja Garden New Delhi -110027 Dated:15/04/2024

A.0.

Subject: Permission to visit ICMR-National Institute of Malaria Research
with the students of Sem (H) IV semester students as a part of their
curriculum

Respected Sir.

We are organizing an educational field visit on 18th April 2024 (Thursday) to ICMR-National Institute of Malaria Research, Sector-8, Dwarka, New Delhi, for the students of IV semester students as part of the academic curriculum in the paper named - Parasitology (ZOO-DSE-8) to study the natural history and diagnostics of parasites. The students need to submit a report of their visit, which will be evaluated for their Internal Assessment.

The students of B.Sc. (H) Zoology & B.Sc. (P) Life Sciences semester IV along with two teachers from the Department of Zoology (Mr. Manish K. Sachdeva & Dr. Ankita Dua) will accompany the students and will follow all the necessary code of conduct.

The students are also asked to submit their parent's consent before the visit. The students and teachers will directly reach the ICMR-National Institute of Malaria Research, Sector 8, Dwarka. The complete visit will take around 2-3 hours. Proper attendance will be maintained for the visit along with the geo-tagged photos. No function assistance is required from one calege for the visit.

Kindly grant us the permission.

Thanking you

Mr. Manish K. Sachdeva Associate Professor Department of Zoology

Machdena

Shivaji college, D.U.

Dr. Ankita Dua

Assistant Professor Department of Zoology

Shivaji college, D.U.

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Department of Zoology: Photographs of ICMR Visit

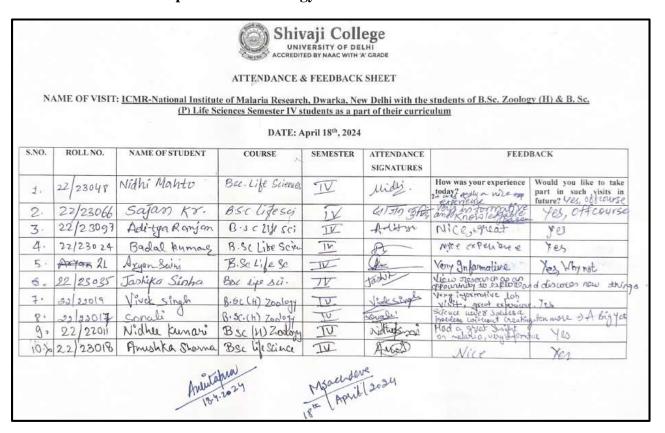








Department of Zoology: Attendance of ICMR Visit



s.vo.	ROLL NO.	NAME OF STUDENT	COURSE	SEMESTER	ATTENDANCE SIGNATURES	FEED	BACK
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		_ W ,		with April	105		







Department of Life Sciences: Permission Letter for ANDC Visit

	To, P(9578/29 Date: 19/10/2023
3/	The 1810spec
2%	Shirip College University of Delhi
1	Raja Granden
	11 a Devise - 11m27
	Subject: Request for grant of permission to visit Aacherya Namendra Dev College on 21-10-2023.
	Kespected Sir,
	Department of Zoology wish to state with due respect Department of Zoology wish to state with due respect
- 6	that the something of Antonya Namencha Der
	have to be there of
	Academic visit for the practical paper of
Valley.	Sericulture. The students will be reaching the
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	the visit duely signed by their parent/ quandic will be provided by the students.
10	902
*3	Forwarded 33.
	Thanking You. Sulph Yoday 3023.
	T.I.C.
	Widhe Steenes.
	(Dr. Nichi Georg) Assistant Professor
	Depenment of Zoology
	Depenment of Zoology Shivagi College
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Department of Life Sciences: Report of ANDC Visit

Event Completion Report- Visit to Sericulture Research Centre of Acharya Narendra Dev College

Date: 21st October 2023 Time: 11:00 A.M

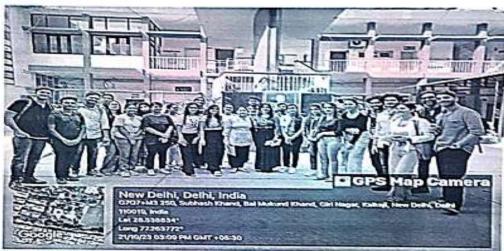
Institute: Acharya Narendra Dev College, University of Delhi, Govindpuri, Kalkaji, New Delhi

110019

Course: B.Sc (P) Life Sciences Subject: Sericulture (SEC)

Teacher Co-ordinator: Dr. Nidhi Garg

The 27 students of B.Sc. (P) Life Sciences of Semester V of Shivaji College, University of Delhi had visited Acharya Narendra Dev College, Seri-Lab on October 21st 2023 at 11 a.m. This visit was a part of their practical syllabus and all students prepared a detailed report on the same. The students were accompanied by their teacher: Dr. Nidhi Garg.



At the Aacharya Narendra Dev College, students were given a brief history of Sericulture including its discovery, the silk route, different varieties of silk that are produced by different silk moths which includes Mulberry silk and Vanya silk by Dr. Sushma Bharadwaj. Later they were taken to the indigenous mulberry garden of the college where they were shown to grow the S-146 variety of Mulberry from cutting, under the guidance of Dr. Sanjay Vohra, students were also taught how to pluck different sizes of leaves for different instar larvae, chopping and storing of leaves were also shown. After that the students visited the Sericulture lab where there were shown the life cycle of Mulberry silkworm (Egg. Larva, Pupa & Adult) with different instars of larvae (1th, 2rd, 3rd, 4th & 5th instar), moulting of larvae, mounting of the larvae, boiling & reeling of cocoons.

Cocoons of 4 different silk moths were also shown which were, Mulberry cocoons (Bivoltine & Multivoltine), Taser Cocoons (which were pedunculate), Eri cocoons (contribute in Ahimsa silk production), and Muga silk (having a unique coarse texture). The information of disease infestation and their control methods, mechanization, uses of disinfectants, and features of rearing house were also discussed.

(Dr. Niolli Gary)

Salida Yadar







Department of Life Sciences: Photographs of ANDC Visit









Department of Life Sciences: Attendance of ANDC Visit

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Student Feedback for the Sericulture Visit	Student's Signature Evening	Student's Signature Morning	Class Roll no. Student's name	Class Roll no.	Roll no.	3. NO.
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Department of Life Sciences: Report on Sanjay Van Visit

VISIT REPORT ON AN EXCURSION TO BIODIVERSITY PARK

Subject: Submission of a Report of Sanjay Van visit scheduled on 07, November 2023.

Date of Visit: 07.11.2023

Purpose of visit: To understand, explore and acquire knowledge of diversity of animal fauna

in Biodiversity Park.

Course: BSc. Life Sciences, NEP UGCF

Semester: I

Paper: Diversity of Animals

Department of Zoology organized a Sanjay Van visit on 07-11-2023 at 9 am for B.Sc. Life Sciences NEP UGCF, Semester I as on account of academic practical syllabus of the paper Diversity of Animals.

This visit is the part of the syllabus to understand and gain knowledge of diversity of animals.

Sanjay Van is a biggest forest area which is located in South Delhi near Vasant Kunj. It is a densely wooded forest which is home to a rich wildlife. Stretching over 3 sq. km of area, this is home to several avifauna species and diverse varieties of trees. It also includes invertebrates, Pila, insects, and several species of butterflies etc., Eurasian golden oriole, purple sunbird, Asian koel, Peacock, ducks, Brahminy starling, Indian silverbill, white-throated kingfisher, grey-breasted prinia, crested honey buzzard, rufous treepie, and Indian paradise flycatcher etc., the forest also conserves habitat for jackals, nilgais, diverse species of snakes etc.

This visit was attended by 93 students of practical batches 1, 2, 3, and 4 of B.Sc. Life Sciences, Semester I with the concerned teachers- Dr. Neetu Singh, Dr. Kulbhushan Thakur and Dr. Meghali Bharti, who guided and assisted the students throughout this visit.

Learning Outcome-

From this excursion, the students were able -

- 1. To observe and understand the diversity of fauna species
- 2. To identify various invertebrate and vertebrate animals based on characteristic features
- To understand the economic importance of non-chordates and chordates and their importance in the ecosystem.







Department of Life Sciences: Attendance and Feedback of Sanjay Van Visit

			FEEDBAG	CK OF SANJAY VAN VISIT BY STUDE	ENTS	
Timestamp	FULL NAME OF STUDENT	ROLL NO.	SEMESTER, BATCH AND COURSE	E-MAIL-ID:	MOBILE NO.	What is your take away from this visit? plea specify your learning outcome?
11-7-2023 13:41:53	Sachin Kumar	23/23043	1st B1 life science	sachinkumar.as470@gmail.com	6202117324	Explored the biodiversity
11-7-2023 13:45:57	Somya	23/23058	Semester - 1 , Batch - B2 , Course - Bsc. Life sciences	somyrohi12@gmail.com	7838680465	It was fun. I learned a lot about flora and fauna.
11-7-2023 14:30:05	Rinku	23/23039	1st sem,B1batch and bsc life science	rinkudhull98964435@gmail.com	9813545502	There were different species of plants and sor animals were also the
11-7-2023 14:33:37	Prachi Saini	23/23037	1st sem Batch B1 Bsc life sciences	jmdprachisainii@gmail.com	8448502299	I got to see a lot of plants and different types animals.
11-7-2023 16:09:48	Mayank Madhukar	23/23030	B.Sc. Life science	Mayankmadhukar20@gmail.com	7732886039	Identify different types of fauna
11-7-2023 16:13:25	Manoj Gupta	23/23080	1st , B2 And Bsc. (Prog.) Life Science	manojguptarollno@gmail.com	9891239113	This Visit was very helpful for me to reach out ma kinds of flora and fauna.
11-7-2023 17:25:29	Akanksha Singh	23/23133	Semester - 1 ,section -b and course -life science	singhkavaya123@gmail.com	7348754164	Pleasent environment, greenery everywhe variety of trees and mammals
11-7-2023 17:33:23	Rohit	23/23041	Semester 1, B1 and Bsc Life science	rohit.chaudharyy.244245@gmail.com	9999203051	The jungle is so huge in area and lots of flora fau found and only some kind of insects and anim found but in my observation I only found flo greenery is very good
11-7-2023 17:39:34	Shashwati Roy	23/23046	1st , B2 , Bsc Life science	shashwati.roy@gmail.com	9650826101	I got learn about different flora and fauna.
11-7-2023 17:42:06	Santosh Singh	23/23044	1st, B1, Bsc Life science	singhsantosh0309@gmail.com	9891390947	Explored many type of species like Lanta Flower,Orthetrum pruinosum, and type of species
11-7-2023 17:51:42	Roshni kumari	23/23042	First semester B1 bsc life	roshnirk215@gmail.com	9110038178	Saw different kind of floura all thaugh fauna w hardly there overall an average experience w limited learning
11-7-2023 17:54:53	Amisha yadav	23/23005	Semester 1 batch B1	amishayadav9585@gmail.com	9625635525	About different species of animals and plants
11-7-2023 17:56:10	Amisha yadav	23/23005	Semester 1 and batch B1	amishayadav9585@gmail.com	9625635525	
11-7-2023 18:06:18	Kartikay Jangra	23/23020	Semester -1, batch - b1, course - bsc life science	jangrakartikay24@gmail.com	9266210488	Learn about flora and fauna, plant diversity
11-7-2023 18:11:44	KHUSHI	23/23024	BSC LIFE SCIENCES .1 YEAR ,1 SEMESTER	Khushigupta9306649834@gmail.com	9306649834	THIS Visit helped me to gain knowledge about flo and fauna and it was an amazing trip
11-7-2023 18:30:48	Harsh kumar	23/23017	Bsc life science, 1st yr,1st sem	harsh052233@gmail.com	8700906965	Explores the diverse flora and fauna there more close to nature , this place was calming
11-7-2023 18:36:42	Himesh kumar	23/23018	1,B1,bsc. Life science	himeshhineshkumar.pc@gmail.com	8851828172	
11-7-2023 18:37:31	Neeraj Kumar Verma	23/23033	1(B1). B.Sc Life Sciences	neerajnkv12@gmail.com	9984350575	Learned about different species of flora and faur

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11-7-2023 18:38:55	Ankit	23/23007	Sem 1, Batch B1, BSC life sciences	ankitshakyacry@gmail.com	9315822882	It was really quite amazing, I'm looking forward more of such visits
11-7-2023	Anushkaa	23/23007	sciences	ankitsnakyacry@gmail.com	9313022002	more of such visits
18:45:12	gautam	23/23009	1.B1, bsc life science	anushkagautam582@gmaiil.com	8368665592	
11-7-2023			1st semester B1 batch life			got to know more about the different flora and far
18:54:54	Mani Dhawan	23/22028	science	manidhawan001@gmail.com	9990229907	present there
						Through our educational visit to Sanjay Var gained a deeper understanding of biodiversity ecological conservation. Witnessing diverse if and fauna firsthand, I learned the importance preserving natural habitats and the impact human actions on the environment, fostering sense of environmental responsibil
11-7-2023 19:25:45	Kashish	23/23021	Sem-1, B-1 , bsc.life sciences	kashishjangra2525@gmail.com	7982997468	
11-7-2023 19:28:53	Shikha Singh	23/23048	1st B2 , Bsc life science	shikhasingh08.2005@gmail.com	8958489550	Seeing different type of species and plants
11-7-2023 19:30:01	Ritik	23/23040	1,B1and life science	ritikboyat64@gmail.com	9718365286	
11-7-2023 19:37:32	Garima	23/23016	1	singhgarima2309@gmail.com	7665396469	Visit was too good. Saw many things . Environm was awesome.
11-7-2023 19:59:43	Anshika Rawat	23/23008	Semester 1 , Batch- B1, course - Bsc life sciences	anshuneelam611@gmail.com	7880010720	It's an amazing experience, we gain many pract knowledge. We saw habitat of animals and way they are living.
11-7-2023 20:06:20	bishal raj	23/23012	first year	rajbishal535@gmail.com	6203060367	about different species of plants
11-7-2023 20:18:36	Simran Yadav	23/23054	Sem-1, batch-b2 , course- bsc Life sci	simranyadav9306@gmail.com	9306025766	Saw forest habitat and various habitat cor under this Related animal and plant specie was nice visiting there.
11-7-2023 20:24:05	Keshav	23/23022	Bsc life sciences 1st year sec A bech 1	Keshavmadhre82@gmail.com	8920692727	Think about what students should be able to k or do upon successful completion of the course
11-7-2023 22:07:15	Piyush Ranjan	23/23085	Bsc Life science 1st semester	piyushranjan877@gmail.com	9006868088	Broadens my views on biodiversity and its aspe
11-7-2023 22:13:07	Lucky	130	1,B4 and B.sc life Science	Lakshay2618@gmail.com	9540909349	I only see about duck's
11-7-2023 22:37:48	Anjali Kumari	23/23105	1st, B3 and Bsc.(prog.) Life Sciences	anjalikumari23120@gmail.com	9958598671	This visit was a really incredible chance to exp the diverse flora and fauna which usually is easy to find these days. It was a good wa reconnect with nature and admire its beauty the different behavioural patterns of animals he us to study about them.
11-7-2023 22:58:59	Parul Baisla	23/23/135	1.B4.B.Sc Life science	tajenderbaisla8@gmail.com	9311428366	It was good but not as much zoological that thi can be we probably abled to see some ecosyste







, woms etc Overall it was good We have explored biodiversity of Sanjay Va Area.we have observed various flora and faun there.it a very pleasant experience along with out friends and teachers. 11-7-2023 23:20:25 Neha Kumari 11-8-2023 6:39:33 Neha Kumari 23/23034 Iife sciences program kumarineha68307@gmail.com 11-8-2023 8:03:16 Tanishq dhaka 23096 1- life science tanishqdhaka@gmail.com 7417192220 , woms 4Area.we have observed various flora and faun there.it a very pleasant experience along with out friends and teachers. 7678619657 Observe wide variety of flaura and fauna Trip was goodbut unable to see much flora an fauna 11-8-2023 1- life science	
We have explored biodiversity of Sanjay Va Area.we have observed various flora and faun there.it a very pleasant experience along with ou 11-7-2023 23:20:25 Neha Kumari 23/23081 1,82,8sc.Life Science nehasinghcutie2002@gmail.com 9043619943 friends and teachers. 11-8-2023 8:03:16 Tanishq dhaka 23096 1- life science tanishqdhaka@gmail.com 7417192220 fauna.	\exists
Area.we have observed various flora and faunthere.it a very pleasant experience along with outhere.it a very pleasant experience along	
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6:39:33 Neha Kumari 23/23034 life sciences program kumarineha68307@gmail.com 7678619657 Observe wide variety of flaura and fauna 11-8-2023 Trip was goodbut unable to see much flora an 8:03:16 Tanishq dhaka 23096 1- life science tanishqdhaka@gmail.com 7417192220 fauna.	
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8:03:16 Tanishq dhaka 23096 1- life science tanishqdhaka@@gmail.com 7417192220 fauna.	_
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Levelered a let of things from this visit Lept know	_
about the animals and plants residing in th	
ecosystem and their living habitat. I clicked a lot o	
pictures of ducks, birds, earthworms, etc so t	
11-8-2023 1st semester, Batch- B3, study them. I think this visit helped me to expan	d
9:08:47 Satwiki 23/23093 Bsc Life Science satwiki874@gmail.com 7838513919 my knowledge about flora and fauna.	-
11-8-2023 Sem 1 / Batch B2/ Bsc 10:55:38 Gaurav 23/23072 Life science gourav90982@gmail.com 8810351342	
TT-0-2520	y
17:22:30 Amrita 23/23136 science, section -B amrita999976@gmail.com 8826596967 geotage images of beautiful plants and animals. It was an amazing trip with teachers and friend	_
It was an amazing trip with teachers and mend All teachers taught us very well about flora an	
11-8-2023 Semester 1st Batch 3 and ther 17:26:12 Tanvi Dhall 23/23097 course Bsc life science tanvidhall2005@mail.com 9810568214 I really enjoyed this educational trip	۳ ا
	_
11-8-2023 1 semester,B3, B.sc Good experience exciting place loving wildlif 17:28:14 SAGAR PATEL 23/23090 (Prog.) Life Science patelsagar6113@gomail.com 9519326186 we explore and learn	•
	\exists
11-8-2023 1st semester ,batch 1 and 17:34:50 Kiran Bhatt 23/23026 bsc life science bhattkiran2005@gmail.com 9625408341 saw different species of plants	٦,
17.39.00 Rilan Briatt 23/23/220 Use the Science Unativariation of Science Science Unativariation of Science Science Unativariation of Science	2+
11-8-2023 Semester 1. Batch- B3. Semester 2. Batch- B3.	
11-8-2023 Semester 1, Batton B3, 17:38-48 Nidhi Mishra 23/23082 B Sc Life Science nidhimishray@gmail.com 9354674969 and habits	.5
17.30-90 Hulli Mishia 23/2002 B-30 Die Solenie Hullimishiay@gmail.com eo-hor-ee and raulis Forest is always not about the carnivorous an	d
herbivores animal it's all about une canimorous an	
11-8-2023 biodiversity and how the plants and the animal its	
11-8-2023 17:55:51 Rachit Yadav 23/23088 BSC Life Sciences 1st Yr rachityadav562@gmail.com 9315472289 together. In the same ecosystem.	٦,
17.00.01 Radnit raday 23/23000 BSC Lile Sciences 1st 11 radnityaday002ggman.com 95/1047/220e togetime. In the same ecosystem. When I visited Sanjay Van, I was immersed i	-
when I visited sampley vari, I was immersed in nature and learn about the rich biodiversity. W	
explored the walking trails, observe various plan	
explored the walking balls, observe various plan and animal species, and gain a deep	
and animal species, and gain a deep understanding of the importance of conservation.	
Genrester 1, Geologi - D,	
11-8-2023 SUROJIT Batch 4, BSc Life will left me with a greater appreciation for th 18:31:01 KANDAR 23/23118 Science suroitk987@mail.com 8799763585 natural world.	-
18:31:UT FANDAR 23/23116 Science Surojitk96/(Qgmail.com 6/88/03000 hattiral world.	_

11-8-2023 18:48:07	Diksha joshi	23/23122	1 sem, B4 bsc prog life science	dikshajoshi1404@gmail.com	8279719570	The nature is home to many. We got to observe learn and see about various flora and fauna. We also learned the habitat of many reptiles and birds.
11-8-2023 19:20:55	Riva Tiwari	23/23117	1st semester, B4 batch and B.Sc. Life Science	triya3298@gmail.com	6203939017	We have seen different floral and fauna in Sanjay van and it was nice experience.
11-8-2023 20:08:16	MAYANK CHAUHAN	23/23123	1 SEM B4 BSC LIFE SCIENCE	mayankchauhan 1834@gmail.com	07303807718	In SANJAY VAN I was learn that the beauty of the nature and peace in forest. I was seen some fauna Cervidae spider snail monarch buttery Bosela Phus Trago Camelus and some other higher animal in Sanjay van. Major part is filled with the fauna there are so many types or species plant present in the Sanjay van they have different type of flower fruits leaf and other.
11-9-2023 9:13:19	Sweety Kumari	23/23132	Life sci 1st sem	Sweety2k02@gmail.com	8434546516	Rich biodiversity lots of floura and funna
11-12-2023 22:19:48	Pinki	23/23084	1st,B3,Bsc. Life Science	pinkigkr@gmail.com	9311338286	I had new experience through this visit. I got to know about the flora and fauna of sanjay van which is amazing and beautiful by nature. This visit made me understand about how different species are conserve and my take away is that unforgettable experience when I saw flora and fauna of sanjay van I felt the nature from deep down. I am grateful towards my professors who gave me opportunity to understand the nature through this visit.I also enjoyed learning about those flora and fauna with my friends (classmates) Because we were searching about those flora on google and it make us more informative and knowledgeable about those flora and fauna.
11-16-2023						
				amitandan man (Banasi) asan	7011258442	1
16:29:41 12-2-2023	Arpit Kumar	23/23120	1,B-4, b.sc life sciences 1st year,B-4,BSc.Life	arpitandsaurav@gmail.com	7011200442	







Department of Life Sciences









Department of Biochemistry: DRDO Visit Report

INMAS, DRDO visit Report

Date: 08 July, 2023

An exhibition has been organized on 8th July 2023 in INAMS (Institute of Nuclear Medicine & Allied Sciences) a premier lab of DRDO under supervision of Dr. Himanshu Ojha, a senior scientist at DRDO. About 14 students from the **Department of Biochemistry**, **Shivaji**College along with Dr. Abhijeet Mishra Asst. Prof., Dept. of Biochemistry participated in this exhibition. The exhibition starts with an introduction to nuclear medicines.

In the first half, they showcase its products and emerging technologies to science graduate students. The main objective of INAMS is the development of radioprotectors, the development of diagnostics and therapeutic approaches using non-invasive imaging techniques, and the neurocognitive and endocrine functional assessment of the human body. They developed Ciprofloxacin Cold Kit for Infection Scintigraphy: 'Diagnobact', light Weight Foldable Stretcher, Lightweight backpack type Army field Cot., Adjuvant Cancer Therapy with 2-Deoxyglucose, UMBRIEL-the UV Herbal Screen for High Altitude. This was continued by a tea break, after this tea break participants get a chance for the lab visit with a clear vision of the CT scan machinery they are using for their experimental work. They also talked about the imaging techniques they are using. The visit was followed by a lunch break. After lunch break participants and professors were asked to give feedback, then certificates were given to the participants. This visit to INAMS at DRDO ends with a group photo.

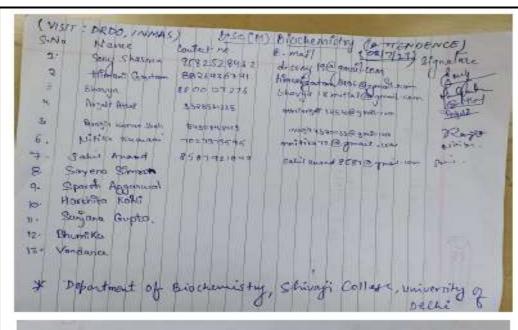
Dr. Sunita Singh







Department of Biochemistry: Attendance of DRDO Visit



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Dr. Sunita Singh







Department of Biochemistry: Photographs of DRDO Visit





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Dr. Sunita Singh







Department of Biochemistry: Educational Visit to South Campus

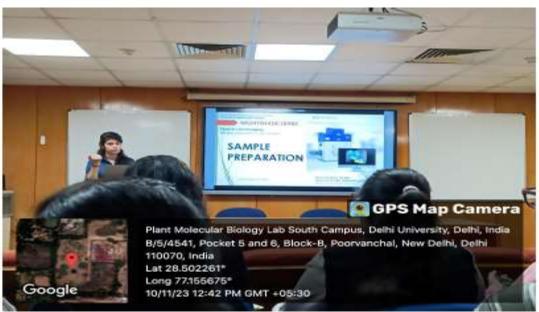
Report Educational Trip November 10, 2023

The Department of Biochemistry, Shivaji College, University of Delhi (under the aegis of DBT sponsored Star College Scheme) went for an Educational Trip to Prof. Girdhar Pandey's lab, Department of Plant Molecular Biology, University of Delhi, South Campus on November 10, 2023 from 11:00AM onwards. Prof. Girdhar Pandey and his PhD students familiarized the students with the plant tissue culture and gave them hands on training of each step involved. It was attended by 12 B.Sc. (H) Biochemistry Sem V students. This educational trip was organized by Dr. Sunita Singh and Dr. Usha Yadav.

List of the Participants (Total-12 students + 2 faculty members)

B.Sc. (H) Biochemistry Sem V

Pictures:









Department of Biochemistry: Photographs of Educational Visit to South Campus









Department of Biochemistry: Educational Visit to NIPGR

A brief report on "National Institute of Plant Genome and Research (NIPGR) open-day visit"

A visit to the National Institute of Plant Genome and Research (NIPGR) was organized by the faculty of Shivaji College under the proper guidance of Dr. Abhijeet Mishra, Department of Biochemistry and Dr. Rangnath Ravi, Department of Chemistry on 22nd Dec 2023. Totally 15 students from semesters III and V from different backgrounds, such as biochemistry, botany, and zoology participated in this visit. There are exhibitions of students who are working on different projects or research areas. There are so many research titles that increase the curiosity of students and make them fond of research work. The main purpose of the researcher is to provide a good plant with fewer consequences and environmental or resource consumption.

They had worked on plant mechanisms to cope with flooding stress in which they have modified a species of paddy by post-translational modification due to which the crop can survive more than 10 days even in a flood situation they try to stop the plant growth and focus on the photosynthesis process to meet the nutrient requirement in case of a flood. They named the transformed plant as scuba diving rice.

There is another research in which the researchers developed a technique to stop seed aging which is done in the case of orthodox seeds, they identified a protein-repairing enzyme that is responsible for increasing the viability of a seed.

A mustard oil extractor was also prepared there to minimize the odour that comes from mustard oil, some people avoid to use mustard oil just because of this odor. There are many poster presented there which basically show more researches on plant genome and some efficient instruments used during research. This visit increased the scientific temperament among the students and motivated them to work hard in research field. In the end students are also provided with refreshment.







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& Nisha Round & Arum Bunday	16 Sc (H) Zestopy	22/09028 22/09011 21/22062	Bodell.
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Department of Biochemistry: Photographs of NIPGR Visit

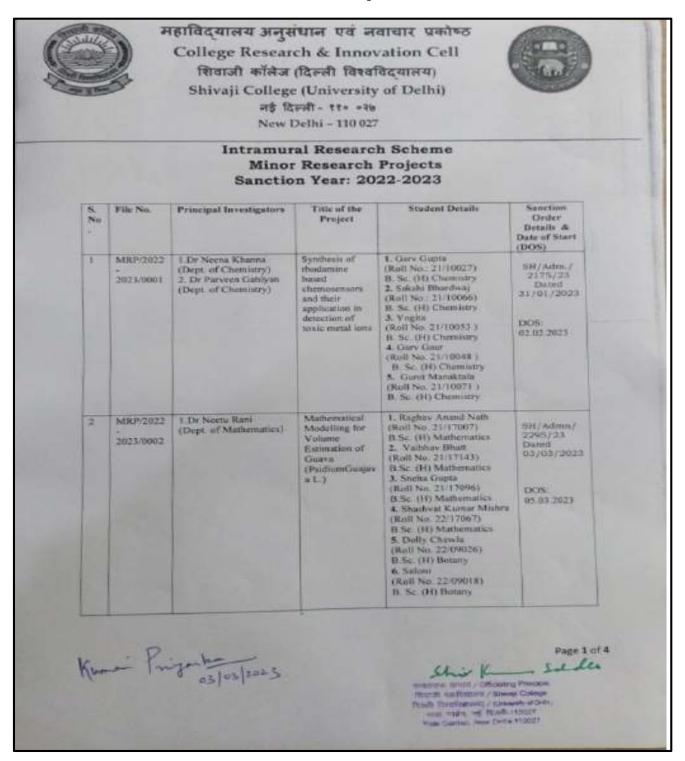








Minor Projects





द्यिवाजी कॉलेज

(दिल्ली विश्वविद्यालय) Shivaji College



(University of Delhi)
NAAC ACCREDITED "A" GRADE COLLEGE

*	MRP/2022 2023/9003	1. Dr Kiran Bamel (Dept. of Butany') 2. Di Secma Talwar (Dept. of Botany)	Impact of Elevated Temperature on the Seed Gerni ration of Medicinal plants (Carbor probas rosess and Treg smalls (Gernan- graceam)	E. Askill (Roll No. 22/09005) B. Sc. (H) Botany 2. Triberol (Roll No. 32/09022) B. Sc. (H) Botany 3. Palsk (Roll No. 32/23002) B. Sc. (Prog.) Life Sciences 4. Shorya (Roll No. 22/23071) B. Sc. (Prog.) Life Sciences S. Gaussen (Roll No. 22/23065) B. Sc. (Prog.) Life Sciences (Roll No. 22/23065)	591/Admin/ 2296/23 Dasid 03/03/2023 DOS: 05.03.2022
4	MRJP/2022 2923/0004	De Preets Tissari (Dept. of Geography) Ma Eksa Raman (Dept. of Geography)	Impact Assessment of Swachh Bharat Mission in Raghubir Nagar	1. Some Borana (Boll No. 22/21050) B.A. (H) Geography 2. Varishias Punia (Roll No. 22/21055) B.A. (H) Geography 3. Amon Singh (Roll No. 22/249151) B.A.(Program) 4. Mineers Siddiqua (Roll No. 22/21029) BA(H) Geography 5. Aditya Sharma (Roll No. 22/249112) B.A.(Program)	BH/Admin/ 2297/23 Dated 03/03/2023 DOS: 05.03.2023
3	MRP/2022 2023/0065	(Dept. of Biochemistry)	Comparative analysis of the effects of dietary supplements to Drosophila mulatrogaster	1. Sayona Sinnum (Roll No. 21/06035) B Sc. (11) Biochemistry 2. Sanjana Grapta (Roll No. 21/06037) IS Sc. (11) Biochemistry 3. Sany Sharma (Roll No. 21/06030) B Sc. (H) Biochemistry 4. Sahil Anand (Roll No. 21/06031) B Sc. (H) Biochemistry 5. Shrvang) Acgor well (Roll No. 21/06030) B Sc. (H) Biochemistry 6. Vandava (Roll No. 21/06037) B Sc. (H) Biochemistry 7. Debdatta Chatterjee (Roll No. 22/06037) B Sc. (H) Biochemistry 7. Debdatta Chatterjee (Roll No. 22/06037) B Sc. (H) Biochemistry 8. Pooja (Rell No. 22/06034)	EH/Admn/ 2298/23 Dated 03/03/2023 DOS: 05.03.2023
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				9. Kanishk Rar (Roll No. 22/06017) B.Sc. (H) Biochemistry 10. Tushar Gupta (Roll No. 22/08032) B.Sc. (H) Biochemistry	
•	MRP(2022 2023/0006	Ma Nomita Kant (Dept. of Zoology) De Bendra Kr. Chaudhary (Dept. of Zoology)	Developing insights rate stars cell therapseatic perantial for summatological disarders based on analysis of National Institute of Stealth (NIHI)'s clinical trials repertuire	I. Priya Roy (Roft No. 21/22020) B Sc. Zoology(11) 2. Akurskiha (Roft No. 21/22021) B Sc. Zoology(14) 3. Supriya Bhardwaj (Roft No. 21/22054) B Sc. Zoology(14) 4. Lakishay Bhardwaj (Roft No. 21/22064) B Sc. Zoology(14) 5. Priya: Tulwar (Roft No. 21/22069) B Sc. Zoology(14)	SH/Admin/ 2299/23 Duted 03/03/2023 DOS: 05.63.2023
3	MHP/2022 2023/0007	1. Dr Laita Runa (Dept. of Geography) 2. Ms Rasheil Singh (Dept. of Geography)	Urban Sprawl Modelling & Commoding Patern- Dethi Guegaon Corridor: A Sustainable Growth	L Inika Garg (Roll No. 22/31020) B.A. (H) Geography 2. Ibilitial Verma (Rall No. 22/31021) B.A. (H) Geography 3. Toyaj Giri Gonwami (Rall No. 22/31034) B.A. (H) Geography 4. Nisodita Sharma (Roll No. 22/31033) B.A. (H) Geography 5. Dildar Ali (Roll No. 22/31017) B.A. (H) Geography 6. Shasharik Singh (Roll No. 22/31047) B.A. (H) Geography 7. Akilesh Kumar (Roll No. 22/31059) B.A. (H) Geography 8. Syed Sadiq Harain (Roll No. 22/31053) B.A. (H) Geography 8. Syed Sadiq Harain (Roll No. 22/31053)	5H/Admn/ 2300/23 Dated 03/03/2023 DOS: 05:03.2023



शिवाजी कालज (दिल्ली विश्वविद्यालय) Shivaji College



(University of Delhi)
NAAC ACCREDITED "A" GRADE COLLEGE

Department of Physics: Permission to Visit National Physical Laboratory

P/9084/23 The Principal 18/09/23 Shir-yè College university of Delli Raja Garden Subject: To lake pumission to writ NPL on 4 act. I would like be inform you that CSIR-National Physical Laboratory (NPL) has envited under wisitable wednesday 4, october 2023. ... dipentment is interested to accept the invitation. We have been asked & send maxmum 50 students and 5 faculty members. kindly allow us & take so students & NPL along with following faculty members: 1. Dr. Hamta N.O. 2. DA. S.S. GOWA 3. Prof Areun Vin Single 1. Dr. S. K Yadar S. Mr. Neetu Verma Intellige 1-1/2 is affached heresofth Thunki w. You is fretherely jan inc.







Department of Physics: Report of National Physical Laboratory Visit

Visit to the National Physical Laboratory

Date: October 4, 2023

On October 4, 2023, the Department of Physics at Shivaji College, accompanied by 37 selected students, had the privilege of visiting the National Physical Laboratory (NPL). The visit provided a unique opportunity for both students and faculty to gain insight into cutting-edge research and applications in the field of physics.



Fig 1:- Entire group at National Physical Laboratory

Our visit commenced with a tour of the Cryogenic Liquification Plants at NPL. The guide led us through this facility, where we had the opportunity to witness the preparation of liquid nitrogen and liquid helium from atmospheric gases. A knowledgeable researcher explained the intricate processes involved in producing these cryogenic liquids, emphasizing their critical roles in various scientific and industrial applications. Additionally, several experiments involving liquid nitrogen were conducted, showcasing its remarkable properties and practical





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Fig 2:- Students exploring physics throughout the visit at NPL

The second part of The final part of our visit exposed us to a series of small, active research projects taking place at NPL. These projects covered a wide spectrum of topics, including crystal growth, UV luminous materials, white light generation through blue laser headlamp technology, nanotube-based sensitive movement tracking, and the development of a unique material stamp for enhancing the security of passports and government-authorized documents. Our interaction with the researchers involved in these projects was both enlightening and inspiring, leaving us with a sense of excitement about the future of science and technology. The visit led us to the Solar Department at NPL. Here, we encountered a diverse range of solar panels, each serving distinct purposes. A knowledgeable researcher enlightened us on the fascinating world of photovoltaics, discussing topics such as PN diodes,





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silicon, fabrication processes, and the differences between commercial and satellite solar panels. One of the highlights of this segment was the demonstration of ultra-pure silicon solar panels, boasting an impressive efficiency rate of approximately 27% for converting solar energy. We also had the opportunity to observe a standard solar panel with an efficiency of around 22%. This demonstration emphasized the strides being made in the field of solar energy and its potential to revolutionize the renewable energy landscape.



Details

Name

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Time

10/4/23 3:47:36 PM

Fig 3:- learning through advanced experiments and apparatus







Department of Physics: Attendance of National Physical Laboratory Visit

Third Year	signature (Reporting Time)	signature (Departure Time)
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	Second Year	signature (Reporting Time)	signature (Departure Time)
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22/19007	Arpit Mann		· · · · · · · · · · · · · · · · · · ·
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22/19020	Krishna Sharma	CDS-	-
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22/19041	Sandhya Nayak	*MY	- DWAYAK
22/19042	Saurabh pal	/	A
22/19045	SHUBHAM SANJAY	25	255
22/19048	Vansh Goel		A
22/19049	YASH -		- A
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22/19056	Rishav Rawat	Why and	The state of the s
22/19057	SUKRITI SHARMA	Sukritt	Sukniti
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Department of Physics: Educational Visit to Rastrapati Bhavan

AN EDUCATIONAL VISIT TO RASHTRAPATI BHAVAN

DATE:- December 14, 2023

On 14 December 2023, The Physics Society of Shivaji College participated in an educational visit to Rashtrapati Bhawan. Students of Physics Department of 5th semester along with some faculty members visited the program. All the students and teachers were very excited for the visit.

After all reached the Rashtrapati Bhawan, the host there welcomed them with all warm greetings and told us about the motive of the visit. The visit was not only oriented towards physics theories but contained knowledge of some great upcoming programs which can help in growth of a student. The agenda of this visit was to give knowledge about upcoming program launches and how we as a student can contribute. As a physics student we all have a dream to work with ISRO but it's not easy and as a student it's impossible, but now we students can also be involved in some upcoming projects. The host told us that ISRO is organizing some upcoming projects and it's a great honour that we can all be involved in it.

The space station moon mission:- Gateway is a vital component of the NASA-led Artemis missions to return to the Moon and chart a path for the first human missions to Mars. The small space station will be a multi-purpose outpost orbiting the Moon and providing essential support for lunar surface missions, a destination for science, and serving as a staging point for further deep space exploration. NASA is working with commercial and international partners to establish Gateway.

Aditya L1:-The Aditya-L1 mission aims to deepen our understanding of solar phenomena, including the solar corona, photosphere, and the impact of solar winds and related radiation. The spacecraft's instruments have been calibrated during its voyage, sending back X-ray images and particle counts, showcasing its healthy condition.

At the end the host concluded the program with a doubt session which went very well and all the students participated in it with great enthusiasm. The visit gave us experience of education, learning and motivation. We are honoured that we were a part of this.



Fig 1:- Students and faculty members at Rashtrapati bhavan







Department of Physics: Permission Letter for Visit to IUAC

University of Delhi, Subject: Request for the permission to visit IUAC occasion of National science day (1 c on 28.224) I would like to inform you that we have been invited by IUAC (inter university accelerations center) to visit on the occasion of National Science day se or 28th Feb 2024. They have asked us to send maximum 10 students with one faculty member. Therefore, we are interested to send following 10 students of Bsc (H) Physics (DISCH) accompanied by I Saurabh Pal. (22/19042) 2. Aniket Pathak (22/19004) 5. Ishika (22/19015) 4. Rahul Mehra (22/19037) 5. Sandhya Nayak (22/19041) 6. Nisha Yadar (22/19027) 7. Rishar Rawat (22/19056) 8. Manjesh Kumar (22/19022) 4. Jalin Bhayana (22/19017) kindly allow is for this visit. IUAC invitation is Than king you.
Than king you.
Yours sincerely.
Dr. 6 Hamle (Associate Pred) ener, Physics society







Department of Physics: Report and Photograph of IUAC Visit

VISIT TO THE INTER-UNIVERSITY ACCELERATOR CENTRE (IUAC)

Date: 28th February, 2024

Science is a continuous journey; there is always something new and exciting to discover. In India, to honour the discovery of the "Raman Effect" by Indian Physicist Sir Chandrasekhara Venkata Raman, on 28 February 1928, National Science Day is Celebrated.

On 28 February 2024 Shivaji College, Department of Physics organised an educational visit to the Inter-University Accelerator Centre (IUAC), New Delhi under the guidance of Dr. Mamta. InterUniversity Accelerator Centre celebrated the day as the National Science Day Programme. The Director of IUAC Professor A.C Pandey interacted with everyone and introduced about IUAC campus and faculty.

Learning Outcomes:-

- The Chief Guest Professor K. Rama Subramaniam (IIT Mumbai) enlightened us with "The Maths and Astronomy of Aryabhata". Further, we were enlightened by "Different Dimensions of Vigyan Bharti".
- 2. we were also addressed on "Indigenous Technologies for Viksit Bharat 2047".
- we had a tour of IUAC laboratories, and they provided premier information about the Beam Transport System, Liquid Nitrogen Refrigeration Plant, Liquid Helium Refrigeration Plant under the Cryogenic group, High Current Injector, Free Electron Laser, Positive and negative ion beam facilities.
- 4. Then, they provided us with the participation certificate and travel allowance.

To sum up, our visit to IUAC on National Science Day was a journey full of Inspiration that left a permanent impression on each one of us.



Fig 1: Students Group at IUAC





Department of Physics: Attendance of IUAC Visit

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		endance	
	Edu	icational visit to IUAC	
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1	22/13022	Manjesh Kuman Manjesh	
2.	22/19027	Nisha Yadan Nisha Yadan	
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Department of Biochemistry Shivaji College Summer Training Program on Research Methodology 3.0 (June 05-July 03, 2023)

Report

The summer training program on research methodology 3.0 was organized by the Department of Biochemistry, Shivaji College, University of Delhi under the aegis of DBT Sponsored Star College Scheme with the supervision of Dr. Jayita Thakur, Dr. Sunita Singh, Dr. Renu Baweja, Dr. Usha Yadav and, Dr. Abhijeet Mishra from June 05-July 03, 2023. Total 29 students participated in this program. The whole program was divided into 5 modules, the first module was taken by Dr. Renu Baweja in which she introduced the participants to research methodology and what a research proposal is all about this was followed with the assignments related to the module. The next module was conducted by Dr. Usha Yadav in which participants were given a clear view of the research and sample design, also they got to know about the literature review, how to develop a hypothesis, and what research plan they have to include in it. These 2 modules were covered in week 1. The next week was taken by Dr. Abhijeet Mishra, he gave a basic idea for the health camp, and how to collect data from that help camp and digitalization of data, this week health camp was organized on the premises of Shivaji College. This health camp includes various parameters such as Height, weight, BMI, fat percentage, visceral fat, basic metabolic rate, and body age. He also developed a scientific temperament among students with his thought-provoking questions. The next module was followed by Dr. Jayita Thakur, in which participants learn about many areas of data presentation, data processing, and statistical analysis in the field of biochemistry during the summer training program. Dr. Jayita Thakur held engaging workshops on these issues, giving a piece of insightful information and practical understanding to students. A health camp is also organized in Miranda House for further data collection. During this 3rd







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week of the program students also got a chance to interact with experts like Dr. Suman Kharbanda, she gave detailed information on how to use Microsoft Excel for data analysis with Dr. Chhavi Sharma, she emphasized the significance of data input and formatting in order to conduct correct analysis. A talk with Dr. Bhupender has conducted for an insight view of Hypothesis Testing, Statistical Tests, and Secondary data analysis.

The last module of this program was taken by Dr. Sunita Singh, who conducted the session on ethical principles in research. The significance of following these principles was emphasized, particularly in terms of biosafety and ethics compliance. These sessions are more interactive with talks from different experts like Prof. (Dr) Man Singh who talks about Intellectual property rights and Patents with his in-depth knowledge, Dr. Ajay opened the discussion by emphasizing the necessity of thorough and methodical research. He emphasized the need for well-defined research topics, clear objectives, and good preparation in guaranteeing a research project's success, and at last, Dr. Arjun gave us a quick overview of the statistical analysis and briefly reviewed the questions submitted in the form of a Google form. All the modules have their own different assignments / tasks which kept the students focused. At last, this summer training program was concluded with a valedictory session in which the feedback of students was taken and the certificates were distributed.







The resource person of the program

- Dr. Jayita Thakur, Department of Biochemistry, Shivaji College, University of Delhi
- Dr. Renu Baweja, Department of Biochemistry, Shivaji College, University of Delhi
- Dr. Sunita Singh, Department of Biochemistry, Shivaji College, University of Delhi
- Dr. Usha Yadav, Department of Biochemistry, Shivaji College, University of Delhi
- Dr. Abhijeet Mishra, Department of Biochemistry, Shivaji College, University of Delhi
- Dr. Suman Kharbanda, Department of Commerce, Shivaji College, University of Delhi
- Dr. Chhavi Sharma, Department of Commerce, Shivaji College, University of Delhi
- Dr. Bhupender, Department of Microbiology, Swami Shraddhanand College,
 University of Delhi
- Prof. (Dr) Man Singh, School of Chemical Sciences, Central University of Gujarat
- Dr. Ajay, Department of Economics, Shivaji College, University of Delhi
- Dr. Arjun, Department of Economics, Shivaji College, University of Delhi







Posters









Shivaji College NAAC Accredited Grade "A" University of Delhi

Department of Biochemistry (under the aegis of DBT sponsored Star College Scheme)

Inter College Summer Training Program

RESEARCH METHODOLOGY 3.0 June 05 – July 03, 2023

LEARNING OUTCOMES

Participants will:

- · Learn to design a research based study and conduct review of literature
- Conduct survey based data collection and organize health camps
- · Analyze data using biostatistics followed by the interpretation of data
- Report the findings of project with appropriate citations and check for plagiarism
- · Interact with the experts and visit research labs

Last date for registration: June 01, 2023*

* No registration fees. Limited seats available.

Selected students will be informed through registered Email Id.

Certificates will be issued after successful completion of the STP.

PROGRAM COORDINATORS

Dr. Jayita Thakur, Dr. Renu Baweja, Dr. Sunita Singh, Dr. Usha Yadav Dr. Abhijeet Mishra

COORDINATOR

STAR COLLEGE SCHEME
Dr. Renu Baweja

WHO CAN APPLY?

UG and **PG** students

REQUIREMENT:

Access to Laptop/Desktop

Click here to register
Or
Scan QR code



PATRON

Dr. Shiv Kumar Sahdev Principal







Photographs













Attendance

SUMM	ER TRAINING PROGRAM "RES	o A o	(020 1927)
		D.	ATE 8 06 23
1.	Palak Pandey (Hansay College) Bsc. Lif Science	Ralak
2.	Nikita Wadhina (Hannaj Callege)) BSC life Scrince	s Winter
3.	Shruti, Bharkarachanya College of Applied Scie	neg BSC (4) Microbiology	I) Show
4.	Megha, Bhaskaracharya College	BSc. (H) Microbiology	
٤.	Kuntale, Bhaskaracharya "	B.Sc (H.) Microbiolo	
6.	Kuntak, Bhaskaracharya " Olveri Skokeed Rojgur College of Applied Sciences for Jomen	B. Se (14) Mecrobiology	- July
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9.	Abhrancel Gupta, BCAS	B.SeCH BMS	Abhrancel
10.	Vertika Rai GPGC.	MS L. ZOOLOGA	, Vertica.
11.	The state of the s	BiscHJ Biochim	fiduitament -
- 12 year	Ekta Mishora, IHE	Bsc (H) food Tech	EKtg.
13:	Nitika Kumaeni (Shingi) College	BSC. (n) Biochmi	Mitiba.
14.	Sahil Anand (Shinaji college)	Marie de Marie de la	Sahij
15.	Disha Chandeliyo (Shinaji Colley)	And the state of t	Bharja Disha.
16.	Bhanya Mettal (Shivaj) colly	B.Sc. (n) Biochm.	Blanya,
- 11	natosha Yadar (Si veneatesoda College)	BSILK) Wochomistry	netell-
18	Amurita Shivyi cology	B.Sc(H) Botapy	Anosita
19	Himani Gautam	BSC(H) Brochemista	Hammy auter
20	maye (Deshbawku college).	B. S.C. CH. 13 is theman	Me.
21.	Ayush Negi (Braskanasharya)	BSC(N) Chemistry	Ayrop
22.	Agush Charedrangl Amily University	B-Salta Brochem	Agul
23.	Animudh (Amity University)	B.Sc. (n.) Biochem	8cm
24,	Mohit Vashistia (swani shraddhanand	B-SC.CH.) Microbiolog	1,70
25.	Siddharth Jain Perhandulollege)	Blodem (n)	fidelote
26	Ashirth Rundl	Mirch	Shir
27.	Breek Tharimune College)	(3SACH) Bochemyry	Mariner
28.	Anstoto, Ramijey College.	BSC Life Sci	aslufe
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Shiavji College, Star College Scheme Department of Botany

Summer Training program on "Conservation and Utilisation of Medicinal Plants" from June 12- June 20, 2023

Department of Botany, Shivaji College had organized a week-long Summer Training Internship Programme under the aegis of DBT Star College Scheme, entitled "Conservation and Utilisation of Medicinal Plants" from June 12- June 20, 2023.

The session on the first day was addressed by Dr. Vijay Kumar, on 'Herbal Garden and Herbarium Techniques', followed by a talk delivered by Prof. Pratima Rani Sardar (Teacher in charge). The participants were acquainted with the procedures to prepare herbarium specimens, which was followed by a visit to the herbal garden of the college with Dr. Devender Singh Meena, to familiarize them with various plants of medicinal use. On the second day of the programme, the participants received hands-on training on experiments regarding Reproductive Biology of plants after a lecture session on the 'Role of Reproductive Biology in Conservation of Medicinal Plants' by Dr. Prabhavathi and Dr. Seema Talwar as the resource persons. The third day was devoted to a session on 'Conservation of knowledge related to medicinal plants and their uses' by Dr. Kiran Bamel and Dr. Nupur Mondal, followed by making students aware about the digital tools required to access information about traditional knowledge, modern patents and copyrights of plants available in our country. This was succeeded on the next day by a lecture session on 'Somatic Embryogenesis and artificial seeds' by Dr. Anuradha Mal and Dr. Deepshikha Chatterjee, where the participants learnt about raising plants on artificial growth media apart from soil after preparing them. The Programme also included a trip to the Botanical Garden of the Republic of India (BGRI, NOIDA), where the participants were apprised of the natural habitats and growth conditions of a wide variety of flora ranging from aquatic plants to the large trees. Dr. Priyanka Ingle (Scientist E and Head of Office, BGRI) led the participants to different sections of the Garden, including arboretum, Ayurvedic Herbal Garden, gave detailed account of the flora present and answered the various queries put forward by them. Participants also visited museum of BGRI displayed with collection of photographs and copy of important illustration of plants gathered from various parts of the world. Dr. Smita Tripathi, Dr. Misha Yadav and Dr. Anurag Maurya served as the resource persons on the penultimate session of the programme on 'Active phytochemicals in medicinal plants', where participants were familiarised with protocols related to phytochemical analyses. On the last day of the programme, an exploratory visit to Ayurvedic and Unani Tibbia College and Hospital, Karol Bagh, Delhi was made. Here, Dr. Shalini Varshney (Dept. of Dravyaguna) and her team delivered lectures on conservation and utilisation of medicinal plants and also familiarized the participants on the same with a visit to the institute's Herbal Garden and research facilities available there.

The key highlights of the programme were the excursions to BGRI and A&U Tibbia College and Hospital, where the students received experiential learning not only about medicinal plants but also about the flora of Delhi in general.

No. of student beneficiaries: 13

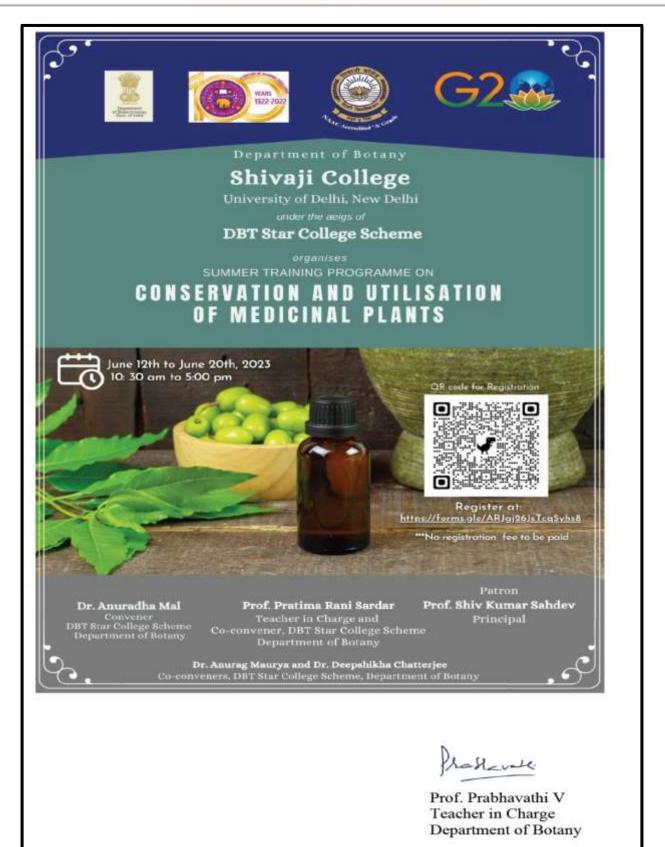
Prof. Prabhavathi V Teacher in Charge Department of Botany

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SHIVAJI COLLEGE



(University of Delhi) NAAC Accredited 'A' Grade

Department of Botany

(Under the aegis of DBT Star College Scheme)
Organizes

SUMMER TRAINING PROGRAMME

On

Conservation and Utilisation of Medicinal Plants

June 12 - June 20, 2023

Venue: Department of Botany, Shivaji College

Organizing Committee

Patron: Prof. Shiv Kumar Sahdev, Principal (Officiating)

Coordinator: Dr. Renu Baweja, DBT Star College Scheme

Convenor: Dr. Anuradha Mal

Co-convenors: Prof. Pratima Rani Sardar, Dr. Anurag Maurya, Dr. Deepshikha Chatterjee

Teacher in Charge: Prof. Pratima Rani Sardar

Organizing Committee: Dr. Vijay Kumar, Dr. Prabhavathi, Dr. Smita Tripathi, Dr. Kiran Bamel, Dr. Misha Yadav, Dr. Seema Talwar, Dr. Nupur Mondal, Dr. Devender Singh Meena

Prof. Prabhavathi V Teacher in Charge Department of Botany

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Department of Botany: Summer Training Programme Schedule

PROGRAMME SCHEDULE

12 June- 20 July 2023

Day	Date	Morning Session	Topic of Talk	Resource Person	Afternoon Session	Hands On Training
Monday	12.6.2023	10:30 AM- 1:00 PM	Herbal Garden and Herbarium techniques	Dr. Vijay Kumar Prof. Pratima Rani Sardar Dr. Devender Singh Meena	2:00 PM onwards	Visit to Herbal Garden of the College, Herbarium preparation
Tuesday	13.6.2023	10:30 AM- 1:00 PM	Role of reproductive biology in conservation of medicinal plants	Dr. Prabhvathi V. Dr. Seema Talwar	2:00 PM onwards	Experiments Related to Reproductive Biology
Wednesday	14.6.2023	10:30 AM- 1:00 PM	Conservation of knowledge related to medicinal plants and their uses	Dr. Kiran Bamel Dr. Nupur Mondal	2:00 PM onwards	Repository of traditional knowledge and other digital tools for patents and copyrights
Thursday	15.6.2023	10:30 AM- 1:00 PM	Somatic embryogenesis and artificial seeds	Dr. Anuradha Mal Dr. Deepshikha Chatterjee	2:00 PM onwards	Tissue culture technique for medicinal plants
Friday	16.6.2023	10:30 AM- onwards	Trip to BGRI, Noida	Dr. Devender Singh Meena Dr. Anurag Maurya Dr. Deepshikha Chatterjee		Compilation of Report for the Trip
Monday	19.6.2023	10:30 AM- 1:00 PM	Active phytochemicals in medicinal plants	Dr. Smita Tripathi Dr. Misha Yadav Dr. Anurag Maurya	2:00 PM onwards	Phytochemical analysis of selected medicinal plants
Tuesday	20.6.2023	10:30 AM- 1:00 PM	Visit to Ayurvedic and Unani Tibbia College and Hospital, Delhi Report Compilation and submission	Dr. Shalini Varshney (Dept. of Dravyaguna, A&U Tibbia College & Hospital) Dr. Anurag Maurya Dr. Devender Singh Meena Dr. Deepshikha Chatterjee	2:00 PM onwards	Valedictory Session

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Prof. Prabhavathi V Teacher in Charge Department of Botany







List of Participants

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			At	tendance	Date: 12-06-	2013
S. N.	Name	Course			September 2000 Control of the Contro	the participant
L	Pooja	B. Sc. (H) Biochemistry	Sem	Name of the College Shivaji College, University of Delhi	Morning Page Ca	Ponia.
2	Priyanka bisht	B. Sc. (H) Biochemistry	11	Shivaji College, University of Delhi	1	(other
3.	Sarthak	B. Sc. (F() Botany	IV	Shivaji College, University of Delhi	Gardhed .	The West
4.	Sneha goyal	B. Sc. (H) Botany	IV	Shivaji College, University of Delhi	a Salva_	Chillian -
5	Jashika Sinha	B. Sc. (Life Science)	Ш	Shivaji College, University of Delhi	Cost to Son	Tables Shar
6.	Asmita Mishra	B. Sc. (Life Science)	IV	Shivaji College, University of Delhi	Knishma	Ashishma.
7	Jatin jindal	B. Sc. (Life Science)	IV	Shivaji College, University of Delhi	d'airginia	Sinfield
8.	Kunal	B. Sc. (Life Science)	1V	Shivaji College, University of Delhi	Kund	mina
9.	Utkarsh Srivastava	B. Sc. (Life Science)	IV	Shivari College, University of Delhi	(Whoush)	Willearth
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Department of Botany: Summer Training Photographs





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Prof. Prabhavathi V Teacher in Charge Department of Botany







Department of Zoology: Summer Training

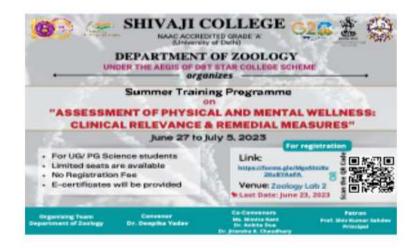
REPORT

Summer Training under the aegis of DBT Star College Scheme organized by Department of Zoology, Shivaji College "Assessment of Physical & Mental Wellness: Clinical relevance & Remedial Measures"

June 27 to July 5, 2023

Venue: Zoology Lab II

Number of Beneficiaries: 30 PAN India UG & PG Students



A hands-on summer training was conducted by the faculty members of Department of Zoology under the aegis of DBT Star College Scheme from June 27th – July 5th 2023 in Zoology Laboratories I and II. A total of six modules were conducted over this duration pertaining to assessment of physical and mental wellness and to educate the students about remedial measures as well to lead a healthy and balanced life ahead. The detailed reports of modules as well as pictures of the same are as follows:

Module I: Hemolytic Assay [June 27, 2023]

Resource Persons: Dr. Rakesh Roshan & Dr. Deepika Yadav

A hemolysis assay is a laboratory test used to assess the ability of certain substances to lyse or rupture erythrocytes. Hemolysis can occur due to the action of various agents, such as

Dr. Deepika Yadav

Convener, DBT Star College Scheme, Zoology Department





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toxins, chemicals, or enzymes. The assay is commonly used in medical and research settings for different purposes, including toxicity testing, drug development, immunological research, diagnostics and the study of various biological phenomena.

Students also gained hands-on experience for using micropipettes and handling equipment like cooling centrifuge, water bath, and microplate reader etc.



Module II: Identification of Haemo-parasites [June 28, 2023]

Resource Persons: Dr. Neetu Singh

Dr. Deepika Yadav

Convener, DBT Star College Scheme, Zoology Department





Department of Zoology: List of Participants

Department of Zoology Shivaji College

Summer Training under the aegis of DBT Star College Scheme "Assessment of Physical & Mental Wellness: Clinical relevance & Remedial Measures"

(June 27 to July 5, 2023)

Module 1 : Hemolytic Assay, Date June 27, 2023

Time 10:00 a.m.-2:00 p.m.

Resource Person: Dr. Rakesh Roshan & Dr. Deepika Yadav

Attendance List of Participants

S. N.	NAME OF STUDENT	COURSE	SEM	NAME OF COLLEGE	Signature
1.	Mehul Verma	B.Sc. (P) Life Science	4	Shivaji College	9711527304 Messey
2.	Jatin Jindal	B.Sc. (P) Life Science	4	Shivaji College	9821956620
3.	Khushi Yadav	B.Sc. (P) Life Science	4	Shivaji College	
4.	Prema	B.Sc. (P) Life Science	4	Shivaji College	9728305310
5.	Mohit Deswal	B.Sc, (H) Zeology	6	Shivaji College	9717954093 (Olan
6.	Khushi Kumari	B.Sc. (P) Life Science	4	Shivaji College	9315003655 Klushi
7.	Gungun Garg	B.Sc. (P) Life Science	4	Shivaji College	9212055 986 Chmbratat

8.	Ajay Chauhan	B.Sc. (P) Life Science	4	Shivaji College	9625738912 Min
9.	Ritika Dewan	B.Sc. (P) Life Science	4	Shivaji College	0.810256498 Ritura
10.	Kunal	B.Sc. (P) Life Science	4	Shivaji College	9654056061 xur-1 7838 388057
11,	Utkarsh Srivastava	B.Sc. (P) Life Science	4	Shivaji College	7838 888057
12.	Purnima Maurya	B.Sc. (P) Life Science	4	Shivaji College	
13.	Jhalak Kaira	B.Sc. (P) Life Science	4	Shivaji College	984592992 flow. 9466137032 Af
14	Lakshay Bhardwaj	B.Sc. (H) Zoology	4	Shivaji College	9466137032
15.	Hritika Shree	B.Sc. (H) Zoology	4	Shivaji College	9931618116 Middle Mrs
16.	Sakshi Saini	B.Sc. (H) Zoology	6	Shivaji College	
17.	Sneha Goyal	B.Sc. (H) Botany	- 4	Shivaji College	
18.	Khushi	B.Sc. (H) Zoology	4	Shivaji College	
19.	PRIYA TALWAR	B.Sc. (H) Zoology	4	Shivaji College	
20.	Akansha	B.Sc. (H) Zoology	4	Shivaji College	
21.	Sarthak Kaushik	B.Sc. (P) Life Science	4	Swami Shraddhanand College	
22.	Saumya Sharma	B.Sc. (P) Life Science	4	Swami Shraddhanand College	

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(University of Delhi)

NAAC ACCREDITED "A" GRADE COLLEGE

23.	Geetanjali Israni	B.Sc. (P) Life Science	4	Swami Shraddhanand College	9315772375 Gianay
24.	Kajal kumari	B.Sc. (P) Life Science	4	Swami Shraddhanand College	859533674) kajel.
25.	Pooja Pahel	B.Sc. (H) Zoology	4	Daulat Ram College	
26.	Sunpreet Kaur	B.Sc. (P) Life Science	6	SGTB Khalsa College	9821348433 Empret Comp
27.	Diksha Negi	B.Sc. (P) Life Science	6	SGTB Khalsa College	pi pi
28.	Ishpreet Kaur	B.Sc. (P) Life Science	4	SGTB Khalsa College	8527882337 Faur.
29.	Harpreet Kaur Sandhu	B.Sc. (P) Life Science	6	SGTB Khalsa College	9315079855
30.	Vimaldeep Kaur	B.Sc. (P) Life Science	4 ,	SGTB Khalsa College	Vimaldeeploouer
31.	Gurleen Kaur	B.Sc. (P) Life Science	6	SGTB Khalsa College	,
32.	Gagandeep Kaur	B.Sc. (P) Life Science	4	SGTB Khalsa College	Gagan 8826212129
33.	Abhishek Choudhary	M.Sc Microbiology	4	Galgotias university	Aphidd 931116103+
34.	Ayan Ahmad	M.Sc Microbiology	4	Galgotias university	CONTROL OF STREET
35.	Shilpa	M.Sc Microbiology	4	Galgotias university	9548258067 Shilpa
36.	Rakshita Dhyani	B.Sc. (P) Life	4	Gargi College	afac 9515835882 Javel

Destile Yalow	
_	

	**				
48.	Ajit	B. Sc. (H) Zoolegy.	6	Shiraji College	
42.	Riya shanker	B.Sc. (H) Zoology	6	Shiveji College	
41.	Pooja Kumari	B. Sc. (H) 200logy	6	Shivaji College	
40.	Shareh hosevami	B.Sc. (N) 200logy	6	shivayi college	9654594908 sparsh
39.	Tanushree	B.Sc. (H) Zoology	6	Gargi College	6375394503 -1944
8.	Muskan Gupta	B.Sc. (H) Zoology	4	Gargi College	
7.	Trisha Mazumdar	B.Sc. (P) Life Science	4	Gargi College	7011780424 Justa.
-		Science			

Signature Resource Person (s):





Internship



THE LEADING THE LEADING SOLUTIONS

CIN NO. U74999DL2018PTC327828

Date: 23 Sep, 2023

Dear Pulkit Garg

Shivaji

INTERNSHIP OFFER LETTER

We refer to recent interview for the below mentioned position and are pleased to offer you the position of Intern with The Leading Solutions Pvt. Ltd. You will report directly to Ms. Diksha.

Please find the following confirmation of the specifies of your internship:

Designation: Intern

Department: Marketing And Finance Date of Joining: 10 Oct, 2023 Location: Delhi/Work from Home

For any queries please feel free to write us at: hr@theleadingsolutions.com Congratulations and welcome to the Team!

Best Wishes!!



(Authorized Signatory) Head HR TLS Pvt. Ltd.

The Leading Solutions, RG Trade Tower, Netaji Subhash Place, Pitampura, New Delhi - 110034 Ph.: +91 1145597267, Email: info@theleadingsolutions.com, www.theleadingsolutions.com







APPOINTMENT AS OPERATIONS INTERN

Dear Pulkit,

On behalf of The Student Company, I am pleased to have you on board as an intern with us, starting on 17th June 2024.

At The Student Company, our mission is to empower students throughout their academic journey by providing a comprehensive platform that fosters their holistic growth. We cater to diverse needs, bringing together opportunities, resources, and services under one roof. Our user-friendly platform streamlines the process of discovering and engaging with extracurricular activities, internships, job opportunities, and mental health support.

As an intern, you will be expected to pay attention to the following points:

- The duration of this internship will be a of minimum 3 months. ONLY after the completion of the minimum duration you will be eligible for the perks provided by this internship.
- Work deadlines are something we consider very crucial for the efficient working of an organization. You will be expected to adhere to the deadlines provided by the coordinators. The inability to meet deadlines even after several warnings will lead to the termination of the Internship.
- 3. A prior notice of at least 1 week should be given to the management before the intern wishes to terminate this internship. In case of non-compliance with this clause, The Student Company has the right to not dispatch a certificate of internship. ' '
- 4. The organization, being a student-run initiative, is a free space for all. However, any kind of unprofessional behaviour with peers or the management team shall lead to the termination of the Internship.

The perks provided to the intern will be:

1. Certificate of internship (After completion of a minimum duration of 90 days)

2. Letter of recommendation (conditional to performance)

3. Promotion opportunities (If any)

4. Access to webinars and sessions hosted by known speakers

We are excited by the prospect of you joining the organization.

Sincerely,

Team - The Student Company

By:

Name: Vishesh Jain Title: Co-Founder	her Jain.
I,	, hereby accept the aforesaid position and the terms and conditions of
this internship with The S	tudent Company.
Name&Signature:	Date:





THE LEADING THE LEADING SOLUTIONS SOLUTIONS CIN NO. U74999DL2018PTC327828

Date: 25 Sep, 2023

Dear Riya Kumari

Shivaji

INTERNSHIP OFFER LETTER

We refer to recent interview for the below mentioned position and are pleased to offer you the position of Intern with The Leading Solutions Pvt. Ltd. You will report directly to Ms. Diksha.

Please find the following confirmation of the specifies of your internship:

Designation: Intern

Department: Marketing And Hr Date of Joining: 10 Oct, 2023 Location: Delhi/Work from Home

For any queries please feel free to write us at: hr@theleadingsolutions.com Congratulations and welcome to the Team!

Best Wishes!!



(Authorized Signatory) Head HR TLS Pvt. Ltd.







THE LEADING SOLUTIONS

CIN NO. U74999DL2018PTC327828

Date: 06 Oct, 2023

Dear Krish Jain

Shivaji

INTERNSHIP OFFER LETTER

We refer to recent interview for the below mentioned position and are pleased to offer you the position of Intern with The Leading Solutions Pvt. Ltd. You will report directly to Ms. Diksha.

Please find the following confirmation of the specifies of your internship:

Designation: Intern

Department: Marketing And Finance Date of Joining: 10 Oct, 2023 Location: Delhi/Work from Home

For any queries please feel free to write us at: hr@theleadingsolutions.com Congratulations and welcome to the Team!

Best Wishes!!



(Authorized Signatory) Head HR TLS Pvt. Ltd.

The Leading Solutions, RG Trade Tower, Netaji Subhash Place, Pitampura, New Delhi - 110034 Ph.: +91 1145597267, Email: info@theleadingsolutions.com, www.theleadingsolutions.com











+91 8448715437



Team@ayushdigitalsolutions.com



www.ayushdigitalsolutions.com

OFFER LETTER

Dear Aman Mishra

Congratulations!

We are thrilled to extend an offer to you to join Ayush Digital Solutions as an Intern. We believe that your skills, enthusiasm, and fresh perspective will make a valuable contribution to our team.

> Internship Position: Video Editor Intern Start Date: 18 September 2023 Duration: 3 months

- ROLES, RESPONSIBILITIES, AND PERKS ARE AS PER THE DISCUSSION
- YOU WILL RECEIVE A CERTIFICATE OF COMPLETION AFTER THE SUCCESSFUL COMPLETION OF THE INTERNSHIP.

To accept this offer, please sign and return the enclosed copy of this letter, indicating your commitment to the internship.

Your internship promises to be a valuable learning experience, and we are excited to see your contributions to our organization.

Once again, congratulations on your selection, and we anticipate your positive response.

Sincerely,

AYUSH TAYAL

Director



@ayushdigitalsolutions













+91 8448715437





www.ayushdigitalsolutions.com

OFFER LETTER

Dear Mansi Pal

Congratulations!

We are thrilled to extend an offer to you to join Ayush Digital Solutions as an Intern. We believe that your skills, enthusiasm, and fresh perspective will make a valuable contribution to our team.

> Internship Position: PR Intern Start Date: 18 September 2023 Duration: 3 months

- ROLES, RESPONSIBILITIES, AND PERKS ARE AS PER THE DISCUSSION
- YOU WILL RECEIVE A CERTIFICATE OF COMPLETION AFTER THE SUCCESSFUL COMPLETION OF THE INTERNSHIP.

To accept this offer, please sign and return the enclosed copy of this letter, indicating your commitment to the internship.

Your internship promises to be a valuable learning experience, and we are excited to see your contributions to our organization.

Once again, congratulations on your selection, and we anticipate your positive response.

Sincerely,

AYUSH TAYAL

Director



@ayushdigitalsolutions

ayush-digital-solutions

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North East Cell Parliament Complex Visit on 20th March 2024

Report of Experiential Field Study to the Parliament Complex

The North East Cell of Shivaji College, under the aegis of the IQAC, undertook an experiential field study to the Parliament Complex on 20th March 2024. The team consisted of 22 students and 3 teachers from the NE Cell. Mr. Rakesh Kumar, Assistant Security Officer, provided an exhaustive and patient guidance during the tour.

The group visited the Central Hall, the Samvidhan Sadan (old Parliament building) and the Sansad Bhavan (new Parliament complex). The field study ended with a sumptuous lunch in the Parliament Canteen.

The NE Cell is grateful to our Principal, Prof. Virender Bhardwaj, for his support and encouragement towards the field study.

SHarge

Dr Siamlianvung Hangzo Convenor North East Cell

Sr. No.	Name	Course	Semester	College	Ph. No	Aadhar	Signature
1	Y Dicson Singh	BA (H) Geography	SEM 2	23/31055	6297055354	203558113546	and the second
2	Kh.Taibanganba	BA Prog(English+Sociology)	SEM 2	23/49103	8974456853	702270129347	the last
3	Letngaisang Kipgen	BA (H) Political Science	SEM 8	21/40034	8448461332	9380 2754 6533	About
4	Chumchanthung S Ngulle	BA Prog (English+Sociology)	SEM 2	23/49061	9233905421	603635641052	30
5	Kevin Thangvanlalmuon Gangte	8. Sc (H) Mathematics	SEM 6	21/17134	8415029576	902341667462	64-3
6	ri Rahayei Abei	BA Prog (History+ Political Sc.)	SEM 4	22/49163	9362108721	526275622491	ART BILL
7	P M Riba	BA Prog (Eng+ Sociology)	SEM 2	23/49142	7630929455	750964033751	fully.
8	Keisham Suchitra Devi	BA Prog (English+ Sociology)	SEM 2	23/49100	9366508697	894814972126	51/8/10
9	Krishnal Borush	B.Sc. Life Science	DEM 4	22/23042	6003274201	242445781066	Kheek
10	Nacho Taba	BA Prog (History * Political Science)	SEM 4	22/49203	9233096969	9745 1575 0857	Emplo
-11	Tribeni Sharma	BSc (H) Botany	SEM 4	22/09022	9085652712	327058277565	Absorpt63
12	Ruchismita Hazarika	BA (H) Political Science	SEM 2	23/40052	7896210657	495212445090	Characa
13	Aheibam Billgates Sing::	BA (H) Economics	SEM 2	23/28006	9863361282	496485972679	Shecker
14	Nobi Gangte	BA (Prog) Eca + Socio	SEM 4	22/49053	9882404072	9473 2914 1595	Man
16	Pamak Mara	BA (Prog) Geo+Hindi	CEM 4	22/49117	7428876291	665762682647	ENA
16.	Nikon Goswami	BA (H) Geography	SEM 4	22/31032	9395704547	553145487392	AL.
17	Kendinang Panmel	BA (Prog) Eng+Socia	SEM 2	23/49101	9863491313	8130 5544 9565	Kendinon
18	Laishram Pratap Singh	DA (Prog) Eng+Socio	CCM 4	22/49055	9233125605	562013136261	Prater
19	Diya Jain	BA (H) Political Science	SEM 2	23/40015	8822587623	35.05-363622-	Juga Jan
. 20	PF Lephroyini	BA (H) Political Science	SEM 6	21/40060	6009713107	916958104987	Care
21	Kendy	B Com (Prog)	SEM 6	21/50157	8787471234	2657 9256 1653	Aprilant
22	Sonim Ramshan	B Com (Hons)	SEM 6	21/51201	8131905824	518006863529	Garan
21	Dr Siamkanvung Hangzo	English			9968289113	738667622242	28
22	Dr L. Gitarani Devi	English	15.		9971129735	763423030630	Flant-







Photographs of Parliament Visit













ENACTUS SHIVAJI COLLEGE

GLOBAL HANDWASHING DAY EVENT

DATE: 15TH OCTOBER 2023

NAME OF THE EVENT: GLOBAL HANDWASHING DAY EVENT

DATE: 15TH OCTOBER 2023

OBJECTIVE: TO SPREAD AWARENESS ABOUT THE IMPORTANCE OF PROPER HANDWASHING AND PROPER HYGIENE ON THE GLOBAL HANDWASHING DAY AMONG GENERAL PUBLIC

OUTCOME: WE PERFORMED A FLASHMOB ALONG WITH A QUIZ ON HANDWASHING TO INTERACT WITH THE GENERAL PUBLIC AND SPREAD AWARENESS ABOUT PROPER HANDWASHING TECHNIQUES. BOTH QUIZ AND FLASHMOB WAS A SUCCESS AND WE WERE ABLE TO CONVEY THE MESSAGE OF IMPORTANCE OF HANDWASHING.

POSTER





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Contd...

LIST OF ATTENDEES				
SNIGHDA SETHI	President (Ba Eco Hons., 3 rd year)			
LAKSHAY SETH	General Secretary (BBE, 3 rd year)			
PRERNA VIJAY	Vice President (Bcom prog.,3rd year)			
AYUSH TIWARI	Operations Head (Bcom, 2 nd year)			
DRISHTI PRASHAR	Core Member (Bcom,2 nd year)			
RIYA ARORA	Social Media Head (Bcom Hons, 2 nd year			
TEJASVI RAZDAN	Editorial Head (Bcom, 2 nd year)			
SATVIK SINGLA	Finance head (Bcom,2 nd year)			
INIKA MAKHIJA	Business Plan Head (Ba History Hons,3" year)			
MANAS KASHYAP	Core Member (Ba Eco program,2 nd year)			
KATYANI SHARMA	Photography Head (Ba Political Sceince Hons.,3 rd year)			
KSHITIJ DAS	Project Head- Dritih (Bsc Zoology Hons,2 nd year)			
SANYA CHAWLA	Business Plan Head (Bbe, 2 nd year)			
RUCHI ARORA	Technical Head (Bcom Hon., 3 rd year)			
SUKRITI BHAGAT	Project Head- Sana (Bcom hons, 2 nd year)			
JOEL CHAMATHI MOHAN	Research Heads (Bcom Hons.,2 nd year)			
AKSHAT WALIA	Operation Team (Bcom hons, 1st year)			
ANIKET	Social Media Team (Bbe,2 nd year)			
SHANISHTH M KESARWANI	Team Dritih (Bcom prog.,1st year)			
MANSI CHAUDHARY	Social Media Team (Ba English Hons.,2" year)			
TANU	Social Media Team (Ba English Hons.,2 nd year)			
GARVITA KHOSLA	Project Dritih (Bbe,1st year)			
BHAVESH VIRMANI	Social Media Team (Bcom,1st year)			

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KASHISH GARG	Social Media Team (Bcom Hons., 1st year)
KHUSHI HALDER	Research Team (Bcom Hons.,1st year)
JIYANSHI BATRA	Project Sana (Bcom Hons.,1st year)
NIDHEESH KUKREJA	Technical Team (Ba Eco Hons.,1st year)
ASHI SINGH	Research Team (Bsc Chemistry Hons.,1st year)
SOMAY GUPTA	Business Plan (Bcom Hons., 3 rd year)
AAGAM JAIN	Operations Team (Bbe Hons,, 1st year)
ADITYA PRASAD	Operations Team (Bcom Hons.,1st year)
RANVEER SINGH	Project Dritih (Bcom , 1st year)
ISHANT SINGH	Social Media Team (Bbe Hons, 1st year)
LAKSHAYA	Project Dritih (Bcom, 1st year)
PRIYADARSHINI SINGH	Technical Team (Bbe , 1st year)
SOUMYA KANSAL	Research Team (Bbe , 1st year)
ANKIT SRIVASTAV	Public Relations (Bcom, 2 nd year)
PRIYANSHI GOEL	Project Sana (Bbe, 1st year)
YASHTI GANDHI	Research Team (Ba Eco Hons.,1st year)
AVNI JAIN	Project Sana (Bbe, 1st year)
KANISHKA GOEL	Project Dritih (Bcom Hons.,1st year)
HARSH VERMA	Project Dritih (Bcom Hons.,1st year)
VERSHA	Research Team (Bcom Hons.,1st year)
DIYA JOSHI	Project Sana (Bcom , 1st year)
ANIKA CHAWLA	Social Media Team (Bcom Hons., 1st year)
ISHA JAIN	Public Relations (Ba Eco Hons.,1st year)
KULSHRESHTH GOSWAMI	Public Relations (Bcom ,1st year)
SAYANK SINGH DHUNNA	Operation Team (Bcom , 1st year)
VAASUDEV GAHLOT	Operations Team (Bcom Hons.,2 nd year)

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YASH SINGHAL	Project Sana (Bbe , 2 nd year)		
ADITYA SINGH	Operations Team (Bcom Hons.,1st year)		
YATHARTH RAJ KAKKAR	Operations Team (Bcom , 2 nd year)		
AMAN JHA	Project Sana (Bcom Hons.,1st year)		
AYUSH ATRI	Research Team (Bcom Hons.,1st year)		
DIVYANSH KHANNA	B. Com hons		
SHREYA MUKUNTHAN	Geography hons		
TAMANNA	English hons		
SHIVAM BERRY	Editorial Team (Ba Eco Hons.,1st year)		

REPORT

Enactus Shivaji along with Sulabh School Sanitation Club organized The Global Handwashing Day Event on 15th October 2023 at Connaught Place, New Delhi where we presented a flashmob and held a quiz for the public. People who gave the correct answers were awarded with a badge along with a soap bar.

SUMMARY OF THE EVENT

The event commenced at 4pm with an enthusiastic choreography on self composed songs. The lyrics of the song portrayed the essence of cleaning our hands and how handwashing is a simple yet powerful action. These songs also convey the proper technique of washing our hands.







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ARDENT PERFORMANCE BY THE MEMBERS

We sparked an interactive discussion with the present audience by asking them questions related to hand hygiene and if they answered correctly they were awarded a badge along with a soap bar as a token of appreciation.





QUIZ WITH THE AUDIENCE

Since germs can spread by handshakes or by touching foreign objects, not only does hand washing protect us, but it also protects those around us. Therefore to further engage with people around us, we prepared banners and props in the form of germs, water and soap.





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BANNERS PREPARED BY OUR TEAM

We performed the flashmob at regular intervals of 10-15 minutes which was again followed by a quiz interaction with the crowd. The crowd raised various slogans of their own which were chanted throughout the event. The people who emerged as the best in this slogan writing competition were awarded with cash

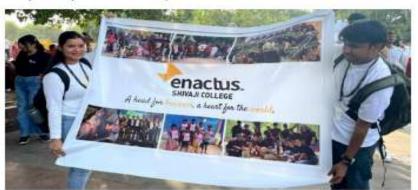
prize.





BADGE AND SOAP BAR AWARDED TO THE WINNERS

Through this event we could make people aware that amidst the hustle bustle of our daily lives washing hands is not merely a cleaning activity but it is actually a significant step that prevents the spread of various diseases.











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Overall the event was a great success!. We were able to engage with a lot of people and spread awareness about Global Handwashing Day in an interactive yet informative manner.



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Dr. Chhavi Sharma Convener, Enactus Shivaji College, University of Delhi







NATIONANAL SERVICE SCHEME: SWACHHATA HI SEVA CAMPAIGN (24.09.23 to 01.10.23)

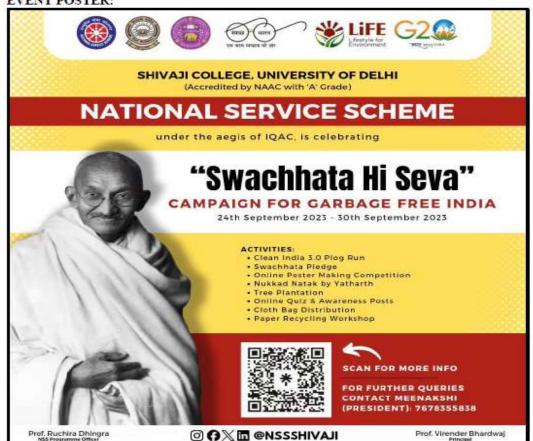
"SWACHHATA HI SEVA CAMPAIGN"

24.09.23 to 01.10.23

OBJECTIVE: The idea behind this exercise was to sensitise students towards the cause of cleanliness.

OUTCOME: By imparting hands-on experience to students, participants became conscious about their civic responsibilities towards the society.

EVENT POSTER:



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NUMBER OF ATTENDEES AND FEEDBACK (24-30 September 2023): 51

S.NO.	NAME	ROLLNO	COURSE/YEAR	FEEDBACK	SIGN
0.	AKSPIUNN	27/43101 22/45005	8 A 9 25 5	you.	(AL
3	Etta Stama	21/50212	blow prog	good	stan
5	Athaiteah Shreya Shukh Harshita	21/50073 21/49096 22/19012	B. Com Pring B.A. Parg B.Sc. My. H	Very Nice Initiative Good initiative Nice	stellet sources
7.	Ishoonie	2= 23084		outstanding	Johanne
8	Sand mo Name! Sourabh Pal	22 15041	BSC (H) Physics BSC (H) Physics	Excellent (Sayali
10 .	Skambnavi	23) 18027	Bac LH) Physics	Nice	6-
12.	Bhotham sonja Pomma	2114044	BACHO Physics BACHONN Physics	Mice Boad	Romany
13	Mehak Nami4a	21/2018J	Bcom(P)	Guod Nice	20
15. 16.	Syed Soudie Simtan Roghov Prosto	22/31053 23/23063 21/49245	BA (n) Goography BSC Life Science BA Program	Nice enjoyed the event	A. Survivo
184	Hetankshi	2921/29014	BA English Horn	N'CE Amosing	107-134
90-	Sneha Kurani Mity Couple	23/45014	BA Sou Knit how	Ni ce	quely but to







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S.NO.	NAME	ROLLNO	COURSE/YEAR	FEEDBACK	SIGN
21	Colored Persons	· 22/5002	Boom /2td	nosis teday's event was great and unformative.	2000
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s.NO.	NAME	ROLLNO	COURSE/YEAR	FEEDBACK	SIGN
34	Asima Kana Peoja Sanui	22/23095	Bsc upe scice	Great event	# State
31.	Egatibles	22/44/03	B.A. pegglamma	Nice	Matible
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3.3	Swego Singh	31/31022	BA Geography (Moru)	Nite	80-70-
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3	Roward	22/19056	Bac (H) Physics	Wice Experience	tister
36	Kahul	22 19039	BSC(H) Physics	Nic p temperione	Kalul
37.	Khudh? Sharmu	21/13055	Bisc CS	Gracut initiative	Pilaring
38-	Anjali Pardey	21/10051	B.A. Polse (H)	Nice event	high
59_	Abhistok Nebra	2031	BBE	Correct event	Magazia
340	Anushka Kappoore	5107	8 (om (H)	General event	Anarak

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(University of Delhi) NAAC ACCREDITED "A" GRADE COLLEGE

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41-	Deepin	2 1 E 104C	final Years B com(H)	Grood Event	<u>peepira</u>
t42	togaj orini troscami	22/31054	2nd year BA (Greag) House	Great wind, really appreciate it	togeth
43	Moud Hosem	22/22045	2 nd year BSC LifeSetens	Great Initrative	1=1
y4	Nyum Kuorak	28/2670	ustoogloom)	Great Tribate	RIGHT
17	Deeparaha Dabas	2149073	3 and Year B.A. (Page)	Clean India, Gueen India	
		21/23072	BSC life Sr. BSC AFS	mena dash mangeela Great	Auth
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NUMBER OF ATTENDEES AND FEEDBACK (1st October 2023): 84

-NO.	NAME	ROLLNO	COURSEATAR	PERDBACK	SHEEN
1	The woman's	221190009	2 and years	very nice event.	Barrate
2	Rain House	21/431-1	2 700 3000	were the something	Och
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a.	Anjali	22/23013	and years	weellend .	Mojule
10	Solarke	29/6349	2nd years.	*xcollest	Ja Gr
1 .	Fammi	21/40044	3 RD Year	Good	Rounn

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द्वित्याजी कॉलेज (दिल्ली विश्वविद्यालय) Shivaji College



(University of Delhi)

NAAC ACCREDITED "A" GRADE COLLEGE

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	Alanon	+1/49000	B.A. PROG.	aces	Chare
1 44-	Sherrya	22 49087	BA Programme	Excellent	Dury
1.5	Sparano	21/68055	BSC CS	Grment	Osam
16.	Gorgan	23/2022	BBE Honous	Very Knowledgell	2000
17-	Parito	23/1010	B. n- Progression o	Very Nice	257 1 Hr 11
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21.	vijay	Zkez/mu).	· TOU	trioped	Over,
22.	yoshie	22/49209	BA Pregram	Cood	Land Mark
e. B.	Jadav	27-2727	N-C-E-	cropd	Mayor
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2.5	Shirani	107	Neclshinas	Good	Ostinis
6.	Diksha	07.6	scinaji xxc	G150 \$	PKA
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22.	Arii bes	22/1000	Recht Physics	Frent was Jose	Paiber
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(दिल्ली विश्वविद्यालय)





(University of Delhi)

NAAC ACCREDITED "A" GRADE COLLEGE

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NAAC ACCREDITED "A" GRADE COLLEGE

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REPORT:

NSS Unit, Shivaji College took a step towards a greener India by organising a tree plantation drive to commemorate NSS Day on 24th September 2023.

On 25th September 2023, NSS Unit organised a Swachhata Pledge and Clean India Plog Run 3.0 under the week-long "Swachhata Hi Seva" campaign. The event served as a powerful reminder of our collective responsibility to keep our surroundings clean. This event exemplified the "Swachhata Hi Seva" initiative's objectives and showcased the commitment of our volunteers and community members to a cleaner, healthier future.

On 26th September 2023, the National Service Scheme unit of Shivaji College organised a Nukkad Natak titled "Swachhata Banaam Samaaj" around the college campus. The primary significance of the play performed by the team YATHARTH was to create awareness of cleanliness and hygiene and to illuminate the invaluable efforts of Safai Mitras in keeping our surroundings clean. This captivating performance delivered a powerful message through a compelling storyline and engaging characters. This event took place under the "Swachata hi Seva" campaign for garbage free India.

The NSS unit of Shivaji College on 28 September 2023 conducted a Public Place Cleanliness Drive under the Swachhata Hi Sewa Campaign. The NSS volunteers cleaned public places like the streets, bus stands and footpaths. The volunteers also spread awareness amongst the people about cleanliness and proper ways of disposing of waste.

The NSS unit of Shivaji College on the 29th September 2023 organised a "Cloth Bag Donation Drive" to spread awareness about the importance of sustainability. The unit distributed cloth and jute bags in the Rain Basera near the Ring Road, Raja Garden and shopkeepers near college campus. The volunteers also explained the harmful effects of plastic bags. The residents of the Rain Basera and shopkeepers were happy to receive the cloth and jute bags and enthusiastically engaged in conversation with the NSS members about sustainable methods. The drive was successful not only in spreading awareness about sustainability but also in spreading kindness towards the deprived sections of the society.

On 1st October 2023, NSS unit under the programme "Ek Tareekh Ek Ghanta" embarked on a campaign for a garbage-free India. It organised a Cleanliness and Awareness Drive alongside a Plog run and a Nukkad Natak by the Yatharth team.

The plog run started from the college campus and 84 NSS Volunteer along with teachers proceeded towards the slum area of Raghuvir Nagar. On the way, the students including teachers picked up plastic and other waste and swept clean two public parks. They also interacted with people on the way to spread awareness about the importance of cleanliness and environmental sustainability.

At the central chowk of Raghuvir Nagar, the Yatharth team enacted a street play which spread the message of fostering hygiene, sanitation, and environmental awareness.

The campaign ended as a commendable initiative that not only enhanced the cleanliness of the chosen location but instilled a sense of responsibility and pride in maintaining cleanliness and building healthier and more responsible communities among the people.

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NATIONANAL SERVICE SCHEME: MERI MAATI MERA DESH" 13.08.23 to 31.10.23

"MERI MAATI MERA DESH"

13.08.23 to 31.10.23

OBJECTIVE: The program was visualised around the objective of inculcating and arousing the sentiment of love and dedication towards our nation.

OUTCOME: By being part of this exercise, students felt a sense of pride towards their nation and their own self.

EVENT POSTER:



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REPORT:

The National Service Scheme unit of Shivaji College organised the "Har Ghar Tiranga" campaign under the "Meri Mati Mera Desh" initiative from August 13th to August 15th, 2023. NSS volunteers uploaded pictures with the Indian Tricolor flag reflect their pride and happiness for their motherland.

On the occasion of Independence Day, the National Service Scheme unit of Shivaji College, in collaboration with the National Cadet Corps unit, organised various programs on 15 August 2023 dedicated to the bravery and sacrifice of the country's brave heroes under the Government of India pledge "Meri Mati Mera Desh". Col. Abdul Hameed Khan graced the occasion with his esteemed presence as a guest speaker.

The event was inaugurated by Col. Abdul Hameed Khan and Principal Prof. Virendra Bhardwaj followed by the hoisting of the National Flag and singing of the National Anthem. The teachers and the volunteers then took the Panch Prana Pledge. The program proceeded with saluting the heroes of our country in which the words of Colonel Khan were inspirational in communicating the spirit of nationalism in the minds of the audience.

The program ended with the celebration of Amrit Vatika, promoting the spirit of nature conservation and patriotism, under which 75 trees were planted commemorating 75 years of independence.







"FIT INDIA SWACHHATA FREEDOM RUN 4.0" 11.10.23 and 16.10.23

OBJECTIVE: The program was intended to work towards instilling the importance of sports and fitness activities in the minds of young India.

OUTCOME: By organising Fit India Freedom Run 1 and Freedom Run 2, students got motivated and invited the ethics of fitness in themselves.

EVENT POSTERS:





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EVENT-PHOTOGRAPHS:







* NSS Volunteers participated in "FIT INDIA SWACHHATA FREEDOM RUN 4.0"

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NUMBER OF ATTENDEES AND FEEDBACK (11.10.2023): 60

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NUMBER OF ATTENDEES AND FEEDBACK (16.10.2023): 62

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REPORT:

The National Service Scheme unit of Shivaji College under the aegis of IQAC organised the "Fit India Swachhata Freedom Run 4.0" on 11th & 16th October 2023.

The event began at 8 AM from the college premises under the guidance of teachers. Approx. Sixty NSS Shivaji volunteers with full enthusiasm and energy covered a total of 3 km approx. in the run to spread awareness about and promote fitness, wellness and community engagement among people.

NSS Shivaji remains committed to continue its journey toward a healthier and sustainable environment and society.

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Ability Enhancement Course (AEC-I) compulsory course for all undergraduate courses

Ability Enhancement course (AEC), Skill Enhancement Course, (SEC) & Value Addition Course (VAC)

These three courses shall be a pool of courses offered by all the Departments in groups of odd and even semesters from which students can choose. A student who desires to make Academic Project/Entrepreneurship as Minor has to pick the appropriate combination of courses of GE, SEC, VAC, & Internship/Apprenticeship/Project/Community (IAPC) which shall be offered in the form of various modules as specified in the scheme of studies.

AEC courses are the courses based upon the content that leads to knowledge enhancement through various areas of study. They are Language and Literature and Environmental Science and Sustainable Development which will be mandatory for all disciplines.







Syllabus of Environmental Studies (EVS)

Ability Enhancement Course (AEC-I) for all undergraduate courses

ANNEXURE-I

Ability Enhancement Compulsory Course

Ability Enhancement Course on Environmental Science: Theory into Practice (I & II) at UG level (AEC I) Course Learning Outcomes

- 6.0 The course will empower the undergraduate students by helping them to.
 - i. Gain in-depth knowledge on natural processes and resources that sustain life and govern economy.
 - ii. Understand the consequences of human actions on the web of life, global economy, and quality of human life.
- iii. Develop critical thinking for shaping strategies (scientific, social, economic, administrative, and legal) for environmental protection, conservation of biodiversity, environmental equity, and sustainable development.
- iv. Acquire values and attitudes towards understanding complex environmentaleconomic- social challenges, and active participation in solving current environmental problems and preventing the future ones.
- v. Adopt sustainability as a practice in life, society, and industry.

6.1 Year - 1 Ability Enhancement Course on Environmental Science: Theory into Practice (I) — at UG level (AEC-I)

Introduction to Environmental Studies (2 lectures and 3 practical/ outreach activities)

- Multidisciplinary nature of environmental studies; components of environment: atmosphere, hydrosphere, lithosphere, and biosphere
- Scope and importance; Concept of sustainability and sustainable development; Brief history of environmentalism

Suggested Readings

- 1. Raven, P.H, Hassenzahl, D.M., Hager, M.C, Gift, N.Y., and Berg, L.R. (2015). Environment, 8th Edition. Wiley Publishing, USA. Chapter 1 (Pages: 1-17); Chapter 2 (Pages: 22-23); Chapter 3 (Pages: 40, 41); Chapter 4 (Pages: 64, 66).
- 2. Singh, J.S., Singh, S.P., and Gupta, S.R. (2017). Ecology, Environmental Science and Conservation. S. Chand Publishing, New Delhi. Chapter 1 (Page: 3-28).

Practical/Exercises/Experiential activities/Outreach activities (College may choose as per requirement)
1. Analysis of achievement of Sustainable Development Goals of any country.

- 2. Gain insights of sustainability framework for an industrial acitivity using activity worksheets
- 3. Use of environmental activity worksheets to understand interdependence and interactionsbetween different environmental components.







Syllabus of Ennvironmental Studies (EVS)

Ability Enhancement Course (AEC-I) for all undergraduate courses

Unit 2

Ecosystems (6 lectures and 6 practical/ outreach activities)

- Definition and concept of Ecosystem
- Structure of ecosystem (biotic and abiotic components); Functions of Ecosystem: Physical (energy flow), Biological (food chains, food web, ecological succession), and Biogeochemical (nutrient cycling) processes. Concepts of productivity, ecological pyramids and homeostasis.
 - Types of Ecosystems: Tundra, Forest, Grassland, Desert, Aquatic (ponds, streams, lakes, rivers, oceans, estuaries); importance and threats with relevant examples from India
 - Ecosystem services (Provisioning, Regulating, Cultural, and Supporting); Ecosystem preservation and conservation strategies; Basics of Ecosystem restoration.

Suggested Readings

- Odum, E.P., Odum, H.T., and Andrews, J. (1971). Fundamentals of Ecology. Saunders, Philadelphia, USA. Chapter 1 (Pages: 1-16); Chapter 2 (Pages: 18-76); Chapter 10 (Pages: 414-458).
- Raven, P.H., Hassenzahl, D.M., Hager, M.C., Gift, N.Y., and Berg, L.R. (2015). Environment, 9th Edition. Wiley Publishing, USA. Chapter 3 (Pages: 38-52); Chapter 4 (Pages: 53-62); Chapter 5 (Pages: 100-103); Chapter 6 (Pages: 106-128).
- Singh, J.S., Singh, S.P., and Gupta, S.R. (2017). Ecology, Environmental Science and Conservation. S. Chand Publishing, New Delhi. Chapter 13 (Pages: 307-323); Chapter 18 (Pages: 420-442); Chapter 28 (Pages: 747-769).

<u>PracticallExercises/Experiential activities/Outreach activities</u> (College may choose as per requirement)

- 1. Schematic collection of data for depicting ecological pyramids in the College campus
- 2. Differentiation of natural and managed ecosystems using Google Earth/Google Map
- 3. Field visit to terrestrial and aquatic ecosystems (forests, grasslands, wetlands, biodiversity parks, etc.)
- 4. Develop a working model of any ecosystem
- 5. Use of worksheets to identify structure and function of different ecosystems.







Syllabus of Ennvironmental Studies (EVS)

Ability Enhancement Course (AEC-I) for all undergraduate courses

Unit 3

Natural Resources (8 lectures and 6 practical/ outreach activities)

- Land resources: Minerals, soil, agricultural crops, natural forest products, medicinal plants, and forest-based industries and livelihoods; Land cover, land use change, land degradation, soil erosion, and desertification; Causes of deforestation; Impacts of mining and dam building on environment, forests, biodiversity, and tribal communities
- Water resources: Natural and man-made sources; Uses of water; Over exploitation of surface and ground water resources; Floods, droughts, and international &inter- state conflicts over water
- Energy resources: Renewable and non-renewable energy sources; Use
 of alternate energy sources; Growing energy needs; Energy contents
 of coal, petroleum, natural gas and bio gas; Agro-residues as a
 biomass energy source
- Case studies: Contemporary Indian issues related to mining, dams, forests, energy, etc. (e.g., National Solar Mission, <u>Cauvery river</u> water conflict, Sardar Sarovar dam, Chipko movement, <u>Appiko</u> movement, Tarun Bharat Sangh, etc.)

Suggested Readings

- Gadgil, M. and Guha, R. (1993). This Fissured Land: An Ecological History of India. University of California Press, Berkeley, USA. (pp. 1-245).
- McCully, P. (1996). Rivers no more. the environmental effects of dams, In: Silenced Rivers: The Ecology and Politics of Large Dams, Zed Books, New York, USA. Page. 29-64.
- Raven, P.H., Hassenzahl, D.M., Hager, M.C., Gift, N.Y. and Berg, L.R. (2015). Environment, 9th Edition. Wiley Publishing, USA. Chapters 10, 11, 12, 13 (Pages: 180-263); Chapter 14 (Pages: 272-275); Chapter 15 (Pages: 286-289).
- (Pages: 180-263); Chapter 14 (Pages: 272-275); Chapter 15 (Pages: 286-289).
 4. Singh, J.S., Singh, S.P. and Gupta, S.R. (2017). Ecology, Environmental Science and Conservation. S. Chand Publishing, New Delhi. Chapter 25 (Pages: 623-663).

Practical/Exercises/Experiential activities/Outreach activities (College may choose as per requirement)

- 1. Visit to a paper recycling unit/rainwater harvesting plant/solar plant/biogas plant in the College campus
- 2. Develop and understand working model of renewable/non-renewable sources of energy
- 3. Mapping of natural resources of a given study area using Google Earth
- 4. Time-series analysis of natural resource consumption of a given country using publicly available data
- Comparison of energy demand and consumption of a particular state over the years using graphical tools.







Syllabus of Ennvironmental Studies (EVS)

Ability Enhancement Course (AEC-I) for all undergraduate courses

Unit 4

Environmental Pollution (8 lectures and 6 practical/ outreach activities)

- Environmental pollution (Air, water, soil, thermal, and noise): causes, effects, and controls; Primary and secondary air pollutants; Air and water quality standards
- Nuclear hazards and human health risks
- Solid waste management: Control measures for various types of urban, industrialwaste, Hazardous waste, E-waste, etc.; Waste segregation and disposal
- Pollution case studies: Ganga Action plan (GAP), Delhi air pollution and public healthissues, Plastic waste management rules, Bhopal gas tragedy, etc.

Suggested Readings

- 1. Brusseau, M.L., Pepper, I.L. and Gerba, C.P. (2019). Environmental and Pollution Science, 3rdEdition. Academic Press, USA. Chapter 16 (Pages: 243-255); Chapter 18 (Pages: 280-305); Chapter 21 (Pages: 352-358); Chapter 22 (Pages: 365-374); Chapter 23 (Pages: 378-388); Chapter 25 (Pages: 416-426). 2. Carson, R. (2002). Silent Spring. Houghton Mifflin Harcourt, USA. Pp. 1-264.
- 3. Raven, P.H, Hassenzahl, D.M., Hager, M.C, Gift, N.Y. and Berg, L.R. (2015). Environment, 9th Edition. Wiley Publishing, USA. Chapter 19 (Pages: 359-381); Chapter 21 (Pages: 401-421); Chapter 23 (Pages: 440-453).
- 4. Singh, J.S., Singh, S.P. and Gupta, S.R. (2017). Ecology, Environmental Science and Conservation. S. Chand Publishing, New Delhi. Chapters 19, 20, 12 (Pages: 445-535).

Practical/Exercises/Experiential activities/Outreach activities (College may choose as per requirement)

- 1. Determine water quality of a given location using rapid pollution monitoring kits 2. Assess air quality index (AQI) of any location using real-time air quality parameters 3. Determine magnitude of solid waste generated in a home/college on a monthly basis
- 4. Develop and maintain compost/vermicompost using biodegradable waste in the College 5. Identify suitability of given water samples for various purposes using given kits
- Prepare water audit report of the college/house/locality/colony.
- 7. Map solid and liquid discharge of the college/colony and develop a management plan(show it using schematic diagram, and photographs.
- 8. Repurpose waste for economic and environmental benefits in your college/near by area/colony (submit a small video).
- Analyze river-society-economy nexus based on primary or secondary data (usequantitative data, and show it using photographs on a poster).







Syllabus of Ennvironmental Studies (EVS)

Ability Enhancement Course (AEC-I) for all undergraduate courses

Year — 2 Ability Enhancement Course on Environmental Science: Theory into Practice (II) — at UG level (AEC-II)

Unit S

Global Environmental Issues and Policies (7 lectures 8 practical/ outreach activities)

- Causes of Climate change, Global warming, Ozone layer depletion, and Acid rain; Impacts on human communities, biodiversity, global economy, and agriculture
- International agreements and programmes: Earth Summit, UNFCCC, Montreal and Kyoto protocols, Convention on Biological Diversity (CBD), Ramsar convention, TheChemical Weapons Convention (CWC), UNEP, CITES, etc.
- Sustainable Development Goals: India's National Action Plan on Climate Change and its major missions
- Environment legislation in India: Wildlife Protection Act, 1972; Water (Prevention and Control of Pollution) Act, 1974; Forest (Conservation) Act 1980; Air (Prevention & Control of Pollution) Act, 1981; Environment Protection Act, 1986; Scheduled Tribesand other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006

Suggested Readings

- Divan, S. and Rosencranz, A. (2002). Environmental Law and Policy in India: Cases, Material & Statutes, 2nd Edition. Oxford University Press, India. Chapter 2 (Pages: 23-39); Chapter 3 (Pages: 41-86).
- Raven, P.H, Hassenzahl, D.M., Hager, M.C, Gift, N.Y. and Berg, L.R. (2015). *Environment*, 9th Edition. Wiley Publishing, USA. Chapter 19 (Pages: 370-376); Chapter 20 (Pages: 385-399).
- Singh, J.S., Singh, S.P. and Gupta, S.R. (2017). Ecology, Environmental Science and Conservation. S. Chand Publishing, New Delhi. Chapter 23 (Pages: 555-598); Chapter 30 (Pages: 801-807).

Practical/Exercises/Experiential activities/Outreach activities

- (College may choose as per requirement)

 1. Depict temperature/precipitation trend of a given study area using online data
- 2. Formulate questionnaire/online surveys for assessment of the impact of
- climate change onpeople
 3. Assess Nationally Determined Contributions (NDCs) of developed and developing countries
- 4. Development and simulation of Model UNFCCC for inoculating negotiation skills at climatechange summits
- 5. Development and simulation of Moot Court for Mock Trials in Negotiation Green Tribunal
- 6. Identify carbon footprint of your college/home/locality (refer wwf@envis.nic.in).







Syllabus of Ennvironmental Studies (EVS)

Ability Enhancement Course (AEC-I) for all undergraduate courses

Unit 6

Biodiversity and Conservation (8 lectures and 8 practical/ outreach activities)

- Definition of Biodiversity; Levels of biological diversity: genetic, species and ecosystem diversity
- India as a mega-biodiversity nation; Biogeographic zones of India; Biodiversity hotspots; Endemic and endangered species of India; IUCN Red list criteria and categories
- Value of biodiversity: Ecological, economic, social, ethical, aesthetic, and informational values of biodiversity with examples; sacred groves and their importance with examples
- Threats to biodiversity: Habitat loss, degradation, and fragmentation;
 Poaching of wildlife; Man-wildlife conflicts; Biological invasion with emphasis on Indian biodiversity; Current mass extinction crisis
- Biodiversity conservation strategies: in-situ and ex-situ methods of conservation; National Parks, Wildlife Sanctuaries, and Biosphere reserves; Keystone, Flagship, Umbrella, and Indicator species; Species reintroduction and translocation
- Case studies: Contemporary Indian wildlife and biodiversity issues, movements, and projects (e.g., Project Tiger, Project Elephant, Vulture breeding program, Project Great Indian Bustard, Crocodile conservation project, Silent Valley movement, Save Western Ghats movement, etc.)

Suggested Readings

- Primack, R.B. (2014). Essentials of Conservation Biology, Oxford University Press, USA. Page. 1-536.
- Raven, P.H, Hassenzahl, D.M., Hager, M.C, Gift, N.Y. and Berg, L.R. (2015). *Environment*, 9th Edition. Wiley Publishing, USA. Chapter S (Pages: 97-99); Chapter 16 (Pages: 299-318).
- Singh, J.S., Singh, S.P. and Gupta, S.R. (2017). Ecology, Environmental Science and Conservation. S. Chand Publishing, New Delhi. Chapters 24 (Pages: 599-690); Chapter 26 (Pages: 664-714).







Syllabus of Ennvironmental Studies (EVS)

Ability Enhancement Course (AEC-I) for all undergraduate courses

Practical/Exercises/Experiential_activities/Outreach activities (College may choose as per requirement)

- 1. Acquaintance with open-source databases of biodiversity
- 2. Determine species location in a given study area
- 3. Depict distribution of biodiversity across latitude and altitude
- 4. Show species distribution across space and time
- 5. Quantify species loss across different time periods
- 6. Sampling of plant and animal biodiversity of the College campus
- Identification of the floral diversity of Delhi and other states.

Documentation of the plants by clicking pictures, finding out the scientific names/local names through literature or mobile applications, identification of their conservation status (IUCN red book list), medicinal properties, water consumption status, and socio-economic-environmental importance. A short report to be submitted)

 Exercise to understand the socio-economic-environmental impact of wildlife conservation.

(Students can choose any global animal species and identify the relevance of the species for the ecosystem/ society/ culture/ local economy, historic or present range of the species, emerging threats due to human activities, identification of documented events of natural disasters/ conflicts/ poaching of the species in the present range, conservation status (IUCN red book list), identification of protected areas/ programs of the government/ international organisation, and their opinion to further improve the conservations of the species. A short report to be submitted.

Unit 7

Human Communities and the Environment (6 lectures and 7 practical/ outreach activities)

- Human population growth: Impacts on environment, human health, and welfare; Carbon foot-print
- Resettlement and rehabilitation of developmental project affected persons and communities; relevant case studies
- Environmental movements: Chipko movement, Appiko movement, Silent valley movement, Bishnois of Rajasthan, Narmada Bachao Andolan, etc.
- Environmental justice: National Green Tribunal and its importance
- Environmental philosophy: Environmental ethics; Role of various religions and cultural practices in environmental conservation
- Environmental communication and public awareness: case studies (e.g., CNG vehicles in Delhi, Swachh Bharat Abhiyan, National Environment Awareness Campaign (NEAC), National Green Corps (NGC) "Eco-club" programme, etc)

Suggested Readings

- Divan, S. and Rosencranz, A. (2002). Environmental Law and Policy in India: Cases, Material & Statutes, 2nd Edition. Oxford University Press, India. Chapter 10 (Pages: 416-473).
- Raven, P.H, Hassenzahl, D.M., Hager, M.C, Gift, N.Y. and Berg, L.R. (2015). Environment, 9th Edition. Wiley Publishing, USA. Chapter 2 (Pages: 33-36);







Syllabus of Ennvironmental Studies (EVS)

Ability Enhancement Course (AEC-I) for all undergraduate courses

Practical/Exercises/Experiential_activities/Outreach activities (College may choose as per requirement)

- Assessment of carbon foot-print of different countries using online databases andmathematical tools
- 2. Visit to marginalized localities and students for environmental education and environmentalawareness
- 3. Formulation of questionnaire/online surveys for assessment of the impact of environmentaleducation
- 4. Visit to any developmental project affected locality for assessing the impacts of economic development on human lives
- 5. Correlation analysis of human population growth and impacts on the environment and human health

6.2Essential Readings

- Brusseau, M.L., Pepper, I.L., and Gerba, C.P. (2019). Environmental and PollutionScience, 3rd Edition. Academic Press, USA. (pp. 1-520).
- Divan, S. and Rosencranz, A. (2002). Environmental Law and Policy in India: Cases, Material & Statutes, 2nd Edition. Oxford University Press, India. (pp. 1-837).
- Gadgil, M., and Guha, R. (1993). This Fissured Land: An Ecological History of India. University of California Press, Berkeley, USA. (pp. 1-245).
- Raven, P.H, Hassenzahl, D.M., Hager, M.C, Gift, N.Y., and Berg, L.R. (2015). *Environment*, 8th Edition. Wiley Publishing, USA. (pp. 1-472).
- Singh, J.S., Singh, S.P., and Gupta, S.R. (2017). Ecology, Environmental Science and Conservation. S. Chand Publishing, New Delhi. (pp.1-842).

6.3 Weekly Lesson Plan

(Year 1)Weeks 1-2

Multidisciplinary nature of environmental studies; components of environment: atmosphere, hydrosphere, lithosphere, and biosphere Scope and importance; Concept of sustainability and sustainable development; Brief history of

environmentalism

Weeks 3-7

Definition and concept of Ecosystem: Structure of ecosystem (biotic and abiotic components);







Syllabus of Ennvironmental Studies (EVS)

Ability Enhancement Course (AEC-I) for all undergraduate courses

Functions of Ecosystem: Physical (energy flow), Biological (food chains, food web, ecological succession), and Biogeochemical (nutrient cycling) processes. Concepts of productivity, ecological pyramids and homeostasis

Types of Ecosystems: Tundra, Forest, Grassland, Desert, Aquatic (ponds, streams, lakes, rivers, oceans, estuaries); importance and threats with relevant examples from India

Ecosystem services (Provisioning, Regulating, Cultural, and Supporting); Ecosystem preservation and conservation strategies; Basics of Ecosystem restoration

Weeks 8-11

Land cover, land use change, land degradation, soil erosion, and desertification; Causes of deforestation; Impacts of mining and dam building on environment, forests, biodiversity, and tribal communities Natural and man-made sources of water; Uses of water; Over exploitation of surfaceand ground water resources; Floods, droughts, and international & inter-state conflicts over water

Renewable and non-renewable energy sources; Use of alternate energy sources; Growing energy needs; Energy contents of coal, petroleum, natural gas and bio gas; Agro-residues asa biomass energy source ase studies: Contemporary Indian issues related to mining, dams, forests, energy, tc. (e.g., National Solar Mission, Cauvery river water conflict, Sardar Sarovar dam, Chipko movement, Appiko movement, Tarun Bharat Sangh, etc).

Weeks 12-15

Environmental pollution (Air, water, soil, thermal, and noise): causes, effects, and controls; Primary and secondary air pollutants; Air and water quality standards Related case studies

Nuclear hazards and human health risks; Control measures for various types of urban, industrial waste, Hazardous waste, E-waste, etc. Waste segregation and disposal Related case studies

6.4 Weekly Lesson Plan

(Year 2)Weeks 1-4

Definition of Diodiversity; Levels of Diological diversity; India as a mega-Diodiversity nation; Biogeographic zones of India; Biodiversity hotspots; Endemic and endangered species

of India; IUCNRed list criteria and categories

Value of biodiversity: Ecological, economic, social, ethical, aesthetic, and







Syllabus of Ennvironmental Studies (EVS)

Ability Enhancement Course (AEC-I) for all undergraduate course

informational values of biodiversity with examples; sacred groves and their importance with examples

Threats to biodiversity: Habitat loss, degradation, and fragmentation; Poaching of wildlife; Man-wildlife conflicts; Biological invasion with emphasis on Indian biodiversity; Current mass extinction crisis; Biodiversity conservation strategies: in-situ and ex-situ methods of conservation; National Parks, Wildlife Sanctuaries, and Biosphere reserves; Keystone, Flagship, Umbrella, and Indicator species; Species reintroduction and translocation

Case studies: Contemporary Indian wildlife and biodiversity issues, movements, and projects (e.g., Project Tiger, Project Elephant, Vulture breeding program, Project Great Indian Bustard, Crocodile conservation project, Silent Valley movement, Save Western Ghats movement, etc.)

Weeks 5-9

Causes of Climate change, Global warming, Ozone layer depletion, and Acid rain; Impacts on human communities, biodiversity, global economy, and agriculture International agreements and programmes; Earth Summit, UNFCCC, Montreal and Kyoto protocols,







Syllabus of Ennvironmental Studies (EVS)

Ability Enhancement Course (AEC-I) for all undergraduate courses

Convention on Biological <u>Diversity</u>(CBD), Ramsar convention, The Chemical Weapons Convention (CWC), UNEP, CITES, etc.

Sustainablé Development Goals: India's National Action Plan on Climate Change and its major missions Wildlife Protection Act, 1972; Water (Prevention and Control of Pollution) Act, 1974; Forest (Conservation) Act 1980; Air (Prevention & Control of Pollution) Act, 1981; Environment Protection Act, 1986; Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006

Weeks 10—15

Human population growth: Impacts on environment, human health, and welfare; Carbon foot-print; Resettlement and rehabilitation of developmental project affected persons and communities; relevant case studies; Environmental movements: Chipko movement, Appiko movement, Silent valley movement, Bishnois of Rajasthan, Narmada Bachao Andolan, etc. Environmental justice: National Green Tribunal and its importance

Environmental philosophy: Environmental ethics; Role of various religions and cultural practices in environmental conservation

Environmental communication and public awareness: case studies (e.g., CNG vehicles in Delhi, Swachh Bharat Abhiyan, National Environment Awareness Campaign (NEAC), National Green Corps (NGC) "Eco-club" programme, etc.)

7.0 Teaching Learning process

The teaching—learning methodologies are designed to provide the undergraduate students a comprehensive understanding of the subject in a simplistic manner as well as evoke critical reasoning and analytical thinking among them. The various approaches to teaching—learning process include classroom lectures, video presentations, and ICT enabled teaching tools. For enhancing practical understanding, field visits are encouraged to relevant places in Delhi like Biodiversity parks, Protected areas, Wetlands, Sewage treatment plants, etc.

7.1 Assessment methods

- Written examinations (Semester exams) [(Year 1: 01 credit (1 hour); Year 2: 01 credit(1 hour)]
- Project work and reports related to field visits, outreach activities, case study, projectformulation, assignments, presentations and practical learning (Internal practical assessment) [(Year 1: 01 credit (2 hour); Year 2: 01 credit (2 hour)]
 - Year 1 (Sem-I/Sem-II): 01 Credit Theory+ 01 Credit practical exercises, etc. = Total 02 Credits (03 hours)
 - Year 2 (Sem-I/Sem-II): 01 Credit Theory+ 01 Credit practical exercises, etc. = Total 02 Credits (03 hours)







(University of Delhi)

NAAC ACCREDITED "A" GRADE COLLEGE

B.Sc.(H) Zoology Semester V-ZH DSE Course I-Animal Behaviour and Chronobiology

Unit 3: Social and Sexual Behaviour

Social Behaviour: Concept of Society; Communication and the senses (Chemical, Tactile, Auditory, Visual); Altruism, Inclusive fitness, Hamilton's rule; Insects' society (Example: Honey bee); Foraging in honey bee and advantages of the waggle dance. Sexual Behaviour: Asymmetry of sex, Sexual dimorphism, Mate choice, Intra-sexual selection (male rivalry), Inter-sexual selection (female choice), Courtship behaviour; Parental care, sexual conflict in parental care.

Unit 4: Introduction to Chronobiology

6 hrs

Historical developments in chronobiology; Biological oscillation: the concept of Average, amplitude, phase and period. Adaptive significance of biological clocks

Unit 5: Biological Rhythm

Characteristics of biological rhythms; Short- and Long-term rhythms; Circadian rhythms; Tidal rhythms and Lunar rhythms; Concept of synchronization and masking; Photic and non-photic zeitgebers; Circannual rhythms; Photoperiod and regulation of seasonal reproduction of vertebrates; Role of melatonin.

Unit 6: Biological Clocks

Relevance of biological clocks; Chronopharmacology, Chronomedicine, Chronotherapy.

Practical [Credits: 2]

- 1. To study nests and nesting behaviour of the birds and social insects.
- 2. To study the behavioural responses of wood lice to dry and humid conditions.
- 3. To study geotaxis behaviour in earthworm/ phototaxis behaviour in insect larvae.
- 4. Study of courtship behaviour in birds and insects from short videos/films.
- 5. Visit to Forest/Wild life Sanctuary/Biodiversity Park/Zoological Park to study and record the behavioural activities of animals and prepare a short report.
- 6. Study and actogram construction of locomotor activity of suitable animal models.
- 7. To study circadian functions in humans (daily eating, sleep and temperature patterns).

Teaching and Learning Process:

Teaching learning methods for the Animal behaviour and chronobiology paper should include conventional black board teaching coupled with power point presentations and smart board. The animal behaviour in wild life can be shown to the student with the help of videos and short films. The classroom teaching should be inclusive and have opportunities for the students to participate in the class discussion. The students should be encouraged to observe various live animal behaviours in their immediate surrounding environment and interpret them. There should be ample scope for field visits and visit to the research laboratories. Seminar should be arranged at the departmental level for the student, where student can have paper presentation on various themes of animal behaviour and chronobiology. Quizzes and debates can be arranged to make the teaching learning more innovative. Students should be advised to use e resources along with standard text books and reference books. They should take short project work and case study on the animal behaviour. They should relate various concepts in chronobiology taught in the classroom with their daily life. The students should be regularly assessed.

forst





Life Sciences

class hours. The students are asked to submit their record notebooks to the teacher/s for checking.

Week 2: Unit I

Week 3: Unit II

Week 4: Unit II

Week 5: Unit III

Week 6: Unit III

Week 7: Field visit

Week 8: Unit IV

Week 9: Unit IV

Week 10: Mid semester Exam

Week 11: Mid Semester Break

Week 12: Unit IV

Week 13: Unit V

Week 14: Unit V

Week 15: Unit V

Assessment Methods

Theory: The students are continuously evaluated based on a class test and the presentation given by each student. The answer scripts of the test are returned to the students and the test paper is discussed at length. The question paper is suitably modified for such students.

Each student in a class is given a different topic to prepare a PowerPoint presentation. All the remaining students listen to the presentation of each student, and peer students are also encouraged to ask questions. Presentations by students improves their reasoning and communication skills. The presentations of students are evaluated by the teacher based on the content, effectiveness of the presentation, whether any new information has been added, and lastly on the answers given by students to the questions posed by the teacher.

The Internal Assessment has a break-up as 10 marks for the test, 10 marks for the presentation/ assignment and 5 marks for the attendance, and comprises 25 % of the total marks.

Practicals: For continuous evaluation two tests are conducted; one on the table work experiments for 10 marks, and the other on setups for 10 marks. The total marks obtained is scaled down to 10. Ten marks are allotted for record notebooks, and 5 marks for attendance. The Internal Assessment for practicals comprises 50 % of the total marks.

Assessment Task

Unit No	Course learning Outcome	Teaching and Learning Activity	Assessment Tasi	
Unit I:	General account about the microbes used as biofertilizer – Rhizobium – isolation, identification, mass multiplication, carrier based inoculants, Actinorrhizal symbiosis.	and Practical demonstration,	Hands on exercises, PPT, assignments, tests	
Unit II:	multiplication - carrier based inoculant,	demonstration, experiments	Hands on exercises, PPT, assignments, tests	







Botany syllabus-III semester

Teaching Learning Process

The Class room teaching is integrated with practical classes, and field visit to impart a sound understanding of the course. The theory topics are covered in lectures with the help of blackboard teaching and PowerPoint presentations. When the entire syllabus is completed, a few lectures are devoted to discuss the previous years' question papers.

Every practical session begins with detailed instructions, followed by students conducting the experiment/s in the laboratory/college campus. When all the students have collected the data, the observations are discussed. Any deviation from the expected trend in results is explained. The students are encouraged to graphically represent the data and record the experiment during class hours. The students are asked to submit their record notebooks to the teacher/s for checking.

College teachers can also form a group and prepare e-contents for theory as well as for practicals. Field visit is also be organised to familiarise the students with local plant species, and to understand community pattern and processes.

Cont.







Monochlamydeae- Any 2 families Monocotyledons- Any 2 families

- 2. Field visit (local)- Subject to grant funds from the University
- 3. Mounting of a properly dried and pressed specimen of any wild plant on herbarium sheet (to be submitted with the record book).

References

- Singh, G. (2012). Plant Systematics: Theory and Practice, 3rd edition. Oxford and IBH Pvt. Ltd. New Delhi. Chapter 1 for unit 1, chapter 2 for unit 5, chapter 3 for unit 4, chapter 5 for unit 2, chapter 7 for unit 3, chapter 8 & 9 for unit 7 and 8, chapter 10 for unit 6.
- Simpson, M.G. (2010). Plant Systematics. Elsevier Academic Press, San Diego, CA, U.S.A. chapter 1 for unit 1, chapter 2, 6 &7 for unit 8, chapter 14 for unit 3, chapter 15-18 for unit
- 3. Stuessy, Tod F. (2009) Plant Taxonomy: The systematic evaluation of comparative data -2nd edition. Columbia University Press Chapter 5, 6 for unit 1, chapter 19-21 for unit 3, chapter 10-11 for unit 4, chapter 4&7 for unit 7, chapter 8 for unit 8.
- 4. Gupta R.2011 (Ed.) Plant Taxonomy: past, present, and future. New Delhi: The Energy and resources Institute (TERI). chapter 2, for unit 5, chapter 4 for unit 5, chapter 5 for unit 3, chapter 8 for unit 2, chapter 9 for unit 7 and 8, chapter 11-15 for unit 3.

Additional Resources

- Stace, C.A (1989) Plant Taxonomy and Biosystematics 2nd edition. Cambridge University Press, NY USA. Chapter 1 and 2 for unit 1, chapter 3 for unit 7, chapter 4 & 5 for unit 3, chapter 9 & 10 for unit 2.
- 6. Raven, F.H., Evert, R. F., Eichhorn, S.E. (1992). Biology of Plants. W.H. Freeman and Company. New York, NY. chapter 20 for unit 8, chapter 12 for unit 1, 2 7 & 8.
- 7. Walter S. Judd, et.al. 2015 Plant Systematics : A Phylogenetic Approach 4th Edition Sinauer Associates, Oxford University Press.USA .chapter 1 for unit 1, chapter 4 for unit 3, chapter 2 & 8 for unit 8, appendix 1 for unit 5, chapter 3 for unit 6.
- 8. http://www.mobot.org/MOBOT/research/APweb/. Unit 6 (for APG IV classification)

Teaching Learning Process

Field visits to the forested areas and on the spot Plant identification feature would be very helpful. Visual media should be made available. It is suggested that Botany Department, University of Delhi may be entrusted with preparation of good visual aids that would help students get a feel of the subject and they find the subject interesting. Even the college teachers can form a group and work out these possibilities of visual aids that would enhance teaching learning process.

Week 1: Unit I

Week 2: Unit II

Week 3: Unit II

Week 4: Unit Local Field visit

Week 5: Unit III







Geography 5th semester syllabus

11. Regional Planning and Development

Course Objectives:

- 1. To understand the concept of Region and Regional Planning.
- 2. To familiarize the students with Theories and Models for Regional Planning.
- To develop understanding about concept of Development, Sustainable Development and different programmes and policies.

Learning Outcome:

After studying, students will be able to:

- Conceptualize the Regional Planning and its theories.
- Get the overview of Sustainable Regional Development.
- 3. Have sound knowledge to Sustainable Development Policies and Programmes.

Course Content:

- Definition of Region, Evolution and Types of Regional planning: Formal, Functional, and Planning Regions and Regional Planning;
- Choice of a Region for Planning: Regionalization of India for Planning (Agro Ecological Zones)
- Theories and Models for Regional Planning: Growth Pole Model of Perroux;
 Myrdal, Hirschman, Rostow and Friedmann;
- Sustainable Development: Concept of Development and Underdevelopment;
 Efficiency-Equity Debate: Definition, Components and Sustainability for

Cont.







Geography 6th Semester syllabus

13. Evolution of Geographical Thought

Course Objectives:

- 1.Understanding historical evolution of geographic thought
- 2.Detailed analysis of different paradigms in geography
- 3. Evaluating the contemporary trends in geographical studies

Learning Outcomes:

- 1. In depth understanding about the evolution of geographical thought
- Detailed knowledge about the paradigms and debates in the geographical studies.
- 3. Understanding of recent traditions in geography

Cont.







14.Disaster Management based Project Work (Practical

Course Objectives:

- 1. Understanding the basic concepts of disaster management
- 2. Detailed analysis about the different types of disasters in India
- 3. Evaluating the various dimensions of disaster management through field works

Learning Outcomes:

- 1. In depth understanding about the various disasters in the country
- 2. It will provide thorough understanding about the human responses to the disasters
- It will give an in-depth knowledge about the disasterscapes through fieldworks

Course Content:

- Introduction to Disaster Management: Basic concepts; Disaster Management Cycle: components and stages; Community Based Disaster Management
- 2. Flood and Drought
- 3. Cyclone and Hailstorms
- Earthquake and Volcanoes
- 5. Landslides
- Human Induced Disasters: Fire Hazards, Chemical, Industrial accidents

(Practical Record: Project work to be based on any two of the above topics of their Choice. First should be field-based case study and second should be local / college-based.)