Criteria II

2.3.1: Student centric methods, such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experiences

Programme Organized by Different departments

Environmental Society - 2013-2014

Guest Lecture

- 1. The society was inaugurated on 28th September, 2013 at the hands of Mr. Bhangu Sir, Ex-Forest Conservator, Govt. of Maharashtra.
- 2. Dr. Notey, (Ex-Forest Officer and Wildlife Expert) who delivered expert lecture on Wild life and its protection. He enthusiastically explained the need to protect wild animals and also explained the importance of biodiversity.
- 3. Also society celebrates "Wild Life Week "on 1^{st} October 7^{th} October every year.



Statistics Society - 2015-16

It is a matter of great pride that the Department of Statistics has completed 60 glorious years of its existence in 2015 and has celebrated Diamond Jubilee.

The **Statistics Society** and certificate course in **R** - **Package** sponsored by U.G.C. was inaugurated at the hands of Mr. J. R. Rao, Assistant Vice President, Planning, Analytics and Regulatory Practices, Credit Union Deposit Guarantee Corporation, Alberta, Canada on 14/08/2015. Mr. J.R. Rao spoke on **Big Data: How it is changing everything**. All students appreciated his informative speech.







3 A guest lecture on **Structural Equation Modeling** (**SEM**) by Dr. ParagDhumal, Associate Professor, University of Wisconsin Parkside, Kenosha, United States, was organized on 22/01/2016, as a part of Diamond jubilee celebrations.

Dr. ParagDhumal introduced structural Equation Modeling (SEM) to the students by giving various real life examples, its challenges and popularity etc. Dr. Dhumal interacted with the students and gave information about the job scenario and education system for the Students of Statistics in US.





Botanical Society 2015-16



Visit of Prof. Shelena Jetley (USA

Inauguration of Botanical Society Chief Guest Prof. Vijay Ghugey and Hon' Director Dr. R. G. Atram

Workshop on Mind power and Brain work by Manashakti Kendra Lonavala

One Day Workshop on "**Mind power and Brain work by Manashakti Kendra Lonavala was organised by Dept. of Botany in association with IQAC,** Institute of Science, Nagpur on 31st July 2015. An interesting lecture on goal setting in life was delivered by volunteer of Manashakti Kendra. He also threw a light on emotional intelligence. Dr. R. G. Atram chaired the session. Around 200 students along with faculties of various department took advantage of the session.



Work shop on Mind power and Brain work by Manashakti Kendra Lonavala dated 31/07/2015

One day Symposium "Biodiversity of Past"

Department of Botany, Institute of Science, Nagpur organised One day Symposium on "Biodiversity of Past" on 22nd January 2016. Inauguration ceremony was held in Sabhagruh (Room No. 45) of Institute of Science, Nagpur. Dr. G. V. Patil, Former Vice Chancellor, Sant Gadage Baba Amravati University, Amravati was the chief guest on this occasion. Dr. Steven Manchester, Professor and Curator, Florida Museum of Natural History, University of Florida (U. S. A.) delivered the Key-note address. Nearly 50 faculties of various colleges participated in the Symposium. On this occasion , Dr. A. A. Saoji, Former Director, Institute of Science,

Nagpur, Dr. S. A. Kalkar, Regional Joint Director, Amravati region were also present. During the Symposium Dr. Shyam Shrivastav, Director, Birbal Sahni Memorial Museum, Lucknow spoke on Paleobotanical diversity. Certificates were distributed to all the participants during the valedictory function.



Moments during one day symposium on Biodiversity of past dated

Statistics Society 2016-17

The Statistics Society was inaugurated on 28th September 2016 at the hands of Dr. D V Raje ,Head, Data Analysis Group, MDS Bio- Analytics Pvt. Ltd. He also formally inaugurated the fifth batch of the UGC sponsored Certificate Course in Statistics Package R. He delivered an informative talk on **"How to write a good research paper"** which was highly appreciated by the students. Dr. R. G. Atram, Director, Institute of Science, Nagpur presided over the function.



Guest lecture by Dr. D V Raje, Head, Data Analysis Group, MDS Bio- Analytics Pvt. Ltd.

Guest lecture by Dr Kanchan Jain, Prof and Head, Punjab University

A Guest lecture by Dr. Kanchan Jain ,Prof and Head ,Punjab University ,Chandigarh on the topic " **Estimation and modeling in Survival Analysis**" was arranged on 13th February 2017.Dr. Bhanu ,Professor and Head ,Department of Statistics ,Institute of Science gave brief introduction of the Institute and the Department to the speaker as she was visiting the department for the first time.She was felicitated by presenting a book and a memento. MsDeekshaKordefrom MScSemI introduced the speaker to the audience.DrSandhyaDhabe proposed vote of thanks.



Guest lecture by Dr Kanchan Jain, Prof and Head, Punjab University

Zoological Society 2016-17

A guest lecture of Dr. Krishna M. Kamble, Professor and Former Head of Department of Radiation and Oncology of Govt. Medical College, Nagpur was organized by the students of M.Sc 2nd year on 18th March 2017.

.The topic was on **"Principle of Radiation Biology& health Consequences of Radiation."** He shared immensely great knowledge of radiations which has increased our knowledge regarding this topic and given the opportunity for knowing something new.



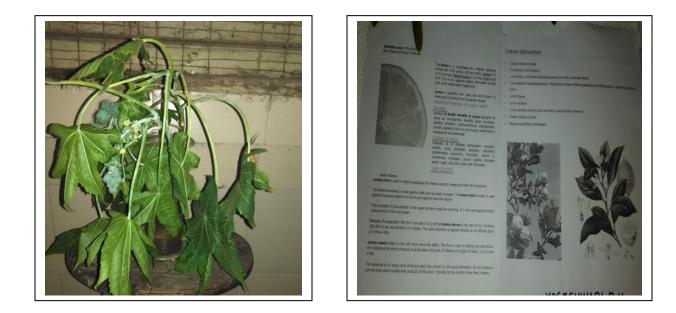
Botanical Society 2016-17

Activities of Botanical Society

Plant of the week- This novel idea was conducted in the department of Botany, where one student of the M.Sc.I used to bring one medicinal plant and important information was displayed on the notice board which includes morphological characters of the plant, geographical conditions in which the plant grows. Medicinal uses of the plant and part which is used for medicinal purpose. The information was open for all the students of the Institute.

Plant of the Week







On 9.03.2017 Dr. G.V. Patil Ex. V.C. Amravati University visited Botany department. On this occasion Dr.Mrs. S.A. Kalkar introduced the guest to the students of M.Sc. He had an interactive session with the students of M.Sc. I and M.Sc. II.



On 01.02.2017 a guest lecture was arranged on Career Counseling and Personality Developmen. Mrs. Anju Dewase, Info Centre Executive LIC was the guest speaker.

One day "Workshop on Medicinal Plant: Cultivation practices and its uses" at Aura Park, Katalabodi, Amravati road, Nagpur

Students of department of Botany, Institute of Science attended one day workshop on "Medicinal Plants: Cultivation Practices and Uses" at Aura Park, Katalabodi, Ayurvan Foundation, Near Starkey Point, Amravati road, Nagpur. On this occasion Dr. R.G. Atram, Director Institute of Science gave very lucid information on Importance of medicinal plant used by tribal people. Mr. Ghatate and Mr. Sherekar introduced various rare medicinal plants from different agro climatic regions to the students. Students were benefitted with the knowledge provided and they have practically observed different medicinal plants and insect biodiversity.. Certificates were distributed to the students at the hands of Dr. R.G. Atram





Participants

On 31st March 2017 Valedictory Function of Botanical Society was arranged. On this occasion Professor A.A. Saoji Ex. Director, Institute of Science, Nagpur was Chief Guest of the function. Prof. R.A. Satpute presided over the function. Prof. A.A. Saoji guided students and narrated the history of Institute of science, Nagpur. The student of M.Sc. I Anjali Tapile gave a presentation on activities held in department during 2016-17.



TWO DAYS UNIVERSITY GUEST LECTURE SERIES ON "SPECTROSCOPY" (22 & 23 FEB 2017)

INTRODUCTION

Two days University level guest lecture series was held at Institute of Science, Nagpur on 22 & 23rd Feb 2017 organized by department of Chemistry and Department of Physics.

The main aims of this event was

- 1. To create interaction between PG students of Chemistry and Physics of Institute.
- 2. To enhance interaction with PG students of other college in the R. T. M. N. University Nagpur.
- 3. To enhance problem solving ability of student the field of Spectroscopy.
- 4. To solve queries in spectroscopy.
- 5. To know importance of spectroscopy in the field of research.
- 6. To minimize expenses over separate Guest lecture.

To organize this event PG student of Chemistry and Physics from other colleges also registered. It was a honor for our institute that near about above 100 participants from other colleges with 80 participant of our own institute participated in this activity.

INAUGURATION



Inauguration at the hands of Dr. R. G. Atram, Director, Institute of Science, Nagpur



Presidential speech by Dr. R. G. Atram, Director, Institute of Science, Nagpur



DURING PROGRAMS





Lecture by Dr. Vishal Banewar, GVISH, Amravati

Participants.

Statistics Society 2017-18

The Statistics Society was inaugurated on 24th August 2017 at the hands of Dr. Asha Lalwani, Nagpur. She delivered an informative talk on "**Identification of Sources of Air Pollution Using Statistical Methods**" which was highly appreciated by the students.

Dr.Asha Lalwani, Senior Scientist, NEERI gave a short description about the problem of air pollution from Koradi and Khaperkheda power plants. She also discussed how this could be explained using a mathematical model based on Normal Distribution (Gaussian Dispersion Phenomenon). The importantance of R programming language and Machine Learning of Operational Research was also emphasized.



Inauguration of Statistics society at the hands of Dr.Mrs.Asha Lalwani

<u>Chemical Society 2017-18</u>

GUEST LECTURE BY DR. SUNIL VIBHUTE [10.02.2018]

The guest lecture was organized for Undergraduate and Postgraduate Students. Nearly 120 Undergraduate and Postgraduate students were present in the lecture. The objective of this guest lecture was to increase awareness among students in this scientific world and to build basic concepts of Science. The lecture received admiration by the students.





Dr. Sunil Vibhute, Delivering the Lecture on Science Fiction



1. A Talk on Career Opportunities in Chemistry - Scope [28.02.18]:

Keeping in mind about the prospects of M.Sc. I and II students after completion of their PG, a talk was organised on the topic **Scope:Career Opportunities in Chemistry**, by **Dr. Rashmi Batra**, Associate Professor of Chemistry at IOS, Nagpur. She explained different aspects the students can opt after completion of their final year.



Zoological Society 2017-18

Inauguration ceremony of Zoological Society was held on 23rd September, 2017 which was inaugurated by the chief guest and speaker **Shri. Sameer Z. Parvez**, Regional Deputy Commissioner of Fisheries, Nagpur. Dr. P. S. Jakhi, Associate Professor, Department of Botany of Institute of Science presided and graced the function.



Shri. Sameer Parvez, the chief guest delivered his lecture on the topic, "Fresh water Fish culture aspects and Governmental schemes for Entrepreneurs" and addressed the students with his kind words and wished the association good luck for all its upcoming endeavors.

<u>Guest lecture on Apiculture</u>

A guest lecture was organized by Zoological Society on 8th February, 2018. The guest speaker was **Dr. B. S. Rahile**, Associate Professor from Shri Shivaji Science College, Pauni, Dist. Bhandara. He delivered a lecture on the topic, "**Employment Opportunities in Honey-bee keeping (Apiculture)**".



This function was presided over by **Prof. Dr. K. S. Bhanu**, Head of the Department of Statistics. This lecture was attended by the students of M. Sc. and B. Sc. and the staff members.

Guest lectures on Career counceling

Two guest lectures were organized by the Zoological Society on 9th March, 2018. For the first lecture we had invited **Shri. Milind Panchbhai**, Assistant Professor from Govt. Institute of Forensic Science, Nagpur. He delivered a lecture on the topic, "**Career Opportunities in Zoology and Life Sciences**".



The second lecture was delivered by **Dr. V. S. Zade**, Associate Professor from Zoology Department of this Institute on the topic, "**Career Counseling and Job Opportunities in Life Sciences**".



Physics Society – 2017-18



Guest lecture on educational opportunities by Dr. Pankaj Koinkar

A Guest Lecture on Educational opportunities was organized by Physics society 2017-18 of Department of Physics, Institute of Science, Nagpur on August 28, 2017. Dr. Pankaj Koinkar, Associate Professor, Department of Optical Sciences, Tokushima University, Japan was the Guest speaker. The function was conducted in room no. 80 of Department at 2:00 PM. The function was presided over by Prof. V. S Sangawar, Head, department of Physics. All teaching staff, members of Physics Society and all the students of Post Graduate Department of Physics attended this function.

He gave seven rules of success for any person:

- Health
- Talent and efforts
- Carefulness, thinking, behavior and respect of time
- Family
- Professors and mentors
- Friends and colleagues
- Luck



Guest lecture on nuclear war with North Korea by dr. Ramesh Singru

Physics society 2017-18 and Thatte Memorial jointly organized guest lecture on the last day of V.N.Thatte memorial lecture series on **"Threat of Nuclear war with North Korea**". The guest speaker on this occasion was Dr. Ramsesh Singru, retired Professor at IIT Kharagpur. Dr. Ramsesh Singru started the lecture by giving detailed information about the geographical location, historical background of North Korea. The reasons behind the division of North Korea and South Korea were also discussed in detail.

He ended the lecture on a cautionary note for India; if we do not take steps now then India will have to get

Environmental Society (2017-18)

The Environmental Science Society of the year 2017-18 was inaugurated on 1st September 2017by Dr. Rahul V. Ralegaonkar, Associate professor, Department of Civil Engineering, VNIT, Nagpur. The function was presided over by Dr. R.G. Atram, Director, Institute of Science, Nagpur. **Chief Guest Dr. Ralegaonkar delivered an interesting talk on "Role of Environmentalist on Sustainable Resource Management".** Head of the Environmental Science Department Dr. Mrs. SushamaNarkhede also shared the dais. A large number of invitees, staff and students attended the function.



"Role of Environmentalist on Sustainable Resource Management"by Dr.Ralegaonkar

1st October to 7th October is celebrated as "**Wildlife week**". On this occasion a guest lecture of Shri. S. S. Notey was organized by the department. Being a retired forest officer he shared his experience of working in a forest department.A "**Bird Feeder**" was also installed during this week





A special guest lecture was organized on 16th March 2018 to acquaint the students on the "Career Opportunities in field of Environmental Science". The lecture was delivered by Dr. Smita Bhabra, Director of Global Scientific Incorporation.



Dr. Smita Bhabra, Director of Global Scientific Incorporation "delivered lecture on Career Opportunities in field of Environmental Science"

Botanical Society 2017-18

"Botanical Society" was set up and installed in the Institute of Science, Nagpur on 21/09/2017. The function began with plantation of sapling by chief guest Dr. Arti Shanware (Director, Rajiv Gandhi Biotechnology Centre, R.T.M.N.U. Nagpur). On this occasion Mr. Ambarish Ghatate (Founder, Ayurvan foundation, Nagpur (M.S.) was present as guest of honor. Dr. R.G. Atram (Director, Institute of Science, Nagpur) presided over the function.



Inauguration of Botanical Society by Dr. Aarti Shanware and Hon. Director Dr. R. G. Atram



Signing of MoU Institute of Science, Nagpur and Avurvan foundation. Nagpur (M.S.)

National Science Day was celebrated with **Career Oriented Lecture Series** for students by Faculty members of the department. The introductory speech was given by Dr. H. R. Pohekar on Rashtriya Vidhnyan. Dr. S. A. Kalkar then gave lecture on "Entrepreneurship in Botany". It was followed by lecture on "Career opportunities for Botany Students" by Dr. P. S. Jakhi. Prof. N. B. Yemul gave concluding lecture on "Mushroom cultivation technique". Dr. R.G. Atram (Director, Institute of Science, Nagpur) presided over the function.



Dr.S.A.Kakar and Dr.P.S.Jakhi delivering the lecture



Chief Guest Dr. N. V. Khubalkar delivering lecture on Pot making technique and field demonstration



On 22nd Dec 2017, the occasion of 130th Birth Anniversary of India's legendary Mathematician, Srinivasa Ramanujan, the guest lecture on "Fluid Dynamics Applications" by Prof. Dr. Kirtiwant P. Ghadle, Department of Mathematics, Dr. Babasaheb Ambedkar Marathwada University Aurangabad was organized.





GOVT. INSTITUTE OF SCIENCE R.T. ROAD, CIVIL LINES, NAGPUR

Guest Lecture by Prof.(Dr.) Peter Kuznick

Nuclear arms control is a hugely important issue — especially in a world where tensions between the US and other nuclear powers, Russia, China, North Korea etc, are heating up.

We have to be extremely vigilant and careful when it comes to nuclear because Nuclear changes the whole ballgame.....

Keeping in mind importance of this statement, a guest lecture was organized by IQAC on 11th Jan, 2018, at 2.00pm by (**Dr.**) **Peter Kuznick**, Professor at Department of History and Director of the Nuclear Studies Institute at American University, Washington DC, on the topic "**Trumps Foreign Policy the Current nuclear Crises**".



ELECTRONICS SOCIETY 2017-18

National Science Day Program: Electronics society organized following programs on this special day.

Inter-Collegiate Electronics Quiz: Total 11 teams from various colleges in Nagpur University registered for the Quiz event and participated in the elimination round. Out of these teams, 5 teams were selected for main draw consisting of four rounds viz. Bounce-Pounce, Buzzer round, Visual round and Rapid fire. The winners of the competition were

Winner: Dharampeth Science College, Nagpur

1st Runner Up: Institute of Science, Nagpur

2nd Runner Up: LAD College, Nagpur

The winners were given the certificates and cash prizes.



Inter-Collegiate Electronics Model/Kit Exhibition: Total 8 teams from Nagpur participated in this event. Students displayed the kits they fabricated in their laboratories. Participants showed more interest in the various kits like IC regulated P/S, Dual P/S, Variable and fix P/S, Entries counter circuit etc. All the three winning teams were from Institute of Science, Nagpur.

The winners were given the certificates and cash prizes.



STATISTICS SOCIETY 2017-18

Poster competition for the undergraduate students of Statistics was organized in the month of February 2018.





Director Dr R G Atram with staff members watching various charts displayed by the B Sc Statistics students in the Chart competition. STATFEST 2018

B. Sc. student delivering seminar in seminar competition in STATFEST 2018





STATFEST 2018 - Quiz competition STATWIZ 2018 - Staff members with Quiz Teams

DEPARTMENT OF ENVIRONMENTAL SCIENCE 2017-

A "**Poster and Slogan competition**" for the undergraduate students on the occasion of "**Ozone Day**" was organized by Department of Environmental Science on 16th September 2017. The judging of this competition was done by Shri S. S. Notey ,Retired forest officer,Nagpur. The first, second and third position winners were awarded with a prize and memento.



Judgment of Poster Competition by Mr. Notey



Prize distribution of Poster and Slogan Competition

PHYSICS SOCIETY 2017-18

Poster competition on "Indian Scientist and his/her prominent research and its application" was conducted in B.Sc. lab of Department.Dr. R.R. Patil and Smt. Naik, faculty of Govt.Institute of Forensic Science, Nagpur were the Judges of the Poster Competition. The winners of the Contest were felicitated in the Teachers' Day program by Chief Guest.

:

- (1) 1st Prize: Nihal Mohurle & Sandesh Padole (Poster: Vikram Ambalal Sarabai)
- (2) 2nd Prize: Swapnil Hingwe & Vikas Mehare (Poster: Dr. C. V. Raman)
- (3) 1st Consolation Prize: Neha Dorle & Shahid Mirza (Poster: Meghnad Saha)
- (4) 2nd Consolation Prize: Diksha Korde & Sujata Shedmake (Poster: P. C. Mahalanobis)



PHYSICS SOCIETY 2016-17

Physics society organized Science exhibition on the occasion of National Science day



SCI-QUIZ COMPETITION 2016-17

"SCI-QUIZ COMPETITION 2016-17" was conducted as an activity of *CHEMISTRY ASSOCIATION 2016-2017* on 13th Jan 2017 in Room No. 45 of the Institute. Shri Shrikant Borkar, Assistant Professor in Botany and Shri Pravin Sayare, assistant professor in Mathematics and Dr. S. Jigajeni, assistant Professor in Physics were Judges for this activity.

Following students secured the winning position in this quiz competition. They were honored by giving certificates and memento on Science day 28th Feb 2017 at the hand of Dr. Khobragade , Director, Govt. Institute of Forensic Science, Nagpur.

Name of students	Position	Class
	secured	
Sumit Kapgate, Mithilesh Sowerkar & Roshan Bhoyar	First	B.Sc-II
Shashikant Nagrare, Shubham Meshram & Nitanshu Nandeshwar	Second	B.Sc-II
Robart Bhowate, Priyanesh Naidu & Sanket Gaikwad	Third	B.Sc-III

Govt. Institute of Science, Nagpur

Department of Chemistry

Chemistry Association 2016-17

organized

SCI-QUIZ-2016-17

List of Participants

	at at later at a	Full Name Of Participant -2	Full Name Of Participant -3	Class
Team No	Full Name Of Participant -1		Dhiraj J. Sarkar	B.Sc 3rd Year
1	Nehal W. Vaidya	Gulshan R. Kharkate	Chetan Prakash Kale	B.Sc 3rd Year
	Sachin Dhanpal Chaudhari	Dikshant Shamrao Maske		B.Sc 3rd Year
3	Abhijeet Prakash Pardhi	Amardeep Bandu Dhote	Tushar Pradip Shende	
4	Krishnendu Kanai Roy	Yash Rajesh Ghai	Arpit Anant Kharwade	B.Sc 3rd Year
	Sumedh Bombatkar	Shubham Thakre	Kaushik Biswad	B.Sc 2nd Year
5	Charles and the second second	Privanesh Naidu	Sanket Gaikwad	B.Sc 3rd Year
6	Robert Bhowate	Chandrakumar Rajkumar Mahure	Tarun Kailash Sahare	B.Sc 2nd Year
7	Mayank Tiwari	Western C. S.	Nehal Sadmake	B.Sc 2nd Year
8	Swapnil Hingwe	Rohan Dehankar		B.Sc 2nd Year
9	Gitesh Choudhari	Sagar Kulsinge	Pranay Yengandhewar	
10	Vikas Mehare	Suraj Paswan	Rikesh Kumbhare	B.Sc 2nd Year
11	Himanshu Vijay Dwivedi	Gaurav Sudhir Dubey	Eknath Gajanan Thawari	B.Sc 2nd Year
12	Ekashvi Chahar	Rachna Prakash Kanojiya	Ayesha Tazin	B.Sc 3rd Year
	Vaibhav R. R. Chichmalkar	Kajal Asudani	Frank Barton	B.Sc 3rd Year
13	and the second states of the s	Mrunal Ishwar Pande	Minakshi Gulabrao Rangari	B.Sc 3rd Year
_4	Isha Sunil Kapte	Simran Akram Qureshi	Rashmi Durwas Dhole	B.Sc 3rd Year
15	Pranali Yuvraj Umredkar		Prachi Prakash Rahate	B.Sc 3rd Year
16	Rekha Yashwant Patel	Rita Aravind Mate		B.Sc 3rd Year
17	Payal Dudhe	Pragati Wanjarkar	Payal Borkar	
18	Kirti Anandsagar Multani	Swarali Vishweshwar Wandhare	Puja Suresh Mundle	B.Sc 3rd Yea B.Sc 2nd Yea
19	Shashikant Sidharth Nagrare	Shubham Rupchand Meshram	Nitanshu Shishupal Nandeshwar	1.
20	Arti Manoj Yadav	Swechcha Rambabu Sharma	Sakshi Sukhchand Rahangdale	B.Sc 1st Yea
21	Mayuri Tikaram Hatzade	Naazneen Sarfaraj Khan	Payal Keshaorao Burde	B.Sc 2nd Yes
22.	Nandlal Giradkar	Indrapal Neware	Amardip Shebe	B.Sc 2nd Ye

	GOVT. INSTITUTE OF SCIENCE, NAGPUR DEPARTMENT OF CHEMISTRY
	CHEMISTRY ASSOCIATION 2016-17
	ORGANISED SCI-QUIZ-2016-17
	Name of Participants and Group with Class
	1. Yogita Ramerh Bhoyar - 1st year (182) 34
	2. Rohul any prosad yadav - 1st year (CBZ) marks Obtained
	2. <u>Rahul aayaprasad Yadav-1st yerr</u> (CBZ) marks Obtained 3. <u>Rahul aajanan 7ele -1st year</u> (CBZ)
	Time - 10 min. Total marks - 40 Total Que 20.
- sieude-	Qualifying Test
1	If an apple is released from an orbiting spaceship, it will
	a)fall towards the earth (b) move along with spaceship at the same speed
	c)move at a higher speed d)move at a lower speed
	What happens when water is cooled from 8° C to 0° C?
	a)Its volume decreases uniformly, becoming minimum at 0° C
.	b)Its density increases uniformly, attaining maximum value at 0° C
	c)Its volume decreases up to 4° C and then increases
	dylts density decreases up to 4° C and then increases During summer, we feel comfortable under a fan because it –
/	a)throws cool air on us
	a) sets the air in motion, thereby increasing the evaporation of sweat
	c)produces convection currents
	ل)produces air which carries heat away from the body
	Light waves are different from sound waves in that
	a fight waves are electromagnetic but sound waves are not
	b)light waves can travel through water but sound waves cannot
0	clight travels with the same speed in all media
	a)light waves produce interference but sound waves do not
/	The absolute zero of temperature is
	a)the starting point of any scale of temperature
	b) the lowest temperature that is theoretically possible
P	c) the temperature at which the vapors of all liquid substances freeze
angle and	d) the temperature at which all substances exists in the vapor phase
5	Polythene is industrially prepared by the polymerization of a)Methane b)Acetylene c)Ethylene d)Ethane
7	
2	Communicable diseases are those diseases which
)	a)Do not spread by touching each other b)Do not spread by air, dust and food etc.
01.	De net enned wowy fact
8	One of the main causes of air pollution in cities is emissions from vehicles like cars and trucks. Cars
	emit various pollutants which are bad for human health when innated, inte
	a)Nitrogen oxides (NO)

CHEMICAL SOCIETY QUIZ COMPETITION

ACUMEN QUIZ COMPETITION [10.02.2018]:

'**ACUMEN**' Quiz Competition was organised on 10th February, 2018 at room no.45. The competition commenced at 11:30 am with a registration of nearly 50 teams. Each team consisted of three members. Dr.Naqui Siddiqui, Assistant Prof. Dr. Rajendra Tayade and Assistant Prof. Prakash Shirsat very exhaustively presented the substance of activity. The Competition had four rounds.

First round was **written test** based elimination round in which five teams were qualified for the next round. Second round was '**Pounce-Bounce**' round in which each team were asked two questions. Third round was the '**Buzzer**' round in which overall ten questions were asked. The last round was the '**Rapid Fire**' round.

In this round, each team was asked five questions within a time limit of 45 seconds. Finally, Dushant Bagde, Nisarg Sukhdeve and Aman Bishnani team of **B. Sc. first** year were declared winner of the competition and were awarded with a cash prize of **Rs.1000**. The first runner-up team was of Aarohi Wandalkar, Anurag Sidam and Shubham Mange of B.Sc. first year and was awarded with a cash prize of **Rs.750**.

The second runner-up teams were of Swapnil Hingwe, Sanket Despande and Rikesh Kumbhare of B.Sc. final year and were awarded with cash prize of **Rs.500**. The event ended with the vote of thanks. The hard work of organising association was completely reflected by the grand success of the programme.



Acumen Quiz Competition: Students Participation



Winners of Acumen Quiz Competition



Team at Second and Third position



Staff members with the Winners of Acumen Quiz Competition

Criteria II

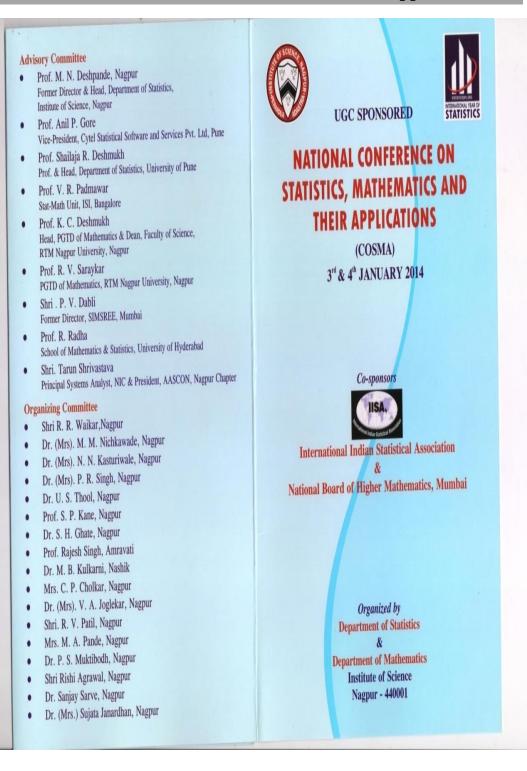
2.3.1: Student centric methods, such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experiences

Report of Conferences, Seminars, and Workshops organized

Institute of Science, Nagpur

2013-14

National Conference on Statistics Mathematics and their Applications



Dear Colleague,

It is a matter of great pleasure to invite you to celebrate the "International Year of Statistics" by participating in the NATIONAL CONFERENCE ON STATISTICS, MATHEMATICS AND THEIR APPLICATIONS (COSMA) to be held on 3rd and 4th JANUARY 2014 at Institute of Science, Nagpur.

Institute of Science

Institute of Science, Nagpur established in 1906 is a premier institute of Central India imparting quality education in eight under graduate, seven post graduate and eight Ph.D. programs.

The Department of Mathematics was established as an undergraduate department initially and upgraded to a post graduate department in 1925. It flourished under the leadership of great mathematicians like Dr. S.C. Dhar, Dr. N.G. Shabde, Dr. S.S. Shrikhande and others. A separate department of Statistics was established in 1955. Under the able guidance of eminent statisticians like Dr. V.P. Godambe, Dr. A.B. Buche, Dr. M.N. Deshpande and others, the department has risen to become one of the best departments that constantly strives to excel both in imparting training and in research. At present both the departments offer UG and PG programs which cater to the needs of nearly three hundred students.

Conference Theme

Mathematics and Statistics have become an integral part of almost every area of life including agriculture, engineering, medicine, management, as well as the physical, chemical, biological and social sciences. The goal of this conference is to provide a common platform to leading academicians, researchers and professionals working in the field of Mathematics and Statistics to share their knowledge about various aspects of these two important branches of Science. The conference will provide an opportunity for technical discussions, reflections and exchange of ideas and perspectives in both theoretical and applied fields of Statistics and Mathematics besides exploring the potential of their applications in new interdisciplinary areas.

The following themes are included but not limited to:

- Probability Theory
- ♦ Statistical Inference Applied Statistics

♦ BioStatistics

✤ Reliability Theory &

Survival Analysis

- ✤ Computing and Simulation
- ✤ Operations Research

♦ Stochastic Modelling

 Data Mining & Data Warehousing ♦ Algebra

- Analysis
- Fluid Dynamics
- Relativity
- Combinatorics

Call for Papers:

Authors are invited to contribute their research papers and send the soft copy of the abstracts by email before the scheduled date. Abstracts of papers should be concise with a maximum limit of 300 words.

Full length papers are to be submitted in Times New Roman, Heading 14 and text font size 12-MS Word format, 1.5 line spacing and A4 size paper setup, with 1.5" margin on all sides with three-four key words.

Important dates

Last date for receiving abstracts : 30-11-2013 Intimation of acceptance of abstracts: 10-12-2013 Full paper submission : 20-12-2013

Registration

Please send the filled registration form with demand draft (DD) drawn in favor of "The Convener, COSMA" payable at Nagpur.

The registration fee may also be directly remitted or transferred online to the following bank account.

Bank Name	:	Bank of India
Branch	:	R. T. ROAD, Nagpur.
A/C No.	:	870910110003465
IFSC Code	ŝ	BKID0008709
MICR Code	:	440013009

If the fee is remitted/transferred online to the above account, a soft/hard copy of the transaction with number should be sent along with the registration form.

Registration Fees

Faculty / Professionals : ₹ 1000/-; Research Students : ₹ 750/-

UG /PG Students : ₹ 500/-

Accomodation

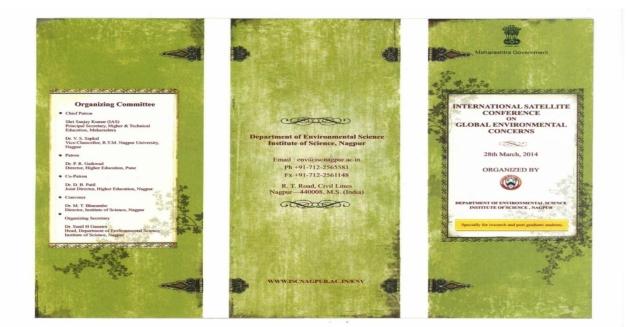
Accomodation will be arranged on request at reasonable rates on payment . Those requiring such facility should contact by 5th December 2013.

- **Differential Equations**
- Thermoelasticity
- Mathematical Modelling



National conference on Statistics, Mathematics and their applications (COSMA) 3^{rd} and 4^{th} January 2014

International Satellite conference on Global Environmental concerns, Department of Environmental Science



O REGISTRATION FORM	O INTERNATIONAL SATELLITE CONFERENCE ON O GLOBAL ENVIRONMENTAL CONCERNS O				
ame :	About Conference	Programs			
.ddress :	The drastic change in environment of our globe is a major concern. The public interference in the	Date: 28th March, 2014 10.00 am: Inauguration and Key Note Address			
lobile :	environmental processes brought major global environmental changes.	First Session 11.30 am : Expert Lecture I 12.15 pm: Expert Lecture II			
mail :	The human activities like mining, water resource management and urbanization led heavy pressure onto natural processes.				
ffiliation Institute :	These anti-environmental activities led us to have	12.30. Lunch			
epartment :	global warming, polluted water, air and food. Finally these all leads to the detoriation of public health.	Second Session			
	Health related science has achieved a lot but new diseases, chronic problems in human health still	1.00 pm : Poster Presentation2.00 pm : Expert Lecture III / Paper Reading			
egistration as : Student (Post Graduate / Research) Teacher delegate	keeping the public health a serious problems due to environmental pollution.	2.45 pm : Expert Lecture IV / Paper Reading			
elegate's Signature	There is an urgent need to have thorough discussion and actions towards solving public health related	3.30 pm : Tea Break 3.45 pm : Panel Discussion 4.15 pm : Valedictory Function.			
Registration Fees : Student : Rs. 250 /-	problems which are purely due to environmental changes.	4.30 pm : Certificate Distribution			
eacher Delegate : Rs. 350 /-					
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Students of B.Sc. Part-I presented the model based on Composting of Solid Waste at International Satellite Conference on "Global Environmental Concerns" March, 2014

2nd International Congress of Society for Ethno pharmacology (SFEC 2015) in India





Student's participation in 2nd International Congress of Society for Ethnopharmacology (SFEC-2015)



Students' participation



The second International Congress of the Society for Ethnopharmacology, India (SFE-India) was organized by Department of Pharmaceutical Sciences, Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur, India in association with Society for Ethnopharmacology (India) during February 20-22, 2015 with the theme "Validation of Medicinal Plants and Traditional Medicine – Global Perspectives" and co-organized by Institute of science, Nagpur. The congress has witnessed mammoth gathering of stalwarts from academia, Industry, Research Institutes, Health Practitioners and Research Scholars with the participation of around 1000 delegates. The congress witnessed participation of resource persons and delegates from around 20 different nations from across the globe. About 65 Lectures from eminent speakers, more than 500 Poster and 150 Oral scientific presentations are good enough to highlight the strength of scientific compartment of this congress. Participation of about 40 traditional healers and exhibition of raw material to finished goods from naturals gave silver lining to this conference. Organizing Secretary, Dr. Prakash Itankar gave credit of the success of congress to team of Department of Pharmaceutical Sciences, R.T.M. Nagpur University, and Society for Ethnopharmacology, India and SFE Chapters all across India, all the associate institutions, industries, sponsors, well wishers, delegates and the dedicated team of our beloved Student Volunteers, including students from many pharmacy and Institute of Science, Nagpur.

One Day Workshop on "Mind power and Brain work"

One Day Workshop on "Mind power and Brain work" by Manashakti Kendra Lonavala organised by Dept. of Botany in association with IQAC, Institute of Science, Nagpur on 31st July 2016. The expert lecture was delivered by volunteer of Manashakti Kendra. He explained about setting goal of life. We should set SMART goal. He also threw a light on emotional intelligence. Dr. R. G. Atram chaired the session. 200 students along with faculties of various departments attended the session and took advantage of the session.



Work shop on Mind power and Brain work by Manashakti Kendra, Lonavala dated 31/07/2015

One day Workshop on "Biodiversity and Habitat of Gorewda"



To develop awareness about forests and sustainable forest management among students Government Institute of Science, Nagpur has organized one day workshop on " Biodiversity and Habitat of Gorewada " for Post graduate students of Department of Zoology in collaboration with Forest Development Corporation of Maharashtra (FDCM) on 20th Feb. 2016 at Gorewada National Park, Nagpur. Dr.R.G.Atram, Director, Institute of Science, Nagpur, inaugurated the workshop. Dr. Gurudeo Kunghadkar and Mr. Rahul Gudhe spoke on qualitative analysis of phytoplankton of the lake and hydro chemical assessment for nitrate content of lake water, respectively. Mr. V. A. Shende also provided important information on snakes, birds as well as other beasts found in this region. Mr V. A. Shende explained identification of poisonous and non-poisonous snakes, rescuing snakes, first aids after snake bite and diversity of snakes in Vidarbha region.

One day workshop on ARENA software

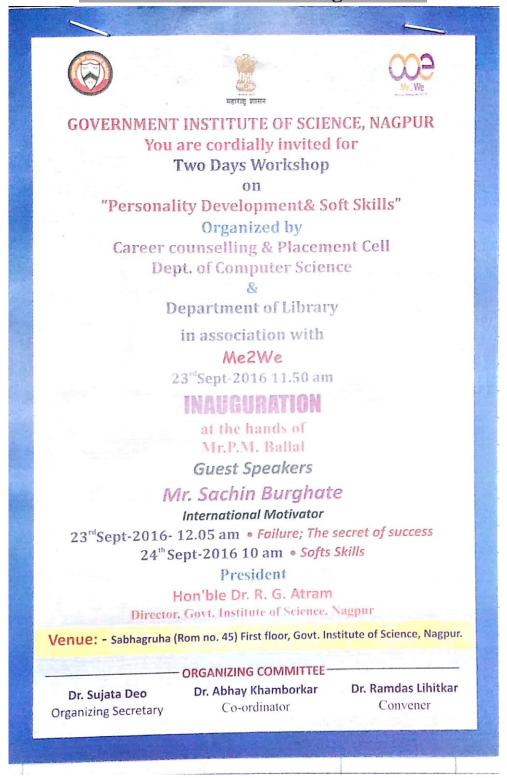
Arena Simulation Software is the most used Discrete Event Simulation Software in the world. Students who have Arena experience possess a valuable skill sought after by many companies. With Arena training, students are introduced to the principles of simulation which will enhance their problem-solving skills by conducting effective simulation modeling, analysis, and research projects. Simulation concepts are understood quickly and easily through a simple flowchart modeling approach.

Arena is used by many large companies engaged in simulating business processes. Some of these firms include General Motors, UPS, IBM, Nike, Xerox, Lufthansa, Ford Motor Company, and others. Use of statistical software is a must for handling large data sets and for carrying out complex statistical analysis. In view of various advantages and utility of ARENA software , one day workshop on ARENA software was organized by Department of Statistics, Institute of Science ,Nagpur on 9th August 2016.Dr. Parag Dhumal, Associate Professor, University of Wisconsin Parkside, Kenosha, United States, was the resource person . All teachers and M.Sc.II students participated in workshop. The workshop was beneficial to all teachers and students.



Dr Parag Dhumal delivering lecture during ARENA software workshop

Two Days Workshop on Personality Development and Soft Skills in association with Me2We Organization







Shantanu Gotmare, IAS gracing the dais with his presence

A power packed audience



Appreciation of the entire CCPC committee by the audience.

One day Workshop on Medicinal Plants

Department of Botany, Institute of Science, Nagpur organised one day workshop on "Medicinal Plants: Cultivation Practices and Uses" at Aura Park, Katalabodi, Ayurvan Foundation, Near Starkey Point, Amravati road, Nagpur. On this occasion Dr. R.G. Atram, Director Institute of Science gave valuable information on importance of medicinal plant used by tribal people. Mr. Ghatate and Mr. Sherekar introduced various rare medicinal plants from different agroclimatic regions to the students. Students were benefitted with the knowledge provided and they have practically observed different medicinal plants and insect biodiversity.. Certificates were distributed to the students at the hands of Dr. R.G. Atram.





Students and faculty members

AATMAVISHWAS - TWO DAYS INTER-COLLEGIATE WORKSHOP (3rd& 4th of February 2017) <u>ON</u> PERSONALITY DEVELOPMENT AND CAREER GUIDANCE

Aatmavishwas, a two days inter-collegiate workshop was organized on 3rd and 4th February, 2017 on Personality Development and Career Guidance, by Career Counselling and Placement Cell, Library (Knowledge Resource Centre) and Department of Computer Science. A series of lectures of vibrant speakers was organized over the span of two days. The two days' workshop was inaugurated by Dr. Shashikant Choudhary.

The first day had a series of four inspiring lectures. The first one was given by Mrs. Deepali Ghonge on the topic Vivekanand – Ek Yug Purush. She delivered an outstanding performance and all the students were awestruck by her words.

The next session was a technical one which was conducted by Mr. Anil Totade on Industrial Robotics and Cloud Technology.

The third talk was given by our very own Dr. S. H. Ganatra on the topic of Aatmavishwas. He inspired the students with his highly motivated words.

The fourth and last session of the first day was on Managerial Skills of Shivaji Maharaj by the renowed speaker Dr. Sumant Tekade who took the audience by storm.

The second day had a little surprise as an interactive session was announced. Five teams comprising of six students were made from a lucky draw at the end of first day. An interactive session of Group Discussion was conducted by Vaibhav R. R. Chichmalkar which received a highly positive response.

This interactive session was followed by a career guidance session by Narayana IAS Academy who guided the students for the preparation of Civil Services examination.

Then came the most interesting session of the workshop where Nisha Bhandarkar and Suraj Ganorkar had a candid talk with our director Dr. R. G. Atram where he revealed his highly inspiring journey from the Bus Stand to the Director's Chamber.

The Two Day workshop ended with a stellar performance by Mr. Sachin Burghate, who spoke on 'Action Talks'. The audience couldn't stop appreciating his inspiring words by showering continuous rounds of applause.

















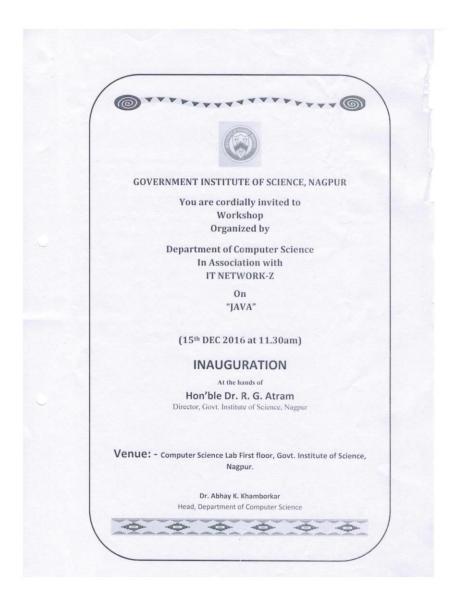


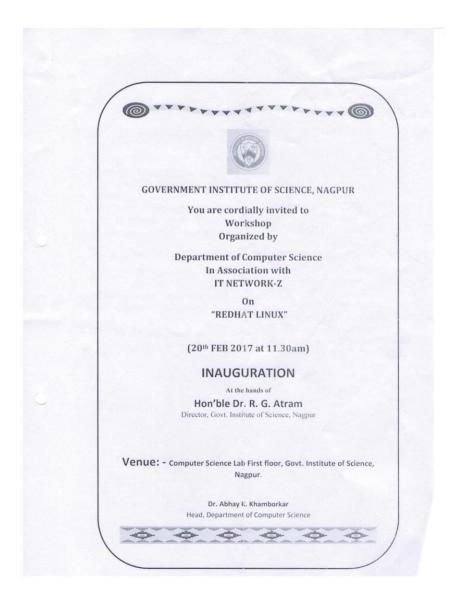






One day Workshop on "Java" was organized by Computer Science Department in collaboration with IT, Network-Z, Nagpur





'TARUNYABHAN'

THE LIFE SKILL EDUCATION WORKSHOP in Association with

Maharashtra Bhushan Dr. Rani Bang's 'SEARCH'

09th, 10th & 11th March 2017

Most of the youngsters today, because of their inquisitiveness and peer influence tend to move towards wrong sources which give them incorrect information about adolescence and sexual behaviors, leading to a disaster in congruent and perhaps lead to disaster in a long run. It is very essential to give them correct and proper information in a scientific and sensitive way so as to prevent them from going towards a wrong track. Bearing in mind this situation of youth 'SEARCH' (Society for Education, Action & Research in Community Health) Gadchiroli designed a program 'TARUNYABHAN'. The content of workshop has been designed by leading gynecologist **Maharashtra Bhushan Dr. Rani Bang** and facilitator include well known trained person Shri. Dyneshwar Patil, Mrs. Sunanda Khorgade and Shri Rajendra Issasare.

With this relevance Institute of Science decided to organize this three days workshop on **09, 10 & 11 March 2017** in association with Maharashtra Bhushan Dr. Rani Bang's SEARCH organization. In all total <u>**186 participants**</u> registered their name for taking advantage of this workshop.

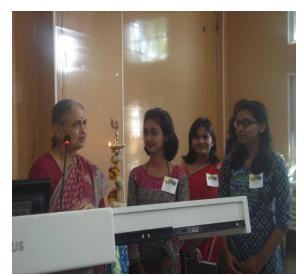


INAUGURATION CEREMONEY OF TARUNYABHAN WORKSHOP





FELICIETATION OF DEGNITARIES





HON. DR. RANI BANG AND HON. DR. R.G. ATRAM ADDRESSING IN INAUGURATION



STAFF MEMBERS AND STUDENTS ACTIVELY PARTCIPATED IN VARIOUS ACTIVITIES

One day Workshop on "Migration of Birds" in Gorewada Bio-park

Forest Development Corporation of Maharashtra Ltd's (F.D.C.M.) Gorewada Project and Institute of Science, Nagpur had organized a Workshop in Gorewada International Bio-park to study, "Migration of Birds" in Gorewada Bio-park on 19th January 2017. About 45 N. S. S. Volunteers and the Staff Members of Gorewada Project Participated in the workshop. The Participants also Performed Cleanliness Drive at the site. About 20 species of birds were identified and studied by the participants.



Mr. Shrikant . B. Ukey, Herpetologist, gives demonstration of studying a reptile like a Lizard. Miss. Kalpana Chinchkhede (R.F.O., F.D.C.M. Nagpur) guided and explained how to identify the bird species, their Habitats and to prepare the checklist of identified birds.



Participants at the Workshop Site of Gorewada

Institute of Science, Nagpur

2017-18

Govt. Institute of science

Department Of Botany Botany society 2017-18

Workshop on Pot making technique

Chief Guest: Dr. N. V. Khubalkar

Date: 08/03/2018 Time: 3:30 p.m. to 4:30 p.m.

Venue: Botanical Garden

All are cordially invited

Prof.N.B.Yemul (*Prof.Incharge*)

President and Head, Department of Botany Govt. Institute of science, Nagpur

A Report of Workshop on Pot making technique In the Department of Botany on 08/03/2018



Chief Guest Dr. N. V. Khubalkar delivering lecture on Pot making technique



Students preparing pots

GOVERNMENT OF MAHARASHTRA												
SM	INST:	IT	UTE O	F SCI	ENCE							
R.T. ROAD, CIVIL LINE, NAGPUR-												
CARRER COUNCELLING AND PLACEMENT CELL												
ि धार ध्येय प्राप्तीचा- Goal Setting												
2 DAYS WORKSHOP (18 & 19 Sept 2017) ON												
PERSONALITY DEVELOPMENT AND CAREER GUIDANCE ORGANIZED BY												
CAREER COUNSELLING AND PLACEMENT CELL												
IN ASSOCIATION WITH DEPARTMENT OF LIBRARY												
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Dr. Ramdas Lihitkar	Kartik Pathak	Shraddha Raikwar	Dr. Sujata Deo	Dr.S.R.Jigajeni
CONVENER	PRESIDENT	SECRETARY	ORGANISING	Coordinator
	CCPC	CCPC	SECRETARY	



NIRDHAAR- DHYAAS DHEYA PRAPTICHA- Two days intercollegiate workshop (18th – 19th of September 2017):-

WOMAN'S DEVELOPMENT CELL GOVT. INSTITUTE OF SCIENCE, NAGPUR

Organizes One Day Workshop On



Dr.Aparna Ashtaputre -Sisode

Co-ordinators: Dr. G.M.Phadnaik Mrs. Meera Alsi Dr. Kavita Patil



Learn How to Amplify Your Effectiveness with Emotional Intelligence

WOMEN'S DEVELOPMENT CELL

Speaker's GOVT. INSTITUTE OF SCIENCE, NAGPUR Dr. Zulfi Sheikh & Actress Ilakruti

Organizes Guest Lecture

WO Thursday 8 March 201 Govt. Institute Science,Nagpu

8th March 2018 Thursday

19th Aug, 2017

Saturday

At 1.00 PM In Hall No. 45

Co-ordinators: Dr. G.M.Phadnaik Mrs. Meera Alsi Dr. Kavita Patil

A successful Woman is one who can build a firm foundation with the bricks others have thrown at her.







One day workshop On "Career Guidance"

Institute of science organized a workshop on career guidance on UPSC on 06/10/2017. Mr. Sanjeev V. Chetule, Assistant commissioner (P) (EOL), Indian Revenue Service (Custom, GST & Narcotics), Ministry of Finance, Govt. of India was Chief guest on this occasion. Dr. R. G. Atram, Director of Govt. Institute of Science Nagpur was the president of programme. Mr. Sanjeev V. Chetule shared the importance of competitive Examinations and its helps in social development of students in his address.



Mr. Sanjeev V. Chetule awaked the students about UPSC and other Competitive exams.



Students and Faculties present during the workshop

SEMINAR COMPETITION FOR UG

For this year Chemistry Association of Chemistry Department and Environment Science society jointly organized COLLEGE LEVEL SEMINAR COMPETITION FOR UG STUDENTS ON 17TH FEB 2017, FRIDAY. For this competition students were given three topic for presentation

- 1. RADIOACTIVE POLLUTION
- 2. WIRELESS ENERGY TRANSMISSION
- 3. BIOLOGICAL WEAPONS

In competition every participant was given 6 min for power point presentation and 2 min for discussion or for solving queries of audience. Mr. Pravin Sayare, Mr. Milind Panchbhai and Miss Anagha Patil were the judges for this competition and gave their valuable suggestion regarding their presentations. 26 students from different groups of BSc participated in this event. Dr. Rajendra R. Tayade was the Coordinator and Dr. Sushama Narkhede was the organizing secretary for this UG seminar competition. The students of organizing committee Mr. Akash Khojare, Miss Nirmal Borkar, Mr. Harish Barewar, Mr. Suraj Ganorkar, Mr. Saurabh Urade and Mr. Shubham Akarte took lot of efforts for making this event successful. Miss. Saniya Siddiqui-First, Miss Ayesha Tazin-Second and Miss. Trupti Moon-Third were the winners of this UG seminar Competition.



Winners of seminar competition with judges

Organizing team

SEMINAR COMPETITION FOR PG

Chemistry Association of Chemistry Department organized college level seminar competition for PG students on 18th feb 2017, saturday. Dr. Aruna Kawadkar, Dr. Gayatri Phadnaik and Dr. Uday Thool were the judges for this competition and gave their valuable suggestion regarding the presentations. 18 students from different M.Sc disciplines participated in this event. Dr. Rajendra R. Tayade was the Coordinator for this PG seminar competition. The students of organizing committee Mr. Amit Gadre, Miss Anagha Jiturkar, Mr.Jamil Sheikh, Mr. Akash Khojare, Mr. Kohinoor Turkar and Miss. Dhanashree Padghan took lot of effort for making this event successful. Miss. Shagufa Ahmad-First, Mr. Anurag

Sidam-Second, Miss. Juhi Pandharikar-Third and Divya Gupta-consolation were the winner of this UG seminar Competition.



Participation of students in other colleges



Academic session 2017-18

Dr.R.G.Atram with winners of Institute of Science, Nagpurin the workshop STATISTICA organized by **Hislop College, Nagpur held in March 2018**



B Sc I student MrSaurabh Jaiswal receiving prize in STATISTICA in HISLOP college

Best Paper Award

Monalisa Mehrolia, research student, Department of Botany received Late Prof. P.H Gregory award (Young Scientist award)For best paper presentation

This award was given to *MonalisaMehrolia* for her joint paper with her guide Dr. *SurekhaKalkar* at Bose Institute, Kolkata in 19th NCA on 11th Dec 2016









First Prize in Intercollegiate Mathematics Quiz Competition

From left to right: Mr. PravinSayare, Dr.Batra, Mr.Akshay Ingle, Dr. R.G. Atram (Director), Dr. U.S. Thool, Mr.AdarshNarendulwar& Miss SnehalJamdhade

National Players 2017-18



Name : Zishan M. Kazi Class : BSc - IIIrd (PSM) Game : Minigolf National Event : Single (Gold)



Name : Tushar M. Patil Class : BSc - IIIrd (PSM) Game : Minigolf National Event : Double (Silver)



Name : Pawan S. Katkar Class : BSc - IIIrd (PSM) Game : Minigolf National Event : Mix Double (Silver)



Name : Onker I. Thengne Class : BSc - Ist (CZEnv) Game : Minigolf National Event : Mix Double (Silver) Double (Gold)



Name : Santanu V. Bankar Class : BSc - IIIrd (PSM) Game : Minigolf National Event : Double (Silver)



Name : Sunny U. Ninawe Class : BSc - Ist (CBZ) Game : Minigolf National Event : Single (Silver)



Name : Taitil D. Yele Class : BSc - Ist (CBZ) Game : Minigolf National Event : Single (Gold)



Name : Kanchan B. Jivanapurkar Class : BSc - Ist (PSM) Game : Minigolf National Event :



Name : Apeksha S. Mankar Class : BSc - Ist (PSM) , Game : Minigolf National Event : Mix Double (Silver)



Name : Nirmohi S Vaidya Class : BSc - 1st (PCM) Game : Minigolf National Event : Mix Double (Silver)



Name : Ritu B. Patle Class : BSc - Ist (CBZ) Game : Minigolf National Event : Team (Silver)



Name : Godavari G. Borkar Class : BSc - Ist (CBZ) Game : Minigolf National Event : Team (Silver)

Criteria II

2.3.1: Student centric methods, such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experiences

Industrial Visits and Study Tours

	LIST OF FIELD TRIPS	CONDUCTED BY V	ARIO	DUS DEPAR	RTMENT
1	Visit to Biogas digester plant at Nagpur Municipal Commissioner's Bungalow	Department of environmental science & NMC	2015	4/27/2015	Field Visit
2	Visit to Maharashtra Remote Sensing Applications Centre	Department of environmental science & Maharashtra Remote Sensing Applications Centre, VNIT Campus, Nagpur	2015	4/29/2015	Field Visit.
3	ISPRS Summer School training workshop (Ms. Anagha P Patil)	IIRS Dehradun	2015	7/6/2015	On Job training program , National.
4	Visit to Biodiversity Park at RajBhavan with B.Sc. I students and M.Sc. II students of Botany Department	Raj Bhavan ,Nagpur & BNHS.	2016	10/12/2016	Field Trip
5	Department of Chemistry Visit to MIDC Hingna and Mihan Project Nagpur.	MIDC	2017	1/12/2017	Field Visit
6	"Migration of Birds" at Gorewada	Forest Department Of Maharashtra.	2017	1/19/2017	Field Visit
7	One Day Workshop On Medicinal Plants	Ayurvan Foundation Katlabodi	2017	2/7/2017	Field Visit.
8	Department of Chemistry Field Trip.	Department of Chemistry.	2017	2/03/17 to 6/03/17	Field trip
9	Department of Enviornmental science Visit of M.Sc. I students to Phyto-remediation Plant, PDKV Nagpur	PDKV	2017	3/15/2017	Field trip
10	Visit of M.Sc. I & II students to Sewage Treatment Plant, Bhandewadi	NMC	2017	3/20/2017	Field trip

11	Visit of M.Sc. I & II students to Water Treatment Plant, Veolia	Veolia Water Treatment Plant	2017	3/22/2017	Field trip
12	Visit of M.Sc. I & II students to Regional Meteorological Centre, Nagpur	Regional Meteorological Centre.	2017	3/23/2017	Field trip
13	Visit of M.Sc. students to, NEERI, Nagpur along with Dr Ramchandra from IISC Bangalore	NEERI, Nagpur.	2017	3/24/2017	Field trip
14	Departmental of zoology visit to Seed Testing laboratory, Nagpur.	Seed testing Laboratory.	2017	3/24/2017	Field trip
15	Botanical Excursion Tour	Department of Botany , at Makardhokda Dam.	2017	9/26/2017	Field trip
16	Department of Statistics -Visit to National Sample Survey Office (NSSO)	NSSO	2017	9/26/2017	Departmental Visit
17	Departmental Visit of External Students Of Kamla Nehru mahavidalaya,Nagpur.	Kamla Nehru Mahavidalaya	2017	10/11/2017	Student Exchange
18	Industrial Visit of the Electronics Department	Shriram rice mill, Pachkhedi	2018	05/01/18 to 06/01/18	Field trip
19	Department of statistics. Visit to NEERI	NEERI, Nagpur.	2018	1/15/2018	Field trip
20	Biodiversity study tour of B.Sc I year to Pench National Park	Department of Environmental Science	2018	2/9/2018	Field trip
21	Department Of Environmental Science - Excursion Tour To Shimla	Department of Environmental Science	2018	11/02/18 to 19/02/18	Field trip
22	Botanical Excurssion at Simla, Kullu Manali	Department Of Botany.	2018	2/13/2018	Field trip

23	Department of Zoology Visit to seed testing laboratory	Department of Zoology	2018	2/15/2018	Field trip
24	Visit to Bhandewadi Sewage treatment plant	Department of Environmental Science	2018	3/9/2018	Field trip
25	Visit of PG students to Neelawar Laboratory	Department of Chemistry, in collabration with Neelawar Laboratory	2018	3/22/2018	Field trip
26	Botanical Excursion Tour at Satpuda Botanical Garden	Satpuda Botanical Garden	2018	3/26/2018	Field trip
					Director Institute of Science NAGPUR.

Study Tours & Industrial Visits

<u>Department of Environmental Science</u> <u>Visit to Biogas Digester Plant at Nagpur Municipal Commissioner's</u> <u>Bungalow (27/04/2015)</u>

Students of B.Sc. Part II visited a Biogas digester plant at Nagpur Municipal Commissioner's Bungalow on 27th April 2015. Shri. Shrikant Pathak explained the entire working of Biogas digester implemented by Kirloskar Pumps.



Visit to Maharashtra Remote Sensing Applications Centre (29/04/2015)

Students of B.Sc. Part II visited Maharashtra Remote Sensing Applications Centre, VNIT Campus, Nagpur and Dr. Ajay Kulkarni a scientist from MRSAC explained about the Basics of Remote Sensing and its Applications in Environmental Science.



SPRS Summer School Training Workshop (06/07/2015)

A research student Ms. Anagha P Patil was selected as one of the participant amongst 20 from all over India for ISPRS Summer School training workshop of 10 days organized by IIRS, Dehradun.



<u>Department Of Botany</u> <u>Visit to Biodiversity Park at Raj Bhavan with B.Sc. I students and M.Sc. II</u> <u>students of Botany Department (12/10/2016)</u>

Tour of B.Sc. I & M.Sc. II students was arranged to Biodiversity Park Raj Bhavan, Sadar Nagpur. Fifty students attended the excursion. Executive of Bombay Natural History Society an NGO guided our students. The Biodiversity Park along with thematic sections such as Butterfly garden, Herbal garden, Cactus gardens etc was an ideal opportunity for our students to enrich their knowledge. The nature trail in the Biodiversity Park provides an excellent opportunity to see and understand local biodiversity. Excursion was arranged under the guidance of Dr. P.S. Jakhi and Dr. S.S. Bodkhe.



<u>Department Of Chemistry</u> <u>One Day Industrial Visit of M.Sc. Students to Hingna MIDC and Mihan</u> <u>Project Nagpur (12/01/17)</u>

As per the curriculum of M.Sc. Chemistry, students are expected to visit prominent industries and companies for the practical exposure and insight to real working environment. So with the help of MCED, Nagpur Department of Chemistry organized one day industrial visit to Hingna MIDC and MIHAN project on 12 Jan 2017.

Mr. H. R. Waghmare, Project Officer MCED, Udyog Bhavan Nagpur gave permission to visit 10 minor industries in Hingna MIDC and also arranged the special meet with secretary of MIHAN project. He also made arrangement of one guide Mr. Rammilan Kashyam. Department is really very thankful to both of them for giving their valuable time to us.



Department of Zoology "Migration of Birds" at Gorewada (19/01/2017)

Dr. Kishor. G. Patil, H.O.D. of Zoology Department, Institute of Science and Guest of honor for the workshop explained the importance of Migratory Birds in his introductory speech. He said, "Gorewada International Bio-park is rich in its flora as well as fauna. In the vicinity of Nagpur City it is always an important site for nature lovers, environmentalists, researchers and bird watchers etc. Therefore I found this place ideal for the workshop". He requested the participants to take part in every session of the workshop and respect nature.



Participants in Workshop on "Migration of Birds" at Gorewada International Bio-park, Nagpur. Dated 19th Jan. 2017

Department Of ChemistryFive Days Long Tour Of Rajasthan 2016-17(2nd - 6th March 2017)

A five day tour to Rajasthan was organized by Department of Chemistry for M. Sc. Students. Dr. Indira Soni, Dr. Naqui Siddiqui and Dr. Rajendra Tayade accompanied the students.



Department of Environmental Science Visit of M.Sc. I students to Phyto-remediation Plant, PDKV Nagpur (15/03/2017)



Visit of M.Sc. I & II students to Sewage Treatment Plant, Bhandewadi (20/03/2017)

Our main purpose for this visit is to be familiar with industrial environment and to get practical knowledge of sewage treatment plant components. Also in our syllabus, subject like water and waste water treatment requires knowledge about how polluted water is being treated, so it is very much convenient to see all the components in real time work environment.



Visit of M.Sc. I & II students to Water Treatment Plant, Veolia (22/03/2017)

On 22nd March, 2017 students have visited the Veolia drinking water treatment plant situated at Godhani, Nagpur. The visit started with a general introduction about the water treatment plant. Mr. Dhiraj Koche, Head of the Veolia projects in Nagpur, explained them about the advanced technologies used in purification of water. He showed them a couple of animated videos explaining the Multiflow-TM and TGV Filters. He also cleared our doubts about the conventional and advanced methods used in treatment of water.



Visit of M.Sc. I & II students to Regional Meteorological Centre, Nagpur (23/03/2017)

Students learned about measurement of wind speed and direction, wind roses and the data interpretation, weather prediction and forecasting by meteorology department, rainfall measurement and forecasting.



Visit of M.Sc. students to, NEERI, Nagpur along with Dr. Ramchandra from IISC Bangalore (24/03/2017)



Students of M.Sc. interacting with Dr. Ramchandra from IISC, Bangalore

Department of Zoology Visit to Seed Testing Lab. Nagpur (24/03/17)



Department Of Botany Botanical Excursion to Makardhokda Dam on (26/09/2017)

As a part of B.Sc. Curriculum One Day Excursion tour of B.Sc. III year students was organized to Makardhokda Dam, Saiki Wetland And Mangali Platue by Department Of Botany, Institute of Science, and Nagpur.

The major objective was to familiarize students with flora and ecology of the region. Also to acquaint them with importance of wetlands and threats these ecosystems face due to natural and anthropogenic pressure. A group of 195 students were accompanied by Dr. S.D. Narkhede, Dr. K. D. Jadhav, Dr.H.R.Pohekar, Dr. K.M. Telmore, and Shri. N.B. Yemul & Shri. S.J.Borkar. The tour successfully inculcated in students the practicality of different theoretical concepts of Botany.





Department of Statistics Visit to National Sample Survey Office (NSSO) (26/09/2017)

A visit to National Sample Survey Office (NSSO), Nagpur was arranged for the Post graduate students of the department on 26th September 2017. A batch of 40 students along with some faculty members visited the Office. The NSSO authorities acquainted the students with the working of different departments including the Field Operations Division (FOD) and Data Processing Division (DPD). This was followed by an informative presentation by Dr T K Basu, Director General about the role of Statistics in NSSO. There were other presentations by senior officers on the working of NSSO and preparation of Indian Statistical services and State Statistical services. Overall, the visit was very informative and enjoyable.





Department Of Botany

Visit of External Students of Kamla Nehru Mahavidalaya, Nagpur to the Botany Department, Institute of Science, Nagpur (11/10/2017)



Department of Statistics Visit to NEERI (15/01/18)

In order to make the students aware about the application of Statistics in diverse fields, Department Of Statistics arranged a study tour of P.G. students on 15-01-2018 to NEERI, Nagpur .Around 40 students along with some faculty members participated enthusiastically in the tour.

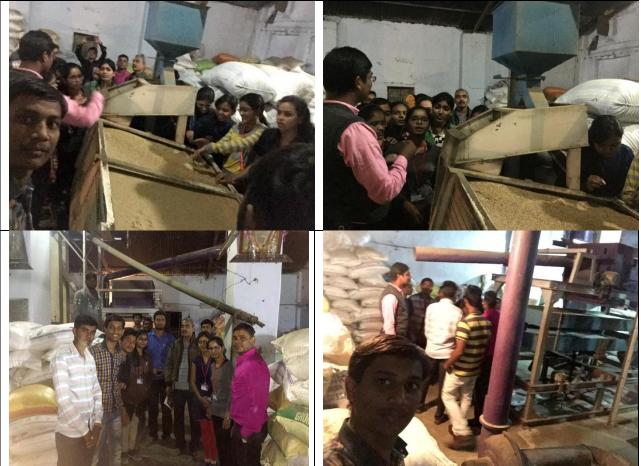
Important aspects such as Dealing with water shortage. Preparing water safety plans, Waste water technology, Environmental Genomics and Removing Waste from drinking water were shown using posters and working models. A short film on Sustainable Development was also shown on this occasion.

Dr Asha Lalwani, Senior Scientist, NEERI gave a short description about the problem of air pollution from Koradi and Khaperkheda power plants. She also discussed how this could be explained using a mathematical model based on Normal Distribution (Gaussian Dispersion Phenomenon). The importance of R programming language and Machine Learning of Operational Research was also emphasized.



Department Of Electronics Industrial Visit of the Electronics Department (05/01/18 to 06/01/18)

Place: Shriram rice mill, Pachkhedi



Department Of Environmental Science Biodiversity study tour of B.Sc. I to Pench National Park (09/02/18)

Department organized a Biodiversity study tour of B.Sc. I to Pench National Park on 9th February 2018. Students learned about Biodiversity, Wildlife of Pench National Park, Forest Ecology



Department Of Environmental Science Excursion Tour To Shimla (11/02/18 to 19/02/18)

A long educational tour to Shimla-Manali-Amritsar was organized in the month of February from 11February 2018 to 19 February 2018. Students studied the flora, fauna, geography and climate of that region. They also visited a Hydroelectric Power Plant situated at Manali.



Botanical Excurssion to Simla, Kullu Manali (13/02/18)

A long Botanical Excursion was organized for B. Sc. Sem. VI Students at Delhi, Shimla, Kullu and Manali. Dr. H. R. Pohekar and Dr. K. M. Telmore escorted the students during the tour.



Department of Zoology Visit to Seed Testing Laboratory (15/02/18)

A central seed testing laboratory is established in IARI, at New Delhi. There are 18 state seed testing laboratories spread over states of India. In Maharashtra, it is located at the College of Agriculture, Nagpur. It is provided with modern seed testing equipments and is helping in seed certification and seed control program.

Its main function is to analyze the seed samples for purity, moisture content, wet seeds (%) and germination, etc and to assist the seed inspectors in determining whether correct labeling is being done as per requirements of the seed act.

The students of M. Sc. Zoology (Semester- 2 & 4) visited the seed testing laboratory on 15th February 2018.

Shri. G. M. Moon, Seed Testing Officer and other officers showed the demonstration of seed testing procedure which determines the standards of seeds on the basis of physical purity, moisture, germination and ODV and thereby enabling the farmer community to get the quality seeds.



Department Of Environmental Science Visit to Bhandewadi Sewage treatment plant (09/03/18)

B.Sc. III year visited Bhandewadi Sewage treatment plant on 9th March 2018 to study the processes involved in Sewage treatment.

Working and process flow of sewage Treatment Plant, daily sewage generation and the advanced technologies for treatment



Department Of Chemistry Visit to Neelawar Analytical Laboratory (22/03/18)

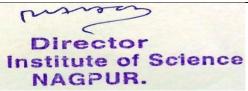
Forty six students and three staff members visited **Neelawar Analytical Laboratory**, one of the biggest testing labs in Maharashtra, nearby Nagpur. Students learnt the method of testing Soil, water and air. Determination of P^{H} & Conductance by instruments, Sulfur, Phosphorous & Organic Content by Volumetric analysis, Sodium & Potassium by Flame Photometry, and heavy metals in soil and water by Atomic Absorption Spectrometry. Similarly, air sampling equipments were also shown and every instrument was very well explained and demonstrated by the young and enthusiastic staff of the Laboratory. **Mr. Bobade**, manager of the laboratory was very cooperative and supported the students and assured that if any of the students is desirable of learning the working and functioning of the instrument they are free to visit the lab for 2 to 3 days.





Department Of Botany Botanical Excursion Tour To Satpuda Botanical Garden (26/03/18)





Criteria II

2.3.1: Student centric methods, such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experiences

Subject related Activities-Projects

List of certificates of field projects undertaken by Post Graduate students of

Environmental Science Department

for the session

2017-18



Govt. Institute of Science, Nagpur Department of Environmental Science EV.

CERTIFICATE

This is to certify that dissertation entitled "Eco-archiving the spectrum of Environmental Assets within the Province of Institute of Science" submitted by Miss. Geetai N. Laxane in fulfillment of Degree of Master of Science (Environmental Science) to Rashtrasant Tukadoji Maharashtra Nagpur University is bonafied research work carried out under our supervision and guidance.

The work embodied in the dissertation has not been submitted for any other degree or diploma.

Name of the Guide

Dr.Mrs.S.D.Narkhede Head of the Department (Environmental Science) Govt. Institute of Science *Head of the Drpti*, OF ENV. SCIENCE,

INSTITUTE OF SCIENCE NAGPUR

Place: Nagpur

Date: April 25, 2018

Name of Co-Guide

Miss.Anagha P.Patil Faculty Dept. of Environmental Science Govt. Institute of Science

This is to certify that adissertation on "Digitization and Mapping Spatial Data of Gorewada Reservoir and Peripheral Quadrant Vegetation in Quantum GIS" is a bonafide work of Harish Barewar submitted to the Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur in partial fulfilment for the award of a Master of Science and has been carried out at the Department of Environmental Science, Government Institute of Science, Nagpur during the academic year 2017-18.

Date:

Place:Nagpur

3 Aludi

Dr. Sushma D. Narkhede

Head

Department of Environmental Science

tati

Co-Guide

Ms.Anagha P. Patil

Faculty

Department of Environmental Science

Scanned by CamScanner

This is to certify that this project work entitled "Micro Level Plan of Segregation, Collection, Transportation, Treatment and Disposal of Municipal Solid Waste at Source of Dhantoli, Nagpur", contains bonafide work of Ms. Jui M. Pandharipande.

I found the present work suitable for submission during the academic session 2017-2018 in partial fulfillment of the requirement for the award of Degree of Masters of Science from the R.T.M. University, Nagpur.

Co-Guide Dr. Mrs. Sushama Narkhede Head of the Department, Institute of Science, Ndrad of the Depti. OF ENV. SCIENCE, INSTITUTE OF SCIENCE NAGPUR,

Guide Dr. Ramnath Sonawane Chief Executive Officer, Smart and Sustainable City Development Corporation, Nagpur.

This is to certify that the work presented in the dissertation entitled "THE PROCESS OF DEVELOPING A SEWAGE MASTER PLAN FOR CITY" by Mr. Kumaresh S. Tikadar, student of M.Sc.-IV semester, Department of Environmental Science, Nagpur carried out project under my guidance and supervision.

I found that present work is suitable for submission to RTM Nagpur University for evaluation award of M.Sc. Degree.

purth GUIDE

DR. PRANITA WATH UMREDKAR Institute of Science, Nagpur

(Environmental Science)



CO-GUIDE DR. S. D. NARKHEDE

Head of Department

(Environmental Science)

Institute of science, Nagpur Mead of the Depti. OF ENV SCIENCE

OF ENV. SCIENCE,

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This is to certify that Mr. Mohammad Hadi Ayyub Sheikh has carried out his project dissertation entitled "REMOVAL OF MALACHITE GREEN DYE FROM WATER BY USING ACTIVATED COCONUT SHELL CARBON" during the academic session of 2017-18 under my supervision in department of environmental science, Institute of Science, Civil Lines, Nagpur. The work presented in her own work of the candidate and has not been submitted anywhere.

Guide Dr. Sushma .D Narkhede Head Department of environmental Science Institute of Science, Nagpur

> Head of the Depti. OF ENV. SCIENCE, INSTITUTE OF SCIENCE NAGPUE.

Ksirgh

Co-guide Dr. Kalpana Singh Visiting Faculty Department of Environmental Science Institute of Science, Nagpur.

Date: 17/4/18 Place: Nagpur

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Certificate

This is to certify that the work presented in this dissertation "COMPARATIVE STUDY OF ORGANIC FARMING SOIL AND SOIL WITH CHEMICAL FERTILIZERS" by PIYUSH V. WAGHMARE has been carried out under my guidance and supervision.

I found that present work is suitable for the submission to the R.T. M. University for evaluation and award of M.Sc. Degree.

Je thede

Dr. Sushma D. Narkhede Head of the department Of Environmental Science, Institute of Science, Nagpur. *Mead of the Deptt.* OF ENV. SCIENCE, INSTITUTE OF SCIENCE NAGPUR



Guide Prof. S. U. Patil Assist. Professor Department of Chemistry Institute of Science, Nagpur. SH. S. U. PATIL Department of Chemistry Institute of Science, Nagpur

Scanned by CamScanner

This is to certify that Miss. Reema G. Shende has carried out her project dissertation entitled "Eco-profile and Bionomic Reconnaissance of Koradi Power Plant Lake" during the academic session of 2017-18 under my supervision in Department of Environmental Science, Institute of Science, Civil Lines, Nagpur. The work presented in her project is the own work of the candidate and has not been submitted anywhere.

hede Guide

Dr. Mrs. Sushama Narkhede

Head

Dept. of Environmental Science Institute of Science R. T. Road of Civil Lines, Nagpur

Head of the Deptt. OF ENV. SCIENCE, INSTITUTE OF SCIENCE NAGPUR

Co-Guide Ms. Anagha P. Patil Faculty

Dept. of Environmental Science Institute of Science R. T. Road of Civil Lines, Nagpur

Π

This is to certify that the Miss. Renuka Sudhir Kamble has carried out her dissertation entitled "Environmental Audit of an Industry" during academic session 2017-18 under my supervision in Department of Environmental Science, Civil Lines, Nagpur. The work presented in the project is the own work of the candidate and has not been submitted anywhere.

Guide

Dr. N.S. Raman

Deputy Director & Head of Environmental Audit Cell,

NEERI,

Nagpur.

Dr. Sushma D. Narkhede

Head of Department

Department of Environmental Science

Government Institute of Science, Nagpur.

Head of the Deptt. OF ENV. SCIENCE, INSTITUTE OF SCIENCE NAGPUR.

Certificate

This is to certify that the dissertation entitled Parboiled rice mill wastewater treatment by conventional coagulants and a synthetic polyelectrolyte submitted by Shubham Shegaonkar in partial fulfillment of the requirement for the degree of Master of Science (Environmental Science) to R.T.M. Nagpur University, Nagpur is a bonafied research work carried out under our supervision and guidance.

The dissertation fulfills the requirement pertaining to the nature and standards of the work for the M.Sc. Degree (Environmental Science) in the faculty of Science, R.T.M. Nagpur University, Nagpur. The work presented here has not been submitted for any other degree or diploma.

Guide

Co-guide

her-

Dr. Shanta Satyanarayan Ex Deputy Director NEERI, Nagpur

Dr. Sharda Kosankar Scientist C, EBG Division, NEERI, Nagpur

Place : Nagpur Date : 18/04/2018

on alude

Dr.(Mrs.) Sushma D. Narkhede Head, Department of Environmental Science,

> Nagpur Head of the Depti. OF ENV. SCIENCE, INSTITUTE OF SCIENCE NAGPUR.

This is to certify that Miss Yashi Tarun Sharma has carried out his project dissertation entitled **REMOVAL OF CONGO RED DYE FROM AQUEOUS SOLUTION BY USING ORANGE PEEL ACTIVATED CARBON** during the academic session of 2017-18 under my supervision in department of environmental science, Institute of Science, Civil Lines, Nagpur. The work presented in her own work of the candidate and has not been submitted anywhere.

Naklede

Guide Dr. Sushma D. Narkhede Head Department of environmental Science Institute of Science, Nagpur

> Mead of the Deptt. OF ENV. SCIENCE, INSTITUTE OF SCIENCE NAGPUR.

Ksingh

Co-guide Dr. Kalpana Singh visiting faculty Department of Environmental science Institute of Science, Nagpur

Scanned by CamScanner

List of certificates of field projects undertaken by Post Graduate students of

Statistics Department

for the session

2017-18

This is to certify that the work in this report entitled "Fitting of Logistic Regression with Predicted Probability for a Team Winning an ODI" which is being submitted herewith for the award of the Degree of Master of Science in Statistics of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur is a result of original research work completed by Mr. Nehal T. Harshe, Mr. Shubham K. Mange, Mr. Anurag N. Sidam under my supervision and guidance in the Department of Statistics, Institute of Science, Nagpur & to the best of my knowledge and belief the embodied in this project report has not formed earlier the basis for the award of any degree of similar of this or any other university or examining body.

Dr. G. SyBehere

Assistant Professor Department of Statistics Institute of Science, Nagpur 440001

Date: 25/04/2018 Place: Nagpur.

Dr. K. S. Bhanu Professor & HOD Department of Statistics Institute of Science, Nagpur 440001

> Head Department of Statistics Institute of Chance, Nagpur

CERTIFICATE OF THE SUPERVISOR

This is to certify that the project report entitled "Population Projection of Nagpur District in 2051", submitted by Ms. Diksha Nigam, Ms. Aparna Bire, Ms. Priyanka Bhongade is a record of bonafied work carried out under my guidance for the partial fulfilment of the degree of master of science in statistics during the academic year 2017-2018.

Dr.A.K.Khamborkar (Project Supervisor) Assistant Professor Department of Statistics Institute of Science, Nagpur 440001

Forwarded By U

Dr.K.S.Bhanu Professor and Head Department of Statistics Department of Statistics Institute of Science, Nagpur 440001

ane

Head Department of Statistics Institute of Science, Nagpur

Date: 25/04/2018 Place: Nagpur

This is to certify that the project report entitled "A Statistical Analysis on Insurance", submitted by Jaya Pandey, Diksha C. Arse, Dolly p. Ingle is a ecord of bonafied work carried out under my guidance for the partial fulfillment of the degree of Master of Science in Statistics during the academic year 2017-2018.

Place: Nagpur

Date: 25-04-2018

Mrs. M.V.Alsi (Project Supervisor) Department of Statistics Institute of Science, Nagpur 440001

ann

Year : 2017-2018

DH. K.S. BHANU

HEAD OF DEPARTMENT (STATISTICS) Institute of Science, Ngp.

Head Department of Statistics Institute of Science, Nagpur

This is to certify that the project report entitled "Survey on Two Wheeler" submitted by Ms. Supriya R Sharma, Ms. Sulaxshana U Khungar, Mr. Paritosh S Kadam is a record of bonified work carried out under my guidance for the partial fulfillment of the degree of Master Of Science in Statistics during the academic year 2017 - 2018.

Dr. Pritee Singh

Dr. Pritee Singh Assistant Professor Department Of Statistics Institute Of Science Nagpur – 440001

Dr K.S. Bhanu Professor and Head Department Of Statistics Institute Of Science Nagpur – 440001

Shaw 25/4

Date: 25/04/2018

Place: Nagpur

Stat

This is to certify that the project entitled **COMPARATIVE STUDY OF OLA AND UBER**, submitted by Ms. Tejal G. Borkar, Ms. Yupika G. Kanojiya, Ms. Lavanya S. Avula is a record of bonafied work cárried out under my guidance for the partial fulfillment of the degree of Master of Science in Statistics during the academic year 2017 – 2018.

Sondabe Dr. Sandhya Dhabe Associate Professor Department of Statistics, Institute of Science Nagpur 440001

Dr. K.S. Bhanu Professor & Head Department of Statistics, Institute of Science, Nagpur 440001

illi

Head Department of Statistics Institute of Science, Nagpur

abrule 2594/18

Date :

Place : Nagpur

List of certificates of field projects undertaken by Post Graduate students of

Zoology Department

for the session

2017-18

20010 gy

This is to certify that the research project entitled **"Calcium Status in Pre and Post-Menopausal Women of some area of Nagpur region"** submitted by Miss. Sadiya Danish, Miss. Shilpa S.Thawale, Miss. Ruchira B. Chankapure for the award of the degree of **"Master of Science"** in the subject Zoology, Rastrasant Tukadoji Maharaj Nagpur University, under my guidance.

They have completed their work and the project is ready for evaluation.

Place : Govt. Institute of science, Nagpur

Date : 13-04-2018

1 alcy/18

Dr. Kavita. R. Patil

Supervisor

Head

Department of zoology

Institute of Science, Nagpur

Read of the Zoology Department Institute of Science, Negour

Dr. Kavita. R. Patil

HEAD

Department of zoology

Institute of Science, Nagpur

This is to certify that the work presented in this project entitled "QUALITATIVE AND QUANTITATIVE ESTIMATION OF ZOOPLANKTON FROM SARANGPURI LAKE, ARVI, DISTRICT - WARDHA" is own work of Ms. Pranjali S. Lokhande student of M.Sc. IVth semester, for the award of the degree of Master of Science (M.Sc.) in the subject zoology of Rastrasant Tukadoji Maharaj Nagpur University, Nagpur under my supervision. This work has not been submitted earlier to any institution or university for any Diploma or Degree.

Dr. R. V. Tijare Asst. Professor Institute of Science, Nagpur

Assistant Protessur Tepartness of Zoology Institute of Science, Nagpur,

Dr. K. R. Patil Head of Department, Zoology Institute of Science, Nagpur

Head of the Zoology Department. Institute of Science, Negpur

CERTIFY that the work presented in this project entitled "COMPARATIVE OF PHYSICO-CHEMICAL PARAMETERS OF AMBAZARI AND FUTALA **EFROM NAGPUR CITY MAHARASHTRA**" is own work of Mr. Harish B. andekar ,Mr. Prashant B. Goraman and Ms. Khushbu P.Paliwal student of M.Sc. semester, for the award of the degree of Master of Science (M.Sc.) in the ject zoology of Rastrasant Tukadoji Maharaj Nagpur Univesity, Nagpur under supervision. This work has not been submitted earlier to any institution or mersity for any Diploma or Degree.

Kanadhar - ARUNA K. KAWADKAR

Asst.Professor

institute of Science, Nagpur

Assistant Professor Department of 20 mogy Mature of Science, Naghar,

Jan 16/02/18

Dr. KAVITA R. PATIL Head of Department, Zoology Institute of Science, Nagpur

Head of the Zoology Department Institute of Science, Negour

This is certify that the work presented in this project entitled "QUALITATIVE AND QUANTITATIVE ESTIMATION OF ZOOPLANKTON FROM KHAIRI DAM, KARANJA (GHA.)WARDHA" is own work of Ms. Juhi P. Khanjode student of M.Sc. IVth semester, for the award of the degree of Master of Science (M.Sc.) in the subject zoology of Rastrasant Tukadoji Maharaj Nagpur University, Nagpur under my supervision. This work has not been submitted earlier to any institution or university for any Diploma or Degree.

Dr. R. V. Tijare Asst. Professor Institute of Science, Nagpur

Assistant Protocour Department of Lobiesy Institute of Science, Naglar,

10/04

Dr. K. R. Patil Head of Department, Zoology Institute of Science, Nagpur

Head of the Zoology Department Institute of Science, Negour

This is to certify that the work presented in this project entitled "ASSESSMENT OF PHYSICO-CHEMICAL PARAMETERS OF TWO LAKES AT HINGNA TALUKA (DISTRICT NAGPUR)" is original work carried out by Ms. Pradnya R. Gajbhiye & Ms. Neha R. Singh student of M.Sc. IVth semester, for the award of the Degree of Master of Science (M.Sc.) in the subject Zoology of Rastrasant Tukadoji Maharaj Nagpur Univesity, Nagpur under my supervision.

Dr. S.A Koushik Asso. Professor Institute of science, Nagpur

Assistant Professor Department of Zonicy Institute of Science, Nagsur,

3/04/18

Dr. K.R. Patil Head reade Zoology Department Institute of Science, Nagpur

Department of Zoology

Institute of science, Nagpur

is is to certify that the work presented in this project entitled "ASSESSMENT PHYSICO-CHEMICAL PARAMETERS OF TWO LAKES AT NGNA TALUKA (DISTRICT NAGPUR)" is original work carried out by Pradnya R. Gajbhiye & Ms. Neha R. Singh student of M.Sc. IVth semester, the award of the Degree of Master of Science (M.Sc.) in the subject Zoology Rastrasant Tukadoji Maharaj Nagpur Univesity, Nagpur under my supervision.

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Dr. S.A Koushik Asso. Professor nstitute of science, Nagpur

Assistant Professor Department of Zeningy stitute of Science, Naghur,

104/18

Dr. K.R. Patil Moed feade, Zoology Department Institute of Science, Nagpur Department of Zoology

Institute of science, Nagpur

This is to certify that the work presented in this project entitled "QUALITATIVE AND QUANTITATIVE ESTIMATION OF ZOOPLANKTON FROM VENNA LAKE, DHAMNA, NAGPUR" is own work of Ms. Puja N. Ugemuge student of M.Sc. IVth semester, for the award of the degree of Master of Science (M.Sc.) in the subject zoology of Rastrasant Tukadoji Maharaj Nagpur University, Nagpur under my supervision. This work has not been submitted earlier to any institution or university for any Diploma or Degree.

Dr. R. V. Tijare Asst. Professor Institute of Science, Nagpur

Assistant Protessor Department of Zoology Institute of Science, Negpus

Dr. K. R. Patil Head of Department, Zoology Institute of Science, Nagpur

Mead of the Zoology Department Institute of Science, Magner

This is certify that Project Report entited *sericulture production* is submitted by *Miss. RajaswitaKengale* in the partial fulfillment of the condition for the Degree of M.Sc in zoology, RashtrasantTukdojiMaharaj University, Nagpur under my guidance.

F104/18

DR .K .R . PATIL

Head of Department Dept. of Zoologyence, Negour

DR.CHOUGALE

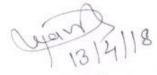
Associated Professor Department of Zoology

Examiner's :

Date : 16/4/2018

Place : Nagpur

This is to certify that Project Report entitled, <u>Medicinal</u> <u>Plants with Aphrodisiac: A Review</u> is submitted by Miss. Aasiya Syed Nasir in the partial fulfillment of the condition for the Degree of M.Sc. in Zoology, Rashtrasant Tukdoji Maharaj University, Nagpur under my guidance.



Dr.K R. Patil Head of Department Dept. of Zoology

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Examiner's Sign:

Date: / /

Place: Nagpur

Jack

Dr. V S. Zade Associate Professor Department of Zoology

Assistant Profession Leparch en ut Zosiegy Institute of Science, Nagran

This is to certify that Project Report entitled, **Medicinal Plants with Abortifacient activity : A Review** is submitted by **Miss. Mohini M. Dadhe** in the partial fulfillment of the condition for the Degree of M.Sc. in Zoology, Rashtrasant Tukdoji Maharaj University, Nagpur under my guidance.

1 dav Dr. K. R. Pati Head of Department Dept. of Zoology

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Head of the Zoology Department Institute of Science, Negpon

Examiner's Sign:

Date: / /

Place: Nagpur

Dr. V. S. Zade Associate Professor Department of Zoology

Assistant Professour Reputering of Lesingy feature of Science, Nace

This is to certify that project report entitled "Prediction of B cell linear epitopes of Pseudomonas *aeruginosa* by reverse vaccinology" is submitted by **Miss. NISHAD SHEIKH** and **Miss. KARISHMA GULE**, in the partial fulfillment of the condition for the award of the degree of Master of Science to Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur has been prepared under my supervision and guidance.

Laiv 18

Dr. K. R. Patil

Head of the department

Dept. of Zoology

Read of the Zoology Department Institute of Science, Negpur

Examiner's signature

Date:

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Place: Nagpur

Mahalley 16.4.18

Mrs. A. N. Mahalley

Assistant professor

Dept. of Zoology

Assistant Professor Loparni autor Lobicov Institute of Science, Nagrae

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GOVT. INSTITUTE OF SCIENCE, NAGPUR

Ravindranath Tagore Marg, Civil Lines, Nagpur - 440 001

Telephone: 07112-2565581/2561148

Fax: 0712-2565581

CERTIFICATE

This is to certify that the project entitled, "STUDIES ON SKELETON OF THE INDIAN MAJOR CARP, LABEO ROHITA (HAMILTON, 1822)" has been originally prepared by Ms. Heena Diliprao Bharne, Ms. Kshitija Abhayrao Wekhande And Ms. Shraddha Shankarrao Barahate, under my guidance and here by the same is submitted towards partial fulfillment for the award of degree of Master of Science in Zoology of R. T. M. Nagpur University, Nagpur.

lugv Head of the Zodiday Bebs mem

Department of Zoology ovt. Institute of Science, Nagpur

ite: 16/04/2018 ice: Nagpur

Supervisor Dr. J. S. Maske Assistant Professor Department of Zoology

Assistant Professor linpartness of 25 seey Institute of Science, Naghar

List of certificates of field projects undertaken by Post Graduate students of

Botany Department

for the session

2017-18

This is to certify that, Miss. Shabnam L. Sheikh student of M.Sc. Semester IV, Department of Botany, Nagpur has been carried out project entitled "Pollen Analysis of Honey Samples from Village Area Seloo Tahsil, Wardha District (M.S.)" for the partial fulfilment of degree of Master of Science (Botany), R.T.M. Nagpur University during the academic year 2017-2018.

Alellen. Guide

Dr. (Mrs.) S. A. Kalkar Associate professor Department of Botany, Institute of Science, Nagpur

Andi

Dr. R. A. Satpute Head, Department of Botany Institute of Science, Nagpur बिजाग प्रमुख वनस्पतीशास्त्र बिजान संस्था नागपूर

This is to certify that, Miss. Shabnam L. Sheikh student of M.Sc. Semester IV, Department of Botany, Nagpur has been carried out project entitled "Physicochemical parameters of honey samples from village area of Seloo tahsil, Wardha district (M.S.)" for the partial fulfillment of degree of Master of Science (Botany), R.T.M. Nagpur University during the academic year 2017-2018.

Molton Guide

Dr. (Mrs.) S. A. Kalkar Associate professor Department of Botany, Institute of Science, Nagpur

nu

Dr. R. A. Satpute Head, Department of Botany

Institute of Science, Nagpur विमान प्रमुख वनस्थती शास्त्र विज्ञान संस्था नागपूर

This is to certify that, Miss. Pooja .N. Saraf, student of M.Sc Semester -IV, Department of Botany, Nagpur has been carried out project entitled "Melissopalynological Studies of Bee pollen loads of *Apis florea F*. from Hamdpur Village of Wardha district with reference to Bee forage sources and Biochemical content" for the partial fulfillment of degree of Master of Science (Botany), R.T.M. Nagpur University during the academic year 2017-2018.

Atella Guide

Dr. (Mrs.) S. A. Kalkar Associate professor Department of Botany, Institute of Science, Nagpur

विमाग

Dr. R. A. Satpute

Head, Department of Botany Institute of Science, Nagpur

This is to certify that, Miss. Rizwana N. Sheikh student of M.Sc. Semester IV, Department of Botany, Nagpur has been carried out project entitled "Exploration of bee pollen sources of *Apis florea* F. from Hamdapur village of Wardha district (M.S.)" for the partial fulfillment of degree of Master of Science (Botany), R.T.M. Nagpur University during the academic year 2017-2018.

Mr Hor. Guide

Dr. (Mrs.) S. A. Kalkar Associate professor Department of Botany, Institute of Science, Nagpur

वर्षांग प्रमुख वनस्पतीशास्त्र Dr. R. A. Satpute जिज्ञान संस्था नागपू

Head, Department of Botany Institute of Science, Nagpur

This is to certify that, Miss. Harsha S. Sangrame, student of M.sc-IV semester, Department of Botany, Nagpur has been carried out project entitled "Economic importance and medicinal uses of wild edible vegetables used by local people of Sivanibandh, Sakoli Taluka Districts Bhandara" for the partial fulfillment of degree of Master of Science (Botany), R.T.M. Nagpur University during the academic year2017-2018.

wili Guide:

Prof.Dr. R.A.Satpute Head Department of the

Botany, Institute of Science, Nagpur

Prof.Dr. R.A. Satpute Head of the Department (Botany) Institute of Science, Nagpur बिसाग प्रमुख बनस्त्रीसास्त्र

विज्ञान संस्था साम्हर

This is to certify that, Miss Monali Deorao Borkar, student of M.sc-IV semester, Department of Botany, Nagpur has carried out project entitled "Study of Aquatic Macrophytes From Fresh Water Reservoirs of Sindewahi Village of Chandrapur District, Maharashtra" in the partial fulfillment for degree of Master of Science (Botany), R.T.M. Nagpur University during the academic year2017-2018.

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Guide: ` Dr. R.A.Satpute Professor and Head Department of Botany, Institute of Science, Nagpur

Etalpull

Prof. (Dr.) R.A. Satpute Head of the Department (Botany) Institute of Science, Nagpur बिज्ञाग प्रमुख वनस्पतीशास्त्र बिज्ञान संस्था नागपूर

This is to certify that, Miss. Pranali R. Topale, student of M.Sc.semesterIV ment of Botany, Nagpur has been carried out project entitled "Synthesis of silver particles using endophytic fungi from *Amaranthus viridis* (family: Amarantaceae) der different wavelengths of visible light" for the partial fulfillment of degree of Master Science (Botany), R.T.M. Nagpur University during the academic year2017-2018.

Guide:

Prof.Dr. R.A.Satpute Head Department of the Botany, Institute of Science, Nagpur

2 Julpulli

Prof.Dr. R.A. Satpute Head of the Department (Botany) Institute of Science, Nagpur

This is to certify that, Miss. Shalaka L. Shewade, student of MSc-IV semester, Department of Botany Institute Of Science, Nagpur has been carried out project entitled "Estimation of secondary metabolites from *Clerodendrum infortunatum*" for the partial fulfilment of degree of Master of Science (Botany), R.T.M. Nagpur University during the academic year2017-2018.

Date : 23/04/18

Place : Nagpur

23-04-18 Guide:

Dr. Kirankumar D. Jadhao Assistant professor Department of Botany, Institute Of Science, Nagpur 2017-18

-mum

Dr. R. A. Satpule Head of the Department (Botany) Institute Of Science, Nagpur 2017-18

विज्ञाग प्रमुख वनस्पनी शास्त्र विज्ञान संस्था नागपूर

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This is certify that Miss. Apurva B. Bondre, student of M.Sc. IV semester, Department of Botany, Institute of Science, Nagpur has been carried out project entitled "Evaluation of secondary metabolites from *Gardenia gummifera* (L.) an Indian medicinal plant" for the partial fulfillment of degree of Master of Science (Botany), R.T.M.Nagpur University during the academic year 2017-2018.

23-04-18 Guide:

Dr. Kirankumar D. Jadhao Assistant professor Department of Botany, Institute of Science, Nagpur 2017-18

Hulpinde

Dr. R.A. Satpute Head of the Department (Botany) Institute of Science, Nagpur बिजाग प्रमुख वनस्पताशास्त्र बिजान संस्था नागपुर

This is to certify that, Miss. Sujata R. Misal, student of M.sc-IV semester, Department of Botany, Institute of Science, Nagpur has been carried out project entitled "Estimation of secondary metabolites from *Cymbopogon citratus*" for the partial fulfillment of degree of Master of Science (Botany), R.T.M. Nagpur University during the academic year 2017-2018.

23-04-18 Guide:

Dr. Kirankumar D. Jadhao Assistant professor Department of Botany, Institute of Science, Nagpur

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Prof. Dr. R.A. Satpute Head of Department, Botany.

Institute of Science,

शिकाम प्रमुख वनस्पतीशास्त्र विज्ञान संस्था नागपुर

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<u>CERTIFICATE</u>

This is to certify that the project entitled "Identification And Investigation Of Bio-Pesticides /Herbal Pesticides Properties in Regional Plants" Submitted by Miss. Yogeshwari R. Karanjekar, in partial fulfillment of requirement for the Degree of Maters of Science in Botany to R.T.M.N.U. Nagpur is a bonafied research work carried out under my supervision and guidance.

This project fulfils the requirement pertaining to the nature and standard of work for the M. Sc. Degree (Botany) in the faculty of science, RTM Nagpur University, Nagpur. The work presented here has not been submitted for any other degree or diploma.

Place: Nagpur Date: 17/04/2018

Dr. S. D. Narkhede, Associate professor Department of Botany, Institute of Science, Nagpur

Etaupule Dr. R.A. Satpute

Head, Department of Botany Institute of Science, Nagpur बिज्ञान संस्था नागपूर

I hereby certify that this project entitled "ANATOMICAL STUDY OF A DICOTYLEDONOUS WOOD FROM DECCAN INTERTRAPPEAN EXPOSURES OF RAMBHAKHERI, MADHYA PRADESH, INDIA" submitted for partial fulfillment of the degree of master of science, Nagpur University, Nagpur, embodies the result of bonafide project work carried out by Miss.Shriya G. Sagar under my guidance and supervision. I find this work comprehensive, complete and fit for the purpose of sending it to the examine.

I further certify that such help or source of information has been availed of in this connection is duly acknowledged and no part of this project ever has been submitted anywhere else for any other degree.

3 Klude

Dr.S.D.Narkhede Associate Professor, Department of Botany Institute of Science, Nagpur

Dr.R.A.Satpute Head, department of Botany Institute of Science, Nagpur

बिभाग गर्व जन्मनात्रास्त्र विज्ञान संस्था नातपूर

<u>CERTIFICATE</u>

This is to certify that, Miss, ritu o.kapse student of M.sc-IV semester, Department of Botany, Nagpur has been carried out project entitled "Study of ground water quality from Residential area of Saoner Tehsil" for the partial fulfillment of degree of Master of Science (Botany), R.T.M. Nagpur University, Nagpur during the academic year2017-2018.

ebudy of Guide:

Dr. sushama D.narkhede Associate professor Department of Botany, Institute of Science, Nagpur

RAn yould

Dr. R.A. Satpute Head of the Department (Botany) Institute of Science, Nagpur बिजाग प्रमुख बनस्पती खाल्ज विज्ञान संस्था नागपूत्र

<u>CERTIFICATE</u>

This is to certify that, Miss. Kiran S. Raut, student of M.sc-IV semester, Department of Botany, Nagpur has been carried out project entitled "Anatomical Study of A Bisexual Flower from the Deccan Intertrappean Bed of Bhutera, Madhaya Pradesh, India" for the partial fulfillment of degree of Master of Science (Botany), R.T.M. Nagpur University during the academic year 2017-2018.

Guide:

Dr. S.D. Narkhede, Associate professor Department of Botany, Institute of Science, Nagpur

milè Dr. R.A. Satpute

Head Department of Botany Institute of Science, Nagpur

This is to certify that the work presented in the dissertation entitled 'Evaluation of lake water, pond water & drinking water quality through use of simple physico-chemical parameters' has been carried out under our guidance and supervision.

We found that the present work is suitable for the submission to the R.T.M. Nagpur University for Evaluation and Award of M.Sc. Post Graduate Degree.

Guide : Dr. K R Gopal.

mymb Dr. R.A. Satpute

Head of the Department (Botany) Institute of Science, Nagpur जिल्लाग प्रमुख वनस्पतीशास्त्र चित्रान संस्था नागपुर

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<u>CERTIFICATE</u>

This is to certify that, Miss. Neha J.Tiwari, student of M.sc-IV semester, Department of Botany, Nagpur has been carried out project entitled "Ethnobotanical study of fruits and their medicinal values" for the partial fulfillment of degree of Master of Science (Botany), R.T.M. Nagpur University during the academic year2017-2018.

Guide:

Dr. K.R.Gopal Associate professor Department of Botany, Institute of Science, Nagpur

Timber

Dr. R.A. Satpute

Head

Department ofBotany Institute of Science, Nagpur विज्ञान प्रमुख वनस्पत्री शास्त्र विज्ञान संस्था नागपूर

00t 218

This is to certify that, Miss. Aishwarya M.Rahood student of M.Sc. Semester IV, Department of Botany, Nagpur has been carried out project entitled "Evaluation of Biofortification of Rice Varities of Easter Vidarbha Zone" for the partial fulfillment of degree of Master of Science (Botany), R.T.M. Nagpur University during the academic year 2017-2018.

Guide

Dr. K.R. Gopal

Associate professor, Department of Botany, Institute of Science, Nagpur

Dr. R.A. Satpute

Head of the Department (Botany) Institute of Science, Nagpur विभाग परात तरस्ती शास्त्र विज्ञान संस्था नागपूर

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Botany

CERTIFICATE

This is to certify that, Miss.Diksha B. Pothhare, student of M.Sc-IV semester, Department of Botany, Nagpur has been carried-out project entitled "Effect of Fertilizers on plant growth & Qualitative parameters of various vegetable crop plants from Gondkhairi village, Amravati road, Nagpur," for the partial fulfillment of degree of Master of Science (Botany), R.T.M. Nagpur University during the academic year2017-2018.

> Date : 23/04/18 Place : Nagpur

Guide:

Dr. P. S. Jakhi -

Associate professor Department of Botany, Institute of Science, Nagpur

Dr. R.A. Satpute

Head of the Department (Botany) Institute of Science, Nagpur. चित्राग प्रमुख बनम्परी शास्त्र चित्रान संस्था नागपुद

This is to certify that, Miss.Snehal S. Lenghe, student of M.Sc-W semission, Department of Botany, Nagrur has been carried out project entitled "Effect of Fertilizers on plant growth & Qualitative parameters of various vegetable crop plants from Gondkhairi village, Amount noul, Nagrun," for the partial fulfillment of degree sof Master of Science (Botany), R.T.M. Nagrur University during the academic year2017-2018.

Guide:

Dr. P. S. Jakhi Science, Nagpur

mpulli

Dr. R.A. Satpute Head of the Department (Botany) Institute of Science, Nagpur

विमाग प्रमुख जनम्परी मास्त्र विज्ञान संस्था नागपुर Place-Nagrur Date-23/4/18

red by Can

This is to certify that, Miss. Anjali A. Tapile, student of M.Sc (Botany)-Sem. IV, has been carried out project entitled "INVNTORIZATION OF VARIOUS WILD VEGETABLES USED BY LOCAL PEOPLE FROM UDASA VILLAGE, UMRED TALUKA" for the partial fulfillment of degree of Master of Science (Botany), R.T.M. Nagpur University during the academic year 2017-2018.

Dr. P.S.JAKHI Associate professor Department of Botany, Institute of Science, Nagpur

Place: Nagpur Date: 10/04/2018

Et a pulle

Dr. R.A. Satpute Head of the Department Institute of Science, Nagpur विज्ञान प्रयत्र ननज्जीशास्त्र विज्ञान संस्था नागपूर्य

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This is to certify that, Miss. Anjali A. Tapile, student of M.Sc (Botany)-Sem. IV, has been carried out project entitled "INVNTORIZATION OF VARIOUS WILD VEGETABLES USED BY LOCAL PEOPLE FROM UDASA VILLAGE, UMRED TALUKA" for the partial fulfillment of degree of Master of Science (Botany), R.T.M. Nagpur University during the academic year 2017-2018.

Dr. P.S.JAKHI Associate professor Department of Botany, Institute of Science, Nagpur

Place: Nagpur Date: 10/04/2018

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Dr. R.A. Satpute Head of the Department Institute of Science, Nagpur जिलाग प्रमुख वतव्यती सारव जिलाग संस्था नागपुष

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