



**Dr. Homi Bhabha State University**

**Information for the Annual Report  
The Institute of Science, Mumbai**

**Academic Year: 2022-23**

1. Principal/Director: Dr. Jairam Khobragade
2. Vision
  - Empowerment through education” is the key to Personal, Social and National development.
  - To be premier Institute providing students with value added higher education in a dynamic environment where today's students meet tomorrow's opportunities.

**Mission /Goals of the College/Institute**

- To strive for excellence in academic and nonacademic fields in order to match global standards.
- To prepare outstanding educators, scholars and researchers and to advance education through research in Science and art of teaching and learning.
- To work towards advancement of the knowledge base through research by undertaking research in basic, applied and interdisciplinary Sciences.
- To empower students through education to make them strong, self-reliant, responsible and secular human beings, professionals and citizens, so that they chart out their own path of success and possess perfection in their endeavors.
- To foster Regional, National and Global competencies among the students.
- To ensure that every student of Institute becomes an achiever.

**OBJECTIVES**

The objectives of the Institute can be summarized as follows:

1. **Imparting Post Graduate Training and Conducting Research:** The primary objective is to provide advanced training in various disciplines of basic and fundamental sciences at the postgraduate level and to undertake research in diverse subjects.
2. **State-of-the-Art Infrastructure:** The Institute aims to offer state-of-the-art infrastructure and facilities to both students and faculty, ensuring an environment conducive to learning and research.
3. **Promotion of Technology Use:** The Institute strives to promote the use of technology in teaching, research, and other academic activities, fostering innovation and modernization.

4. **Imparting Basic Human Values:** Along with academic excellence, the Institute emphasizes instilling basic human values such as truth and hard work among its students, nurturing their overall development.
5. **Promotion of Student Excellence:** The Institute seeks to promote excellence among students by encouraging their active participation in seminars, workshops, conferences, debates, both at the national and international levels.
6. **Exposure to Eminent Personalities:** The Institute facilitates interaction between students and distinguished individuals from various fields through talks and lectures, providing valuable insights and inspiration.
7. **Industry Visits and Experiential Learning:** Students are provided with opportunities to visit industries, asylums, and organizations, organizing camps and excursions to enhance their practical understanding and real-world exposure.
8. **Financial and Merit-Based Support:** The Institute aims to extend financial and other forms of assistance to deserving and meritorious students, ensuring that financial constraints do not hinder their educational pursuits.

By pursuing these objectives, the Institute strives to create an environment that fosters academic excellence, research, holistic development, and values, preparing students for successful careers and contributing to society at large.

3. **College Governance:** LMC and other committees

**Enclosed as annexure A**

4. **Names of programmes offered**

UG	PG	Ph.D
	Botany Biochemistry Biotechnology Chemistry Data Science Environmental Science Maths Microbiology Physics Zoology	Botany Biochemistry Biotechnology Chemistry Environmental Science Maths Microbiology Physics Zoology

5. **When the curriculum was last revised**

Complete : 2021 Partial
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6. Number of teaching posts Sanctioned/Filled

	Professor			Asso. Professor			Asst. Professor		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Sanctioned			10			20			41
Recruited	03	00	03	10	05	15	11	09	21

7. Number of research projects of the year 2022-23(on-going/completed)

Sr. No.	Name of the project	Name of the principal Investigator / Co-Investigator	Year of award	Duration	Funding Agency	Total amount of funds provided
1	Hydrogen storage capacity of metal doped nanocages using density functional theory	Prof. Ajay Chaudhari	2023	2023-2026	SERB-SURE	Sanctioned
2	Activity of Molybdenum Dioxide embedded cobalt and Iron oxide nanostructures for Hydrogen and Oxygen Evolution using Photo-Electrolysis for Water Splitting	Prof. Dr. Anamika V. Kadam	2022	2022-2025	DST-SERB	Sanctioned
3	Understanding Sorption Mechanism in Li and Na silicate sorbents for Post/pre-combustion CO <sub>2</sub> capture applications: Synthesis and Solid State NMR Strategies	Dr. Vishal Banewar	2022	2023-2026	DST-SERB	Sanctioned
4	Upskilling & Empowering Women and Senior Citizens for Digital Financial Inclusion and cybersecurity awareness	Dr. Vishal Banewar	2023	2023-2024	CSR (Corporate Social Responsibility)	Sanctioned
5	Fabrication and development of In-Situ Characterization of Soil element determination system	PI-Dr. Pravin More Co-PI Dr. Rajesh Raut Co-PI-Prof. Yuvraj	2018	3 Years extended till Sept. 2023	RGSTC	86.104 Lakh

		Malghe				
6	Rapid and Ultra-sensitive Detection of p-tau- 181 and p-tau-217 antigens using gold nanoparticles antibodies conjugates	Dr. Rajesh W. Raut and Mr Sahebrao B Kashid	2022	2022-2025	RGSTC	48.94 Lakh
7	Microwave-assisted novel synthesis of bioactive thiaza, thidiazia, spiro-indoline and different sulphur-nitrogen allied substituted heterocycles.	Dr. Vikas M. Bangade	2023	2023-2026	SERB-SURE	Sanctioned

8. Inter –institutional collaborative projects and Associated grants received (Add details about beneficiaries, grants received and nature of collaboration)

National collaboration	03
International collaboration	

Sr. No.	Organisation	Name of the Institution / Industry	Year of signing MoU	Duration	Activities	No. of Students/ Teachers participated	Outcome
1	TIFR, Mumbai	TIFR	2019	5 Yrs	Collaborative Research	66	Research
2	ICT Mumbai	ICT	2017	Continuous	Collaborative Research	48	Research
3	CMET Pune	CMET	2022	Continuous	Collaborative Research	4	Research

9. Details of projects funded by DST-FIST, UGC-SAP/CAS,DPE, DBT, ICSSR, AICTE etc., : Total grants received

Sr. No.	Name of the PI/Co PI	Name of the Scheme	Name of the funding agency	Year of Award	Funds provided	Duration of award
1	Prof. Ajay Chaudhari	Hydrogen storage capacity of metal doped nanocages using density functional theory	SERB-SURE	2023	Sanctioned	2023-2026
2	Prof. Dr. Anamika V. Kadam	Activity of Molybdenum Dioxide embedded cobalt and Iron oxide nanostructures for Hydrogen and Oxygen Evolution	DST-SERB	2022	Sanctioned	2022-2025

		using Photo-Electrolysis for Water Splitting				
3	Dr. Vishal Banewar	Understanding Sorption Mechanism in Li and Na silicate sorbents for Post/pre-combustion CO2 capture applications: Synthesis and SOLid State NMR Strategies	DST-SERB			
4	Dr. Vishal Banewar	Upskilling & Empowering Women and Senior Citizens for Digital Financial Inclusion and cybersecurity awareness	CSR (Corporate Social Responsibility) ATA FREIGHT LINE INDIA PRIVATE LIMITED	2023	1,200,000	2023-2025
5	Dr. Rajesh W. Raut Mr. Sahebrao Kashid	Rapid and Ultra-sensitive Detection of p-tau-181 and p-tau-217 antigens using gold nanoparticles antibodies conjugates	RGSTC	2022	Sanctioned	2022-2025

10. Recognition from UGC-SAP, CAS, DST-FIST, DBT, ICSSR and other recognitions by National and International Agencies

Sr. No.	Name of the Department	Name of the Scheme	Name of the funding agency	Year of Award	Funds provided	Duration of award

11. Special research laboratories sponsored by / created by industry or corporate bodies

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12. Number of publications during the year

Sr. No.	Particulars	Numbers

Papers presented	31
Number of Papers published	42
Number of Books with ISBN	00
Number of Citation Index – range / average	00
Number of Impact Factor – range / average	4.70 (Average)
Peer-reviewed papers(International)	40
Peer-reviewed papers(National)	4
Books–Authored	00
Books–Edited	00
Chapters in Edited Books/Volumes	11
Others	00

Give list of the publications in APA format

13. H-index of individual faculty (add separate sheet ,if necessary)

Sr. No.	Name of the Faculty	H-index
1	Prof. Ajay Chaudhari	28
2	Prof. Dr. A.V. Kadam	13
3	Dr. Vishal Banewar	4
4	Dr. Rajesh W. Raut	9
5	Prof Y S Malghe	15
6	Dr. B. M. Patil	2
7	Dr. U. M Lekhak	20
8	Prof Rupendra Jadhav	23
9	Dr. Umesh Kakde	9
10	Dr. V. D. Mendhulkar	13
11	Prof S. B. Kulkarni	20
12	Prof. Aparna Saraf	8
13	Prof P. S. More	17
14	Prof Vandana Kamble	08
15	Prof R. M. Patil	08
16	Prof Manohar Padul	12
17	Dr. Shekar Jadhav	15
18	Dr. Shubhangi Patil	03
19	Dr. Vikas Bhangade	09
20	Shri S. B. Kashid	07
21	Prof R. B. Kale	23
22	Prof Gayatri Barabde	02
23	Prof Selby Jose	05
24	Dr. Kiran Sonawane	08
25	Dr. Mahadev Sonawane	03

14. Details of patents and income generated

Sr. No.	Name of the Patenter	Patent No.	Title of the Patent	Year of Award of Patent	Income generated
1	Srivastava Rohit, Jaya Lakkakula,	201721029703	"Alloy, Bi and Tri Metallic Nanoparticles	IN ORDER FOR GRANT UNDER	0

	Tharayil Deepika D., Raut, Rajesh W.,		and Method for Green Synthesis of said Nanoparticles”	SECTION 43,AWAITING NBA APPROVAL	
2	Shri S.B.Kashid, Rajesh Warluji Raut	90/MUM/2013	"Process for Growing the Silver Nanoparticles on the Fibres"	Granted Application, Patent Number :377046 2021	0
3	1. LAKKAKULA, Jaya R. 2. THARAYIL, Deepika Divakaran 3. SRIVASTAVA, Rohit 4. RAUT, Rajesh W.	202121046488	Green Process for Synthesizing Metal Nanoparticles within Polymeric Matrices	Granted Application, Patent Number :405579 2022	0
4	Dr. B. M. Patil	202221003201A	Microwave Assisted Synthesis Of Synroc-B From Tartrate Precursor- CBR-1581- 20/01/2022	25-02-2022 Published waiting for granted	0

15. Areas of consultancy and Income generated from consultancy

Sr. No.	Name of the Consultant	Name of the Consultancy project	Consultancy / Sponsoring agency	Year	Revenue Generated
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16. Revenue generated from corporate training

Sr. No.	Name of the teacher - Consultant / corporate trainer	Title of the corporate training programme	Agency seeking training with contact details	Year	Revenue Generated	No. of trainees
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17. Awards/Recognitions received at the National and International level by : Faculty / Doctoral/Post-doctoral fellows / Students

Sr. No.	Name	Year of Award	Designation	Name of the Award
1	Prof. Dr. A.V. Kadam	2023	Professor	INSA Scientist Program

2	Ms. Ayesha Khan	2022	Ph.D. student	IWAS Indian women Scientist's Association
3	Ms. Ayesha Khan	2023	Ph.D. student	Best innovative researcher-G20 summit on environment sustainability and bioenzyme-International conference-1st Prize for paper presentation
4	Mr Sharad Jadhav	2022	Ph.D. student	ETMS-1st prize for oral presentation in conference
5	Mrs. Ashwini Pol	2023	Ph.D. student	G20 summit on environment sustainability and bioenzyme-International conference-2nd Prize for paper presentation
6	Mr. Abrar	2022	<a href="#">M.Sc.</a> Student	Inspire Fellowship for Ph.D.
7	Chirag B. Gawali-	2022	Ph.D. student	Mahajyoti Fellowship
8	Ms. Liviya Gaikwad	2023	Ph. D Student	BARTI
9	Ms. Harshala Naik	2021	Ph. D Student	UGC-NET SRF
10	Mr. Parvindar M. Sah	2021	Ph. D Student	RGST JRF
11	Mr. Pratik Jagtap	2023	Ph. D Student	BARTI
12	Mrs. Bhumika S. Ambadkar	2023	Ph. D Student	BARTI
13	Mr. Shubhangi Tayde	2022	Ph. D Student	BARTI
14	Mr. Abhijeet Salve	2022	Ph. D Student	UGC-NET SRF
	Mr. Akshay Chavan	2022	Ph. D Student	UGC-NET JRF

18. How many students have cleared Civil Services and Defense Services examinations, NET, SET (SLET), GATE and other competitive examinations

Department	Examinations	Number
Botany	NET	01
Biochemistry	SLET	05
Biotechnology	GATE	03
Chemistry	GMAT	
Data Science	CAT	
Environmental Science	GRE	
Maths	TOEFL	01
Microbiology	CIVIL Services	
Physics	State Government examinations	
Zoology	Any other	



19. List of doctoral, post-doctoral students and research associates

Sr. No.	Name of the Guide	From the host institution/university	From other institutions/universities
1	Prof. Ajay Chaudhari	Chaitanya Gend Poonam Parkar Unnati Jethawa	
2	Dr. Vishal Banewar	Mr. Maruti Aldar Mr. Keshav Darekar Ms. Chaitra Shriyan	
3	Dr. Rajesh Raut	Miss Harshala Naik Mr. Parvindar Sah Mr. Pratik Jagtap Mrs. Bhumika Ambadkar	
4	Dr. B. M. Patil	Mr. Sarang Bhagwat Mrs. Gayatri Gaydhane Mr. Mayuresh Kadav Mr. Ranjeet Maske	
5	Dr. U. M. Lekhak	Ms. Sailee Raut Ms. Sneha Ganpule Ms. Sana Jalili	Ms. Swati Girawale
6	Prof. Rupendra Jadhav	Ms. Mrunal Posam Mr. Rajendra Choure Ms. Akshada Bhadane Ms. Neelam Ware Ms. Sayli Mandavkar Mrs. Dipali Khedekar	
7			

20. Research Scholars/ Post Graduate students getting financial assistance from the University/State/ Central Govt.

Name of Department	PG Numbers	Ph.D Numbers
Physics		<b>Chaitanya Gend – Mahajyoti Fellowship</b>
		<b>Poonam Parkar – Inspire Fellowship</b>
		Amar Jadhav-Sarthi Fellowship

		Sharad Jadhav- Sarthi Fellowship
		Suchitra Sakapal- Project Associate on SERB
Chemistry		Chirag B. Gawali- Mahajyoti Fellowship
		Smita G. Gite - Mahajyoti Fellowship
Botany		Harshala Naik- UGC JRF Fellowship
		Parvindar Sah- Project Assistant RGSTC Project
		Pratik Jagtap- BARTI Fellowship
		Bhumika Ambadkar- BARTI Fellowship
EVS		Manisha Patil- Single Child fellowship
Botany		Gurunath Kashivle - BARTI Fellowship
		Shubhangi Tayade - BARTI Fellowship
		Abhijeet Salve- CSIR (Till Feb 2023) terminated
		Akshay Chavan - CSIR-UGC

21. Average percentage of courses having focus of employability/entrepreneurship/skill development

Sr. No	Name of the Course	Course Code	Name of the Programme	Activities with direct bearing on Employability/Entrepreneurship/Skill development	Year of Introduction

22. Value Added Courses

Sr. No.	Name of the value added course with 30 or more contact hours	No. of times offered during the year	Total No. of students completing the course

23. List and description of the courses which address the Gender, Environment and Sustainability, Human Values and Professional Ethics into the curriculum

Sr. No	Name of the Paper	Semester
1.	Biodiversity and Conservation MSBOGE 102T Generic Elective Course (2 Credits)	I

2.	Ecosystem & Environmental Botany MSBOGG203T/P Core Compulsory (4+2 Credits)	II
3.	Ecology, Environmental Botany and Biotechnology-I (Ecological Concepts and Climate Change) MSBODE305T/P Discipline Specific Elective (4+2 Credits)	III
4.	Ecology, Environmental Botany and Biotechnology- II (Environmental Pollution) MSBODE306T/P Discipline Specific Elective (4+2 Credits)	III
5.	Environmental Impact Assessment MSBOGE30 1T Generic Elective Course (2 Credits)	III
6.	Ecology, Environmental Botany and Biotechnology- III (Conservation, Policies and Practices) MSBODE405T/P Discipline Specific Elective (4+2 Credits)	IV
7.	Ecology, Environmental Botany and Biotechnology- IV (Technologies for Pollution Control) MSBODE406T/P Discipline Specific Elective (4+2 Credits)	IV

24. Number of students admitted in programmes offered

Level of Programme	Name of the programme	Intake	2020-21	2021-22	2022-23
PGProg.1	M.Sc. Botany	20	20	19	14
PGProg.2	M.Sc. Biochemistry	20	20	20	20
PGProg.3	M.Sc. Biotechnology	20	20	20	20
PGProg.4	M.Sc. Chemistry	80	80	80	80
PGProg.5	M.Sc. Data Science	40	--		
PGProg.6	M.Sc. Environmental Science	20			
PGProg.7	M.Sc. Microbiology	20	20	20	20
PGProg.8	M.Sc. Mathematics	40	40	48	40
PGProg.9	M.Sc. Physics	40	40	39	39
PGProg.10	M.Sc. Zoology	20	20	20	20
PhD Prog.	Ph.D.	---	25	37	33

25. Teacher: Student Ratio 

1:12
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26. Details of student centric methods, such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experiences (add separate sheet, if necessary)

Experiential learning is a key component of the educational approach implemented during laboratory sessions, providing students with valuable knowledge through direct hands-on experience in practical courses. Students are presented with a descriptive problem statement related to the subject matter and are tasked with designing and conducting an experiment to address the problem.

To begin, students thoroughly understand the problem at hand and engage in further research by referring to books, research journals, and other relevant sources. They then develop an experiment protocol, outlining the steps and procedures they will follow to carry out the experiment. Once the experiment is conducted, students analyze the results, publish their findings, and provide an interpretation of the data collected.

To enhance understanding and facilitate discussions, teachers conduct pre- and post-laboratory discussions. These sessions allow students to clarify any uncertainties, ask questions, and receive guidance from the teacher on the interpretation of their observations and data.

In order to optimize time and resources, students occasionally work in groups to complete their practical work. Each student plays a role within the team, fostering collaboration and encouraging high-quality discussions during lectures, group discussions, and debates on presentations made by their peers. Additionally, special group discussions are organized to delve into student assignments, explore current research issues, and cover other relevant subjects as they arise.

Assignments based on real-world problems are an integral part of the learning process. Students are required to conduct a literature review, thoroughly examine existing research on the topic, and employ the scientific method to develop a well-structured plan of action to address the problem at hand. This approach encourages critical thinking, research skills, and the application of scientific principles in problem-solving.

Through experiential learning, students not only acquire theoretical knowledge but also develop practical skills, scientific reasoning, and effective communication abilities. This immersive and interactive learning approach enables students to gain a deeper understanding of the subject matter and prepares them for real-world challenges in their chosen field.

#### 27. Use of ICT enabled tools including online resources for effective teaching and learning process (add separate sheet, if necessary)

In each classroom, there is a computer and a projector to facilitate effective teaching and learning. Additionally, if needed, an audio speaker system is available to ensure clear audio during lectures and presentations. The instructors make use of various resources to enhance the understanding of theoretical and practical concepts.

To explain ideas and concepts, instructors utilize readily available video tutorials, YouTube lectures, and scientific documentaries. These visual aids help to illustrate complex topics, making them more accessible and engaging for students. The use of multimedia resources allows for a dynamic and interactive learning experience.

In instances where specific topics require further discussion and exploration, instructors present relevant images, journal articles, articles from popular science magazines, and book chapters on the screen. These visual materials provide additional context, examples, and real-world applications, enriching the learning process and encouraging further exploration of the subject matter.

Moreover, the instructors offer demonstrations and hands-on training on various software applications commonly used in scientific research and data analysis. Programs such as Excel, Word, PowerPoint, and R programming are personally introduced and explained to students. This practical approach helps students develop essential skills in data simulation, modeling, analysis, and report writing. It also equips them with the necessary tools to produce professional articles and presentations in their academic and professional endeavors.

By utilizing computer technology, multimedia resources, and software demonstrations, the teaching methods employed in the classroom create an interactive and immersive learning environment. These approaches cater to different learning styles, enhance understanding, and equip students with practical skills that are valuable in their academic and future professional pursuits.

#### 28. Details for initiatives regarding Slow and Advanced Learners

The evaluation of students' learning progress is a continuous process conducted by each department. Throughout lectures and practical sessions, students' engagement and enthusiasm for learning are observed. If any concerns arise, the respective professors or a panel of teachers provide individual or group counseling to address the specific needs of the students.

A variety of assessment methods are employed to evaluate students' learning outcomes. Internal descriptive exams, quizzes, and assignments with evaluation rubrics are designed and administered to assess their understanding of the subject matter. Additionally, students are given opportunities to deliver presentations on syllabus themes and cutting-edge research topics, allowing them to showcase their knowledge and presentation skills.

In teacher meetings, special attention is given to identifying slow learners or students with specific learning requirements. These students are provided with additional teaching and discussion sessions, allowing for extra time and support tailored to their individual needs. Teachers develop study plans customized to suit the requirements of slow learners, helping them to grasp concepts more effectively. At the end of each week, these students are encouraged to discuss their learning progress, enabling teachers to provide personalized guidance and feedback.

By implementing comprehensive evaluation strategies and providing individualized support, the departments ensure that students' learning progress is closely monitored and that necessary interventions are in place to support their academic development. This approach aims to create an inclusive learning environment where every student has the opportunity to succeed and excel.

#### 29. Details of Personal Counseling and Mentorship programmes for students

Counseling and mentorship programs are established with the aim of providing individualized guidance and support to students in order to help them achieve their personal, academic, and professional goals. Faculty members closely collaborate with students, offering one-on-one support and mentorship. During these interactions, students have the opportunity to discuss their concerns, challenges, and aspirations, while the mentor provides guidance, advice, and support tailored to the student's specific needs.

Confidentiality is a crucial aspect of these counseling and mentorship programs, ensuring that students can openly share their thoughts and difficulties without fear of judgment or repercussions. Faculty members uphold strict confidentiality when necessary, fostering an environment of trust and enabling students to address personal issues, improve their academic performance, develop effective coping skills, and enhance self-awareness.

Such initiatives are invaluable for students facing academic, personal, or career-related challenges, as they provide a dedicated support system to help them navigate difficulties and unlock their full potential. The mentorship and counseling process focuses on empowering students, enabling them to make informed decisions, develop effective strategies, and overcome obstacles along their educational and personal journeys.

In the case of MSc Part-II students, they are mentored by specialized teachers in their respective fields of study. These mentors provide guidance and support that caters to both the academic and psychological needs of the students, ensuring a comprehensive approach to their development.

Similarly, for MSc Part-I students, the Head of the Department takes on the role of mentor, providing mentorship that encompasses academic guidance and psychological support. This mentorship ensures that students receive the necessary assistance and guidance throughout their academic journey, promoting their overall growth and success.

By implementing counseling and mentorship programs, the institute acknowledges the importance of individualized support in helping students overcome challenges, maximize their potential, and achieve their goals. These programs contribute to creating a supportive and nurturing environment that fosters the holistic development and well-being of the students.

### 30. Average percentage of placement of outgoing students

Sr. No.	Number of students placed	Name of the employer with contact details	Package received	Programme graduated from
1	2	Metal Power Analytical Pvt. Ltd., Andheri (east), Mumbai	240000/-	<a href="#">M.Sc.- 2023</a>
2	1	HYTHANE Lab	264000/-	<a href="#">M.Sc.-2022</a>

### 31. Percentage of student progression to higher education (only for the year 2022-23)

Sr. No.	Name of students enrolling into higher education	Programme graduated from	Name of Institution joined	Name of Programme admitted to

### 32. Number of Ph.D. scholars working at present during the year

Sr. No.	Name of the Ph.D Scholar	Name of the Department	Name of the guide/s	Year of registration of the scholar
1	Mr. Pramod Tohake	Mathematics	Prof. Selby Jose	2017
2	Ms. Dipali Sawant	Mathematics	Prof. Selby Jose	2017
3	Mr. Gaurav Sawant	Mathematics	Prof. Selby Jose	2019
4	Ms. Meenal Kolkar	Mathematics	Prof. Selby Jose	2021
5	Nikki Huria	Botany	Prof. Aparna Saraf	24/08/2020
6	Divya Lobo	Botany	Prof. Aparna Saraf	24/08/2020
7	Liviya Gaikwad	Botany	Prof. Aparna Saraf	30/06/2021
8	Neha Mourya	Botany	Prof. Aparna Saraf	27/01/2022
9	Shubham Burande	Botany	Prof. Aparna Saraf	15/10/2022
10	Shubham Tanpathak	Botany	Prof. Aparna Saraf	14/10/2022
11	Dwijali Deo	Botany	Prof. Aparna Saraf	14/10/2022
12	Sheetal Sharma	Botany	Prof. V.D. Mendhulkar	
13	Anam Ansari	Botany	Dr. Rahul Zanan	2022
14	Pravin Sangale	Botany	Dr. Rahul Zanan	2022
15	Ajay Gangurde	Botany	Dr. Rahul Zanan	2022
16	Sushant More	Botany	Dr. Rahul Zanan	2022
17	Chaitanya Gend	Physics	Prof. Ajay Chaudhari	2020-2021
18	Poonam Parkar	Physics	Prof. Ajay Chaudhari	2021-2022
19	Unnati Jethawa	Physics	Prof. Ajay Chaudhari	2022-2023
20	Mr. Maruti Aldar	Chemistry	Dr. Vishal Banewar	2019-20
21	Mr. Keshav Darekar	Chemistry	Dr. Vishal Banewar	2021-22
22	Ms. Chaitra Shriyan	Chemistry	Dr. Vishal Banewar	2022-23
23	Miss Priyanka Pataskar	Chemistry	Prof. Gayatri Barabde	2020-21
24	Mr. Abhishek Dhumal	Chemistry	Prof. Gayatri Barabde	2022-23
25	Mr. Shriram Suryawanshi	Chemistry	Prof. Gayatri Barabde	2022-23
26	Mr. Prashant Wadekar	Chemistry	Prof. Gayatri Barabde	2022-23
27	Mr. Akshay Botle	EVS	Prof. Gayatri Barabde	2021-22
28	Miss Sayli Salgaokar	EVS	Prof. Gayatri Barabde	2021-22
29	Amar Jadhav	Physics	Prof. Anamika V. Kadam	2020-21
30	Sharad Jadhav	Physics	Prof. Anamika V. Kadam	2020-21
31	Suchitra Sakapal	Physics	Prof. Anamika V. Kadam	2020-21
32	Ayesha Khan	Physics	Prof. Anamika V. Kadam	2020-21

33	Aswini Pol	Physics	Prof. Anamika V. Kadam	2020-21
34	Bhalchandra Mandalekar	Physics	Prof. Anamika V. Kadam	2020-21
35	Mr. Vijay Kule	Physics	Dr. Kiran G. Sonawane	2022-23
36	Miss Harshala Naik	Botany	Dr. Rajesh Raut	2020-21
37	Mr. Parvindar Sah	Botany	Dr. Rajesh Raut	2020-21
38	Mr. Pratik Jagtap	Botany	Dr. Rajesh Raut	2020-21
39	Mrs. Bhumika Amdadkar	Botany	Dr. Rajesh Raut	2020-21
40	Mrs. Minakshi N. Bhatu	Chemistry	Dr. Shubhangi Patil	2022-23
41	Mr. Guruprasad Mavlankar	Chemistry	Dr. Shubhangi Patil	2022-23
42	Ajay Lalan Vishwakarma	Physics	Dr. M. R. Sonawane	2021-2022
43	Shruti Warma	Physics	Dr. M. R. Sonawane	2021-2022
44	Brijesh Yadav	Physics	Dr. M. R. Sonawane	2021-2022
45	Ms. Swati Girwale	Biochemistry	Dr. M. V. Padul	2021-22
46	Ms. Sailee Raut	Biotechnology	Dr. U. M. Lekhak	2021-22
47	Ms. Sneha Ganpule	Biochemistry	Dr. U. M. Lekhak	2021-22
48	Sana Sajjad Jalili	Microbiology	Dr. U. M. Lekhak	2022-23
49	Priyanka Deshmukh	Biochemistry	Dr. M. V. Padul	2022-23
50	Dilip Nakhwa	Zoology	Dr S.B. Chaudhari	2017-18
51	Bapusaheb Shinde	Zoology	Dr S.B. Chaudhari	2022-23
52	Chetana Kanekar	Zoology	Dr S.B. Chaudhari	2022-23
53	Shweta Chiplunkar	Zoology	Dr Varsha Andhare	2016-17
54	Sushma Singh	Zoology	Dr Varsha Andhare	2028-19
55	Snehal Londhe	Zoology	Dr. A.K. Chougale	2017-18
56	Sonali Sonar	Zoology	Dr. A.K. Chougale	2017-18
57	Aparna Ghadigaonkar	Zoology	Dr. Manisha Kuklarni	2017-18
58	Snehal Phunde	Zoology	Dr. Manisha Kuklarni	2022-23
59	Mr. Ganesh Naik	Zoology	Dr. Manisha Kuklarni	2022-23
60	Mr. Shashank More	Zoology	Dr. Manisha Kuklarni	2022-23
61	Miss. Aparna Ghadi	Zoology	Dr. Manisha Kuklarni	2022-23
62	Miss. Snehal Punde	Zoology	Dr. Manisha Kuklarni	2022-23
63	Ms. Manisha Patil	Zoology	Dr. Manisha Kuklarni	2022-23
64	Ms. Revathy Swami	Zoology	Dr. Manisha Kuklarni	2022-23
65	Ms. Saiba Qureshi	Zoology	Dr. Manisha Kuklarni	2022-23
66	Ms. Rahilah Shaikh	Physics	Prof. Rohidas B Kale	2022-23
67	Ms. Sonali Pingale	Physics	Prof. Rohidas B Kale	2022-23
68	Mr. Rohit Patil	Physics	Prof. Pravin More	2021-22
69	Mrs. Gopika Rajan Nair	Physics	Prof. Rohidas B Kale	2022-23
70	Ms. Rukhsar Momin	Physics	Prof. Rohidas B Kale	2022-23



71	Mr. Gurunath Kashivale	Botany	Prof. Umesh B. kakde	2022-23
72	Mr. Abhijeet Salve	Botany	Prof. Umesh B. kakde	2022-23
73	Akshay Chavan	Botany	Prof. Umesh B. kakde	2022-23
74	Ms Shubhangi Tayade	Botany	Prof. Umesh B. kakde	2022-23
75	Ms Ayesha Khan	Botany	Prof. Umesh B. kakde	2022-23
76	Manjiri Talanikar	Environmntal Science	Prof. Umesh B. kakde	2022-23
77	Ms Shivani Aawle	Environmntal Science	Prof. Umesh B. kakde	2022-23
78	Ms.Archana R. Baraskar	Chemistry	Prof. Ratnamala P. Sonawane	2019-20
79	Ms. Satyabhama Vishwakarma	Chemistry	Prof. Ratnamala P. Sonawane	2019-20
80	Mr. Mohan Sagare	Chemistry	Prof. Ratnamala P. Sonawane	2019-20
81	Mr. Shivhari Gawand	Chemistry	Prof. Ratnamala P. Sonawane	2019-20
82	Smita G. Gite	Chemistry	Prof. Ratnamala P. Sonawane	2020-21
83	Dhiraj A. Sawant	Chemistry	Prof. Ratnamala P. Sonawane	2022-23

### 33. Number of Ph.D. awarded during the year (2022-23)

Sr. No.	Name of the Ph.D Scholar	Name of the Department	Name of the guide/s	Year of registration of the scholar	Year of award of Ph.D
1	Vijay Tiwari	Mathematics	Prof. Selby Jose	2017	2023
2	Aditi Saitavdekar	Botany	Prof. U.B. Kakde	21/06/2017	04/10/2022
3	Toha Qureshi	Botany	Dr. S.J. Khan	19/07/2010	03/10/2022
4	Tanmay Patil	Botany	Dr. S.J. Khan	16/11/2015	03/01/2023
5	Jayaa Pawar	Botany	Prof. U.B. Kakde	2019	2023
6	Priyanka Tavhare	Physics	Prof.Ajay Chaudhari	2016	June 2022
7	Ms. Revati Potdar	Physics	Prof.Pravin More	2019	May 2023
8	Mr. Baliram Nadekar	Physics	Prof.Pravin More	2018	February 2023
9	Mr. Jayesh Tamhankar	Chemistry	Prof. Sushma Ambadekar	2019	March 2023
10	Ms. Rekha B. Rajput	Physics	Prof. Rohidas B. Kale	2019	May 2023
11	Ms. Adity Saitawadekar	Botany	Prof Umesh B. Kakde	2018	Oct 2022
12	Ms. Jaya Pawar	Botany	Prof. Umesh B. Kakde	2019	March 2023
13	Ms. Ritima Singh	Chemistry	Prof. Ratnamala P. Sonawane	2017	April 2022

34. Other programmes offered by the college/institute (Bridge Course/ Certificate Course / Diploma Course / Skill Development Course 2022-23)

Sr. No.	Name of the programme	Intake	Admitted Students

35. Number of JRFs, SRFs, Post Doctoral Fellows, Research Associates and other research fellows enrolled during the year.

Sr. No.	Name of Research fellow	Year of enrolment	Duration of fellowship	Type of the fellowship	Granting agency
1	Ms.Poonam Parkar (Guide-Prof.Ajay Chaudhari)	2022	2022-2027	Inspire Fellowship	DST-Inspire
2	Miss Harshala Naik	2020	2020-2025	UGC-JRF	UGC
3	Mr Akshay Chavan	2020	2020-2025	UGC-JRF	UGC

36. Total no. of research projects(completed during the year)

Sr. No.	Name of the project	Name of the principal Investigator	Year of award	Duration	Funding Agency	Total amount of funds provided

37. Number of computers available in Department Computer Facility/Laboratory/Office

Department	Computer Facility	Classrooms & Laboratories	Office	Total
Botany	15	5	---	
Biochemistry	12	2+2+1		
Biotechnology	04	3	---	
Chemistry	45	02+05		
Data Science	20	01		
Environmental Science	05	01		
Maths	13	01	02	
Microbiology	25	01+01		
Physics	40	03+05		
Zoology	16	01+03	---	

38. Number of equipment available in the Department

Sr.No	Department	Equipment –Existing worth>Rs.1.00Lakhs	Numbers
	Botany	Nano Particle Analyser (NTA) Nanosight (UK) LM 20 1 Sonicator Ultra-sonic 1 Refrigerated Centrifuge Eppendorf 5101R HPLC Agilent 1200 series 1 HPTLC CAMAG 1 Cell Counter Guava PCA 1 Bioreactor INFORS HT 1 Inverted Microscope Olympus CH 51 1 UV-Vis Spectrophotometer Shimadzu-1800 2 PCR (Gradient) 1 Microplate Reader Biotek 1 Research Microscope Olympus with Photography 1 Incubator Shaker 4 Oil Extractor 1 Klejdhal Apparatus 1 HPTLC-MS- interface 1 Balance 1 Ultra water Purification system 1 Flame Photometer 1 Hot Air Oven 1 Non-Refrigerated Centrifuge Eppendorf 2 -40 Refrigerator 1	
	Biochemistry	Spectrophotometer Multimode plate reader 2D Electrophoresis Deep freezer Shaking incubator Cooling centrifuge Ultrasonicator HPLC Table top centrifuge	1 1 1 1 1 1 1 1 1

	Biotechnology		
	Chemistry	Chemistry-FTIR Chemistry -Microwave Workstation Chemistry- Electrochemical Work station and Impedance Analyzer Chemistry- Rotatory Evaporator Chemistry- PL Chemistry - Solar Simulator Chemistry- UV-Visible Spectrophotometer Chemistry- TG-DTA Analyzer Chemistry - XRD Chemistry-High Temp Muffle Furnce Chemistry- UV-Visible NIR Spectrophotometer Chemistry- HPLC	
	Data Science		
	Environmental Science		
	Maths		
	Microbiology		
	Physics	SEM FTIR UV-Vis-NIR Spectrometer PL Workstation	
	Zoology		

Sr.No	Department	Equipment –added during the last year	Numbers
	Botany	Balance Analytical Liquid Handling System	
	Biochemistry	Ultrasonicator Bead Beater Microscope Ultrafiltration system	1 1 1 1
	Biotechnology		
	Chemistry	FTIR Electrochemical Work station and Impidance Analyzer Rotatory Evaporator	

		Solar Simulator	
		Fume Hood	
	Data Science		
	Environmental Science		
	Maths		
	Microbiology		
	Physics		
	Zoology		

39. Pass percentage of Students in last year (details of students passing the course)

Programme code	Programme Name	No. of student appeared in the final year examination			No. of students passed in the final year examination		
		Male	Female	Total	Male	Female	Total
M.Sc.	Botany	03	11	14	03	11	14
M.Sc.	Biochemistry	04	13	17	2	13	15
M.Sc.	Biotechnology	04	14	18	03	14	17
M.Sc.	Chemistry	33	38	71	25	36	61
M.Sc.	Data Science						
M.Sc.	Environmental Science						
M.Sc.	Mathematics	14	28	42	12	26	38
M.Sc.	Microbiology						
M.Sc.	Physics	13	26	39	11	22	33
M.Sc.	Zoology	2	12	14	2	12	14

40. Infrastructure

Sr. No.	Particulars	Numbers
	Classrooms	08
	Teaching Labs/ Laboratories	14
	Research Laboratories	12
	Museum/or any such repository	---
	Library	01
	Ladies Lounge/Room	01

41. Number of Seminars/Conferences/workshops, etc. conducted during the year

Sr. No.	Particulars	Name	Date	Number of participant
	Seminars			
	Conferences			
	Workshops	Three days National workshop on NET-SET Guidance - organised by Chemistry Dept	13th to 15th October 2022	105
		Organized a Seven-Day	from 28 January	76

		Hands-on Training Course on Instrumentation Organized by The Department of Botany, Chemistry & Physics Dr Homi Bhabha State University The Institute of Science, Mumbai,	to 3 February 2023.	
	Others(specify_____)			

42. Number of Seminars/Conferences/workshops, etc. attended by the faculty during the year

Sr. No.	Particulars	Name	Date	Number of participant
	<b>Seminars</b>			
	<b>Conferences</b>	Prof. Dr. Anamika V. Kadam Dr. B. M. patil Prof.Dr.Manisha Kulkarni Prof. Umesh B. Kakde	2 (17-19 Nov 2022 & 9-10 Nov 2022)	4 1 2
	<b>Workshops</b>	Prof. Rohidas B. Kale	2 ( 26 - 27 Sep. 2022 and 28 Jan. to 03 Feb. 2023)	
	<b>Others(specify_____)</b>	Prof. Dr. Anamika V. Kadam	Training Program- (05-09 Dec 2022)	

43. Number of Teachers undergoing online / face-to-face FDP, PDP, Orientation/ Induction programme / Refresher Course, Short Term course during the year.

Sr. No.	Name of teachers	Title of the programme	Duration (From – To)
1	Prof. Dr. Anamika V. Kadam	Training programme on Advances in Applications of Nanotechnology	05-09 Dec 2022
2	Dr. U. M. Lekhak	Faculty Development Programme on "INCUBATION, ENTREPRENEURSHIP AND INNOVATION"	28-11-2022 to 04-12-2022
3	Dr. U. M. Lekhak	Two - Week Inter-disciplinary Refresher Course On "ENVIRONMENT AND HUMAN HEALTH"	28-03-2022 to 11-04-2022

#### 44. Number of Awards/Recognition/Patents during the year

Particulars	Numbers
Awards	12
Recognition	
Patents	05
Others(specify_____)	

#### 45. Details of Alumni Meet

The Institute of Science Mumbai Alumni Association (ISAA) plays a vital role in supporting the growth and development of students through various initiatives and programs. The association provides scholarships, mentoring, invited talks, lectures, networking opportunities, and outreach programs that have a meaningful impact on students' lives. The Executive Committee Meetings (ECM) of ISAA were conducted in a hybrid mode (online and offline) on the following dates:

1. ISAA EGM: 8th May 2022
2. ISAA EGM: 15th September 2022
3. ISAA EGM: 20th October 2022
4. ISAA EGM: 15th Feb 2023

The Annual Alumni Get-Together & Dinner took place on 10th December 2022. During the event, the Vidnyan Sanstha Ratna Awards were presented to four distinguished alumni: Dr. Adi Damania, Dr. Vasant Pusalkar, Dr. Surendra Manjrekar, and Shri. Prataprao Deshmukh. The gathering was attended by over 300 alumni, and the function was presided over by the Hon'ble Principal Secretary, Higher & Technical Education, Maharashtra State, Shri. Vikaschandra Rastogi, and Hon'ble Vice Chancellor Rajanish Kamat.

Several talks and lectures were organized in collaboration with the Department of Botany:

1. A talk on "Longevity and Anti-aging concepts with Ayurveda plants" by Dr. Ila Bhor was held on 20th October 2022.



2. An invited talk on "Role of Geoinformatics in conserving biodiversity & ecosystem services" by alumnus Dr. Gautam Talukdar, Scientist F, WH, Dehradun, took place on 13th Feb 2023.
3. A talk on "Food prices and the Doomsday Conservation of Crop Genetic Resources" by alumnus Dr. Ardeshir B. Damania from the Department of Plant Sciences, University of California, USA, was organized in collaboration with the Department of Botany on 15th February 2023.
4. The Institute of Science Alumni Association (ISAA), in collaboration with the Department of Botany, celebrated National Science Day by organizing a talk on "Scientific Treasures of Ancient India" by alumnus Prof. Sagarika Damle on 28th Feb



2023.

46. Details of ten Distinguished Alumni

Annexure B

Sr. No.	Name of the Alumni	Position	Contact No.	E-mail ID

47. Any two best/healthy practices of department( Title of the practice, Objective of the practice, Context, The practice, Evidence of success, Problems encountered and resources required , Note optional )

Title: Green Initiatives: Enhancing the Green Cover of Institute Campus

Objectives:

To enhance the green cover of the institute campus through conscious efforts.

To promote awareness among students about the importance of conservation and propagation of native medicinal plants.

Context: The focus of this initiative is to actively contribute to environmental conservation and raise awareness about the significance of native medicinal plants among students.

Practice: On the occasion of World Environment Day, which took place on 3rd June 2022, students and faculty members collaborated to plant a total of 1036 plants belonging to 86 different varieties. This planting activity aimed to improve the green cover of the campus. The initiative received support from Dr. Nair of Forest Creators and Ms. Madhu of IIFL Foundation, who assisted the institute under their GSR initiative.

Evidence of Success: The event saw active participation from 62 students. Through their involvement, students not only contributed to increasing the green cover but also gained valuable knowledge about the phytochemical constituents and pharmacological uses of the plants they planted. The garden attracted interest from students of nearby colleges, who visited to observe and learn from the initiative.

Problems Encountered: One of the challenges faced during the initiative was the task of watering the plants, especially during vacation periods when regular maintenance became difficult. This issue posed a hurdle in maintaining the well-being of the plants.

By actively engaging students and faculty members in planting activities, this green initiative successfully enhanced the environmental aesthetics of the institute campus. Furthermore, the initiative fostered a sense of environmental consciousness among the participants, while also creating a platform for the dissemination of knowledge about native medicinal plants. It is crucial to address challenges like maintaining plant care during vacation periods to ensure the sustained success of such green initiatives.

Title: Annual Research Scholars' Work Seminar: Fostering Knowledge Exchange and

## Professional Development



### Objectives:

To facilitate the gathering of faculty members, researchers, and students for the purpose of sharing their research work, knowledge, ideas, and expertise.

To promote healthy research practices and create a platform for Research Scholars to showcase their work.

To enhance the development of Research Scholars through exposure to new ideas, methodologies, and collaborative learning opportunities.

**Context:** The Annual Work Seminar for Research Scholars serves as a pivotal event to foster the exchange of ideas and promote professional growth among researchers within the Department of Botany.

**Practice:** On 9th January 2023, the Department of Botany organized the Annual Work Seminar for Research Scholars. This seminar served as a forum for Research Scholars to present their ongoing research projects and receive feedback and suggestions from external experts and fellow scholars.

**Evidence of Success:** The seminar witnessed the participation of 22 Research Scholars who presented their research work to an audience consisting of external experts and other researchers. The platform provided an opportunity for fruitful discussions, collaborative learning, and the sharing of insights. The comments and suggestions offered by the experts were integrated into the scholars' future work, contributing to the improvement and refinement of their research endeavors.

The seminar proved to be a valuable experience for the Research Scholars, as it facilitated the exchange of knowledge and ideas among researchers from various backgrounds. The event served as a catalyst for intellectual growth and professional development, allowing scholars to expand their perspectives, refine their research methodologies, and explore new avenues for investigation.

**Problems Encountered:** The seminar faced challenges related to space and time constraints, which affected the organization and logistics of the event. However, despite these challenges, the seminar was successfully conducted, thanks to the collective efforts of the organizing committee and the enthusiasm of the participants.

By providing a platform for Research Scholars to present their work, engage in discussions, and receive expert feedback, the Annual Research Scholars' Work Seminar contributes to the overall advancement of knowledge in the field of botany. This event fosters a culture of intellectual exchange, encourages collaborative learning, and supports the professional growth of Research Scholars.

#### 48. Achievement and Unique features of the department

#### 49. Any other information that indicate distinctiveness of the department not covered so far

**Awareness Program:** The department places great importance on educating students and staff about sustainability and the crucial role that plants and ecosystems play in maintaining a healthy environment. To achieve this, the department organizes a series of invited talks, workshops, and other educational activities. These initiatives aim to increase awareness and understanding of sustainability-related issues, such as climate change, biodiversity conservation, and ecosystem services. By fostering knowledge and consciousness among the institute's community, the department strives to inspire individuals to make environmentally responsible choices in their daily lives.

**Planting Trees and Green Spaces:** In an effort to enhance the ecological integrity of the

campus, the department actively engages in tree planting initiatives and the creation of green spaces. By strategically planting trees and other greenery around its buildings and campus, the department not only improves the aesthetics but also contributes to improving air quality and mitigating the impacts of urbanization. Additionally, these green spaces serve as a valuable resource for research students studying medicinal plants, as they provide a fresh and easily accessible source of plant materials for their studies.

**Composting:** The department has implemented a composting system to manage organic waste generated within the institute, including plant trimmings, leaves, and wet garbage from the canteen. Composting is an environmentally friendly practice that diverts organic waste from landfills, reducing the burden on waste management systems. The resulting compost serves as a natural fertilizer that enriches the soil and supports the growth of plants in gardens and green spaces across the campus. This closed-loop system promotes sustainability by recycling organic waste and nurturing the soil, contributing to a more sustainable and self-sufficient environment.

**Encouraging Sustainable Practices:** The department actively promotes and encourages sustainable practices among students, staff, and the wider institute community. This includes initiatives aimed at reducing the use of plastic, promoting recycling, and conserving water and energy. By advocating for the reduction of single-use plastic items, implementing recycling bins and education programs, and promoting water and energy conservation measures, the department fosters a culture of sustainability. Through these efforts, the department empowers individuals to adopt environmentally conscious behaviors and make a positive impact on the environment.

Through its multifaceted approach, the department endeavors to create a culture of sustainability within the institute. By raising awareness, promoting green spaces, implementing composting practices, and encouraging sustainable behaviors, the department strives to contribute to a healthier and more environmentally responsible campus community.

#### 50. Strength, Weakness, Opportunities and Challenges(SWOC) of the department (five points each)

##### Strengths:

**Strong and Knowledgeable Faculty:** The department boasts a team of faculty members who possess expertise in their respective research areas. Their passion for research drives the academic environment and promotes knowledge dissemination.

**Well-equipped Research Labs:** The department maintains well-equipped laboratories that provide the necessary infrastructure for conducting cutting-edge research. These labs support the faculty and students in their research endeavors.

**Good Students/PhD Scholars:** The department attracts talented and dedicated students and PhD scholars who contribute to the research output and academic excellence. Their enthusiasm and commitment enhance the overall research environment.

**Interdisciplinary Collaborations:** The department actively engages in interdisciplinary collaborations with other departments within the institute and external institutions. These collaborations foster the exchange of ideas, promote cross-disciplinary research, and encourage innovation.

**Medicinal Plants Garden:** The presence of a medicinal plants garden provides a valuable resource for research and learning. It offers opportunities for the study and exploration of medicinal plants, facilitating hands-on experiences and practical application of knowledge.

**Weaknesses:**

**Limited Funding for Research:** The department faces challenges in securing sufficient funding for research activities. Limited financial resources restrict the scope and scale of research projects and the acquisition of necessary equipment and supplies.

**Vacant Faculty Positions:** The department experiences vacant faculty positions, which places a higher workload on existing faculty members. The absence of sufficient faculty members can affect teaching and research activities.

**No Lab Attendant:** The absence of a dedicated lab attendant may add to the workload of faculty members and impact the efficiency of laboratory operations, including maintenance and organization.

**No Field Collector:** The lack of a designated field collector poses challenges in conducting fieldwork and collecting samples, which are essential for certain research projects and studies.

**Opportunities:**

**Expansion of Interdisciplinary Collaborations and Partnerships:** The department has the potential to forge additional interdisciplinary collaborations and partnerships with other departments, research institutes, and industry stakeholders. Such collaborations can broaden the research scope, foster innovation, and facilitate the exchange of expertise and resources.

**Increased Funding Opportunities:** By actively seeking grants and establishing strategic partnerships, the department can enhance its funding opportunities for research projects. Collaborating with industry, government agencies, and non-profit organizations can provide access to additional resources and funding streams.

**Expansion of Course Offerings and Curriculum Diversity:** The department can explore opportunities to expand its course offerings, introducing new subjects and areas of study. This expansion can enhance the diversity of the curriculum, attracting a broader range of students and catering to emerging research trends and demands.

## Challenges:

**Limited Resources for Research and Facilities:** The department faces challenges due to limited resources for conducting research and maintaining facilities. Insufficient funding restricts the acquisition of advanced equipment, upgrades to infrastructure, and the overall support required for research activities.

Addressing the weaknesses, capitalizing on the opportunities, and tackling the challenges will require strategic planning, resource mobilization, and proactive measures. By leveraging the strengths and mitigating weaknesses, the department can strive towards excellence, promoting impactful research and fostering a conducive learning environment for students and faculty.

### 51. Plan of action for the next academic year.

## Micropropagation of Medicinal Plants:

The institute places significant emphasis on the micropropagation of medicinal plants as a core research area. This research focuses on the development and application of tissue culture techniques to produce large quantities of valuable medicinal plant species. By employing aseptic culture methods, the institute aims to conserve and propagate these plants, ensuring their sustainable availability for various medicinal and therapeutic purposes.

## Organization of Research Scholars Meet in the Institute:

To foster a collaborative and intellectually stimulating research environment, the institute organizes regular Research Scholars Meets. These meetings serve as a platform for research scholars from various disciplines to present their work, exchange ideas, receive constructive feedback, and engage in interdisciplinary discussions. These gatherings not only facilitate knowledge sharing but also encourage networking, collaboration, and the exploration of new research avenues.

## Organization of Instrumentation Workshop:

Recognizing the importance of hands-on training and skill development, the institute conducts instrumentation workshops. These workshops provide researchers, students, and faculty members with opportunities to learn about the operation, calibration, and application of advanced scientific instruments and equipment. By enhancing technical expertise, these workshops empower participants to utilize sophisticated instrumentation effectively in their research projects and experiments.

## Organization of Internship Program:

The institute offers an internship program designed to provide students with practical exposure and real-world experience in their respective fields. Through collaborations with industry partners, research institutes, and organizations, students have the opportunity to work on research projects, gain hands-on skills, and apply their theoretical knowledge in practical settings. These internships enhance students' employability, nurture professional networks, and foster a deeper understanding of their chosen field of study.

### Organization of Invited Talks by Eminent Personalities:

To enrich the academic environment and inspire intellectual growth, the institute organizes invited talks by eminent personalities from academia, industry, and related fields. These talks expose students, researchers, and faculty members to a wide range of perspectives, cutting-edge research findings, industry trends, and success stories. By engaging with renowned experts, participants gain valuable insights, broaden their knowledge base, and stay updated on the latest developments in their respective disciplines.



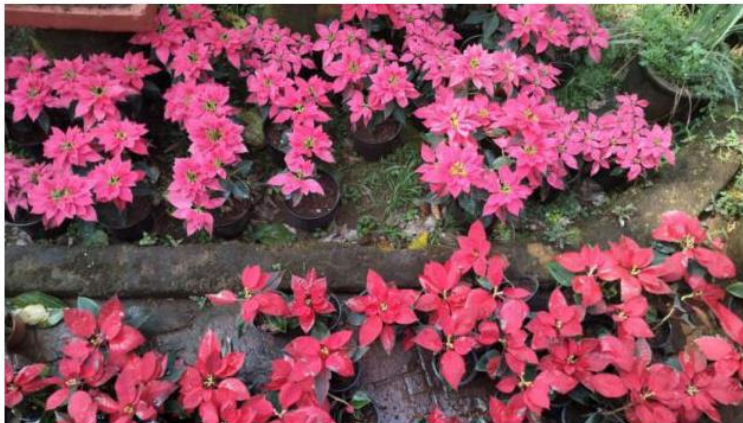


#### **Organizing Long Excursions/Industrial Visits:**

The institute arranges long excursions and industrial visits to provide students with practical exposure beyond the confines of the classroom. These visits offer firsthand experiences of industrial processes, research facilities, and real-world applications of theoretical concepts. By observing industry best practices, students gain valuable insights, develop a deeper understanding of their field, and cultivate industry-relevant skills that enhance their employability.







### Organization of NET/SET Workshops:

In order to prepare students for national-level eligibility tests, such as the National Eligibility Test (NET) and State Eligibility Test (SET), the institute organizes specialized workshops. These workshops focus on exam-specific preparation strategies, covering relevant syllabus topics, providing study materials, and offering guidance on exam patterns and question-solving techniques. The workshops aim to equip students with the necessary skills, knowledge, and confidence to excel in these competitive examinations, opening doors for their future academic and research pursuits.





By actively organizing these initiatives, the institute demonstrates its commitment to

promoting research excellence, practical skill development, interdisciplinary collaboration, and holistic growth of students, researchers, and faculty members. These efforts contribute to fostering a dynamic academic environment, nurturing innovation, and establishing the institute as a hub for cutting-edge research and knowledge dissemination in the field of medicinal plants and related areas.

**Signature of the Principal / Director**

**THE INSTITUTE OF SCIENCE  
MUMBAI-400032**

**ACADEMIC AND ADMINISTRATIVE COMMITTEES**

Following Academic and Administrative committees of the faculty and staff members have been constituted for the academic Year **2022-23**. All the concerned should do the needful for smooth functioning of the Institute.

Sr. No.	Title of the Committee	Name of the faculty Members
	Steering Committee	<b>Prof. Ajay Chaudhari (Physics) Co-ordinator</b> Prof. Y. S. Malghe (Chemistry) Prof. R.B. Kale (Physics) Prof. Rupendra Jadhav (Microbiology) Prof. S.B. Kulkarni (Physics) Prof. Aparna Saraf Dr Sushil Chaudhary (Zoology) Dr. R.A. Tayade (Chemistry)
	Secretary to Common Room	<b>Dr. Ravibabu Tayade (Chemistry) Co-ordinator</b>
	Planning & Budget	<b>Dr. Jairam Khobragade-Director (Chairman)</b> Prof. Ajay Chaudhari (Physics) Prof. Y. S. Malghe (Chemistry) Prof. R.B. Kale (Physics) Prof. S. B. Kulkarni (Physics) Prof. U. B. Kakde Dr. Sushil Chaudhary (Zoology) Shri. Sambhaji Sable (Office)
	Store Committee	<b>Prof. Ratnamala Sonawane (Chemistry) Co-ordinator</b> Prof. Rupendra Jadhav (Microbiology) Prof. Pravin More (Physics) Dr. Rajesh Raut (Botany) Dr. Sushama Ambadekar (Chemistry) Shri. Sambhaji Sable (Office) Shri. Prashant Patil (S.O)
	Pay Pension Fixation for Faculty & Staff	<b>Dr. Umesh Kakde (Botany) Co-ordinator</b> Prof. Selby Jose (Mathematics) Dr Sushil Chaudhary (Zoology) Prof. R.M. Patil (Chemistry) Prof. Pravin More (Physics)

Library	<p><b>Prof. Ratnamala Sonawane (Chemistry) Co-ordinator</b>  Dr. Manohar Padul (Biochemistry)  Prof. R.M. Patil (Chemistry)  Shri. S. B. Kashid (Chemistry)  Dr. Utkarsha Lekhak (Biochemistry)  Smt. Prathiba Raut (Librarian Member Secretary)</p>
Faculty and staff members Grievances Committee (Statutory)	<p><b>Prof. Varsha Andhare (Zoology) Co-ordinator</b>  Prof. S.B. Kulkarni (Physics)  Prof. Vandana Kambale (Chemistry)  Dr. Sushama Ambadekar (Chemistry)  Smt. Sangeeta Jangam (Microbiology)  Shri. S. Sabale (Office)</p>
Publicity Committee	<p><b>Dr. Rajesh Raut (Botany)</b>  Dr. B. M. Patil (Chemistry)  Mr. Rajendra Chaure (Microbiology)</p>
Philosophical Association & Staff Academy	<p><b>Prof. Umesh Kakde (Botany) (Co-ordinator)</b>  Prof. Ratnamala Sonawane (Chemistry)  Dr. Manisha Kulkarni (Zoology)  Smt. Jaya Pawar (Botany)  Smt. S.K. Jangam (Microbiology)  Dr. Kiran Sonawane (Physics)  Smt. Swati Vilhekar (Chemistry)  Dr. Shubhangi Patil (Chemistry)</p>
Students Grievances Committee	<p><b>Prof. Ratnamala Sonawane (Chemistry) (Co-ordinator)</b>  Dr. Sushama Ambadekar (Chemistry)  Smt. Savita Dange (Physics)</p>
Gymkhana Committee	<p><b>Dr. Shekhar Jadhav (Biochemistry) Co-ordinator</b>  Smt. Savita Dange (Physics)  Dr. Vikas Bangde (Chemistry)  Dr. Kiran Sonawane (Physics)</p>
Campus Maintenance & Cleanliness Committee	<p><b>Dr. Alka Chougale (Zoology) (Co-ordinator)</b>  Dr. B.M. Patil (Chemistry)  Smt. Sangeeta Jangam (Microbiology)  Smt. Savita Dange (Physics)  Shri. S. L. Sabale (Office Superintendent)  Shri. Prashant Patil (S.O.)</p>

University Examination/Evaluation CAP and Technical Committee	<p><b>Prof. Gayatri Barabde (Chemistry) (Coordinator-Exam)</b>  <b>Prof. Umesh Kakde (Botany) (Co-ordinator- CAP)</b>  Dr. Sushama Ambadekar  Dr. Mahadev Sonawane (Physics)  Smt. Jaya Pawar  Dr. Utkarsha Lekhak  Dr. Kiran Sonawane  Dr. Rajesh Raut (Botany)  Dr. Vikas Bangde (Chemistry)  Mr. Rajendra Choure (Microbiology)</p>
Annual Report and Magazine	<p><b>Prof. S. B. Kulkarni (Physics) Co-ordinator</b>  Dr. Anamika Kadam (Physics)  Ms. Savita Dange  Mr. Rajendra Chaure</p>
Canteen Committee	<p><b>Dr Sushil Chaudhary (Zoology) Co-ordinator</b>  Prof. Ratnamala Sonawane (Chemistry)  Dr. Manisha Kulkarni (Zoology)  Dr. Shubhangi Patil (Chemistry)</p>
Fellowships & Scholarships	<p><b>Dr. R.M. Patil (Chemistry) Co-ordinator</b>  Dr. B. M. Patil (Chemistry)  Dr. Shekhar Jadhav (Biochemistry)</p>
Gas Facility	<p><b>Dr. Sushama Ambadekar (Chemistry)</b></p>
Hostel Committee	<p><b>Prof. Umesh Kakde (Botany) Co-ordinator</b>  Dr. Mahadev Sonawane (Physics)  Smt. Savita Dange (Physics)  Dr. Utkarsha Lekhak (Biochemistry)</p>
Computer Maintenance, Internet, Fax, Epabx	<p><b>Prof. Selby Jose (Maths) Co-ordinator</b>  Dr. Pravin More (Physics)  Dr. Rajesh Raut (Botany)  Dr. Vikas Bangde (Chemistry)  Shri. R.G. Choure (Microbiology)</p>
Ladies Common Room	<p><b>Prof. Vandana Kamble (Chemistry) Co-ordinator</b>  Dr. Alka Chougale (Zoology)  Dr. Shubhangi Patil (Chemistry)</p>
Research Scholars' Meet	<p><b>Prof. Gayatri Barabde (Chemistry) Co-ordinator</b>  <b>Prof. Varsha Andhare (Zoology)</b>  Dr. Sushama Ambadekar (Chemistry)  Dr. Utkarsha Lekhak (Biochemistry)</p>



Staff Meeting & Common Room	<b>Dr. Manisha Kulkarni (Zoology) Co-ordinator</b> Dr. Alka Chougale (Zoology) Dr. Utkarsha Lekhak (Biochemistry) Mrs. Swati Vilhekar (Chemistry)
Garden Committee	<b>Prof. Umesh Kakde (Botany) Co-ordinator</b> Smt. J.S. Pawar (Botany) Dr. Rajesh Raut (Botany) Shri. R.G. Choure (Microbiology) Shri. S. L. Sable (Superintendent)
Income Tax	<b>Prof. Selby Jose (Maths) Co-ordinator</b> Dr. Sunil Singh (Maths) Prof. Pravin More (Physics) Dr. Utkarsha Lekhak (Biochemistry) Shri. R.G. Choure (Microbiology) C.A. appointed by Institute of Science Shri. Milind More
NAAC & Internal Quality Assurance Cell (Statutory)	<b>Dr. Jairam Khobragade Director (Chairperson)</b>  <b>Prof. Aparna Saraf (Botany) Co-ordinator</b> Prof. R.B. Kale (Physics) Prof. Rupendra Jadhav (Microbiology) Prof. Varsha Andhare (Zoology) Prof. Gayatri Barabde (Chemistry) Prof. Umesh B. Kakde (Botany) Dr. Sushama Ambadekar (Chemistry) Dr. Anamika Kadam (Physics) Dr. Rajesh Raut (Botany) Prof. Sonali Rode, Jt. Director (Management Member) Shri. Sambhaji Sable (Administration) Ms Prachi Prajapati (Student representative) Prof. N.V. Thakkar (Alumni representative) Dr. Surendra Manjrekar (Industrialist)
NAAC Subcommittees Curricular Aspects (Criteria –I)	<b>Dr. Anamika Kadam (Physics)</b> Dr. Shubhangi Patil Dr. Shekhar Jadhav Dr. B.M. Patil
Teaching Learning and Evaluation (Criteria –II)	<b>Prof. R.B. Kale (Physics)</b>  Shri Rajendra Chaure Shri Sahebrao Kashid Dr. Vikas Bangade Dr. Kiran Sonawane

Research, Innovation and  
Extension (Criteria –III)

**Prof. Rupendra Jadhav (Microbiology)**

Prof. P.S. More  
Prof. R.M. Patil  
Dr. Utkarsha Lekhak

Infrastructure and Learning  
Resources (Criteria –IV)

**Prof. Umesh B. Kakde (Botany)**

Dr. Sushilkumar Chaudhari  
Dr. Mahadev Sonawane  
Dr. Sunil Singh  
Ms. Jaya Pawar

Student support and Progression  
(Criteria –V)

**Prof. Gayatri Barabde (Chemistry)**

Dr. Alka Chougale  
Smt. Sangeeta Jangam  
Smt. Swati Vilhekar

Governance, Leadership and  
management (Criteria –VI)

Prof. Varsha Andhare

Dr. Manohar Padul  
Dr. Rajesh Raut  
Dr. Vishal Banewar

Institutional values and Best  
Practices (Criteria –VII)

**Dr. Sushama Ambadekar (Chemistry)**

Prof. Vandana Kamble  
Prof. Ratnamala Sonawane  
Dr. Manisha Kulkarni

Central Admission Committee

**Dr. Ravibabu Tayade (Co-ordinator)**

Prof. S.B. Kulkarni  
All Head of Departments

National Service Scheme (NSS)

**Dr. Shekhar Jadhav (Biochemistry) (Co-ordinator)**

Ms. Swati Vilhekar (Chemistry)  
Dr. Shubhangi Patil (Chemistry)  
Smt. Savita Dange (Physics)  
Dr. Vikas Bangde (Chemistry)  
Dr. Utkarsha Lekhak (Biochemistry)

District Planning and development  
Council (DPDC)

**Prof. Y.S. Malghe (Co-ordinator)**

Prof. S.B. Kulkarni (Physics)  
Prof. Rupendra Jadhav (Microbiology)  
Mr. Sahebrao Kashid (Chemistry)

UGC and CPE	<b>Prof. Y.S. Malghe (Co-ordinator)</b> Prof. Praveen More (Physics) Dr. Manohar Padul (Biochemistry)
Internal Complaint Committee (ICC) and Women's Empowerment Grievances Cell (Statutory)	<b>Prof. Varsha Andhare (Co-ordinator)</b> Prof. Gayatri Barabde (Chemistry) NGO Member –Adv. Ruchi Bhagat (Public counselor for Governance Trust) Dr. Sushama Ambadekar (Chemistry) Prof. S.B. Kulkarni (Physics) (Sr. Gents Member) Smt. Sunita Dhuri (Non-Teaching Staff) Smt. Seema Nimse (Office)
Vigilance	Prof. S.B. Kulkarni ( <b>Co-ordinator</b> ) Prof. Rupendra Jadhav (Microbiology) Prof. Umesh B. Kakde (Botany)
<b>Anti-ragging Committee (Statutory)</b>	<b>Dr. Ravibabu Tayade (Chemistry) (Co-ordinator)</b> Prof. Vandana Kamle (Chemistry) Prof. Varsha Andhare (Zoology) Dr. B. M. Patil (Chemistry) Parents representative Students representative
RTI Committee (Statutory)	<b>Dr. Jairam M. Khobragade (Director) Appellate Authority</b> Prof. Y.S. Malghe (Chemistry) Information Officer Shri. Sambhaji Sable Asst. Information Officer
Legal Matter (Court/MAT)	<b>Prof. Praveen More (Physics) (Co-ordinator)</b> Dr. Sushil Chaudhari (Zoology) Dr. Vishal Banewar (Chemistry) Shri. Rajendra Chaure (Microbiology) Dr. Shekhar Jadhav (Biochemistry)
Academic Calendar	<b>Prof. Gaytri Barabde (Chemistry) (Co-ordinator)</b> Dr. Anamika Kadam (Physics)
Parent Teacher Association	<b>Dr. Ravibabu Tayade (Chemistry) (Co-ordinator)</b> Prof. Gaytri Barabde (Chemistry) Dr. Anamika Kadam (Physics) Dr. Manisha Kulkarni (Zoology) Smt. Savita Dange (Physics)

Research Recognition and Ph.D.  
Admission Committee.

**Prof. Ajay Chaudhari (Physics) Co-ordinator**

Prof. Y.S. Malghe (Chemistry)

Prof. S.B. Kulkarni (Physics)

Prof. Selby Jose (Maths.)

Prof. Rupendra Jadhav (Micro)

Prof. Umesh B. Kakde (Botany)

Carrier Advancement Scheme  
(CAS) & API Scrutiny

**Prof. Umesh B. Kakde (Botany) Co-ordinator**

Prof. Selby Jose

Prof. Vandana Kamble

Dr. Manohar Padul (Biochemistry)

University Extension Work  
Activities

**Dr. B. M. Patil (Chemistry)**

Dr. Sunil Singh (Maths.)

Website Maintenance &  
Upgradation Committee

**Dr. Rajesh Raut (Botany)- Co-ordinator**

Prof. Selby Jose (Maths.)

Dr. Vishal Banewar (Chemistry)

Shri. Rajendra Choure (Microbiology)

Dr. Vikas Bangde (Chemistry)

Consultancy, MoU & Extension

**Prof. S. B. Kulkarni (Physics) Co-ordinator**

Prof. Rupendra Jadhav (Microbiology)

Dr. Anamika Kadam (Physics)

Student's Council Committee  
(Statutory)

**Prof. Rupendra Jadhav (Micro.) Co-ordinator**

Prof. Varsha Andhare (Zoology)

Prof. Ratnamala Sonawane (Chemistry)

Prof. P.S. More (Physics)

Technical Committee (Store)

**Prof. P.S. More Co-ordinator**

Prof. Selby Jose (Maths.)

Dr. Rajesh Raut (Botany)

Dr. Vikas Bangde (Chemistry)

Fire Safety Committee

**Prof. R. M. Patil (Chemistry) Co-ordinator**

Dr. Mahadev Sonawane (Physics)

Prof. Rupendra Jadhav (Microbiology)

Shri.S.B.Kashid (Chemistry)

Competitive Examination

**Prof. Rupendra Jadhav (Microbiology) Co-ordinator**

Mr. Rajendra Choure (Microbiology)

Dr. Anamika Kadam (Physics)

Dr. Shekhar Jadhav (Biochemistry)

Students Feed-Back Committee

**Dr. Anamika Kadam (Physics) Co-ordinator**

Dr. Shekhar Jadhav (Biochemistry)

Dr. Shubhangi Patil (Chemistry)

Internal Complaint Committee  
Student representative...Institute  
(Statutory)

Dr. Gayatri Barabde (Chemistry) Co-ordinator

(NGO Member)

Dr. Alka Chogale (Zoology)

Prof. Shrinivas Kulkarni (Physics)

Dr. Mahadev Sonawane (Physics)

Dr. Shubhangi Patil (Chemistry)

Shri. Sambhaji Sable

Write Off Committee

**Prof. Pravin More (Physics) Co-ordinator**

Dr. Rajesh Raut (Botany)

Shri. Rajendra Choure (Microbiology)

Dr. Mahadev Sonawane (Physics)

Shri. Sambhaji Sable (Office)

Shri. Prashant Patil (S.O.)

RUSA Committee (Statutory)

**Prof. Shrinivas Kulkarni (Physics) Co-ordinator**

Prof. Yuvraj Malghe (Chemistry)

Prof. Selby Jose (Maths.)

Mr. Rajendra Choure (Microbiology)

Dr. Vishal Banewar (Chemistry)

Teacher Mentor Scheme

**Prof. Gayatri Barabde (Chemistry) Co-ordinator**

Prof. Rupendra Jadhav (Microbiology)

Prof. Varsha Andhare (Zoology)

Earn and Learn Scheme

**Dr. Ravibabu Tayade (Chemistry) Co-ordinator**

Prof. Gayatri Barabde (Chemistry)

Dr. Manohar Padul (Biochemistry)

Student faculty Exchange  
Programme and MOUs

**Prof. Ajay Chaudhari Co-ordinator**

Prof. Shrinivas Kulkarni (Physics)  
Prof. Rupendra Jadhav (Microbiology)

Equal Opportunity Cell

Prof. Pravin More, Co-ordinator  
Dr. Anamika Kadam (Physics)  
Dr. Shubhangi Patil (Chemistry)  
Dr. Shekhar Jadhav (Biochemistry)

ST-SC Student grievances  
Committee

**Prof. Vandana Kamble (Chemistry) Co-ordinator**

Dr. Manohar Padul (Biochemistry)  
Dr. Anamika Sonawane (Physics)

OBC Welfare Committee

**Prof. Ratnamala Sonawane (Chemistry) Co-ordinator**

Dr. Sushama Ambadekar (Chemistry)  
Dr. Rajesh Raut (Botany)

Audit Para Committee

**Dr. Sushil Chaudhary (Zoology) Co-ordinator**

Prof. RM Patil (Chemistry)  
Heads of the Departments  
Shri. Sambhaji Sable  
Shri Patil

PWD Work Monitoring committee

**Prof. Umesh Kakde (Botany) (Co-ordinator)**

Prof. Varsha Andhare (Zoology)  
Prof. Rohidas Kale (Physics)  
Dr. Sunil Singh (Maths)  
Dr. Vishal Banewar (Chemistry)  
Mr. Rajendra Choure (Microbiology)  
Dr. Shekhar Jadhav (Biochemistry)

Placement Cell

**Prof. Gayatri Barabde (Chemistry) (Co-ordinator)**

Prof. Selby Jose (Maths)  
Dr. Sushama Ambadekar (Chemistry)  
Dr. Vishal Banewar (Chemistry)

NIRF Committee

**Dr. Rajesh Raut (Botany) (Co-ordinator)**

Dr. Vishal Banewar (Chemistry)  
Shri Rajendra Choure (Microbiology)  
Dr. Vikas Bangde (Chemistry)

  
Dr. Jairam Khobragade  
DIRECTOR

**Director**  
**The Institute of Science,**  
**Mumbai - 400 032**



# THE INSTITUTE OF SCIENCE MUMBAI ALUMNI ASSOCIATION

15, Madam Cama Road, Mumbai 400 032.  
Phone: 022-2844219, 2829293/4/5

## Annual Report of The Institute of Science Alumni Association (ISAA) for the Academic year 2022-23

The association conducted following activities for the benefit of students & faculty.

### Green initiative: Sowing of *Mahua* seeds in campus: 18<sup>th</sup> July 2022

Alumnus Prof. A.D. Sawant from Friends of Trees, Mumbai donated *Mahua* seeds which were planted in the Institute garden by the students of Botany Department on 18<sup>th</sup> July 2022.





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### Plantation drive of Rare & Endangered plants: 12<sup>th</sup> August 2022.

As a part of green initiative, a plantation drive of rare and endangered plant *Entada pursaetha* DC. was undertaken on 12<sup>th</sup> August 2022 in collaboration with Department of Botany. It was donated by alumna Shubham Tanpathak and planted by alumna Prof. Sagarika Damle.







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## Green Umbrella: Plantation drive 20<sup>th</sup> October 2022.

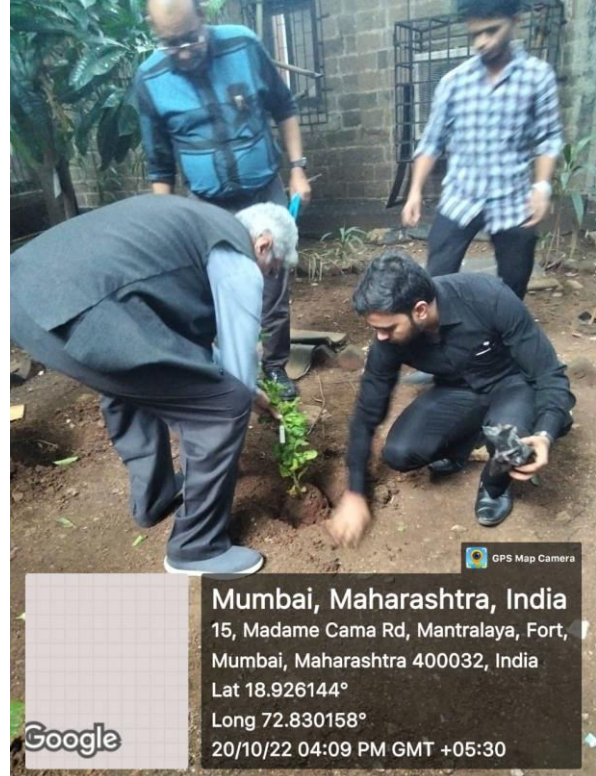
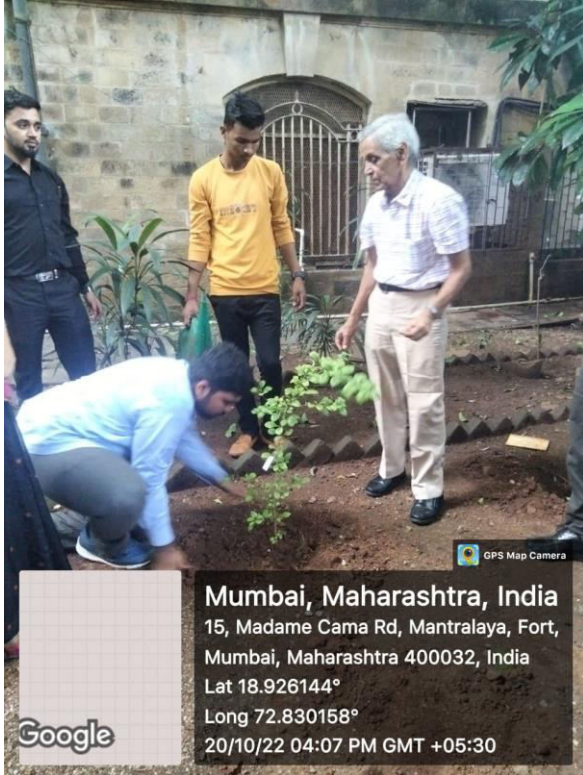
The organization Green Umbrella donated plants to the Department of Botany, as a part of green initiative. Alumnus Shubham Tanpathak coordinated with Green Umbrella organization for the plantation drive on 20<sup>th</sup> October 2022. 75 plants were planted to commemorate 75 years of independence. Alumnus Prof. N.V. Thakkar, Prof. S.B. Chaphekar, Dr. Latoo, Prof. Mendhulkar & Prof. Aparna Saraf actively participated in the event.





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### "Longevity and Anti-aging concept with Ayurveda plants" by Dr. Ila Bhor 20<sup>th</sup> October 2022

The Alumni Association in collaboration with Department of Botany organized a talk on "Longevity and Anti-aging concept with Ayurveda plants" by Dr. Ila Bhor on 20<sup>th</sup> October 2022.





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**Vigyan Sanstha Ratna Awards: 10<sup>th</sup> December 2022.**

Dr. Homi Bhabha State University  
The Institute of Science, Mumbai

The Institute of Science Alumni Association (ISAA)  
Announces

## ***Vigyan Sanstha Ratna Awards***

To

**Dr. Ardeshir B. Damania  
Shri Pratapsinh G. Deshmukh  
Dr. Surendra K. Manjrekar  
Shri Vasant Pusalkar**

Awards will be presented

at the

## **Annual Alumni Get-Together & Dinner**

Date : Saturday, 10<sup>th</sup> December, 2022  
Time : 5 pm onwards  
Venue : The Institute of Science, Mumbai.

Please mark the date on your Calendar

Prof. Aparna A. Saraf  
Secretary, ISAA

Prof. N. V. Thakkar  
President, ISAA

Prof. Sharad B. Chaphekar  
Coordinator, VSRA Committee



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**Alumni Get-Together & Dinner : 10<sup>th</sup> December 2022.**

Dr. Homi Bhabha State University  
The Institute of Science, Mumbai

The Institute of Science Alumni Association (ISAA)

## Alumni Get-Together & Dinner

Date : Saturday, the 10<sup>th</sup> December, 2022  
Venue : The Institute of Science, Mumbai.

### Programme

4.00 pm Tea and Alumni Reunion

5.00 pm Invocation

Welcome address Dr. Jairam Khobragade  
(Director, The Institute of Science)

ISAA Report

Vigyan Sanstha Ratna Awards

- Dr. Ardeshir B. Damania
- Shri Pratapsinh G. Deshmukh
- Dr. Surendra K. Manjrekar
- Shri Vasant Pusalkar

Addresses

- Guest of Honour: Shri Ashwinbhai C. Shroff  
(Executive Chairman, Excel Industries Ltd)
- Chief Guest: Hon'ble Shri Vikas Chandra Rastogi  
(Principal Secretary, Higher & Technical Education, MS)

Felicitation of Senior Teachers/Alumni

Response by Alumni

Presidential Remarks Prof. Rajanish K. Kamat  
(Hon'ble Vice Chancellor, Dr. HBSU)

Vote of Thanks

7.30 pm Dinner

Prof. Aparna A. Saraf  
Secretary, ISAA

Prof. N.V. Thakkar  
President, ISAA

Dr. Jairam Khobragade  
Director



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On 10th December 2022, Alumni Get-Together and Dinner were organised by the Institute of Science Alumni Association (ISAA). The event was held at The Institute of Science, Mumbai.

The alumni started gathering from 4.00 pm onwards. They enjoyed fellowship and reunion with their old associates over tea/coffee and snacks. Over 200 alumni including senior teachers, Vigyan Sanstha Ratna Awardees and students attended the event.

The program started at 5.00 pm with a welcome address by **Dr. Jairam Khobragade**, Director of the Institute of Science. It was followed by felicitation of the Chief Guest Hon'ble **Shri Vikas Chandra Rastogi** I.A.S., Principal Secretary, Higher and Technical Education, Maharashtra State and Guest of Honour **Shri Ashwinbhai Shroff**, Executive Chairman, Excel Industries Ltd. by Hon. Vice-Chancellor of Dr. Homi Bhabha State University, Prof **Rajanish Kamat**. He also felicitated Special Invitee **Shri C. M. Deshpande**, Vice President – Corporate Affairs and Administration, Excel Industries Ltd., Mumbai.

ISAA president **Prof. N.V. Thakkar** felicitated Hon'ble Vice-Chancellor **Prof. Kamat** on behalf of the Alumni association. **Prof. Thakkar** in his brief speech welcomed all the guests and gave a brief background about the genesis of ISAA and its objectives. He mentioned that **Prof. Manikrao Salunkhe**, former Director of the Institute of Science, was the one who initiated the formation of the alumni association and made it active. **Prof. Salunkhe** was invited but was unable to attend the function.

**Prof. Aparna Saraf**, Hon. Secretary, ISAA then gave a presentation of the ISAA activities which included various programmes and events which were organised under the banner of ISAA or in collaboration or with support of ISAA. She also highlighted that even Covid-19 couldn't hinder the activities of ISAA as various lectures and seminars were organised in online mode during the pandemic. She also shared the history and the list of previous Vigyan Santha Ratna Awardees.

This was followed by the Chief Guest's address, In his speech, Hon'ble **Shri Vikas Chandra Rastogi** appreciated the activities conducted by ISAA. He focused on the challenges faced by the Institute and the role that alumni association can play in meeting them. He promised all the



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support on the part of the government.

Then came the most awaited session of the felicitation of the Vigyan Sanstha Ratna Awardees. The Institute and its Alumni Association take pride in distinguished alumni who are contributing to the growth and welfare of industry, society and nation. Achievements of many alumni are outstanding and praiseworthy. The Association has a tradition of honouring such illustrious alumni by felicitating and presenting Vigyan Sanstha Ratna Award in recognition of their remarkable achievements and accomplishments. This year's Vigyan Sanstha Ratna Awardees included:

**Dr. Ardeshir B. Damania**

**Shri Pratapsinh G. Deshmukh**

**Dr. Surendra K. Manjrekar**

**Shri Vasant Pusalkar**

These illustrious alumni were felicitated by Hon. Chief Guest, Guest of Honour and Hon. Vice-chancellor with flowers, shawl and shreefal. They were further presented with the Award which included a Citation and a Memento.

The VS Ratna **Shri Pratapsingh G. Deshmukh** represents the story of rags to riches. He is the founder of Pratap Organics which manufactures entirely export oriented chemicals at their Navi Mumbai and Mahad units. In his address **Shri Deshmukh** while stressing that there was no substitute to hard work, emphasized the importance of the role of Guru and destiny in a person's life.

This succeeded by the felicitation of **Shri Vasant Pusalkar**, Director, Breeding Botanicals and owner, Aruna Plant Medica. With his innovative methods he has contributed substantially in the field of Cultivation & Export of Medicinal plants used in Pharmaceutical Industry. In his speech **Shri Vasant Pusalkar** said that this place, the Institute, has some charisma which brought a change in him. He was overwhelmed with emotions while remembering efforts, guidance and support of his professors. His emphasised on the power of practical experience and thinking



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outside the box.

**Dr. Surendra Manjarekar**, an alumnus of the chemistry department, started from scratch and went on to make his mark in development and manufacture of speciality coatings. He is a founder of Sunanda Global, which has presence in various countries. Presently, he is the only Indian Honorary Member of the American Concrete Institute (ACI). On being awarded with the VS Ratna Award, in his response, he walked the audience through memory lane, He said, even after speaking at various internationally acclaimed institutions, the satisfaction to be and speak at very own Institute of Science is distinctive.

**Dr. Ardeshir Damania** was in US and was unable to attend the event. Hence, it was announced that he would be honoured and presented with the Ratna Award during his next visit to The Institute.

The audience, inspired by the work and response, applauded all the Vigyan Santha Ratna awardees.

Guest of Honor **Shri Ashwinbhai Shroff**, Executive Chairman, Excel Industries, recalled that his father late **Shri C. C. Shroff** was an alumnus of the Institute, having graduated in early thirties, planted the seeds in 1945 by establishing a small unit which has now grown into well-known Excel Industries. He remembered the values his father Late **Shri. C. C. Shroff** taught, which he learned at the Institute of Science, are now followed by Excel Industries. He wished all the best to the Institute and its alumni.

His speech was followed by felicitation of senior alumni and teachers above the age of 75 years. Everyone was gratified on sight of their beloved teachers and batchmates and cheered for each. Those who were felicitated included **Dr. Raj Mehta, Dr. S. D. Gulhaney, Prof. S. R. Dharwadkar, Prof. A. P. Sathe, Dr. R. G. Jadhav, Dr. C. S. Lattoo, Prof. K. V. Hippalgaonkar, Dr. J. D. Chavan, Dr. D. A. Bhiwgade, Dr. Mrs. S. U. Kulkarni, Dr. Mrs. Neela M. Naik, Dr. Manohar Bapat, Prof. Mrs. M. M. Bapat, Prof. S. B. Chaphekar and Prof. N. V. Thakkar.**





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In his presidential remarks, Hon.V.C. **Prof. Rajanish Kamat** applauded the work of ISAA and hoped for persisting support for betterment of the institute. On his own behalf as the Vice Chancellor, HBSU, he thanked the Chief Guest Shri Rastogi, the Guest of Honour Shri Shroff, Special Invitee Shri Deshpande, the Ratna Awardees and all the alumni for making the event a great success.

After this **Dr. Laxmikant Yergi**, an alumnus of Botany Department, presented his ballad on The Institute of Science, which was lauded by all. He also gifted a framed version of the poem to the Director **Dr. Jairam Khobragade**.

Finally, a vote of thanks was proposed by **Prof. Gayatri Barbade**. She thanked the Chief Guest **Shri Vikas Chandra Rastogi**, Guest of Honour **Shri Ashwinbhai Shroff**, Special Invitee **Shri D. M. Deshpande** for having accepted invitation and spent their valuable time. She thanked Hon. vice-chancellor **Prof. Rajanish Kamat**, ISAA President **Prof. N. V. Thakkar**, ISAA Secretary **Prof Aparna A. Saraf** for organizational support, All **Vigyan Santha Ratna awardees** and Alumni for making this program successful. **Dr Sagarika Damale** and **Prof. Debjani Dasgupta** deserved special thanks for hosting the event. Finally, she expressed gratitude for the entire support team of **Dr. Sushma Ambadekar, Dr. Varsha Andhare, Dr. Utkarsha Lekhak, Dr. Rajesh Raut** and all other **faculty members, non-teaching staff** and **student volunteers**.

On behalf of the ISAA, she thanked **Shri P. G. Deshmukh**, Vice-President, ISAA for sponsoring the dinner. She also thanked the caterer **Shri Girish Mata**, for delicious dishes and very good dinner arrangement.

The gathering ended with the national anthem. The guests proceeded to enjoy the dinner organised in the beautiful decorated and illuminated Institute's garden. While leaving, the guests were presented with a beautiful souvenir, a mug with inscription ISAA-2022 and logos of the Institute and the ISAA.



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### Role of geoinformatics in conserving biodiversity & ecosystem services: Alumnus Dr. Gautam Talukdar, on 13th February 2023


Alumnus Dr. Gautam Talukdar, Scientist F & Head, Protected Area Network, Wildlife Institute of India, Dehradun delivered a talk on Role of Geoinformatics in conserving biodiversity & ecosystem services on 13<sup>th</sup> February 2023. Hon. VC Prof. Rajnanish Kamat was the chief guest for the function. 52 students from Environmental Science, Zoology and Botany department attended the talk along with faculty members from The Institute and other colleges.

Dr. Homi Bhabha State University  
The Institute of Science, Mumbai

Institute of Science Alumni Association (ISAA) in collaboration  
with Department of Botany  
organizes a talk on

**Role of Geoinformatics in conserving  
biodiversity & ecosystem services**

By



**Dr. Gautam Talukdar**  
Scientist F & Head, Protected Area Networks Wildlife Institute of India

Date: Monday, 13<sup>th</sup> February, 2023, 12:00 noon  
Venue: Room No. 62

All are cordially invited.

Prof. Aparna A. Saraf  
Head, Dept. of Botany  
Secretary, ISAA

Prof. N.V. Thakkar  
Chairperson, ISAA

Dr. Jairam Khobragade  
Director



GPS Map Camera

Mumbai, Maharashtra, India  
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Maharashtra 400032, India  
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**Hon'ble VC Prof. Rajanish Kamat felicitating Dr. Gautam Talukdar**



**An engrossed audience**



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### Food prices and the doomsday conservation of crop genetic resources Dr. Ardeshir Damania, 15<sup>th</sup> February 2023

A talk on Food prices and the doomsday conservation of crop genetic resources was delivered by alumnus of the department, Dr. Ardeshir Damania, Department of Plant Science, University of California, USA, on 15<sup>th</sup> February 2023. The session was well attended by many prominent alumni of the Institute. Dr. Damania put forth the importance of conservation of Crop genetic resources for the coming generation. A very positive outlook was given in terms of food security using biotechnological techniques.

**Dr. Homi Bhabha State University**  
The Institute of Science, Mumbai

Institute of Science Alumni Association (ISAA) in collaboration  
with Department of Botany  
organizes a talk on

### FOOD PRICES AND THE DOOMSDAY CONSERVATION OF CROP GENETIC RESOURCES

By



**Dr. Ardeshir B. Damania**

Department of Plant Sciences, University of California, USA

Date: Wednesday, 15<sup>th</sup> February, 2023, 3:00 pm  
Venue: Room No. 36

All are cordially invited.

Prof. Aparna A. Saraf  
Head, Dept. of Botany  
Secretary, ISAA

Prof. N.V. Thakkar  
Chairperson, ISAA

Dr. Jairam Khobragade  
Director



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Pearls of wisdom.....



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## Scientific Treasures of Ancient India: Prof. Sagarika Damle on 28<sup>th</sup> February 2023

The department celebrated National Science Day by arranging a talk by alumnus Prof. Sagarika Damle on Scientific Treasures of Ancient India on 28<sup>th</sup> February 2023. A wonderful talk introducing the students to our rich scientific cultural heritage.

Dr. Homi Bhabha State University  
The Institute of Science, Mumbai

The Institute of Science Alumni Association (ISAA) in collaboration  
with Department of Botany celebrates  
**National Science Day**  
by organising a talk on

**Scientific Treasures of Ancient India**  
By



**Prof. Sagarika Damle**  
Prof. & Head, Department of Life Sciences, KC College, HSNL University, Mumbai

Date: Tuesday, 28<sup>th</sup> February, 2023, 3:00 pm  
Venue: Room No. 62

All are cordially invited.

Prof. Aparna A. Saraf  
Head, Dept. of Botany  
Secretary, ISAA

Prof. N.V. Thakkar  
President, ISAA

Dr. Jaiaram Khebragade  
Director



**GPS Map Camera**

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**GPS Map**

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Golden Gate, Mantralaya, Fort, Mumbai  
Maharashtra 400032, India



Mumbai  
14<sup>th</sup> July 2023

  
**Prof. N. V. Thakkar**  
President, ISAA

  
**Prof. Aparna A. Saraf**  
Hon. Secretary