

# 2020-2021 ANNUAL REPORT



*National Education Society's*  
RATNAM COLLEGE OF ARTS, SCIENCE AND COMMERCE,  
Bhandup (W), Mumbai 400 078

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2020-2021**

## **THEME 2020-2021**

*“Forging ahead for the zenith of excellence deploying the latest emerging technologies for upgradation in every field.”*

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## Founder-President's Foreword

*“When the going gets tough, the tough get going.”*

The academic year 2020-2021 seems synonymous with this saying. Despite the Covid-19 pandemic spreading its fangs across the country and the globe likewise, and limiting the education sector to online sessions of knowledge-sharing, I feel proud to note that the NES-SVB institutions continued to impart knowledge and skills to its students even in the online mode without compromising on the standards they are well-known for. I am delighted that this institution, i.e., N. E. S. Ratnam College of Arts, Science and Commerce, among other NES-SVB institutions, has been one of the first to implement my dream project “Remodelling 2020-2022” which imbues both – knowledge and values – through intensive tutoring modalities and is aimed at preparing the students for both – their academic exams and the exam called ‘Life’ which begins shortly after they graduate and turn alumni. This project, a work in progress, has been very well received by both academics and students alike.

I wish the teaching guild, the non-teaching staff and all our students all the very best and look forward to seeing them achieve great heights! I conclude by quoting Dr. Babasaheb Ambedkar who very aptly said:

*“Cultivation of mind should be the ultimate aim of human existence.”*

**Dr. R. VARADARAJAN**  
Founder-President  
NES-SVB Group of Institutions

## Principal's Message

True to its motto “LEARN, LIVE AND LEAD”, National Education Society’s Ratnam College has time and again proved itself to be one among the forerunners in imparting education to the youth of our nation. Our college has been thrice accredited with ‘A’ Grade by NAAC, has successfully embarked upon the second innings of the DBT Star Status Scheme 2020-2023, the earlier one being 2017-2020. We, at NES Ratnam, strive towards holistic development of students by instilling core values and teaching them life skills in addition to the curriculum.

Despite the academic year 2020-2021 turning out to be a challenge in the aftermath of the global crisis of the Covid-19 pandemic, our faculty members have left no stone unturned in providing an enriching learning environment to students through innovative pedagogical methods which was given a huge impetus through the introduction of the “Remodelling 2020-2022” project, a brainchild of our Founder-President Dr. R. Varadarajan.

This Annual Report 2020-2021, as a result, marks a significant milestone on the road to excellence for both - my colleagues and students, through a balance of curricular and extra curricular activities in the online mode.. I convey my heartiest congratulations to all the Departments for securing 100 percent results at the Final year Examinations and also to the students for their achievement in their respective disciplines during 2020-2021. I am thankful to all - the teaching fraternity and non-teaching staff – for their contribution to these achievements; and am confident that our college will continue on its path to brilliance for years to come.

**Dr. MARY VIMOCHANA**  
Principal  
N. E. S. Ratnam College

# Committee Reports

## **Ratnam E-Cell:**

1. Idea Competition organised in January 2021 with the Theme: Unique Innovation in Pandemic Times
2. Mentoring Session by Mr. Simon Mendes on 'Igniting Entrepreneurial Skills in Covid Times' conducted on 15<sup>th</sup> January 2021
3. Mentoring Session by Ms. Sunita Sawant on 'Women Entrepreneurs: Education, Experience & Exposure' to educate girl students on various career options, work opportunities and management skills to be developed for the same. **date**

## **Students' Council:**

1. Independence Day was celebrated with great fervour on the 15th of August 2020. Organised every year by the Student Council, it showcases the patriotism and love that we feel for our country through various patriotic-themed songs and dances by our students.
2. Ganesh Utsav was celebrated on the 22nd and 23rd of August 2020 and this year we had got an eco friendly Ganpathy idol.
3. Republic Day was also celebrated in January 2021 to commemorate the forming of Indian Republic. Both teachers and students participated in this online cultural programme.

## **Gymkhana Committee:**

1. International Yoga Day was celebrated on 21st June 2020 in the online mode, where Mr. Datta Gaikwad and his team, taught various yoga asanas to the students, alumni, teaching and non-teaching staff
2. Organised Yoga session for all the BCom students of our college on 7th July 2020, wherein 85 students participated and benefited from it
3. Online Chess training programme was conducted on 27th September 2020 by chess expert Shri. Sudhir Sawant; who taught the what and how of the game to beginners
4. Organised an online self-defence training programme conducted by experts Mr. Ramesh Jadhav, Dr. Vijay Tandalekar and Mr. Kishore Ahir on 27<sup>th</sup> March 2021
5. Ratnam boys volleyball team participated in the various volleyball tournaments conducted by Spykar boys, NG Achievers club and Jaizz Club; and won the position of Runner up and received participation certificates

### **Cultural Forum:**

1. The academic year 2020-21 began with a grand inauguration of the Cultural Forum on 19th August, 2020 on the virtual mode where the office bearers were declared and the activities for the year were launched beginning with the Talent Search Activities. A Competition of Short Films was conducted for all on 21st September and met with huge response.
2. Celebrated University Day in the online mode on 18<sup>th</sup> August 2020, which saw the involvement of all students across streams and classes
3. Participated in the zonal-level online 53<sup>rd</sup> University Youth Festival held in March 2021 by the University of Mumbai
4. Celebrated Talent Search Week in the online and offline modes; it saw participation by all classes was conducted on 21st October, 2020.

### **WOMEN DEVELOPMENT CELL**

- A one-day National webinar on “Encompassing Gender” under the aegis of WDC was conducted on 14th August 2020. The resource person was Dr. Leena Pimpley and a total of 157 participants attended the same.
- An Essay writing competition on “Gender favouritism” was organised on International Women’s Day i.e. 8th March 2021, wherein a total of 32 students participated



## DLE Activities

- An orientation program was carried out on 20<sup>th</sup> January 2021 by Resource Person Prof. Vaishali Dhaware, whereby students received information about IOP, CP, SWS, NIOS and PEC Projects. 63 students participated in this.
- 10 students presented papers online, in the presence of parents and teachers, on various topics of interest such as – Girl Child, Woman Empowerment, Save Trees, Covid -19, Legal Procedures, Banking Procedures etc. in March-April 2021 as part of Population Education Club (PEC)
- 4 students carried out a Survey on Women’s Status in the Months of January-February-March 2021. where each of them interviewed 40 women and then compiled the data and analysed it. The consolidated analysis of the survey was made available to the Lifelong Learning and Extension department under the activity of Survey of Woman’s Status (SWS)
- 6 students carried out Online Technical Jobs as teaching assistants for Junior and Senior college staff and prepared notes, PPT, other documents etc. – all this was under the Industry-Oriented Project (IOP)
- 1 student registered as a Student Manager (SM). Under this activity, this student manager assisted extension work teachers to prepare the following – Registration list of students, organising 1st term and 2nd term training programme, guide and supervise other student volunteers

## Departmental Reports

ALL THE DEPARTMENTS ACROSS ALL FACULTIES SECURED 100 PERCENT RESULTS AT THE FINAL YEAR EXAMINATIONS HELD IN 2019-20.

### ❖ DEPARTMENT OF ENGLISH

- The Virtual International Fun with Words Competition under the aegis of English Literacy Association was conducted on 18th and 19th July 2020. The event saw a whopping total of 854 participants from across the globe, including students from Iraq, Oman, Spain, Australia, Germany, Netherlands, and the United States.
- The Short-Term Career-Oriented ‘Add on’ Certificate Course by the University of Mumbai – “Certificate Course in Conversational English” was conducted from November 2020 to February 2021. 73 students benefited from the same.
- Noted Speaker Mr. Suneel Agarwal was invited for a speech on “Thorns and Roses in Speaking” on 21st February 2021.
- Guest Lecture by Ms. Vandana Mishra conducted on 6th April 2021.
- A Webinar titled “Covid and Mental Health” was organised on 28th May 2021 to help students cope with the repercussions of the pandemic. There were 87 attendees in all.
- Creative Writing Competition organised for the Ratnamites on 18<sup>th</sup> June 2020 to submit articles (poetry, one act play, essay, short story, short documentary, short film, etc) on Pandemic and Lockdown along with sub-themes / by 30th June. (31 articles were received)

### ❖ DEPARTMENT OF MARATHI

- An interaction between alumni and students on Career Guidance was organised on 21st February 2021. It was an online event organised on the Google Meet platform.
- Magazine “Spandan” , which provides opportunity to students to showcase their creative and literary talent – was released on 28th February 2021
- Marathi Language Week was observed from 20th February 2021 to 28th February 2021 successfully, with the participation of a total of 34 participants.

### ❖ DEPARTMENT OF COMMERCE

- International webinar on “Impact factor, H-index & Google Scholar” was organised for the benefit of researchers, academics and students alike, on 29th June 2020. There were 893 PARTICIPANTS from ACROSS THE GLOBE
- Webinar titled “Innovation and Ethical Leadership” was organised on 30th September 2020 in collaboration with Institute for Leadership & Management UK
- Masterminds, the Commerce Association presented Zero Gravity the Commerce fest. where Intra and Inter- collegiate competition was held over a period of two days on 27th and 28th November 2020.

- A National Webinar on “Career Opportunities in the post-pandemic era” was organised on 27th and 28th November 2020. Students got awareness about job opportunities, areas of upskilling themselves to become employable. 826 Students from 35 colleges across India participated in the webinar.
- The Department partnered with the Institute of Leadership & Management, Tamworth, UK for conducting the International Leadership Week in June/ November 2020.
- B.Com Accounting & Finance department organised its maiden intra-collegiate event named “FINANZAS” on 30th March 2020. The event was organised under ‘Masterminds’, the Commerce Association.
- 18 students enrolled for the Certificate Course in Retail Management
- 15 students from the Department of Commerce successfully completed their internship on Entrepreneurship enhancement of tribal handicraft products through online portal.
- 6 students of SYBCom were mentored by Dr. Rebecca Thomas for the intercollegiate fest called Avishkar Research Festival.

#### ❖ DEPARTMENT OF BOTANY

- A Certificate Course on “Nutrition and Dietetics” by alumnus Ms. Nalini Singh was introduced for a duration of 60 days. 21 students enrolled for the same.
- 5 students were sent for “Spirulina Cultivation” to ICAR-CIFE, Versova, Mumbai as part of field project work from 18/3/21 to 21/3/21
- Webinar on COVID and Personal Protection Dr. Shailesh Wagale, Manager-Community Investment , from the NGO, United Way Mumbai(Arranged by alumnus of our department Ms. Karishma Lokhandwala who is working for NGO on 28th August
- A Workshop on Paper bag making organised on 5th February 2021
- Guest lecture on “Career aspects in perfumery and Cosmetic industry” and “Introduction to soil less culture” conducted by alumni Ms. Sara Faroqui and Dr. Chanda Maurya respectively on 15th March 2021
- Dr. A. P. Jayaraman , retd. Senior Nuclear Scientist, Chairman , National Centre for Science Communicators , President of STEAM Academy, gave a Guest Lecture on “Plagiarism and research integrity” on 31st March,2021.. It was organised for Teachers , Research Scholars & Post Graduate students to update about ethics in research & importance of research integrity. More than 100 participants were registered.
- Inhouse faculty of department of Botany conducted Online training / Lecture series on“ How to handle Microbes in Lab” with ppt for SYBSC (CB) & TYBSC (AC) Students in the mont of September.
- Week-long celebration of Van-Mahotsav (Slogan writing and e-poster making) from 1st to 7th July 2020 was organised.

- An “e-quiz competition” was organised to celebrate World Environment Day on 5th June 2020 and a whopping 431 participants, including one from Germany, were accounted for for the same. 196 students scored above 80% and all were given certificates.
- Guest Lecture by Dr. Sasirekha of Mithibai College on “ Friend or Foe- An insight about Fungi was conducted on 28th November, 2020
- Guest lecture on “Introduction to soilless culture” by Dr. Chanda Mourya , Ruia College , alumnus of the department on 26th March
- “Virtual Vigyan Tarang 2021” an outreach program under DBT Star Status (for school students) was organised in collaboration with Happie Foundation (Regd) & STEAM Foundation was conducted from 22nd March to 26th March 2021. More than 105 school students attended the program. Some of the schools which registered for the activity are :
  1. Pragatik Vidyalaya
  2. Colaba Municipal Secondary School
  3. R. A. U. B. S. English High School
  4. Vidya Vihar School
  5. Reliance Foundation School
  6. Dharavi Public School

#### ❖ DEPARTMENT OF CHEMISTRY

- National Webinar ( Intra college and inter college for students) on the topic: “Popular Science lecture on Glass in every walk of life : A versatile functional and structural material” by Resource Person Dr. G. P. Kothiyal, Former Head, Glass and Advanced Ceramics Division of BARC, conducted on 24th August 2020 and organised jointly by Departments of Physics and Chemistry in association with Indian Women Scientists Association and supported by Board of research in Nuclear Sciences -DAE
- Webinar on “How to make it to the top with a Science career” by Dr Prabodh Chobe, Ex Gen Manager BASF on 9th September 2020.
- Abdul Kalam Lecture series by Dr Shiju N Raveendran ,Associate Prof /Chair of Catalysis Engineering group Vant Hoff Institute of Molecular Sciences University of Amsterdam on 28th November 2020
- Webinar in collaboration with VKK Menon College on “IR and NMR Spectroscopy” and “What after BSc Chemistry?” by Suvarn Kulkarni, IIT Bombay and Retd(Prof) Lakshmy Ravishankar ,Vaze college on 19<sup>th</sup> and 20<sup>th</sup> March 2021
- Webinar on “How to Use Scientific Graphing and Molecule Editor Drawing Software by Dr Pramod Kalambate, Senior Researcher, Chulalongkorn (University, Thailand) and Dr Anita D. Pandey (Asst. Prof Dept of Chem, RJ College on 26th & 28th May 2020

- Webinar on “Prospects after graduation” by Dr Pramod.K Kalambate ,Senior Researcher,Chulalongkon on 29th May 2021

#### ❖ DEPARTMENT OF MATHEMATICS AND STATISTICS

- IIT JAM sessions organised under Career Guidance programme for students to equip them to appear for entrance examinations for further studies
- 20 TYBSc students attended a talk on ‘Entrepreneurship and Mathematics organised under DBT-Star College scheme by Ruia College on 3rd March 2021
- Four students of TYBSc participated in ‘One theorem and Applications” activity organised under DBT Star College under DBT-Star College scheme of Birla College, Kalyan
- Organised Webinar Series by Prof. Kaneenika Sinha, ISSER, Pune – titled ‘102 years of Circle method of Ramanujan and Hardy’ jointly with Ganit Sora
- Organised Lecture series commemorating National Mathematics Day in the month of December 2020
- 150 students and staff had enrolled for Python, BioPython. Blender, JchemPaint, R-software and Expeyes

#### ❖ DEPARTMENT OF ECONOMICS

- A Staff Training Programme on Modern methods of Teaching and Online Teaching Tools was conducted on 20th July 2020 to demonstrate various efficient ways of teaching students online. These methods have been implemented and found to be effective in teaching students online.
- A webinar on learning how to use Campusone for Attendance was conducted on 11th October 2020
- A Bridge Course on Quantitative Techniques was conducted for Arts students on 28th January 2021. A total of 22 students benefited from this session.
- An Interclass Competition on various topics – such as Eco-Word Crunch: A 1000 words essay, Eco-Xpress: A creative photo collage, Eco-News Correspondent, Eco-Prez, Eco-Biz Quiz, Eco-Logic Aptitude Test and Eco-Speaks – was conducted on 28th January.
- A Seminar on Appropriate Technology under Research Methodology was conducted for TYBA Economics students in August 2021

#### ❖ DEPARTMENT OF POLITICAL SCIENCE

- Awareness Programme on International Day of Democracy- discussion on the issues that endanger Democracies today was conducted in the SYBA class on 15th September 2020

- Webinar titled ‘Films as a medium for Learning about Politics was held on 23rd September 2020
- Two days Global Conference on the topic “WPC COVID-19 DIALOGUE Sectoral Impacts, Global Responses and Enhancing Resilience to Future Pandemics” was conducted on 24-25th September 2020 by NES Ratnam College in collaboration with Yunus Centre Dhaka, Bangladesh and Venuganga Foundation Aurangabad, India. Ms Surbhi Shah from the TYBA Political Science class worked in the organising team with Mr. Bawaskar (faculty member) and Ms. Aruna Shinde (alumnus of the department) as coordinator, moderator, and social media coordinator respectively. She’s also an intern in the Venuganga Foundation.
- Constitution Day was celebrated on the 26th of November 2020 with the FYBA Class by discussions on different issues that question the Constitutional validity in India
- A Plenary session on the topic “Valuing Water: Culture, Commodity and Understanding of Water” was organised for college students on 22nd March 2021. It’s goal was to sensitise the students towards the burning issues of water scarcity and water conservation etc.

#### ❖ DEPARTMENT OF BBI

- Webinar on “Consumerism and Financial Literacy in Covid 19 Times” was organised jointly with the Department of BMS on 12th November 2020
- Webinars on Investor Awareness Programme was organised on 23rd November 2020 and 21st January 2021
- Organised online seminar on Research Methodology and Data Analysis from 25th November 2020 to 12th December 2020.
- A webinar on "Digital Marketing, Online Earning & Personality Development" was conducted on 3rd April 2020
- Gained membership of the Bombay Management Association (BMA) for a year

#### ❖ DEPARTMENT OF BMS

- Webinar on “Consumerism and Financial Literacy in Covid 19” was conducted jointly with the Department of BBI on 12th November 2020 and 9th January 2021
- Webinar on Investor Awareness Programme was organised on 23rd November 2020.
- Webinar on "Digital Marketing, Online Earning & Personality Development" was organised on 3rd April 2021 for the students.

#### ❖ DEPARTMENT OF COMPUTER SCIENCE

- Webinar on DataScience Career & Job Prospects by ITVedant on 25th November 2020
- E-content developed on “Cloud Computing” via Youtube Blogger and launched between 1st and 30th April 2020

- Deepak A. created an app called COVID19 Prediction Bot using Natural Language - This app can predict whether the person is corona positive by analysing certain parameters. It can be used by doctors, health workers and common citizens during COVID-19 pandemic. And another App called Fiana (Skin Tumour Prediction ChatBot) - Fiana is a chatbot in which you can analyse yourself for skin allergy and tumour. This app can be used by doctors, health workers as well as common citizens

#### ❖ DEPARTMENT OF ZOOLOGY

- The 124th Birth Anniversary of Dr. Salim Ali was celebrated by releasing his Autobiography on 12th November 2020. Following competitions were organised:
  1. Virtual Jungle – Adventures of Jake
  2. Wildlife Quiz Carnival
  3. Forest Owlet Conservation Day
  4. Captura 2020
  5. Poster making competition
  6. Slogan writing competition
  7. Quiz-O-Gamey
  8. World Sparrow Day celebration
  9. Photography Competition
  10. Slogan Writing on Sparrow
  11. Sparrow Carving, and,
  12. Puzzle Geek
- Mr. Nitin Joil (Alumnus -2017-18) Ms. Radhika Madalgi (Alumna – 2006-07) and Mr. Sarvesh Kumar Sharma (Alumnus – 2014-15) were gracious to present their area of expertise to the students under the topics “Virtual Study Trip to Kunkavle”, “Presentation on ‘Polymerase Chain Reaction and its applications’.” and “Presentation on ‘Air Quality Management and Source Apportionment Study’.” respectively.
- Celebration of Wildlife Week – “Virtual Jungle – Adventures of Jake” and “Wildlife Quiz Carnival” on 08<sup>th</sup> and 10<sup>th</sup> October 2020
- Celebration of Forest Owlet Conservation Day – Essay writing and drawing competition on 24<sup>th</sup> October 2020
- Celebration of “Bird Week” 5th to 12th November 2020 – Video making Competition – on local biodiversity on 7<sup>th</sup> November 2020
- Guest Lecture on “Impact of Molecular Genetics on Clinical Management of Inherited Diseases” – Dr. APJ Abdul Kalam Lecture Series by Dr. Parvathy Venugopal, Postdoctoral Research Fellow, Maddie-Riewoldt’s Vision Fellow, Department of Genetics and Molecular Pathology, Centre for Cancer Biology, Adelaide, Australia
- 106 students from 7 schools in Bhandup and 1 school in Dharavi participated in an Outreach programme called “Presentation on Evolution of organisms” – under the aegis of Zoology Department’s DBT Star Status under the Virtual Vigyan Tarang on 23rd March 2021

## Faculty Development

- ❖ Dr. Lata Swaminathan
  - presented a research paper titled " Understanding Plato and Chanakya's Leadership Models and their Relevance in Contemporary Corporate Leadership" at GKA Human 2020 Virtual - 9th International Conference on Humanities from November 2-4 in collaboration with American College of Greece
- ❖ Dr. Sunita Chahar
  - gave a lecture on Impact of COVID on Ecosystem for the celebration of World Environment Day on 5th June 2021, organised by Patkar College, Goregaon, Mumbai
  - attended Orientation programme from 8th May 2021 to 17th May 2021
- ❖ Dr. Jayasree Sasangan was the resource person for the Online Peer review of Semester IV SYBSc Zoology University Textbook
- ❖ Dr. Akanksha Gawade
  - Published a Research paper by the title ‘Contribution Of Women In Marathi Literature’ at a National level webinar.
- ❖ Dr. Jayasree Gopalan
  - was Convener and Resource Person for One Week National Level Workshop (FDP) from 05/06/2020 to 12/06/20 on Effective use of LMS (GC & MOODLE) for ICT enabled teaching- learning Process at NES Ratnam College of Science, Arts and Commerce
- ❖ Dr. Rupali Patel
  - “Fabricating multi layer anti reflective coating for near complete transmittance in broadband visible light spectrum” Rupali Patel , Optical Materials, Volume 108, October 2020, 110415
- ❖ Dr. R. Vijayalakshmi
  - Developed e-content on the module ‘Nationalism and Imperialism’ for undergraduate courses on the MOOC platform of IDOL – Mumbai University



❖ Dr. Sangeeta Roy

- Chaired a Session on during the WPC Covid Dialogue held in collaboration with Water Policy Centre and Yunus Centre, Bangladesh on 24<sup>th</sup> September 2020
- Guest lecturer at K.E.T.'s V.G. Vaze College (Autonomous), Mulund for TYBA Political Science on the topic 'Films as a Medium for Learning about Politics' on 23<sup>rd</sup> September 2020 via Zoom app

❖ Dr. Jyothi Sadasivam

- Presented a paper titled Ecological Crusaders in Indian Children's Fiction at the International e-Conference on "Environment, Literature and Culture" on 11th-12th September 2020, organised by Higher Education and Research Society, Mumbai

❖ Dr. Phebe Kingsley Mal

- Co-authored Book on "Concise Graduate Chemistry, FYBSc Semester-II, Paper- II", University of Mumbai ISBN: 978-81-942249-6-9 (Chapters- Ionic Equilibrium, Molecular Spectroscopy, Solid state Chemistry)
- Wrote a chapter titled "Ionic Equilibrium, Molecular Spectroscopy, Solid state Chemistry" in the Concise Graduate Chemistry, FYBSc Semester II, Paper II, University of Mumbai ISBN: 978-81-942249-6-9

❖ Ms. Sumali Bose

- Invited to judge a photography competition on Ganpati images conducted by The Global Assembly: Travel and Photography Forum, Mumbai
- Nominated by University of Mumbai to the Board of Studies in Foundation Course at Vaze College for three consecutive years and attended Virtual Meeting as on 20th August 2020
- Appointed member of the syllabus sub-committee for FYBA English Literature i.e., Paper I (Introduction to Prose and Fiction) under the Board of Studies in English
- Became Member of the National Advisory Committee in the steering of International Web Symposium on "Biomedical Instrumentation: A Boon to Healthcare Industry – 2020" (BIBHI – 2020), held on 26th and 27th June 2020

❖ Ms. Shweta Belose

- was the resource person for the workshop on Horticulture & Herbarium Preparation organised by Department of Biotechnology, Karmveer Bhaurao Patil College, Vashi on 28th & 29th January 2021

❖ Mrs. Riya Rupani:

- Has participated in the One-Day International webinar on "Management from Mahatma Gandhi and Abraham Lincolns perspectives organised by IQAC in collaboration with forum for F. A. S. E. S of SIES (Nerul) College of Arts, science and Commerce on 14th August, 2020.
- Has participated in National level one week Faculty Development Programme on Research Methodology from 26th April to 1st May 2021 organised by Amar Sewa Mandal's Kamla Nehru Mahavidyalaya, Nagpur.
- Successfully completed the fourth credit course Academic writing with a consolidated score of 95% from the evaluation based on continuous online assessment and the proctored examination held in the month of September 2020. (Swayam Online Course Certification).

❖ Mr. Rajiv Mishra:

- Successfully completed online faculty Induction programme of UGC-HRDC, Kannur University, Kerala from 3rd September, 2020 to 2nd October 2020.

❖ Mrs. Tejashwari Dodamani

- Awarded with National youth award 2021 by Dudhare Sports Foundation on 23rd January 2021
- Presented a paper on 'A critical study on impact of COVID 19 on Hotel Industry with special reference to Mumbai suburban area' at the international 2021 Business Conference on 6<sup>th</sup>-7<sup>th</sup> May 2021

❖ Dr. Rupesh Dhruvanshi

- Awarded with National youth award 2021 by Dudhare Sports Foundation on 23rd January 2021
- Presented a paper on 'A critical analysis on the impact of COVID 19 on SME sector with respect to labourers of Textile Industries of Bhiwandi region' at the international 2021 Business Conference on 6th-7th May 2021

❖ Mr. Shivam Yadav

- was the resource person for the staff training programme on 7th May 2021 for Saraswati Vidyabhavan College of Pharmacy on the topic - “Video Presentation in PowerPoint”

❖ Mrs. Susanna Muntode

- Participated 7 days online Faculty Development Program on Research Methodology organised by MKMP senior college from 24th to 31st May, 2021

❖ Mrs. Veena B. Kamat

- organised a Webinar on -Conclave on “Transformational Reforms in Higher Education under NEP address by the Prime Minister” on 7th August 2020
- was the resource person for the revised syllabus of FYBSc., jointly organised by BOS in Mathematics and Ruparel College on 19th August 2020.
- Attended the MTA National Conference organised by MTA, HBCSE, Mankhurd, Mumbai on 5th, 6th September 2020
- Organised a IWM-Visitors Programme including a webinar on ‘Measuring Symmetry with Finite Groups’ by Prof. Cheryl E. Praeger, Dept. of Mathematics, University of Western Australia on 25th September 2020

❖ Mrs. Bhakti Velankar

- was the resource person for Mathematical Modelling and Simulation Software - Maple on 28th July 2020 organised by Government Engineering College, Nagpur

❖ Dr. Nithya S

- Participated in International Webinar on “ Mathematical Modeling and Data Analysis ” organised by ORSI-Ajmer Chapter & Department of Mathematics Samrat Prithviraj Chauhan Government College, Ajmer on 05-08-20
- Participated in Four-Day Online National Conference on Pure and Applied Mathematics (NCPAM-2020) Organised By Department of Mathematics Karnatak Law Society’s GOGTE INSTITUTE OF TECHNOLOGY, BELAGAVI from 11- 08-20 to 14-08-20

❖ Ms. Mahalaxmi Pillai

- wrote a research paper titled “Thermoregulating the body temperature externally with the help of thermoregulating gear to prevent sunstroke” in the International Journal of Scientific & Engineering Research (IJSER) on 21st

## **DBT Activities:**

### **I. Participation and honours received in Research Conventions and competitions:**

**i) Development of cost effective and eco friendly working Laminar Air Flow model for laboratories:** Ms. Sonal Maharana, Student of Zoology department presented the model of laminar air flow prepared by her and **bagged third rank** in Pure Sciences category at UG level in the **15<sup>th</sup> Intercollegiate Avishkar Research Convention 2020-21 of University of Mumbai on 23<sup>rd</sup> June 2021.**

**ii) Citric Acid based Biodegradable Polyester Elastomer using Coconut Oil:** Ms. Shaikh Mariyam & Ms. R. Vaishnavi students of chemistry department, presented their project in the **Final Round** of 15th Inter-Collegiate Avishkar Research Convention 2020-21 of University of Mumbai on 23<sup>rd</sup> June, 2021.

**iv) Nine students of Mathematics Department** participated in the Online Intercollegiate Science Festival - Pravah 2021-“ Nurture the Nature” organized by B.K. Birla (Autonomous College) Kalyan, under DBT-Star Status from 8<sup>th</sup> to 9<sup>th</sup> March 2021 out of which Ms. Rotti Bharathi bagged **second prize** for her PPT presentation of the project “ Pell’s Equation”.

**iii) Eight students from Botany and Chemistry Departments** presented their research projects in first round of 15th Inter-Collegiate Avishkar Research Convention: 2020-21 of University of Mumbai on 23<sup>rd</sup> June, 2021.

### **II. Setting up of home labs:**

**i) Ms. Anshu Kadam, Mr. Omkar B., Mr. Kunal Kadam, Students of Zoology department received K S Krishnan award by TIFR - CUBE ( Tata Institute of Fundamental Research- Collaborative Undergraduate Biology Education) for their exemplary contribution in developing home lab for the isolation of *Caenorhabditis elegans* from soil by developing substitutes for Agar plates.**

**ii) Ms. Aakanksha Sunil Kumar was awarded – Young scientist 2020-21 by CUBE for her work on Zebra fish.**

**iii) Mr. Kunal Kadam has prepared a booklet of 74 bird’s photos captured by him from November 2020 to June 2021, by taking a special permission from Thane Municipal Corporation to watch birds at Bhandup Pumping Station which is a Birding Paradise Station now declared as Thane creek Flamingo Sanctuary for development and betterment of the Biodiversity hotspot.**

ii) Students of Botany Department, Ms. Shaheen Khan and Ms. Kareena Dhuri are studying Sleep-Wake cycle of *Phyllanthus amarus* plant at home and are presenting their work in TIFR-CUBE platform regularly.

### III. Skill development courses:

#### i) Physics Department-

- a) Five students of SYBSc Physics Ms. Shalini S., Deepak S., Tulika S, Adesh D., Abhida N. have successfully completed 30 hrs. training STCC @ RUSA on “solar based green energy solution” conducted by department of physics , Guru Nanak Khalsa College, Matunga from 9<sup>th</sup> January to 28<sup>th</sup> January 2021 and are working on developing the solar panels.
- b) **Summer Training:** Three students attended Summer School on “ Computational Physics 2021 “ conducted by Indian Association of Physics Teachers (IAPT) from 17<sup>th</sup> May to 29<sup>th</sup> May 2021.

**ii) Mathematics Department: Training in Spoken Tutorials** – An initiative of the Ministry of Human Resource Development and IIT- Bombay. 150 students and staff have enrolled for Python, BioPython. Blender, JchemPaint , R- software and Expeyes. The course is in progress.

**iii) Botany & Zoology Departments:** Five students of SYBSc & TYBSc (Botany & Zoology), Ms. Manasi Pote, Ms. Sakshi Tripathi, Ms. Shrusti Rane, Mr. Sanjay Yadav and Ms. Kshamita Baviskar completed 4 Days training program on Spirulina cultivation at Indian Council of Agricultural Research – Central Institute of Fisheries Education, Versova , Mumbai from 15<sup>th</sup> March to 19<sup>th</sup> March 2021.

### IV. Activities in collaboration with STEAM Academy ( Outreach activities)

STEAM Academy provided resource persons for organising outreach activities for school students.

The topics chosen for the five departments were Botany- “Taxonomy”, Zoology- “Evolution”, Chemistry –“ Water’, Physics – “ Reflection of light” Mathematics – “ Surface Areas and Volumes”. Students from 8 schools ( 90 students) attended the program online on 5 days from 22<sup>nd</sup> March 21 to 26<sup>th</sup> March 21. The students were coordinated through “Happie Foundation”- working for the underprivileged school students.

**V. Dr.A. P. J. Abdul Kalam Memorial Lecture Series: Series of lectures were organized by each Department.** Eminent people were invited to give talks like Dr. Ashish Arora , Institute of Physics, University of Muenster, Germany, Dr Shiju N Raveendran, Associate Prof,Chair of Catalysis Engineering group Vant Hoff Institute of Molecular Sciences University of Amsterdam, Dr. Pramod K Kalambate ,Senior Researcher, Chulalongkon, University of Thailand, Dr. Parvathy Venugopal, Maddie-Riewoldt, Fellow, Centre for Cancer Biology.

**VI. Academic Fest - SCI-TREK** - Inter & Intra Collegiate Competitions like quiz, slogan writing, e-poster making, photography & puzzle contest were conducted online by all the five departments.

## Students' Achievements

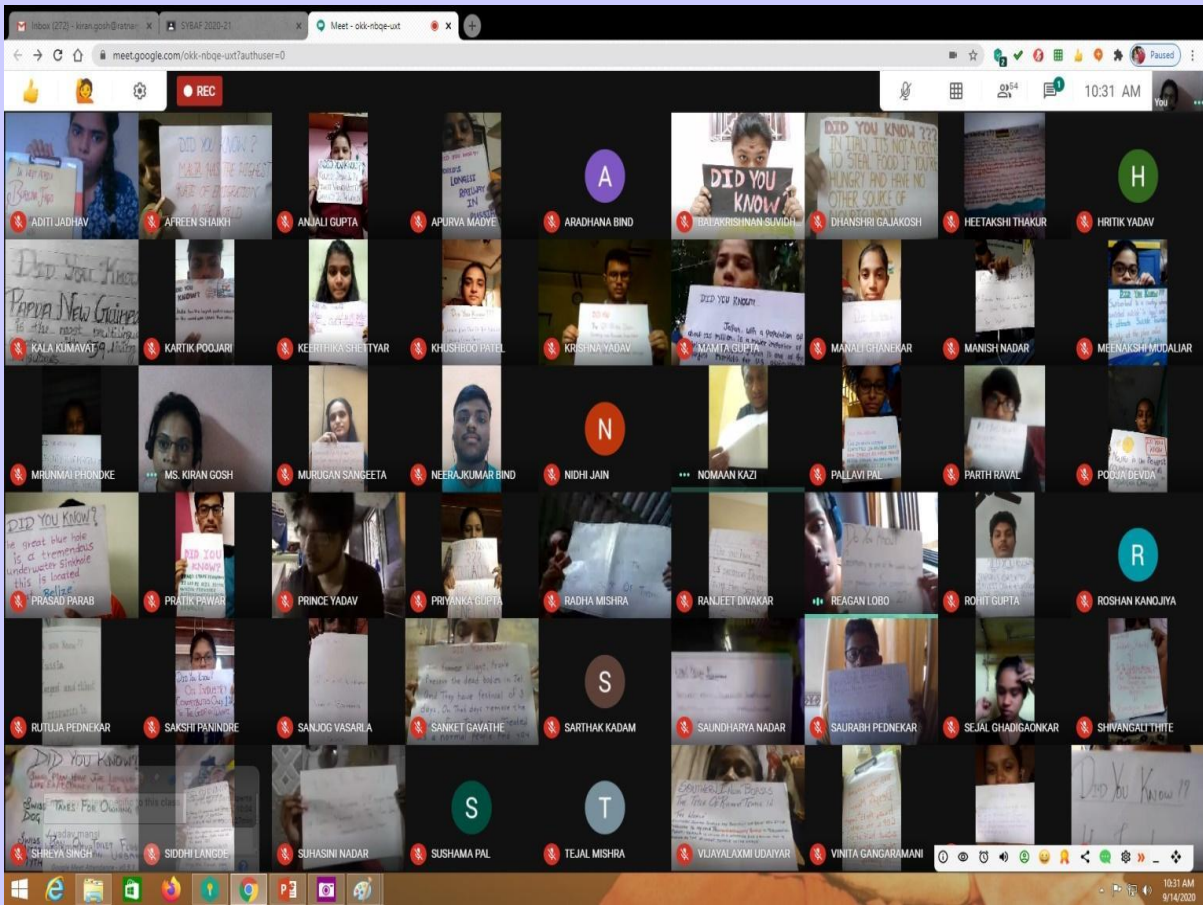
- Ms. Vandana Mishra, a student of English Literature, qualified the IELTS, an international level examination, during the academic year 2020-2021
- Ms Samona Punjabi from the 2019-20 batch of Political Science qualified the IELTS, an international level examination, during the academic year 2020-2021
- Ms. Sonal Maharana, Student of Zoology department presented the model of cost-effective and eco-friendly laminar air flow prepared by her and bagged third rank in Pure Sciences category at UG level in the 15th Intercollegiate Avishkar Research Convention 2020-21 of University of Mumbai on 23rd June 2021
- Ms. Shaikh Mariyam & Ms. R. Vaishnavi- students of chemistry department, presented their project on: Citric Acid based Biodegradable Polyester Elastomer using Coconut Oil in the Final Round of 15th Inter-Collegiate Avishkar Research Convention 2020-21 of University of Mumbai on 23rd June 2021
- Ms. Rotti Bharathi bagged second prize for her PPT presentation of the project “Pell’s Equation” at the Online Intercollegiate Science Festival - Pravah 2021- “Nurture the Nature” organised by B.K. Birla (Autonomous College) Kalyan, under DBT-Star Status from 8th to 9th March 2021 out of which
- Ms. Anshu Kadam, Mr.Omkar B., Mr.Kunal Kadam, i.e. Students of Zoology department received K S Krishnan award by TIFR - CUBE (Tata Institute of Fundamental Research- Collaborative Undergraduate Biology Education) for their exemplary contribution in developing home lab for the isolation of *Coenorhabditis elegans* from soil by developing substitutes for Agar plates.
- Ms.Aakanksha Sunil Kumar was awarded – Young scientist 2020-21 by CUBE for her work on Zebra fish.
- Akshay Kambale of SYBA awarded Best student of Marathi department as he participates in each & every academic & co-curricular activities. He is a successful Class Representative, Excellent Leader, and successful in his academic carrier, He own several prizes in various competitions
- Shruti Bhise, Sakshi Gosavi, Aniket Ligam and Hemant Kank of FYBA, FYBSc, FYJC, and TYBSC classes won the 1st , 2nd, 3rd and consolation prizes respectively in the Lekhan competition.
- Vishal Pawar (TYBA), Anuja Panchal (TYBA) and Siddhi Shinde (SYBSC) bagged the 1st, 2nd, and 3rd prizes in the Poster Making on Marathi Poems Competition.
- For the Magazine Spandan – Front Page making competition, Akshay Kambale (SYBA), Khushbu Patil (SYBA) and Maheshwari J. (SYBA) won the 1st, 2nd and 3rd prizes respectively.
- Sujay Patil of SYBSc won the first prize for video-making competition ‘Mahitipat’.
- Shubham Dakare (FYBA) and Dipali Raut (TYBSc) were awarded 1st and 2nd prize respectively
- Shweta Khambe (TYBA) won the 1st prize in Slogan writing competition



- Vishal Pawar (TYBA), Akshay Kamble-Khushboo Patil (SYBA) and Maheshwary J.- Sayali Lad (SYBA) won the 1st, 2nd and 3rd prizes for Conversation in BOLI respectively.
- Aratrika Roy (SYBSc) bagged the following awards – 1st prize in Essay Writing at Vande Mataram College, 3rd prize in Message Collage Making at Jnan Vikas Mandal's College, and the 4th prize in an online quiz at the Jnan Vikas Mandal's College.
- Aanchal Chavan (TYBSc), Sujay Patil (SYBSc), Mansi Parab (FYBSc) and Aratrika Roy (SYBSc) bagged the 1st, 2nd, 3rd and Consolation prizes in “CHEM Speak 20-21”
- Mansi Parab & SHakira Khan (FYBSc), Swati Mishra (TYBSc) and Aratrika Roy (SYBSc) won the 1st, 2nd and 3rd prizes respectively in “CHEM Article 20-21”
- Bharathi Rotti (TYBSc) won second prize for her presentation on ‘Pell's Equation and its Applications’

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# Activity Photographs



Online revision session conducted by Commerce Dept in September 2020



Leadership Webinar conducted under the banner of Zerogravity 2020-2021

# NES RATNAM COLLEGE OF ARTS, SCIENCE & COMMERCE

MANZIL 2020 – 2021  
..... THE ULTIMATE DESTINATION

NAME OF THE EVENT : GAMIFY BANKING

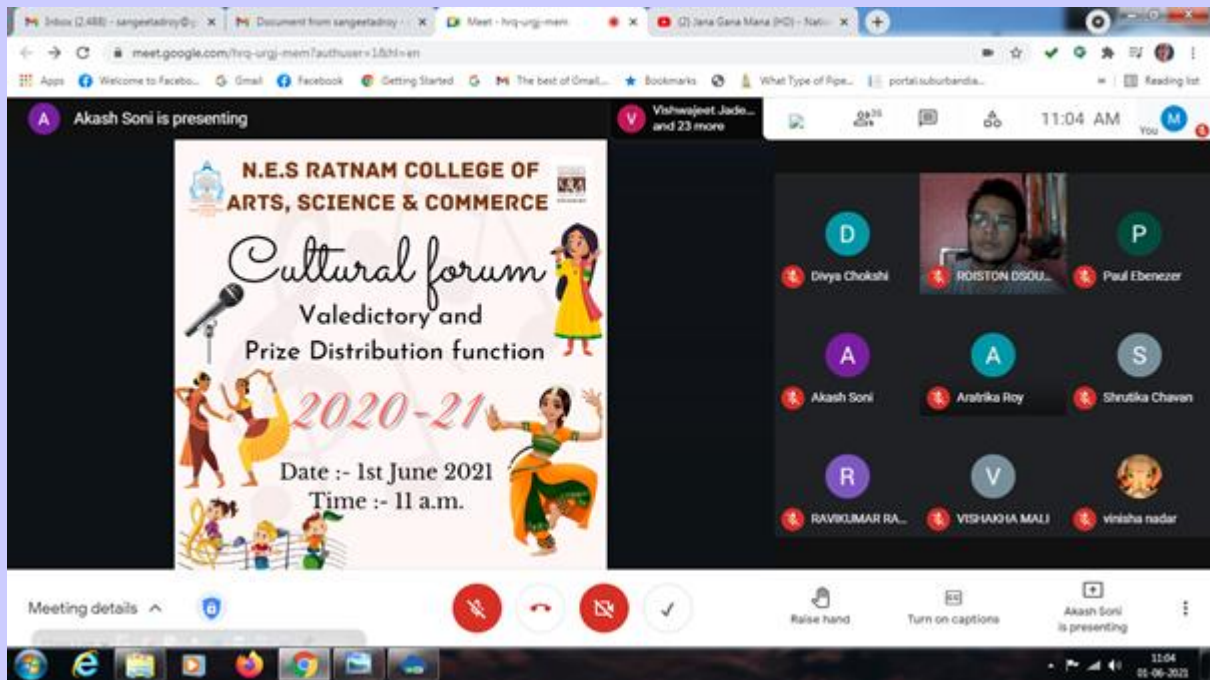
A HEARTY WELCOME TO  
ALL THE PARTICIPANTS



Manzil 2020, the BBI event, held annually, was conducted online due to the Pandemic

The screenshot displays a Zoom meeting in progress. The central focus is a presentation slide titled "NEW AGE BANKING CHANNELS" which lists four types of banking channels: "Bank Branches", "E Lobbies / Satellite Branches", "Net Banking", and "Phone Banking". Each channel is accompanied by a small representative image. To the right of the slide, a grid of participant video thumbnails is visible, showing various attendees, some with their names partially visible like "35.Poonam Son...", "TarannumSheikh", and "120.Vedant Parab". The bottom of the screen shows the Zoom control bar with icons for Unmute, Start Video, Participants (207), Q&A, Chat, Share Screen, Raise Hand, Record, and a red Leave button. A Windows watermark is also present at the bottom right.

BBI guest lectures conducted online during the academic year 2020-2021



Cultural Forum conducted its entire event right from the Inauguration to the Valedictory function online in the year 2020



International Yoga Day celebrations organised by Gymkhana Committee



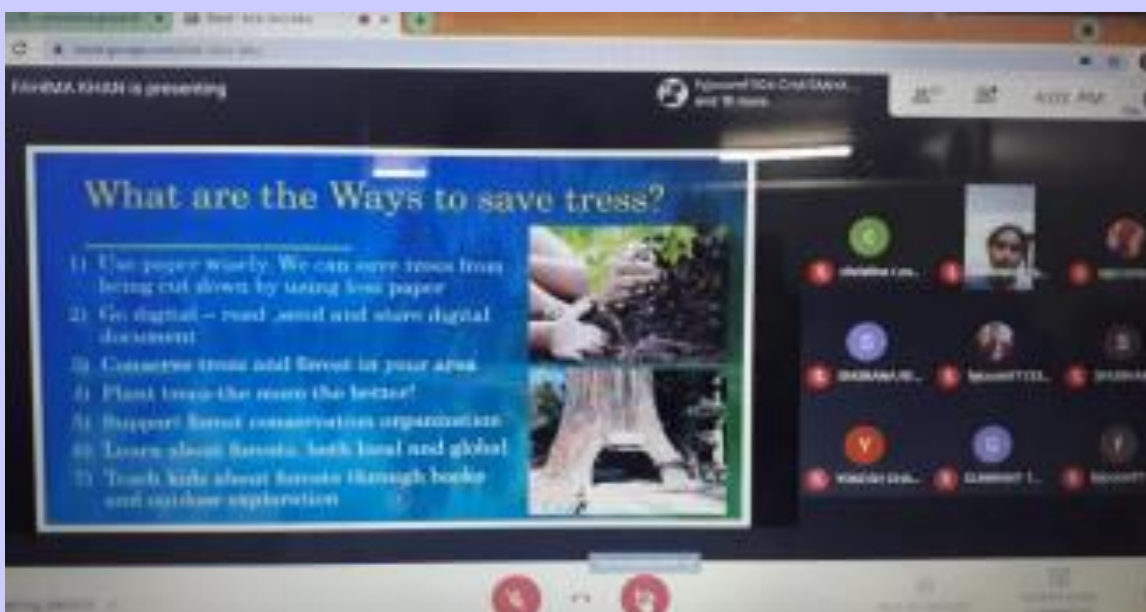
Self-Defence Training Programme undertaken by the Gymkhana Committee



Ratnam Volleyball Team with the Winning Trophy



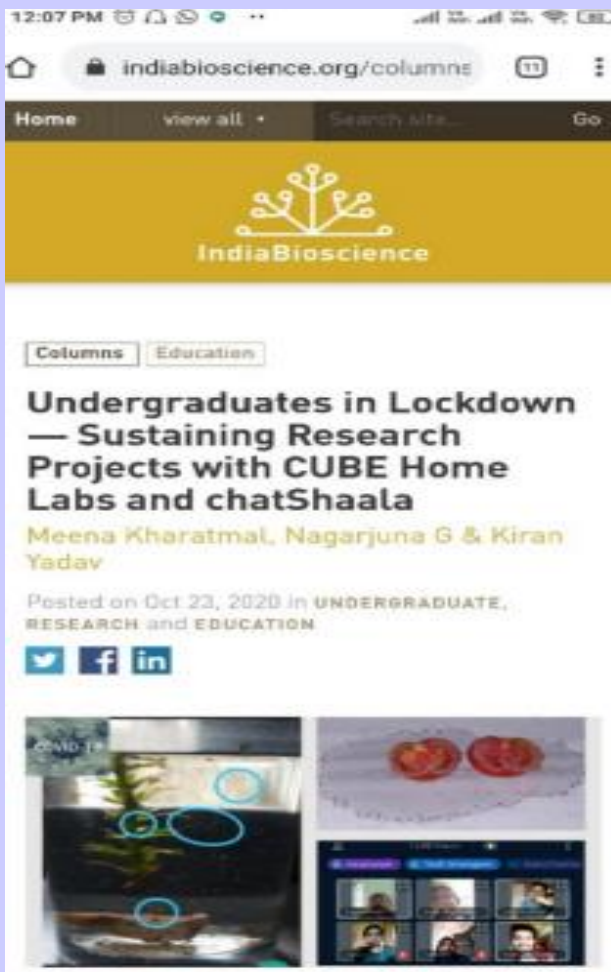
Chess Training Programme organised during the academic year 2020-2021



Training programme of LLE organised to guide and supervise other student volunteers for works to be done throughout the year in 2020-2021



LLE session on Girl Child empowerment and Government policies for the same



Online discussion by Zoology department on ‘Sustaining REsearch Projects with CUBE Home Labs in the year 2020-2021



University of Mumbai  
15<sup>th</sup> Inter-Collegiate/  
Institute/Department  
**AVISHKAR**  
Research Convention: 2020-21  
**SELECTION ROUND**  
(District/Zonal Level Research Proposal Competition)

## *Certificate of Participation*

This is to certify that **Dr. Sunita Chahar** of **NES Ratnam College of Arts, Science and Commerce, Bhandup** has guided a research proposal titled **Synthesis and Characterization of Chitosan from Shrimp Shells and its use as Biofertilizer in Zea mays**, which was submitted by **Ms. Ravindra Singh Nalini** in **Agriculture and Animal Husbandry** category and **PPG** level for the **Selection Round** of **15th Inter-Collegiate / Institute / Department Avishkar Research Convention: 2020-21** for zone.

  
**Dr. (Mrs.) Minakshi Gurav**  
OSD,  
Avishkar Research Convention,  
University of Mumbai

  
**Dr. Sunil Patil**  
Director,  
Department of Students' Development,  
University of Mumbai

Mumbai  
April 12, 2021



Research Proposal accepted and selected for the 15th Inter-collegiate Avishkar Research Convention 2020-2021

And, many more...

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