

Shri Shivaji Education Society Amravati's  
**SCIENCE COLLEGE, Congress Nagar, Nagpur**

**DEPARTMENT OF CHEMISTRY**

**INTERNAL ACADEMIC AUDIT**

**2020-2021**

1. Vision and Mission of the Department

**Vision :**

A vision of the Department is to disseminate scientific knowledge among the students through practical to promote professional and technological expertise.

**Mission :**

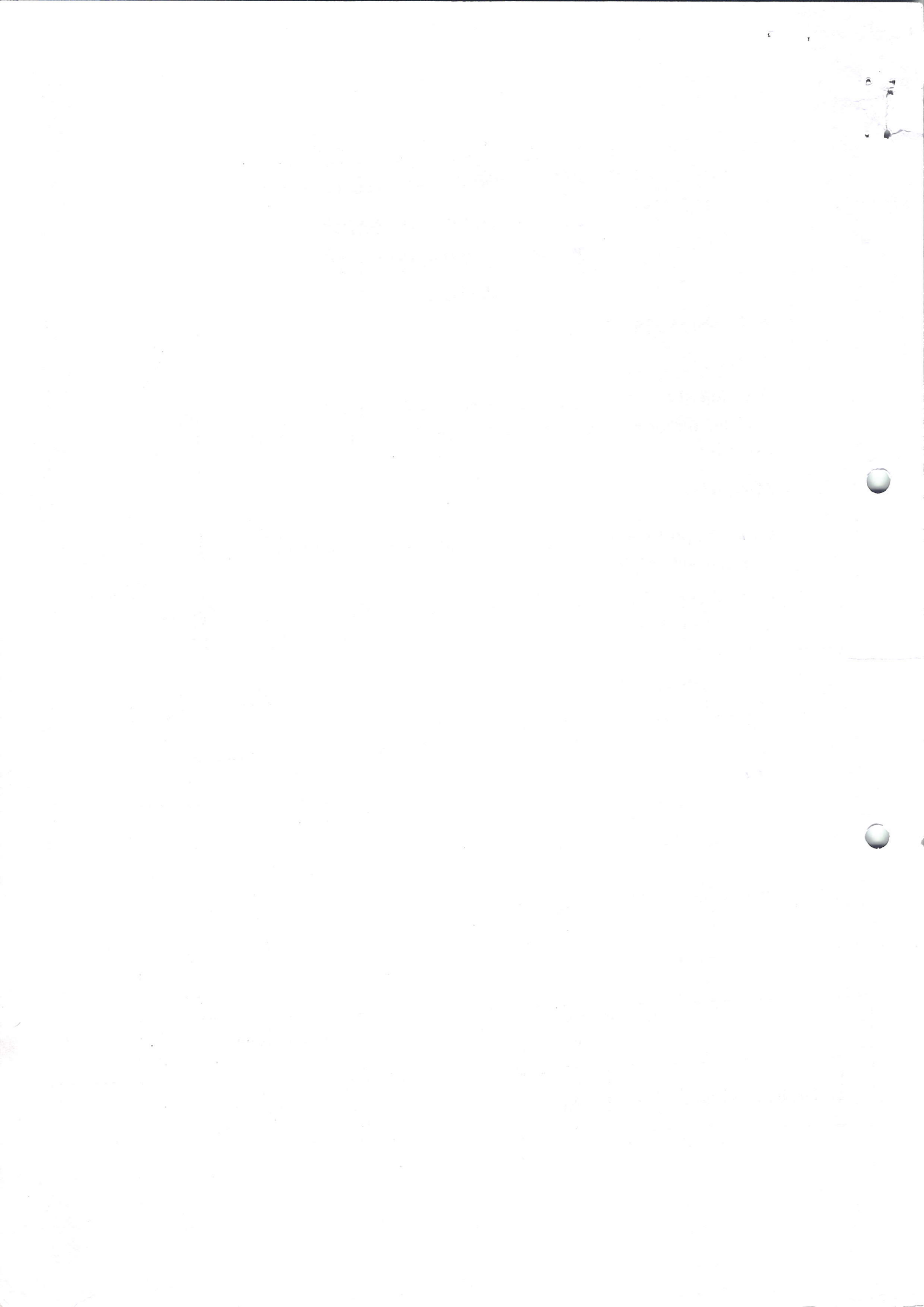
- To support the developmental activities of the institution and make the Department vibrant.
- To focus on synthesis of biofuels, biosensor, superconducting polymers , low cost household products like soap, detergents, and safeguard chalks etc.

2. A. Faculty Strength:

Faculty	Recruited	Vacant	Remarks
Regular	08	04	
CHB	01	--	
Ad-hoc	03	--	
Non-teaching	08	03	

B. Faculty profile

Name	Highest Qualification	Designation	Specialization	Teaching Experience
1. Dr. R. U Khope	M. Sc, M Phil, B. Ed, Ph. D.	Head and Professor	Physical Chemistry	29Years



2. Dr. P. S Utale	M. Sc, Ph. D.	Associate Professor	Organic Chemistry	22 Years
3. Dr. Y. K Meshram	M. Sc, SET, Ph. D.	Associate Professor	Organic Chemistry	26 Years
4. Dr. J. K Gunjate	M. Sc, SET, NET, Ph. D.	Associate Professor	Organic Chemistry	18 Years
5. Dr. R. A Deshmukh	M. Sc, Ph. D.	Professor	Organic Chemistry	16 Years
6. Dr. R. D Urkude	M. Sc, Ph. D.	Professor	In-Organic Chemistry	16 Years
7. Dr. Priyadarshani N. Deshmukh	M. Sc, Ph. D.	Assistant Professor	Organic Chemistry	4 Years
8. Dr. Vrushali Kinikar	M. Sc, Ph. D.	Assistant Professor	Organic Chemistry	13 Years

### 3. Students strength

#### A. (Winter 2020)

Year	Group	Number of Students Admitted
B.Sc. Semester I	PCM	56
	CZM	41
	CBM	32
	CBZ	52
	CBG	26
	CGM	17
	PCG	17
	CMBT	82
	<b>Total</b>	<b>323</b>
	B.Sc. Semester III	PCM
CZM		31
CBM		29
CBZ		45
CBG		19
CGM		15
PCG		21
CMBT		84
<b>Total</b>		<b>294</b>
B.Sc. Semester V		PCM
	CZM	29
	CBM	33



	CBZ	62
	CBG	37
	CGM	27
	PCG	32
	CMBT	98
	Total	<b>376</b>
M.Sc. I		
M.Sc. II		<b>27</b>
Ph.D.		<b>22</b>
Value Added Program		

B. (Summer 2021)

Year	Group	Number of Students Admitted
B.Sc. Semester II	PCM	55
	CZM	40
	CBM	31
	CBZ	53
	CBG	26
	CGM	17
	PCG	17
	CMBT	82
	Total	<b>321</b>
	B.Sc. Semester IV	PCM
CZM		31
CBM		29
CBZ		45
CBG		19
CGM		26
PCG		19
CMBT		82
Total		<b>301</b>
B.Sc. Semester VI		PCM
	CZM	30
	CBM	23
	CBZ	48
	CBG	19
	CGM	26
	PCG	19
	CMBT	77
	Total	<b>297</b>
	M.Sc. I	
M.Sc. II		<b>22</b>
Ph.D.		
Value Added Program		





#### 4. Students Performance

##### A. Result Analysis (Winter 2020 ) UG & PG

Programme Code	Programme Name	Number of students appeared in the final year examination	Number of students passed in final year examination	Pass Percentage
B.Sc I <sup>st</sup> Yr.	B.Sc Sem I	323	316	97.83%
B.Sc II <sup>nd</sup> Yr.	B.Sc Sem III	291	290	99.65%
B.Sc III <sup>rd</sup> Yr.	B.Sc Sem V	374	371	99.19%

##### • Result Analysis (Winter 2020 ) PG

Programme Code	Programme Name	Number of students appeared in the final year examination	Number of students passed in final year examination	Pass Percentage
M.Sc. I <sup>st</sup> Year	M.Sc Sem I	27	27	100%
M.Sc. II <sup>nd</sup> Year	M.Sc Sem III	22	22	100%

##### B. Result Analysis (Summer 2021 ) UG & PG

Programme Code	Programme Name	Number of students appeared in the final year examination	Number of students passed in final year examination	Pass Percentage
B.Sc I <sup>st</sup> Yr.	B.Sc Sem I	316	316	100%
B.Sc II <sup>nd</sup> Yr.	B.Sc Sem III	290	290	100%
B.Sc III <sup>rd</sup> Yr.	B.Sc Sem V	356	356	100%

##### • Result Analysis (Summer 2021 ) PG

Programme Code	Programme Name	Number of students appeared in the final year examination	Number of students passed in final year examination	Pass Percentage
M.Sc. I <sup>st</sup> Year	M.Sc Sem II	27	27	100%
M.Sc. II <sup>nd</sup>	M.Sc Sem IV	22	22	100%

5  
2  
A





Year				
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C. Achievements

A- (Medals/Awards/Prizes at University level)

Sr. No.	Name of the Students	Class	Title

B- Merit Position of PG Students in RTMNU (for PG Dept. only) ✓

5. Students Progression:

NIL

Year	No. of students enrolling into higher Education	Program graduated from
	UG to PG	25 ✓
	PG to Research	00
	Placement	
	On campus	02 ✓
	Off campus	

(i) Students' publication in Extracurricular activity

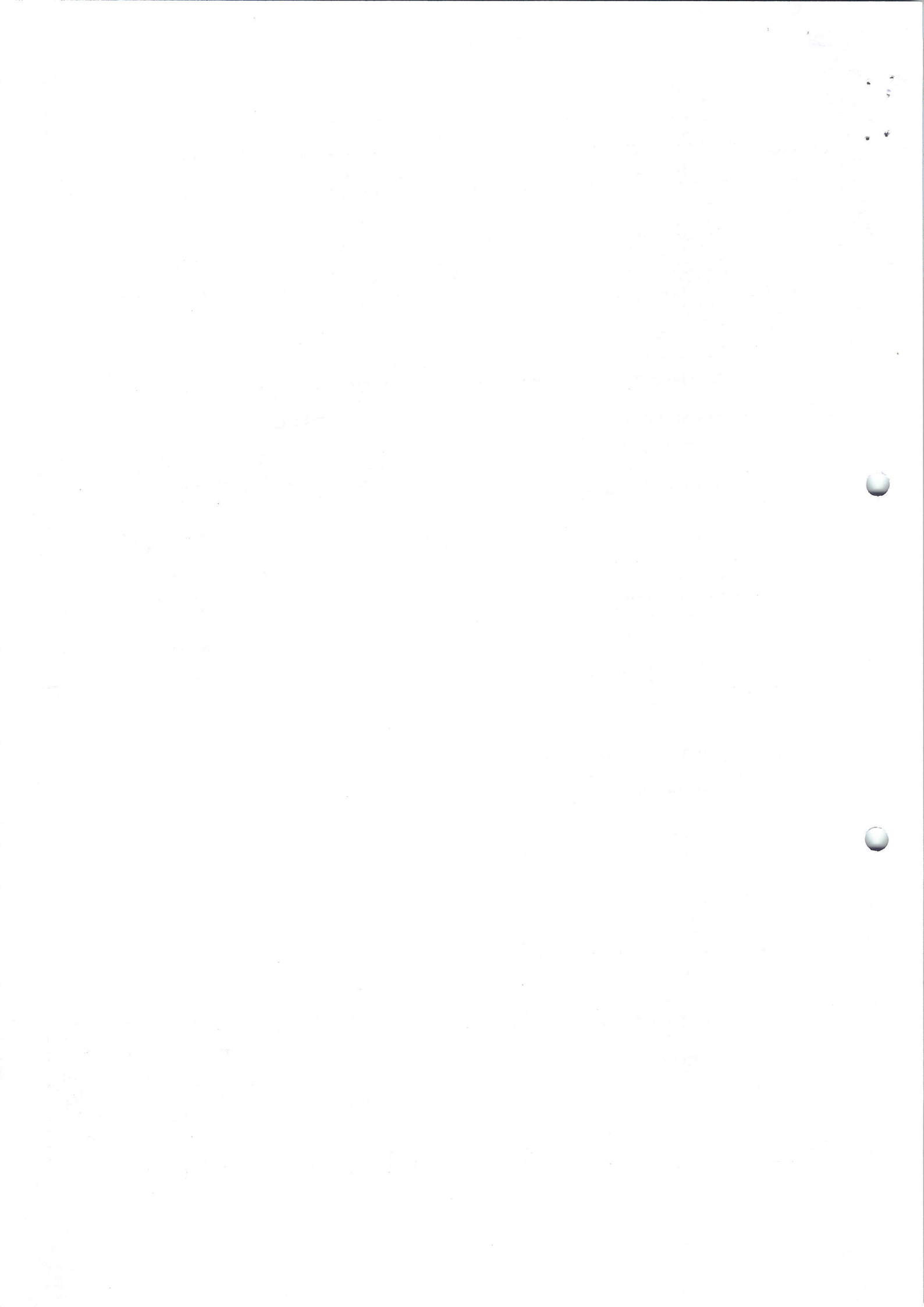
Title of the Paper	Name of Author	Title of journal	Year of publication

(ii) Students' Extension Activity: Nil

(iii) No. of Students pursuing higher course

(iv) Students' participation in seminar/quiz

Sr. No.	Name of Student	Participation
1.	Ms. Chandani Chaudhary	Online inter-collegiate digital poster competition held on



		28 <sup>th</sup> May 2021.
2.	Vishal R. Kharchwal	1. Participated in 'A Covid-19 Quiz to test your knowledge of pandemic trivia ,held at Wardha on 12 <sup>th</sup> March 2021 2.Successfully cleared level-1 Of India Fact Quiz-2020.

Student of M.Sc. Sem IV ~~Physics~~ participated in conference

Sr. No.	Name of Students	Conference type	Participation as
1.			
2.			
3.			

(v) Students' Learning course through-on-line

6. Faculty

I. Research Paper Publications

A. Total Number of publications:

- i) International 08  
ii) National

B. Bibliometrics of the publications during the last Academic year based on average citation index in Scopus/ Web of Science or Pub Med/ Indian Citation Index

Title of the Paper	Name of Author	Title of journal	Year of publication	Citation Index	Institutional affiliation as mentioned in the publication	Number of citations excluding self-citation
Assessing	Rashmi	BIOINFOLET ( Web of	2020	-	Shivaji Science	-



pesticidal formulation for Lambda-Cyhalothrin content	Urkude	Science )			College,Nagpur	
Surface technology-adsorption and kinetic of heavy metal ions on modified granular activated carbon by batch study and their recovery study.	Dr.Vrushali KINHIKAR	IOP Publishing (Journal of Physics)doi:10.1088/1742-6596/1913/1/012089. (Scopus)	2020	-	Shivaji Science College,Nagpur	-
ADSORPTION STUDY ON F-400 MODIFIED GRANULAR ACTIVATED CARBON FOR THE MIXTURE OF CR: CO METAL IONS	Dr.Vrushali KINHIKAR	Vidyabharati International Interdisciplinary Research Journal (Special Issue-May 2020) ISSN 2319-4979	2020			
Column adsorption study for the removal of heavy metal ions by 14. GAC,	Dr.Vrushali KINHIKAR	Akshar Wangmay International Research Journal ISSN 2229-4929,Sept-2020 (UGC Approved and Peer reviewed journal)	2020			
Equilibrium studies in adsorption of heavy metals using modified granular activated carbon ,	Yogita. K. Meshram Dr R . U. Khope	Vol. 13   No. 4  2302-2307  October – December   2020 Rasayan J. Chem., 13(4), <a href="http://dx.doi.org/10.31788/RJC.2020.1345752">http://dx.doi.org/10.31788/RJC.2020.1345752</a> (Scopus)	2020	-	S.S.E.S Amti's Science College, Nagpur 440012, (M.S) India	-
Synthesis of 1,3,4 Thiadiazoles and Its isomerization by Neoteric	Dr. P. N. Deshmukh, Dr. Y. K. Meshram, Dr. J. K. Gunjate,	Vidyabharti International Interdisciplinary Research Journal , Web of Science	2020	-	S.S.E.S Amt's Science College, Nagpur 440012, (M.S) India	-

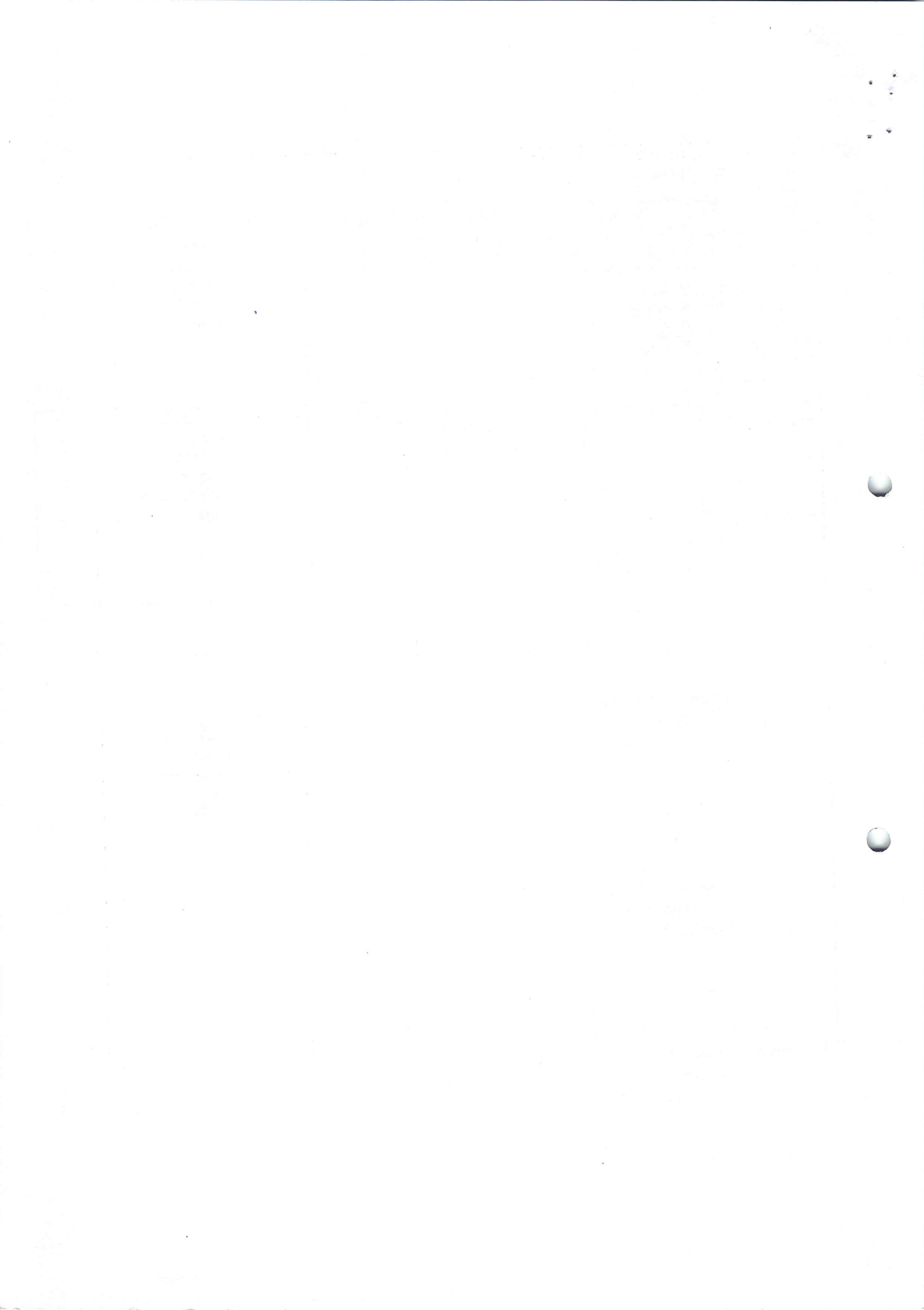




Route And Antimicrobial Activity.	Dr. P. S. Utale					
Synthesis And Antimicrobial Evaluation of 2,6,9-Trisubstituted Purine Coupled With L-Methoine Derivatives At C2 Position	S. V. Pande, J. K. Gunjate, Dr.P.S.Utale, Y. K. Meshram, R. A. Bobdey	Vidyabharti International Interdisciplinary Research Journal, Web of Science	2020	-	S.S.E.S Amt's Science College, Nagpur 440012, (M.S) India	-
Synthesis and properties of visible light active novel $Ce_{0.5}Zr_{0.5}O_2$ for photocatalytic decomposition of organic dye from water	J. K. Gunjate	Vidyabharti International Interdisciplinary Research Journal, Web of Science	2020	-	S.S.E.S Amt's Science College, Nagpur 440012, (M.S) India	

C. Faculty participation in conferences/seminar/workshop and symposia:

Name of the Faculty	Title of Conference/ Seminar/ workshop Attended	Period	Level International/ National/State /University /College	Whether Presented papers	Whether abstract /paper published in Souvenir/Abstract Book
Dr.Vrushali R.Kinhikar	International E-Conference on "Strategies & Challenges in Higher Education During Covid- 19 Lockdown period in India"	15/05/20 to 17/05/2020.	International	Yes	Yes
	International Conference on "Surface Coverage and Adsorption Study of Heavy Uptake by GAC" organized by Annamala University ,Faculty of Science.	28/08/20 to 29/08/2020	International	Yes	No



One Day Interdisciplinary Online International Conference on , " Environmental Changes, Biodiversity,And Sustainable resource Management" organized by Santos Bhimrao Patil Arts,Commerce and Science College Mandrup,Dist.Solapur	10/09/2020	International	Yes	Yes
Online National Conference on , "Recent Advances in Chemical Sciences (NSRAC-2020)" on 1 <sup>st</sup> and 2 <sup>nd</sup> May 2020 Organized by Shankarlal Khandelwal Arts,Commerce ,Science College,Akola, by Department of Chemistry.	1/05/2020 To 02/05/2020	National	Yes	Yes
International Conference on Research Frontiers in Sciences (ICRF-2021)online , organized by G.H.Raisoni College of Engg.	5-6 February 2021	International	No	Yes
Induction Programm- "4-week Orientation /Induction programme for Favulties Universitis/ Colleges/Institutes of higher education" Oranized by Ramanujan College University ,Delhi, from	01/07/2020 to 06/07/2020.	Induction Programm	NA	NA
Awareness Workshop on "Covid-19" organized by Geotech GIC training Institute & Consultancy Services, Aurangabad.	05/06/2020	Workshop	NA	NA
National level online workshop on, "Cybergogy:New art of teaching"organized by Aligarh College Of Education ,Aligarh , Uttar Pradesh	27 <sup>th</sup> May 2020 to 1 <sup>st</sup> June 2020	Worshop	NA	NA

D. Awards to Faculty members; Nil

7. MoUs signed with institutions of national, international importance, other



universities, industries, corporate houses etc. during the year

Date of MOU	Organization	Purpose/Activity	Student Participate under MOU

8. Research funds sanctioned and received from various agencies, industry and other organizations

Nature of the Project	Duration	Name of funding Agency	Amount Sanctioned	Amount Received

9. Books Published

Sr. No.	Book		Book Edited
	Title	ISBN and Date	Chapter
1.	A book of chemistry B.Sc. Sem I	978-93-87278-85-1 15 Aug 2021	Book edited by Dr. R. U. Khope ( Physical Chemistry Part II) ✓

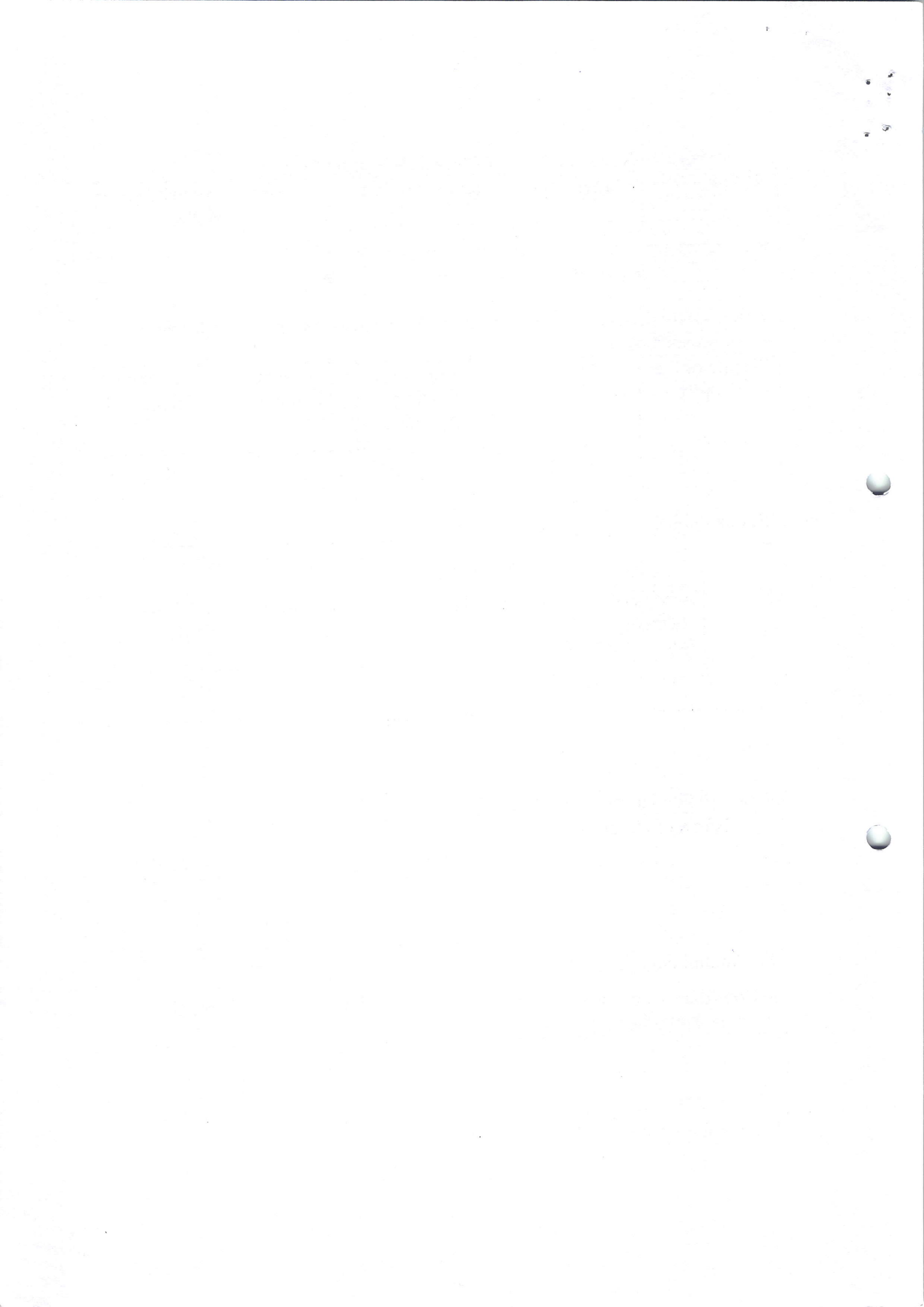
10. Research Guidance by Faculty during the year

Name of the guide	Ph.D		
	Awarded	Submitted	Registered

11. Alumni engagement

a. Contributes significantly to the development of the institution through financial and other supports


b. alumni contribution during the year





## 12. Action Plan of the Department

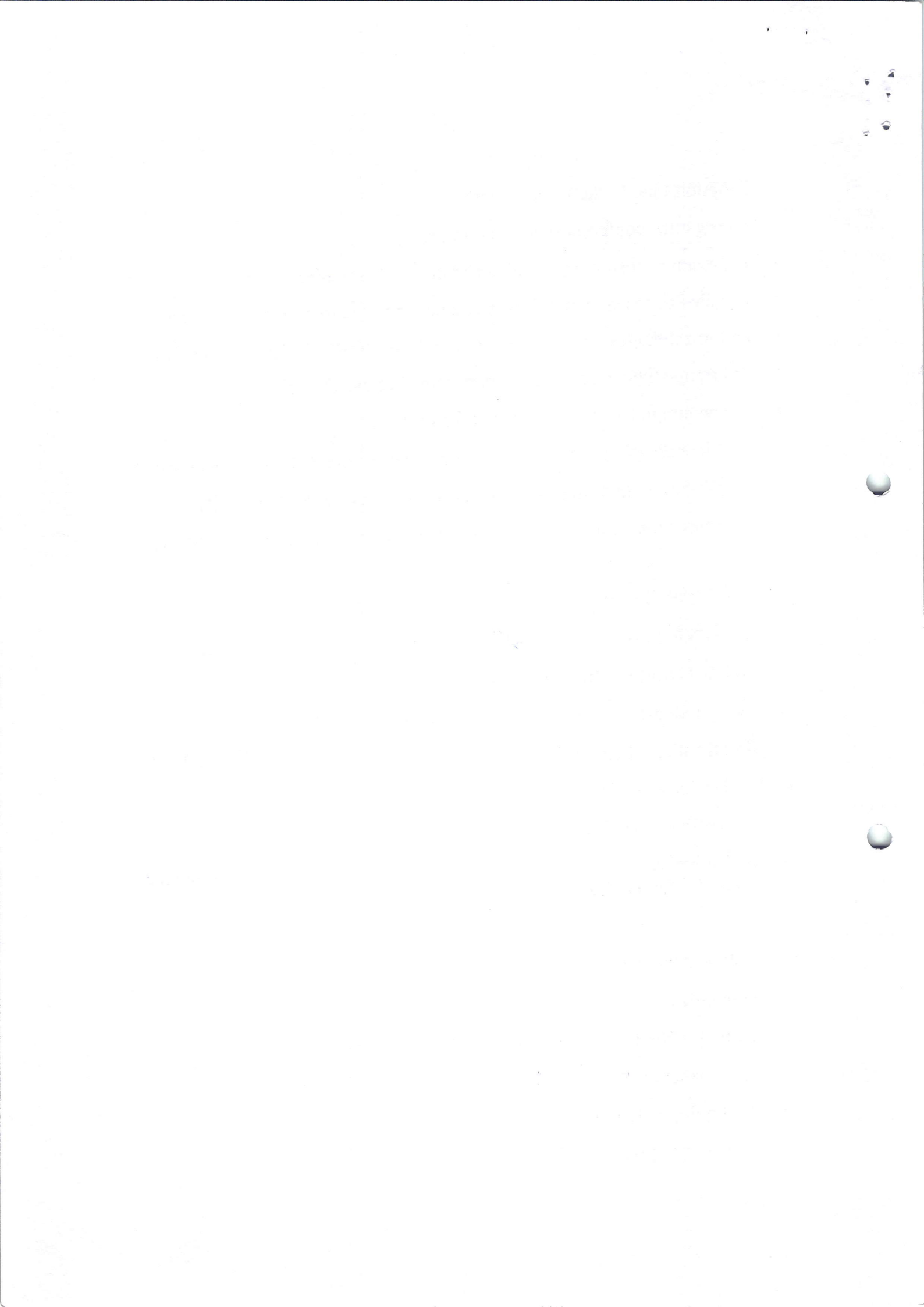
- To organize conferences and seminars.
- To organize poster ,quiz and curriculum related competitions.
- To enhance research publications in national and international Journal.
- To form linkages with National Laboratories like NCL,IICT Hyderabad.
- To arrange the lecturers of eminent scientists and Professor.
- To encourage UG and PG student for research.
- To celebrate scientific days like Ozone days, world water day, Antidrug day.
- To synthesize the drugs, dyes and adsorbents for betterment of life.
- To arrange the skilled based training programmes required by Industries.

## 13. Best Practices of the department

- Counseling to slow learner. ✓✓
- Provided Question Bank as per university pattern.
- Conducted test on all unites as per university pattern.
- Digitalization of entire documents / records.
- Celebration of national science day.
- Celebration of Teacher day.
- Staff members were involved in campus cleaning, Sponsored medals / awards by the faculty.

## 14. SWOCAnalysis

- **Strength:**
- Well Qualified, Competent and Experienced Staff.
- Self financing PG Course.
- Well quipped Laboratories.
- Number of options available with chemistry subject.



- Department is under CPE.
- Certificate course in environmental Analysis.
- Regular seminars, personality development, guest lectures and awareness programs.
- Laboratory is recognized for higher learning and research.
- Five faculties are supervisors.
- Remedial teaching to slow learners.
- NET/SET coaching centre.
- Four National Conferences are organized.

➤ **Weakness :**

- Average student seek admission in the subject.
- Research on social oriented problems.
- The gap between the industrial demand and curriculum.

➤ **Opportunities :**

- Employment potential for M.Sc. Student in chemical/pharma companies.
- Student faculty exchange programme.
- Upcoming industries in MIHAN.
- Upcoming textiles Zone nearby Nagpur.
- To establish collaboration and Consultancy Services.
- To undertake interdisciplinary research having social relevance.
- Students can pursue research leading to Ph.D.

➤ **Challenges :**

- To meet the need of industries by using existing curriculum.
- Keeping pace with the rapid changes in higher education.
- Attitude of students toward their career.



Professor & Head  
Department of Chemistry,  
Shri Shivaji Science College  
Congress Nagar, Nagpur.

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Department of Chemistry,  
Shri Shivaji Science College  
Coimbatore, N.S.