



## KISHINCHAND CHELLARAM COLLEGE CHURCHGATE, MUMBAI 400020

## DBT STAR STATUS ANNUAL REPORT

Period: April 2020 - March 2021

## **ANNEXURES**

## **DEPARTMENTS**

BIOTECHNOLOGY

**CHEMISTRY** 

LIFE SCIENCES

**MICROBIOLOGY** 

**STATISTICS** 

### <u>SUPPORTING ANNEXURES FOR STAR STATUS REPORT 2020 – 2021</u> <u>KISHINCHAND CHELLARAM COLLEGE, MUMBAI</u>

#### **APPENDIX FOR ANNEXURE**

- B) HANDS ON EXPERIMENTS
- C) NEW PRACTICALS
- D) TRAINING RECEIVED BY FACULTY
- E) EXHIBITION
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- K) INVITED LECTURES
- L) BOOKS
- M) PUBLICATIONS IF ANY
- N) ANY OTHER SUPPORTING DOCUMENT

## **DEPARTMENT OF BIOTECHNOLOGY**

## A) RESEARCH PROJECTS

Projects: Completed (15)			
Sr No.	Students	Title of the project	Mentor Teacher
1	Chaurasia Jay, KalaniMohit, Kadam Chaitanya, Ranjika Bhattacharya (Microbiology + Biotechnology) T.Y.B.Sc (1)	A study on comparison of efficiency of Low- Density Polyethene (LDPE) degradation under anaerobic and aerobic conditions by anaerobic bacteria and aerobic <i>Aspergillus</i> species isolated from soil	Dr. Sejal Rathod, Dr. Pratibha Shah, Ms.Hajra Gupta (Microbiology + Biotechnology)
2	Priya Manglani, Maria Siddiqui, Deepti Shrigadi T.Y.B.Sc (3)	A broad study on allelopathic potential of Cannonball fruit and leaf extracts on growth promotion of vegetables and growth inhibition of unwanted weeds.	Ms. Hajra Gupta
3	Kiran Dhaliwal, Ananya Nair, Prerna Kukreja, Tannishtha Shetty TYBSc(4)	Development of a modified Zimmermann HPAKT colorimetric assay to detect testosterone using urine and devising a unique test series for contemplating PCOS in females	Ms. Hajra Gupta
4	Megha Shetty, Amisha Malaviya, Mikael Varghese T.Y.B.Sc (3)	Laboratory Scale Production of Bio oil from <i>Oscillatoria</i> Algae and its application in production of Biodiesel.	Ms. Prachi Bhatia
5	Hufriya Tantra, Afreen Supariwala, Aneeka Shaikh T.Y.B.Sc (3)	Formulation of a novel bacterial - fungal biofertiliser, it's comparison for plant growth promotion with existing chemical fertiliser and evaluation of biochemical properties of soil.	Ms. Hajra Gupta
6	Aditya Achar, Rachel Anthony T.Y.B.Sc (2)	Development of edible and biodegradable food coating on commonly used fruits and vegetables	Ms. Prachi Bhatia
7	Arunika Sherry T.Y.B.Sc (1)	A sequence comparison & structure prediction- based bioinformatics study on protein function annotation of Small Integral Membrane Protein 23 (SMIM23)	Dr. Pratibha Shah, Ms.Hajra Gupta
8	KavyaZaveri T.Y.B.Sc (1)	The Gut Feeling: Isolation of Dopamine producing organisms, from the Gut microbiome	Dr. Pratibha Shah Ms. Prachi Bhatia
9	Soma Bhunia, Gauthami Bitla, Dolly Pandit. T.Y.B.Sc (3)	Optimization of MRS media with an organic waste substitute and assessing the potential of gut <i>Lactobacilli</i> in ink degradation	Ms Hajra Gupta
10	Ayesha Momin, Saurav Talmale, Apurva Juwatkar, Simran Lawerence T.Y.B.Sc (4)	Isolation and primary screening of biosurfactant producing marine microbes	Dr. SejalRathod Ms. Richa Shah
11	Akhilesh Shinde, Saniya Kazi, Tenzin mingyur T.Y.B.Sc (3)	Comparative Study of the Antimicrobial Activity of various Plant Extracts against Dandruff Causing organism	Dr. SejalRathod Ms. Richa Shah
12	Laveena Goswami, Tanya Devnani, Tanvi Bhaye T.Y.B.Sc (3)	Formulation and evaluation of an Antiseptic Ointment Using Natural Extracts	Ms. Prachi Bhatia
13	Harsh Gala T.Y.B.Sc (1)	Isolation of Pseudomonas aeruginosa from	Dr. SejalRathod

		garden soil and evaluation of its potential as a	Ms. Hajra Gupta
		bacterial inoculum for the production of 6-	
		Aminopenicillaic acid	
14	Hamza Qazi T.Y.B.Sc	Study of spoilage organisms from dried coconut	Ms. Hajra Gupta
	(1)	and extraction and estimation of it's fatty acid	
		content	
15	Madhu Appugol	Effect of refrigeration on Vitamin C content of	Ms. Hajra Gupta
	T.Y.B.Sc (1)	fruits and vegetables	_

	Projects: Ongoing (12)			
Sr No	Students	Title of the project	Mentor Teacher	
1	Akansha Patwa, Christine Carvalho, Neeti Parmar, Pratiksha Sakpal S.Y.B.Sc (4)	Bioplastic production using banana and orange peel	Dr. SejalRathod Ms . Neha Manoti	
2	Didhiti Agarwal Dhevang Rokkala, Shreyas Tawde S.Y.B.Sc- (3)	Study the uses and effects of Pyoverdines produced by <i>Pseudomonas aeruginosa</i> on microbial consortia	Dr. Sejal Rathod	
3	Reetikesh Patel S.Y.B.Sc(1)	Effects of D-amino acids and Polyamines on <i>Pseudomonas aeruginosa</i> biofilm.	Dr. Sejal Rathod Ms Hajra Gupta	
4	Ayush Limbachiya, Pranav Tejani, Noella Dsouza S.Y.B.Sc (3)	Extraction of caffeine and study of its properties	Dr. Pratibha Shah Ms. Neha Manoti	
5	Naina Bhanjer S.Y.B.Sc-(1)	Evaluation of prebiotic properties on plant extracts	Dr. Sejal Rathod	
6	Maahenoor Mansoori Zaamena Ansari, Ritika Manawat S.Y.B.Sc (4)	Isolation and characteristic of fertilizer degrading organism.	Ms. Chinmayee Mahadik	
7	Anushka Menon Shivangi Mishra, Mugdhali Sawant S.Y.B.Sc (3)	Bio-Ethanol Production from Banana Peel, groundnut peel and corn cob by using cultures Aspergillus niger and Saccharomyces cerevisiae	Ms. Hajra Gupta	
8	Sonam Gupta, Sera Fernandes S.Y,B.Sc (2)	Bioremediation of petroleum polluted soil using hydrocarbon degrading fungi	Dr. Sejal Rathod Ms Hajra Gupta	
9	Yashica Gupta, Bhakti Patkar, Simran Bedi, Mansi Jain S.Y.B.Sc (4)	Oil extraction from microorganisms	Ms. Chinmayee Mahadik	
10	Pawan Nagarkar, Abhishek Mhatre, Deepshika Dutta S.Y.B.Sc (3)	Isolation, identification& study of antimicrobial property of a bioactive compound in an Indian medical plant Acalyphaindica	Dr. Sejal Rathod Ms. Neha Manoti	
11	Ansh Jain, Karishma Jain, Aditi Verma S.Y.B.Sc(3)	Keratin Production by Decomposing Feather Waste Using Some Local <i>Bacillus spp</i> . Isolated From Poultry Soil	Ms. Hajra Gupta Ms. Neha Manoti	
12	Meera Konar, Aafra Mujawar, Peenal Mistry Priya Jogra S.Y.B.Sc(4)	Isolation of sulphate reducing bacteria and corrosion by sulphate reducing bacteria.	Ms. Chinmayee Mahadik Ms. Neha Manoti	

	Projects: Completed (14)			
Sr No	Students	Title of the project	Mentor Teacher	
1	Akansha Patwa, hristine Carvalho, Neeti Parmar Pratiksha Sakpal T.Y.B.Sc (4)	Extraction of flavonoids from hibiscus, ginger, garlic, and Black pepper and evaluation of its antioxidant and antimicrobial activity	Dr. Sejal Rathod Ms . Neha Manoti	
2	Didhiti Agarwal, Dhevang Rokkala, Shreyas Tawde T.Y.B.Sc (3)	Isolation of <i>Pseudomonas</i> species from soil sample and evaluation of its potential as an antimicrobial agent and for production of pyoverdin.	Dr. Sejal Rathod Ms. Prachi Bhatia	
3	Reetikesh Patel T.Y.BSc (1)	Action of antibiotics on <i>Pseudomonas</i> aeruginosa Biofilms using Liposome mediated delivery system.	Dr. Sejal Rathod	
4	Ayush Limbachiya, Pranav Tejani, Noella Dsouza T.Y. B.Sc (3)	Antimicrobial and phytochemical studies of lemon peel, potato peel and onion peel extract and their potential applications as biopreservatives and natural dyes	Ms. Neha Manoti Ms. Chinmayee Mahadik	
5	Naina Bhanjer T.Y. B.Sc (1)	Evaluation of prebiotic & antimicrobial properties of natural extracts	Dr. Sejal Rathod Ms. Prachi Bhatia	
6	Maahenoor Mansoori, Zaamena Zahera Ansari, Ritika Manawat T.Y. B.Sc (3)	Evaluation of antimicrobial activity of extracts from coriander, mint and spinach	Ms. Prachi Bhatia Ms. Chinmayee Mahadik	
7	Sonam Gupta, Sera Fernandes T.Y. B.Sc (2)	Bioremediation of grease oil polluted soil using PAHs degrading fungi	Dr. SejalRathod	
8	Pawan Nagarkar, Abhishek Mhatre, Deepshika Dutta T.Y.B.Sc (3)	Antimicrobial, phytochemical and dyeing activities of some common household vegetables.	Ms. Prachi Bhatia Ms. Neha Manoti	
9	Meera Konar, Aafra Mujawar, Peenal Mistry, Priya Jogra T.Y. B.Sc (4)	Biopigments: Isolation and extraction of pigment from various bacteria.	Ms. Neha Manoti	
10	Anushka Menon, Shivangi Mishra, Mugdhali Sawant T.Y. B.Sc (3)	Survey on awareness, perception and usage of nutraceuticals.	Ms. Prachi Bhatia	
11	Simran bedi T.Y. B.Sc (1)	Survey on obesity in house pets.	Ms. Chinmayee Mahadik	
12	Yashica gupta, Bhakti patkar, Mansi jain T.Y. B.Sc(3)	Survey on increase in infertility rate and in-vitro fertilization treatment	Ms. Chinmayee Mahadik	
13	Ansh Jain, Karishma Jain, Aditi Verma T.Y.B.Sc (3)	A survey on antibiotics- usage pattern, perception, side effects and awareness on antibiotic resistance.	Ms. Neha Manoti	
14	Mandeep Rathore, Danish Mullaji, Sahil Mohammad,	Survey on Approval rate and public opinion of Plant based meat	Ms. Prachi Bhatia Ms.Chinmayee Mahadik	

Pranali Nigde	
T.Y.B.Sc (4)	

	Projects: Ongoing (13)			
Sr No	Students	Title of the project	Mentor Teacher	
1	Calvin Dsouza S.Y.B.Sc (1)	Potential of LAB (Lactic acid bacteria) bacteriocin as a Food preservative	Dr. Sejal Rathod Ms. Neha Manoti	
2	Padmaja Pai S.Y.B.Sc (1)	Conversion of sewage into potential fertilizer using isolated organisms from cow dung for cleaner environment	Dr. Pratibha Shah Ms. Prachi Bhatia	
3	Pratyusha Rana S.Y.B.Sc (1)	Testing the efficiency of Nicotine chewing gums over nicotine concentration	Dr. Sejal Rathod Ms. Hajra Gupta	
4	Mansi Deshmukh S.Y.B.Sc (1)	Antibacterial hydrogels	Dr. Pratibha Shah Ms. Neha Manoti	
5	Vivisha Lakhani, Nandana Mukherjee S.Y.B.Sc (2)	Comparative analysis of vitamin D	Dr. Pratibha Shah Ms. Hajra Gupta	
6	Suzette Pinto, Sannidhi Shetty, Tisha Sancheti S.Y.B.Sc (3)	Antibiotic drug resistance in strains <i>of Escherichia coli</i> isolated from food sources	Dr. Pratibha Shah Ms. Prachi Bhatia	
7	Ariba Siddhiqui, Vedashree Tanksale, Kamal Jain S.Y.B.Sc (3)	Bacteria in beach sands: an emerging challenge in protecting coastal water quality and bather health	Ms. Prachi Bhatia Ms. Neha Manoti	
8	Jasmine Kukreja, Sakeena Shaika, Nishita Kinger, Harshita Samel S.Y.B.Sc (4)	Antibacterial and antifungal activities and phytochemical profile of leaf extract from different extractants of <i>Ricinus communis</i> against selected pathogens	Ms. Hajra Gupta Ms. Chinmayee Mahadik	
9	Mizba Khan, Saurabh Sahani, Sakshi Devkar S.Y.B.Sc (3)	Natural pigments from red microalgae for use in foods and cosmetics	Ms. Prachi Bhatia Ms. Neha Manoti	
10	Keshika,Gajbhiye Sakshi Parate, Vanshika Kelkar S.Y.B.Sc (3)	Testing the effectiveness of Lactobacillus casei Shirota extracted from probiotics against the aflatoxins produced by Aspergillus fungus.	Ms. Prachi Bhatia Ms.Chinmayee Mahadik	
11	Rushda Khan, Hiral Mehta, Archita Sharma S.Y.B.Sc (3)	Lab scale production of beer	Ms. Hajra Gupta Ms.Chinmayee Mahadik	
12	Pooja Kuppaiah, Shailesh Gurrapu, Saurabh Dubey S.Y.B.Sc (3)	Bioremediation of hydrocarbons from kaduna refining and petrochemical company effluents using cladosporium.	Ms. Hajra Gupta Ms.Chinmayee Mahadik	
13	Preeti Yadav, Diksha Yadav S.Y.B.Sc (2)	Comparison of anti-dandruff activity of synthetic shampoos and crude plant extracts on dandruff causing isolates	Ms. Neha Manoti Ms.Chinmayee Mahadik	

# B) HANDS – ON EXPERIMENTS 2019 – 2020

Sr No	List of Hands-on Experiments (17)	Beneficiaries
1	To study Absorption spectra of different dyes	SYBSc(36)
2	Isolation of Mitochondria from different samples	SYBSc (37)

		GTTD G (0.0)
3	Green synthesis of silver nanoparticles from various samples	SYBSc (36)
4	Air Sampling: settle plate technique	SYBSc (28)
5	Potability of water from various drinking outlets	SYBSc (30)
6	Effect of surfactant-cetrimide on growth of Microorganisms	SYBSc (35)
7	Phases of Milk Spoilage	FYBSc (20)
8	Quality testing for day-to-day food items	TYBSc. (26)
9	Determination of heavy metal toxicity in water	TYBSc. (30)
10	Evaluating turbidity standards of Water	T.Y.BSc (34)
11	Study of non-symbiotic biofertiliser in garden, hilly and potted soil.	T.Y.BSc (34)
12	Comparative study on effect of chemical and biofertilisers on overall plant growth and soil quality.	T.Y.BSc (34)
13	Isolation of plant growth promoting phosphate solubilizing bacteria from soil.	T.Y.BSc (34)
14	Formulation of a urea based chemical fertilizer	T.Y.BSc (34)
15	Effect of dried molasses as binding agent in formulation of a biofertliser	T.Y.BSc (34)
16	Comparative study between effect of bacterial and fungal biofertiliser	T.Y.BSc (34)
17	Formulation of a bacterial & fungal biofertiliser with & without binding agent.	T.Y.BSc (34)

Sr No	List of Hands-on Experiments (Virtual) (16)	Beneficiaries
1	Discussion on Marine Biotechnology Resources and Databases available on Internet.	T.Y.B.Sc(38)
2	Virtually understanding SEM & interactive game session.	S.Y.B.Sc (20)
3	Separation of amino acids by TLC. (Amrita University V-Labs)	T.Y.B.Sc (38)
4	Practical Video Demonstration of Handling and Working of Gel Doc System	S.Y.BSc (20)
5	Practical Video Demonstration of Handling and Working of UV Transilluminator	S.Y.B.Sc (21)
6	Isolation of Plant Pigments by Column Chromatography. (Amrita University V-Labs)	T.Y.B.Sc (38)
7	Study of bacteria growth curve of Staphylococcus aureus. (Amrita University V-Labs)	S.Y.B.Sc(24)
8	Virtual demonstration of spectrophotometer. (Amrita University V-Labs)	S.Y.B.Sc(24)
9	Study of restriction patterns of Eco RI and Bam HI and analyzing fragments by AGE.	T.Y.B.Sc (36)
10	Understanding Pharmaceutical Product Spoilage by Visual Indicators	T.Y.B.Sc (27)
11	Virtual Plasmid extraction (Amrita University V-Labs)	S.Y.B.Sc(24)
12	Quantitative estimation of amino acids by Ninhydrin assay. (Amrita University V-Labs)	T.Y.B.Sc (38)
13	Virtual Testing of milk adulteration. (Amrita University V-Labs)	T.Y.B.Sc (38)
14	Human karyotype analysis activity	S.Y.B.Sc (30)
15	Action of heavy metals on growth of microorganisms	F.Y.B.Sc(24)
16	Action of disinfectants on growth of microorganisms	F.Y.B.Sc(25)

## C) NEW PRACTICALS 2019 – 2020

Sr	List of New Practicals (21)	Beneficiaries
1	Qualitative tests for lipids and cholesterol	SYBSc(35)
2	Quality Control and Assurance test of different Microbiological medias	SYBSc (35)
3	Confirming Mitochondria by Methylene Blue assay	SYBSc (29)
4	Isolation of pure colonies by Four quadrant streaking method	SYBSc (30)

5	Isolation of pure colonies by Pentagonal Streaking method	SYBSc (29)
6	Effect of dyes on growth of Microorganisms	SYBSc (36)
7	Oligodynamic action of metals	SYBSc (32)
8	Density Gradient Centrifugation	SYBSc (22)
9	Handling and working of Soxhlet Apparatus	FYBSc & SYBSc (55)
10	Qualitative Analysis of Cosmetics-Lipsticks	FYBSc (18)
11	Antibacterial effects of Phenolics by disc method	SYBSc (26)
12	Making Biodegradable Plastic from potato starch and corn starch	SYBSc (30)
13	Extraction of Biocolours from various naturals samples	FYBSc (27)
14	Testing of starch in food sample	FYBSc (22)
15	Touch plate experiment on the effectiveness of hand sanitizers	FYBSc (23)
16	Qualitative estimation of plant DNA	T.Y.BSc (34)
17	Preparation of plant-based DNA molecular ladder	T.Y.BSc (34)
18	Study of root nodules in leguminous plants	T.Y.BSc (34)
19	Slide culture technique	T.Y.BSc (34)
20	Handling and working of UV-Visible Spectrophotometer	SYBSc (36)
21	Demonstration of working of Esco Biosafety Cabinet, Class II	TYBSc (15)

SrNo	List of New Practicals – Virtual (14)	Beneficiaries
1	Learn & Let Learn – Video Lecture Preparation Activity-1	S.Y.B.Sc (29)
2	Making mindmaps using Mindomo app	S.Y.B.Sc (24)
3	Quizz app	S.Y.B.Sc (30) T.Y.B.Sc (38)
4	Scientific Data Representation using Graphs	T.Y.B.Sc (38)
5	Learn & Let Learn – Video Lecture Preparation Activity-2	S.Y.B.Sc (30)
6	Learn & Let Learn – Video Lecture Preparation Activity-3	S.Y.B.Sc (29)
7	Guidelines for writing dissertation	T.Y.B.Sc (33)
8	Powerpoint presentation Tips and Tricks	T.Y.B.Sc (26)
9	Microsoft WordTips and Tricks	T.Y.B.Sc (30)
10	Understanding Infectious Bacteria and Viruses	S.Y.B.Sc (30)
11	How to make Survey Questionnaire	S.Y.B.Sc (24)
12	Use of Various referencing tools for research	T.Y.B.Sc (33)
13	Design a research poster	T.Y.B.Sc (38)
14	Protein Structure Visualization	F.Y.B.Sc (26)

## D) TRAINING RECEIVED BY FACULTY

## 2019 - 2020 = 07

Sr	Trainings	Faculty	Resource person
<b>No</b> 1	Faculty development Programme on 'Workshop on Excel'	Dr. SejalRathod	Mr Paresh Pandya, Proprietor, Creative Line Computer Institute
2	Three-day Workshop on 'Molecular and Immunological Diagnostic Techniques' sponsored by Lady Tata Memorial Trust	Dr. SejalRathod, Ms. Richa Shah,MsPrachi Bhatia,Ms Hajra Gupta	Dr. Swarup Shah Dr Somnath Ghosh Dr. Dhanashree Jagtap Dr. Nafisa Balasinor
3	Training Session on Stress Management	Dr. SejalRathod, Ms. Richa Shah, MsPrachiBhatia,Ms. Neha Manoti	Mr. Vijay Thigle Former Head of Department, of Microbiology and Art of living Faculty

4	Two day Programme- Learning Technologies – Learning an overview	Ms. Richa Shah	University of Mumbai
5	Two day Programme on Shaping a Data Science Curriculum	Ms Neha Manoti	Mr Akshay Dixit SAS Institute
6	Advanced Nanomaterials for Energy and Environmental Applications	MsRicha Shah	Dr. Pradeep Sarvade
7	Two day Workshop on Gender and Science	Ms Hajra Gupta, Ms. Richa Shah	Dr. Geeta Chada Mrs. Chayanika Shah

Sr No	Trainings (07)	Faculty	Resource Person
1	Faculty Development Program "Development of Skills in Students-A Teacher's Role" (Virtual)	Ms Prachi Bhatia,Ms Chimayee Madhik, Ms Rashmi Patil	Dr.G.P.Kothiyal, Formerly Head Advanced Glass and Ceramics Division, BARC Professor of Physics, Homi Bhabha National Institute, Currently Chairman, MRSI,Mumbai Chapter
2	Webinar on Intellectual Property Rights (Virtual)	Ms Prachi Bhatia, Ms Neha Manoti	Parag M. More M. Sc., LLM Patent and Trademark Attorney & IPR consultant Founder, Intellectual Platform® (Intellectual Property & Cyber Law Consultants
3	Instrument Training for Teachers-PAGE, western blotting, rotary evaporator (In college)	Dr Sejal Rathod, Ms Prachi Bhatia, Ms Chimayee Madhik, Ms Rashmi Patil, Ms Neha Manoti	Mr. Sameer Shah Product Manager- Educational and Research Aids Co. Mr. Jayesh Kalbhor Sr. Business Development Executive, Genetix.
4	Instrument Training for Teachers- cold centrifuge, microcentrifuge, microscope (In college)	Dr Sejal Rathod, Ms Prachi Bhatia, Ms Chimayee Madhik, Ms Rashmi Patil	Mr Sameer Lendy Service Manager, Eppendorf India Limited
5	COVID-19 Impact and Strategies (Virtual)	Dr. Sejal Rathod, Ms. Hajra Gupta, Ms Prachi Bhatia, Ms. Neha Manoti, Ms Chimayee Madhik,	Dr. Manvi Porwal,Scientist,WHO, Germany
6	Basic and Advance excel course by K.C. College (Virtual)	Dr. Sejal Rathod, Ms Prachi Bhatia, Ms. Neha Manoti, Ms Hajra Gupta	Mr Kaushal Shah,Senior Manager,Reliance Power Ltd
7	Blended Learning and Challenges for On-line Teaching (Virtual)	Dr. Sejal Rathod, Ms Prachi Bhatia, Ms. Neha Manoti, Ms Chimayee Madhik	Dr Kuldeep Kumar, Professor, Bond University, Australia

## E) EXHIBITION

Exhibitions (01)					
Sr	Sr Title Class and No. of Beneficiaries				
No.	No.				
1	Entrepreneurship Development Programme	SYBSc (34)			

#### 2020 - 2021

Exhibitions – Virtual (01)					
Sr	Title	Beneficiaries			
No.	No.				
1	Inspirus 21	FYBSc ,SYBSc,TYBSc (100)			

# F) TRAINING COURSES/WORKSHOPS 2019 – 2020

	Training/Workshop (04)			
Sr No	Title	Type and No. of Beneficaries	Resource Persons	
2	Workshop on ELISA techniques, RFLP & Western Blotting in collaboration with Himedia laboratories pvt.ltd Faculty Development Workshop "Molecular and Immunological Diagnostic Techniques"	Beneficaries Interdepartmental (Biotechnology & Microbiology) SYBSc and TYBSc (40) Intercollegiate teachers, participants Including faculty, students (120)	Mr. Girish Pai Product specialist, Molecular Biology division, Himedia Labarotaries  Prof. Shripad D. Banavali Director Academics, Tata Memorial Center Dr. Surekha Zingde Former Dy. Director, Cancer Research Institute, ACTREC Dr. Swarup Shah Senior Molecular Scientist, Human Genetics, Hinduja Hospital, Mumbai, Maharashtra Dr Somnath Ghosh	
			Scientific Officer F, Radiation Biology & Health Sciences Division, Bhaba Atomic Research Center Dr. Dhanashree Jagtap Scientist C, Structural biology, NIRRH, Mumbai Dr. Nafisa Balasinor Scientist F, Neuroendocrinology Dept, National Institute of Research in Reproductive Health (NIRRH), Parel, Mumbai	
3	Workshop on AI: A Tool to Understand Nature	FYBSc (Interdepartmental-Biotechnology, Microbiology, IT, Life Sciences) (163)	Mr Abhijit Gole, Assistant Professor, Ruia College	

4	"SCI-SHOTS" Training in	SYBSc(Interdepartmental-	Mr. Cyrus Dastur
	Documentary and Short Film	Departments of	SHAMIANA
	Making	Chemistry, Physics,	
		Microbiology, Biotechnology	
		and Life Science) (114)	

	Training/Workshop – Virtual (07)			
Sr No	Title	Type and No. of Beneficaries	Resource Person	
1	Workshop on Know Thy Intelligences	Interdepartmental (Biotechnology and Microbiology) On Zoom and YouTube–Degree & Masters' Students, PhD Scholars from India. 773 [500 on Zoom & 273 on YouTube]	Dr. Bhavna Dave Teacher-Educator at Pillai College of Education & Research, New Panvel	
2	Discussion of various available Online Courses and platforms to use during Lockdown	On Zoom platform FYBSc (30)	Ms Richa Shah Assistant Professor K.C College Ms Neha Manoti Assistant Professor K.C College	
3	Discussion of various available Online Courses and platforms to use during Lockdown	On Zoom platform SYBSc (39)	Ms Prachi Bhatia Assistant Professor K.C College	
4	Discussion of various available Online Courses and platforms to use during Lockdown	On Zoom platform TYBSc (34)	Ms Hajra Gupta Assistant Professor K.C College	
5	Training of teachers and students for using online portal "Zoom"	Interdepartmental FYBSc, SYBSc and TYBSc Microbiology and Biotechnology (9 teachers + 98 students)	Dr Sejal Rathod HOD Microbiology and Coordinator of Biotechnology K.C College	
6	Two-day workshop on Research Methodology	On Zoom platform 270 participants	Mugdha Ambatkar-Kamat Academic Editor at Scholarly Editing and Translation Services Pvt. Ltd.	
7	5 Day Virtual Training Workshop in Biotechniques	Interdepartmental (Biotechnology, Microbiology, Life Science) On Zoom platform 12 Faculty 204 students' participants	Mr Ankur Gautam Lab Services Manager Merck High-End Skill Development Centre IMTech, Chandigarh, India	

# G) FIELD TRIPS AND INDUSTRIAL VISITS 2019 – 2020

	Industrial visits (03)			
SrNo. No.of Students Place		Place		
1	T.Y.B.Sc (10)	ACTREC		
2	SYBSc & TYBsc (63)	Common Treatment Effluent Plant (CETP)		
3	Teacher Participants	National Institute of Research in Reproductive Health,		
	+MSc student (30)	Parel, Mumbai		

#### 2020 - 2021

Industrial visits- Virtual (02)			
SrNo.	SrNo. No.of Students Place		
1	T.Y.B.Sc (38)	ACTREC (Tata Memorial Centre Advanced Centre for	
		Treatment, Research and Education in Cancer)	
2	F.Y.B.Sc, S.Y.B.Sc, T.Y.B.Sc (183)	Anchrom Enterprise Pvt Ltd. on HPTLC	
		(Live Demonstration and Virtual visit)	

## H) SUMMER TRAINING 2019 – 2020

	2017 - 2020				
	Summer Training (04)				
Sr No	No. of the students	Institute/College	Department		
1	T.Y.B.Sc (07)	Haffkines Institute Parel, Mumbai- 400012	Virology, Chemotherapy, Serpentology, Chemical Testing Unit		
2	S.Y.B.Sc (02)	Shreedhar Bhat's Laboratory	Recombinant dna technology. Genetic engineering. Plant tissue culture. Immunotechnology		
3	S.Y.B.Sc (01)	NM Medical	Serology Immunology Clinical Pathology Haematology		
4	T.Y.B.Sc (04)	Rapture Biotech (Central Dogma Pvt Ltd)	Enzyme Technology Fermentation Tech Medical Micro		

# I) SEMINARS 2019 – 2020

	Seminars (	(06)	
Sr No	Title	Type and No.of Beneficaries	Resource Persons
1	Importance of Molecular and Immunological Techniques in cancer diagnosis.	Teaching staff of Departments of Microbiology, Biotechnology, Chemistry, Life Sciences of colleges of	Prof. Shripad D. Banavali Director Academics, Tata Memorial Center
2	Research Fellowships and Grants	Mumbai, Kalyan, Thane, Navi Mumbai and Sangli (26). Students of BN Bandodkar, SIES College students and	Dr. Surekha Zingde Former Dy. Director, Cancer Research Institute, ACTREC
3	DNA based diagnostic methods	KC College (120)	Dr. Swarup Shah Senior Molecular Scientist, Human Genetics, Hinduja Hospital, Mumbai, Maharashtra
4	Protein based diagnostic techniques and use of Western Blotting		Dr Somnath Ghosh Scientific Officer F, Radiation Biology & Health Sciences Division, Bhaba Atomic Research Center
5	Applications of ELISA		Dr. Dhanashree Jagtap Scientist C, Structural biology, NIRRH, Mumbai
6	Immunohistochemistry & Immunofluorescence		Dr. Nafisa Balasinor Scientist F, Neuroendocrinology Dept, National Institute of Research in Reproductive Health (NIRRH), Parel, Mumbai

	2020 - 2021			
		Seminars – Virtual (01)		
Sr	Title	Type and No of Beneficiaries	Resource Person	
No				
1	Alumni meet- Connecting the	On Zoom Platform	Dr. Neah Likhite, Scientist,	
	past, Loading the Future	(Departmental FYBSc, SYBSc,	Effector Discovery/	
		TYBSc students) (67)	Discovery Biology Omega	
			therapeutics, Boston	
			Dr. Nikkhil Welingkaar,	
			Product manager, BioVision	
			Inc, California	
			Mr. Aliasgar Dholkawala,	
			Senior Manager-Legal, Novi	
			Digital Entertainment Pvt Ltd	
			Ms. Sharon D'Souza,	
			Former Research fellow and	
			Assistant professor, K. C	
			college	

	Ms. Prajna Shetty, Manager-
	Marketing, Merck Ltd
	Ms. Ruchika Bhujbalrao,
	Ph.D, IIT BOMBAY
	Ms. Priyanka Gupta,
	Manager, Data and Analytics,
	Eli Lilly, Bangalore

## J) EXTENTION AND OUTREACH ACTIVITIES 2019 – 2020

Sr No.	Activity (02)	Class and No. of Beneficiaries	
1	Inspirus 2019	FYBSc, SYBSc and TYBSc (82)	
2	Lab on Move	SYBSc (17) BMC School students (21) Teachers (3)	

## 2020 - 2021

Sr No.	Activity- Virtual (01)	Class and No. of Beneficiaries
1	Biote-Covid	School, Degree, Masters' students (133)

# $\begin{array}{c} K) & INVITED \ LECTURES \\ 2019-2020 \end{array}$

	Invited Lecture (02)				
Sr	Title	Type and No. of	Resource Persons		
No		Beneficaries			
1	Seminar on Neuronal	FYBSc,SYBSc, TYBSc	Shubha Tole, Ph.D.		
	Cross-talk in	Biotechnology (50)	Senior Professor, Department of		
	Development		Biological Sciences		
			Tata Institute of Fundamental Research		
2	Seminar on Scientific	SYBSc,TYBSc (47)	Ms. Mugdha Ambatkar,		
	Writing	Biotechnology. TYBSc	Academic Editor,		
		Microbiology (28)	Scholarly Editing and Translation		
			Services Pvt Ltd,		

		Invited Lecture -Virtua	1 (05)
Sr Title		Type and No. of	Resource Persons
No.		Beneficaries	
1	Webinar on Happy Mind	Interdepartmental	Inderpreet Kaur
	Happy Life	(Computer Science,	Psychologist (Clinical Psychology),
		Biotechnology and	Personality Development and Soft Skills
		Microbiology) on Zoom	Mentor, Author, Professor
		and 105 Participants	
2	Webinar on Allergy- It's	Zoom Platform (Faculty,	Dr. Ravikant Zala
	Prevention and	students, medical	MBBS; Allergy Specialist
Management		practitioner, medical	
		students) (172)	
3	Webinar on	Zoom &Youtube	Dr Ajit Datar
	Chromatography- Types &	(Faculty, students, PhD	Advisor, Shimadzu Analytical India Pvt
	Recent Application	scholars, R&D Officer,	Ltd

	(Biotechnology &	Scientist, Technicians,	
	Microbiology	from Indian &	
	Departments)	Germany)743 [500	
		(zoom) and 243(You	
		tube)]	
4	International Webinar on	Interdepartmental	Dr Nuruddin Unchawaniwala
	Hiding in Plain Sight: (+)	(Biotechnology and	Post-Doctoral Research Associate
	RNA Virus Replication	Microbiology) on Zoom	Morgridge Institute for Research
	Compartments	and YouTube	University of Wisconsin-Madison
	(Been there Done that	228 participants	·
	Series 2)		
5	International Webinar on	Interdepartmental	Dr Tejeshwar Rao,
	Growth factor receptors:	(Biotechnology and	Post-Doctoral Research Associate,
	Mechano-organizers	Microbiology) on Zoom	University of Albama, Birmingham.
	regulating cell spreading	and You tube 222	USA
	and tension (Connecting	Participants	
	the past Loading the	_	
	future series 2)		

# M) PUBLICATIONS IF ANY 2019 – 2020

Sr. No.	Month and year	Publication title	List of author/s as it appear in the publication	Name of the Journal, Issue no. and year of publication, page nos.	ISSN / ISBN number
1	2020	An Economical, Agri-	Hajra AS. Gupta,	International	E-ISSN: 2347-
	August	Compliant and	Ashlesha Pande,	Journal of Scientific	7520.
		Environmentally	Dhwani	Research in	
		Sustainable 'Sponge	Sanklecha,,	Biological Science	
		Culture' Method for	Holden Tuscano,,	Vol.7, Issue.4,	
		Large-Scale Production of	Anjaly Tankaria,	pp.07-13s	
		Actinopigments from soil	Andrea Pinto		
		Actinomycetes			

Sr.	Month	<b>Publication title</b>	List of author/s	Name of the	ISSN / ISBN
No.	and		as it appears in	Journal, Issue no.	number
	year		the publication	and year of	
				publication, page	
1	April	Optimization of universal	Jakhad Sushma,	Research Journal of	E-ISSN: 2278-
	2021	Chrome Azurol S (CAS)	Kothari Neeti,	Chemistry and	4527
		siderophore detecting media	Rampurawala	Environment Vol.	
		with an economical dye	Sarrah, Shah	25 (4)	
		substitute using	Pratibha and		
		Pseudomonas fluorescens	Gupta Hajra A.S		
		as a test organism			
2	March-	"A Study on Comparison of	Ranjika Pallab	International	Online ISSN:
	April	Efficiency of Low-Density	Bhattacharya,	Journal of	2395-602X,
	2021	Polythene (LDPE)	Hajra A.S. Gupta,	Scientific Research	Print ISSN:

		Degradation Under Aerobic and Anaerobic Conditions by Microorganisms Isolated From Soil"		in Science and Technology (IJSRST), Volume 8 Issue 2, pp. 326-334,	2395-6011,
3	25th March 2021	Laboratory Scale Production of bio-oil from Oscillatoria algae and its Application in Production of biodiesel	Amisha Malaviya, Megha Shetty, Mikael Varghese, Prachi Bhatia	International Journal of Scientific Research in Science and Technology Volume 8, Issue 2 Page Number: 243-250	Print ISSN: 2395-6011 Online ISSN: 2395-602X

## **CHEMISTRY**

## A) RESEARCH PROJECTS 2019 – 2020

Com	pleted Projects (15)		
No	Name of the students	Title of the project	Name of Guiding Teacher
1	Ms Ansari Humera and Ms Ansari Effat	Preparation of Energy bar using figs and dates and comparing its nutritional status with commercial energy bars	Dr Sheela Valecha Ms Mridula Gupta
2	Ms Durriya Kanchwala	Estimation of polyphenolic contents in commercial fruit juices	Mr Karun Sodah
3	Ms Surekha and Ms Somya	Isolation of proteins from <i>Moringa</i> oliefera and <i>Musa acuminta</i> by electrophoresis and its application as antimicrobial and antitubercular	Dr Satish Kolte
4	Ms Dhwani Ms Payal	Analysis of hazardous metals in ready to eat food materials	Dr Rajesh Samant
5	Ms Rachita Asrani	Analysis of Chocolates available in Indian markets	Dr Yogita Shinde
6	Ms Zoha	Analysis of tattoo ink and its effect on human skin	Dr Charulata Chaturvedi
7	Shreya Kelkar, Darshan, Raksha Kelly, Abhay, Mahima	A study on Oil of Wintergreen	
8	Ms Komal Sha Ms Mousam Yadav Ms Shefali Pawar Ms Harshhada Pevekar	Detection of oxytocin	
9	Mr Manav Ms Naureen Mr Sijay	Preparation of dyes and pigments from experimental waste materials	
10	Ms Shravani Hatkar Ms Ariba Khaniya Ms Sangita Maity Ms Yogita Kundap	Analysis of Kajal	
11	Ms Humera Ansari Ms Eram Khan Ms Madalsa Gupta	Preparation of pigments used in poster paints	
12	Ms Vedika Pandya Ms Mugdha Shigrekar Ms Khushi thakur Ms Vanshika Watwani Ms Sayali Bomble	Detection of nanoparticles from colocasia leaves	
13	Ms Rachel Lobo Ms Somya Gururani Mr Ankur Chunekar Mr Joy Mondal	Preparation of organic shampoo using natural surfactants	
14	Ms Ayesha Mansuri Ms Akanksha Pal	Determination of some soft drink constituents and contamination by	

				1
	Ms Misbah Khan		some heavy metals	
15	Aniruddha Aire Parita Chorge		and micribial parametres to	
			evaluate the drinking water quality	
	Bhavika Patel		in five different villages in the	
	Dimple Trikamdas		vicinity of Saphale District:	
	Saakshi Sankpal		Palghar, Maharashtra	
New	Projects (07)			
No	Name of the students	Titl	e of the project	Name of Guiding
				Teacher
1	Ms Manvi Kadam		erobial techniques to determine	Dr Sheela Valecha
	Ms Bhakti Jhaveri	acti	on of vitamins on acne for skin	
			tment	
2	Ms Aamena Lakdawala	Det	ection and estimation of nicotine in	Mr Karun Sodah
	Ms Urvi Achutan toot		hpastes	
3	Ms Mahima Kamble	Stu	dy of Gingiber cassumunar on	Dr Satish Kolte
	Ms Foram Dewani	indi	gestion and other health issues	
4	Ms Nishi Pandey	Esti	mation of alcohol and process of	Dr Rajesh Samant
	Mr Shuvam Sharma	alco	pholic fermentation on various plant	
			rces in preparation of wine	
5	Ms Shifa Khatri		study the chemical and physical	Dr Yogita Shinde
			perties of spices and condiments and	
			xtract essential oils from certain	
		spices		
6	Mr Ishaan Chaurasia	Analysis of components of whitener and		Dr Charulata Chaturvedi
	Ms Namira Ansari	derivative methods to replace VOC's		
7	Ms Angela Titre	<u> </u>		Ms Mridula Gupta
	Ms Sanjana Singh	trad	itionally used plant extracts	

Com	Completed Projects: Total =07			
No	Name of the students	Title of the project	Name of Guiding Teacher	
1	Ms Manvi Kadam Ms Bhakti Jhaveri	Microbial techniques to determine action of vitamins on acne for skin treatment	Dr Sheela Valecha	
2	Ms Aamena Lakdawala Ms Urvi Achutan	Detection and estimation of nicotine in toothpastes	Mr Karun Sodah	
3	Ms Mahima Kamble Ms Foram Dewani	Study of Gingiber cassumunar on indigestion and other health issues	Dr Satish Kolte	
4	Ms Nishi Pandey Mr Shuvam Sharma	Estimation of alcohol and process of alcoholic fermentation on various plant sources in preparation of wine	Dr Rajesh Samant	
5	Ms Shifa Khatri Ms Zehra Sabah Syed	To study the chemical and physical properties of spices and condiments and to extract essential oils from certain spices	Dr Yogita Shinde	
6	Mr Ishaan Chaurasia Ms Namira Ansari	Analysis of components of whitener and derivative methods to replace VOC's	Dr Charulata Chaturvedi	
7	Ms Angela Titre Ms Sanjana Singh	Study of biological activity of traditionally used plant extracts	Ms Mridula Gupta	

New	New Projects = 05			
No	Name of the students	Title of the project	Name of Guiding Teacher	
1	Amin Shaikh	Characterisation of starch-based	Mr Karun Sodah	
		polymer conjugated with inorganic		
		moieties.		
2	Yusufali Godhrawala	Research on quick burn coal	Dr Satish Kolte	
3	Shagun Malik	Analysis of caffeine in beverages of	Dr Rajesh Samant	
		different brands.	Dr Mridula Gupta	
4	Priya Gupta	A Chemical Study on Seeds of	Dr Yogita Shinde	
		Pumpkin Plants		
5	Nameera Shah	Finding the best sanitizer in Mumbai	Dr Charulata Chaturvedi	
		by survey method,		
		Comparison of different ingredients		
		in frequently selling sanitizers and		
		microbial testing in handmade		
		sanitizer.		

### B) HANDS – ON EXPERIMENTS

#### 2019 – 2020 (16)

Sr.	Name of experiment	Class and No. of
No.		Beneficiaries
1	Analysis of milk	
2	Separation of milk protein	115 SYBSc (6 batches)
3	Estimation of casein	
4	Comparative study of different milk brands	
5	Acid value of oil	
6	Aldehyde content of oil	117 SYBSc (6 batches)
7	Saponification value of oil	
8	Unsap value of oil	
9	Comparative study of different oil brands available in market	
10	Study of potable water parameters	
11	Estimation of acidity of water 130 FYBSc	
12	Hardness of water	(6 batches)
13	Comparative study of hardness of different water samples	
	obtained from different sources in the college	
14	Separation of dyes 105 FYBSc (6 batches)	
15	Study of effect of mordants on dyeing process	38 TYBSc
16	Preparation of sodium fusion extract using microscale	125 FYBSc 6 batches
	technique	

## 2020 - 2021 = 04

Sr.	Name of experiment	Class and No.of Beneficiaries
1	Calibration and use of pH meter	TYBSc (65)
2	Calibration and use of conductometer	TYBSc (55)
3	Calibration and use of potentiometer	TYBSc (70)
4	Calibration and use of colorimeter	TYBSc (45)

#### C) NEW PRACTICALS

#### 2019 - 2020 (03)

Sr.No.	Resource Persons	Class and No. of Beneficiaries
1	Separation of indicators by TLC	35 TYBSc
2	Tie and Dye	38 TYBSc
3	Preparation of methyl salicylate	117 FYBSc

#### 2020 - 21 = 02

Sr.No.	Resource Persons	Class and No. of Beneficiaries
1	Calibration and use of Spectrophotometer	TYBSc (67)
2	Calibration and use of glassware	TYBSc (45)

# D) TRAINING RECEIVED BY FACULTY 2020 – 2021

Sr.No.	Name of the Faculty	Trainings	Resource persons
1	All Dept members	Use of chem draw to represent structures correctly	Mr Viral Dave
2	All Dept members	Use of scifinder to search data related to chemistry	Mr Viral Dave
3	All Dept members	Interpretation of IR, UV Visible and ESR spectra	Dr Nandkishor Chandan

## F) HANDS-ON TRAINING COURSES

#### 2019 - 2020 (05)

Sr.	Name of Session	Class and No.	Resource persons
No.		of Beneficiaries	_
1	Calibration of burettes	38 TYBSc	Dr Rajesh Samant
2	Calibration of thermometres	38 TYBSc	Dr CharulataChaturvedi
3	Calibration of standard flasks	38 TYBSc	Dr Rajesh Samant
4	Determination of Viscosity	130 FYBSc (6	Dr S Chaudhari, Mr K Sodah
	-	batches)	Dr C Chaturvedi, Mrs M Gupta,
			MsUzmaShaikh
5	Use of microscale technique	118 SYBSc 6	Dr Satish Kolte, Dr Yogita Shinde, Ms
		batches	Mridula Gupta
			Ms Deepika Jain, Mr Nilesh Dubey

#### 2020 - 2021 = 04

Sr.	Name of experiment	Class and No. of	Resource persons
No.		Beneficiaries	
1	Band It Up - Online hands-on	Students from FYBSc	Dr Yogita Shinde
	training workshop on	and SYBsc, 140	Dr Charulata Chaturvedi
	chromatography		Dr Mayuresh Joshi
2	Use of software Chemdraw for	Students and faculty	Mr Viral Dave
	representation of chemical	from different colleges in	
	data	Mumbai, 137	
3	Use of Scifinder: an effective	Students from different	Mr Viral Dave
	tool - Use of software to aid in	colleges in Mumbai, 145	
	refined searches related to		
	Chemistry		

4	Interpretation of IR and UV	Students and faculty	Dr Nandkishore Chandan
	Visible spectra	from different	
	_	colleges,130	

### G) FIELD TRIPS AND INDUSTRIAL VISITS

## 2019 – 2020 (04)

Sr.No	No. of Students	Place
1	SYBSc- 100	Sahyadri farms, Nahik, Maharashtra
2	SYBSc-100	Sula Vineyards, Nashik, Maharashtra
3	TYBSc -35	Nassolkem Pvt Ltd, Amli, Union territory of Dadra and Nagar Haveli
4	TYBSc -35	Central Instrumentation laboratory, Narsee Monjee Institute of
		Management Studies, Mumbai

#### 2020 - 2021 = 01

	No.of Students	Place
1	265	Virtual Industrial Visit to M/s Cleanchem laboratories

#### I) SEMINARS

#### 2019 - 2020 (05)

Sr No	Title	Type and No. Of	Resource Persons	
		Beneficaries		
1	Tax and Investment	Non-teaching staff from	Mr Kailash Chandak, Associate	
		different departments of	Professor, K.C. College	
		the college - 40		
2	Electronic spectra	TYBSc 45	Dr Suresh Pawar	
			Associate professor, Department of	
			Chemistry, University of Mumbai	
3	Air quality assessment	TYBSc 38	Dr Gowri Pandit, Adjunct professor,	
	for sustainable	SYBSc 95	Envt sci and engg dept, IIT, Bombay	
	management			
4	Calibration of apparatus	TYBSc 35	Ashok Manghani	
5	Training for IIT	SYBSc 110 and TYBSc	Mr JayeshTamhankar, Director,	
	entrance examination	34	ChemSpark	

#### 2020 - 2021 = 01

Sr No	Title	Type and No. Of Beneficaries	Resource Persons
1	Know Your Rights (A three-day Seminar)	Girl students FYBSC, SYBSC and TYBSC (72)	Advocates from NGO MAJLIS

#### **J) EXTENTION ACTIVITIES**

## 2019 - 2020 (07)

Sr	Name of the Event	<b>Activities Conducted</b>	Types of	No of
No			beneficiaries	beneficiaries
1	Mentoring the mentors	Use of Chemical dyes	School students	45
	Tribute to J.K.	Distillation	from surrounding	
	Bhambhani:	Flame tests for metals	area	
	Chemistry for School	Study of pH		
	Students	Solvent Extraction		
2	Chem vision	Quiz	UG and PG	140

3	Tax and Investment	Poster making It's a matter of one minute Name Game Chem Housie The non-teaching staff members were explained the importance and the tricks of investment which would also help in tax saving	students from various colleges of Mumbai  Non-teaching staff from different departments of the college	Total teams 38 23 from other colleges and 15 from K.C 40
4	Basic Chemistry with fun for BMC School students	The activity was aimed at popularising Science in School students. The Participants were familiarised with basic and interesting experiment from Chemistry. Teachers from BMC school also actively participated in the activity	BMC school students and science teachers from surrounding schools	60
5	Core and Enabling Technologies	The Mumbai Chapter of NASI was inaugurated and a seminar on Perspectives on Core and Enabling Technologies organized	UG and PG students from different departments	60
6	International Year of Periodic Table (IYPT)	A lecture series by eminent scientists and researchers to commemorate 150 years of the periodic table.	UG and PG students from different colleges of Mumbai	350
7	Effective CV writing	A session on constructing an effective and crisp CV for better career opportunities	Degree college students from the college	450

#### 2020 - 2021 = 06

	) - 2021 = 06		TD 0.1 0t 1	7. 0
Sr	Name of the Event	Activities	Types of beneficiaries	No of
No		Conducted		beneficiaries
1	How to create	An effort to guide	Students from different	180
	products that matter	students to be	colleges in mumbai	
		successful		
		entrepreneurs		
2	Spectroscopy	basics of	Students and faculty from	200
		spectroscopy	different colleges in mumbai	
3	Flame Photometry	Working and	Students and faculty from	110
		application of flame	different colleges in mumbai	
		photometer		
4	Dos and Donts of	Care to be taken	non -teaching staff from	250
	Corona	during pandemic	different colleges	
5	National level online		students from different	120
	essay competition		colleges in india	
6	Master lecture series:		Students from different	826
	launch of Scicomm		colleges	
	Dr Y S Ranjan,			
	Professor, ISRO			
	(Popular Lecture)			

## K) INVITED LECTURES

## 2019 - 2020 (11)

Sr No	Title	Type and No. of Beneficiaries	Resource Persons
1	Electronic spectra	TYBSc 45	Dr Suresh Pawar Associate professor, Department of Chemistry, University of Mumbai
2	Air quality assessment for sustainable management	TYBSc 38 SYBSc 95	Dr Gowri Pandit, Adjunct professor,Envt sci and engg dept, IIT, Bombay
3	Calibration of apparatus	TYBSc 35	Ashok Manghani
4	Training for IIT entrance examination	SYBSc 110 and TYBSc 34	Mr JayeshTamhankar, Director, ChemSpark
5	Tax and investment	TYBSc 45	Mr Kailash Chandak, Associate Professor, K.C.College
6	Assay of gem stones and precious metals: a glittering career	TYBSc 45 S.Y.B.Sc 60	Ms Neha shinde, Consultanting faculty, precious metal assay and training institute, Mumbai
7	Soft Skill Communication	SYBSc 110	Mr Kartikeya, Co-Founder, Indian Debating Union
8	Effective Cv writing	Degree college students 450	Mr Kartikeya, Co-Founder, Indian Debating Union
9	Importance of Chemistry in a day-to-day life	UG and PG students from different colleges 350	Padmavibhushan Padmashree Prof M M Sharma
10	The Periodic table and essential elements in life	UG and PG students from different colleges 350	Dr S. Majumdar Senior Professor and Chairman, Department of Chemical Sciences, TIFR, Colaba
11	Nanoscience Challenges Periodic Table and Climate Change	UG and PG students from different colleges 350	Dr Vivek Polshettiwar, Associate Professor Department of Chemical Sciences, TIFR, Colaba

## 2020 - 2021 = 11

Sr No	Title	Type and No.of Beneficiaries	Resource Persons
1	Molecular orbital theory for coordination compounds	48	Dr Suresh Pawar, Associate Prof, Dept of chemistry, University of
	coordination compounds		Mumbai
2	ESR spectroscopy	43	Dr Purav Badani, Assistant Prof, Dept of chemistry, University of Mumbai
3	Biogenomics	178	Dr Kamalpreet Arora, senior consultant at Biologics consulting group, Wahington
4	Cosmetics	325	Dr Dilip Tripathi, Johnson and Johnson
5	Enchanting world of perfumes	200	Ms Rashida Mun, Senior perfumer,

			Eaglewings enterprises
6	Energy for drilling	178	Dr Maghrabi
7	Paints and colours in everyday life	131	Dr Gulzar Waghoo, Nerolac Paints
8	Surviving Pandemic: the way	200	Dr Gopal Chaturvedi, Associate
	forward		Consultant, HN reliance hospital
9	Waste management: from lab to life	130	Ameeta Deshpande
			Founder reCharkha
10	Covid 19: Impact and strategies	257	Dr Manavi Porwal , Scientist, WHO,
			Germany
11	Dos and Don'ts of Corona	250	Dr Tejas Lokhande

# M) PUBLICATIONS IF ANY 2020 – 2021 = 04

Qualitative determination of metals	Yogita Shinde, Rachita Asrani	Indian Food Industry Magazine,
in different brands of chocolates,		Vol 29 Association of food
marketed in India.		scientists and technologists
Proximate analysis of chocolates	Yogita Shinde, Rachita Asrani	International journal of Applied
available in Indian market		Chemical and Biological sciences,
		Vol 1 (2)
Survey to study the attitude and	Dr. Yogita Shinde, Rachita Asrani	Asia Pacific Joy of Public Health,
perception of consumers of		Volume 1 issues 2, 2020
chocolates in Mumbai region.		
Preparation of energy bar using figs	Dr Sheetal Valecha Dr Mridula	International Journal of Applied
and dates and analysis of its	Gupta, Humera Ansari, Iffat Ansari	Chemical and Biological Science
nutritional status		Vol 2 Issue 2, 2020

## **LIFE SCIENCES**

## A) RESEARCH PROJECTS

	Completed Projects: 2019 - 2020 (13)			
Sr.	Name of the students	Title of the project	<b>Guiding Teacher</b>	
1.	Tasneem Nawab and Aakanksha Kulkarni	Creating a Bioinformatics Learning Aid	Dr.Sagarika Damle and Dr.(Ms) Aashu Vajpai	
2.	Vikas Gurudu and Jasmine John	Study of properties of various kinds of turmeric and formulation of an ayurvedic face wash and its comparison with commercial face washes	Dr.Sagarika Damle and Dr.Tejashree Shanbhag	
3.	Manasi Prabhu, Avani Newrekar	Journey from waste to paper	Dr.Tejashree Shanbhag and Mrs.Amruta Kothare	
4.	Niharika Gupta and Bhakti Tari	Production of Asparginase enzyme from extremophiles	Dr. Shalini Rai and Dr. (Ms.) Aashu Vajpai	
5.	Himakshi Vartak and Insiya Selia	Organic Juices; Plastic Degradation by Herbs and Spices	Dr. Archana Thite and Dr.Suvarna Sharma	
6.	Bhoomi Dubal, Poonam Gupta	Analysis of efficiency of different feeds on zebrafish	Dr. (Ms.) Aashu Vajpai and Dr.Shalini Rai	
7.	Vishal Bharadhwaj, Rishikesh Masolkar, Avani Newrekar, Manasi Prabhu, Mughdha Shigrekar	Food Nutrition and Healthy Living	Dr.Sagarika Damle and Dr.(Ms)Aashu Vajpai	
8.	Humera Ansari, Bhakti Tari, Eram Khan, Madalsa Gupta, Saba Qureshi	Malaria – A Epidemic	Dr.Sagarika Damle and Dr.(Ms)Aashu Vajpai	
9.	Vikas Gurudu, Yunus Kharodia, Manu Pillai, Kedar Vaidya, Vipul Vaishnov, Ashish Jaiwal	Awareness of Bioinformatics	Dr.Sagarika Damle and Dr.(Ms)Aashu Vajpai	
10.	Effat Ansari, RachitaAsrani, DurriyaKachwala, Raj Shah, Zoha Zariwala, Zia Shaikh	Survey of Night Owl and Early Bird	Dr.Sagarika Damle and Dr.(Ms) Aashu Vajpai	
11.	Sayali Bomble,Vedika Pandya, Insiya Selia, Himakshi Vartak, Mausam Yadav	Consumption of Organic Food	Dr.Sagarika Damle and Dr.(Ms) Aashu Vajpai	
12.	Garima Jain, Aakanksha Pal, Ayesha Mansuri, Misbah Khan, Tufayl Shaikh, Abhishek Gupta	Eyesight Problems in College Students	Dr.Sagarika Damle and Dr.(Ms)Aashu Vajpai	
13.	Bhoomi Dubal, Poonam Gupta, Raveena Papola, Niharika Gupta, Shrutika Hogale, Aakanksha Kulkarni, Sweta Pandey	Menstruation as a social taboo	Dr.Sagarika Damle and Dr.(Ms)Aashu Vajpai	

1		going Projects: 2019 – 2020 (22)	D 0 " D :
1.	Neha Mer	Healthy Rural Living- A dietary Perspective	Dr. Sagarika Damle
2.	Siddharth Nakhwa	A Comparative study on the nutritive and medicinal properties of <i>Oscimum sanctum</i> and <i>Salvia hispanica</i>	Dr. Tejashree Shanbhag and Dr. Mayuresh Joshi
3.	Rhea Narvekar, Sonia Joshi	Effect of Synthetic sugars on the development of chick embryo	Dr. Shalini Rai and Dr. (Ms.) AashuVajpai
4.	Nafisa Shaikh, Amreen Shaikh, Mariam Ansari	Screening of active compounds from avenue trees of South Mumbai for Biological Activities	
5.	Praniti Pawar, Sanjana Anumalla	Gene delivery by Carbon Nanotube method	Dr. Suvarna Sharma
6.	Maitri Shah, Ashoi Dantra	Making of Anti-insecticidal herbal essence sticks	
7.	Urvi Girish, Farah Ansari, Nameera Ansari, Mariam Ansari, Sanjana Anumalla, Khushi Chauhan	Young India is Sleepless	Dr. Sagarika Damle and Dr. (Ms.) Aashu Vajpai
8.	Ashoi Dantra, Mann Doshi, Mehul Jain, Jumana Jaoravala, Bhakti Jhaveri	Reason for Increasing Obesity in College students	
10.	Sonia Joshi, Manvi Kadam, Aman Kamat, Neha Kanojia, Suman Kanwar, Aqsa Kazi	Sweet Tooth	
11.	Shifa Khatri, Ranjeeta Kumari, Sangeeta Kumari, Aameena Lakdawala, Neha Mer, Sumaiya Mulla	Choclaty Thoughts	
12.	Nafisa Khan, Siddharth Nakhwa, Rhea Nawalkar, Nikita Pandey, Nishi Pandey, Praniti Pawar	Internet Vs Vegetable Vendors	
13.	Sangeeta Rajgor, Atharva Sapre, Rutuja Sawant, Sabah Zehra Sayed, Maitri Shah, Riya Sharma, Abhishek Gupta	How well do you know about your headache	
14.	Shivam Sharma, Amreen Shaikh, Huzaifa Siddique, Sanjana Singh, Trushti Talekar, Angela Titre, Yash Bhimani	Health on Menu Card	
15.	F.Y.B.Sc. Life Sciences (12)	Analysis of water sample from Banganga	Dr. Sagarika Damle, Dr. Archana Thite, Dr. (Ms.) Aashu Vajpai, Dr. Suvarna Sharma, Mr. Gaurav Bingi
16.	F.Y.B.Sc Life Sciences (08)	Preparation of Compost using Laboratory and Kitchen Waste	Dr. Sagarika Damle, Dr. Tejashree Shanbhag,

			Dr. Shalini Rai, Dr. (Ms.) Aashu Vajpai
17.	F.Y.B.Sc Zoology (52)	Survey of Genetic Traits in F.Y.B.Sc.	Dr. Shalini Rai
17.	1.1.b.sc 200logy (32)	Zoology Class	Dr. (Ms.)Aashu Vajpai
18.	F.Y.B.Sc Life Sciences (04)	Study of Enzymatic Activity of	Dr. (Ms.) Aashu Vajpai
10.	1.1.B.Sc Enc Sciences (04)	Catalase	Dr. Shalini Rai,
		Cutuluse	Dr. Mayuresh Joshi
19.	F.Y.B.Sc Zoology (52)	Estimation of Body mass index of the	Dr. Shalini Rai,
17.	1.1. <i>B</i> . <i>Se</i> 20010gy (32)	class of F.Y.BSc Microbiology and	Dr. Tejashree Shanbhag
		Life Sciences and compiling the data	Mr.Gaurav Bingi
		with the use of statistical analysis and	Will Guara V Bingi
		proposing the general health status of	
		the group under study	
20.	F.Y.B.Sc Zoology (52)	Identification of local birds' variation	Dr. Shalini Rai,
	,	in different areas	Dr. Tejashree Shanbhag
			Dr. Aashu Vajpai,
			Dr. Suvarna Sharma,
			Mr. Gaurav Bingi
21.	F.Y.B.Sc Zoology (52)	Identifying the fish available in	Dr. Shalini Rai, Dr.
		different seasons with respect to fresh	Tejashree Shanbhag,
		water and marine water with local fish	Dr. Aashu Vajpai,
		market in different areas.	Dr. Suvarna Sharma
			and Mr. Gaurav Bingi
22	F.Y.B.Sc Zoology (52)	Identification of some common snakes	Dr. Shalini Rai, Dr.
		for venomous and non -venomous	Tejashree Shanbhag Dr.
		nature via photographs.	Aashu Vajpai,
			Dr. Suvarna Sharma
			and Mr. Gaurav Bingi

	2020 – 2021			
Com	Completed Projects (16): 2020 – 2021			
Sr.	Name of the students	Title of the project	<b>Guiding Teacher</b>	
1.	Neha Mer	Healthy Rural Living- A dietary	Dr. Sagarika Damle	
		Perspective		
2.	Siddharth Nakhwa	A Comparative study on the nutritive	Dr. Tejashree	
		and medicinal properties of Oscimum	Shanbhag and Dr.	
		sanctum and Salvia hispanica	Mayuresh Joshi	
3	Nafisa Shaikh, Amreen	Screening of active compounds from	Dr. Shalini Rai and	
	Shaikh, Mariam Ansari	avenue trees of South Mumbai for	Dr.(Ms.) AashuVajpai	
		Biological Activities		
4	Ms. Sonia Joshi and Rhea	Derogatory effects of sanitisers in	Dr.Shalini Rai & Dr.	
	Nawalkar	various formulations. A survey-based	Aashu Vajpai	
		study		
5	Ms. Rhea Nawalkar and	Nutritional impact of Spina Bifida: A	Dr.Shalini Rai & Dr.	
	Sonia Joshi	review	Aashu Vajpai	
6	Nafisa Mujibullah, Mariyam	Changing trends in consumer	Dr. Aashu Vajpai and	
	Ansari, Amreen Sheikh	preferences during COVID 19	Dr. Shalini Rai	
		pandemic for a better life style		
7	Praniti Pawar, Sanjana	Gene delivery by Carbon Nanotube	Dr. Suvarna Sharma	
	Anumalla	method		
8	Maitri Shah, Ashoi Dantra	Making of Anti-insecticidal herbal		

		essence sticks	
9	Urvi Girish, Farah Ansari,	Young India is Sleepless	Dr. Sagarika Damle
	Nameera Ansari, Mariam		and
	Ansari, Sanjana Anumalla,		Dr. (Ms.) Aashu Vajpai
	Khushi Chauhan		
10	Ashoi Dantra, Mann Doshi,	Reason for Increasing Obesity in	
	Mehul Jain, Jumana	College students	
	Jaoravala, Bhakti Jhaveri		
11	Sonia Joshi, Manvi Kadam,	Sweet Tooth	
	Aman Kamat, Neha		
	Kanojia, Suman Kanwar,		
	Aqsa Kazi		
12	Shifa Khatri, Ranjeeta	Choclaty Thoughts	
	Kumari, Sangeeta Kumari,		
	Aameena Lakdawala, Neha		
10	Mer, Sumaiya Mulla		
13	Nafisa Khan, Siddharth	Internet Vs Vegetable Ve ndors	
	Nakhwa, Rhea Nawalkar,		
	Nikita Pandey, Nishi		
14	Pandey, Praniti Pawar Sangeeta Rajgor, Atharva	How well do you know about your	
14	Sangeeta Rajgor, Atharva Sapre, Rutuja Sawant,	headache	
	Sabah Zehra Sayed, Maitri	lieadactie	
	Shah, Riya Sharma,		
	Abhishek Gupta		
15	Shivam Sharma, Amreen	Health on Menu Card	
	Shaikh, Huzaifa Siddique,		
	Sanjana Singh, Trushti		
	Talekar, Angela Titre, Yash		
	Bhimani		
16	Zainab Hotelwala	Preparation of Compost using	Dr. Sagarika Damle,
		Laboratory and Kitchen Waste	Dr. (Ms.) Aashu Vajpai
	1	going Projects (08): 2020 – 2021	
	Name of the students	Title of the project	Guiding Teacher
1	Aishwarya Naralkar, Sakshi	Drying – An excellent food	Dr. Sagarika Damle
	Shukla, Sheetal Shukla,	preservation technique.	
	Shrishti Dhankar,		
2	Yashashree Ekbote	Obesity and it's health hazards during	Dr. Taigghrag
	Sara baig, Aditi pal, Shifa shaikh, Janvi rabhadia,	Obesity and it's health hazards during pandemic.	Dr. Tejashree Shanbhag
	Aman singh, Abdul fatah	pandenne.	Shahohag
3	Arzoo Balbale, Danisha	Survey Based Study to Determine the	Dr. Suvarna Sharma
	Kadiwar, Geetika Mehla,	Status of Plastic Recycling in Mumbai	Di. Davama bilanila
	Nameera Shah, Nandini Jha,	a succession of the second in	
	Shrushti Gandharva		
4	Kelly Nigrel, Nikhil	A Survey Based Analysis of Various	Dr. Mayuresh Joshi
	Thadhani, Aryaman	Available Treatments Used by the	
	Tulpule, Rohit Warang,	General Population for the	
	Parva Morakhia, Amey	Management of Acne	
	Chavan		
5	Robin Malhotra, Zainab	A Survey Based analysis on the	Dr. Aashu Vajpai

	Hotelwala, Savina Hegde, Suraiya Sayed, Neet shah, Sneha kukreja, Diya Bomb	Awareness of vegan and cruelty free cosmetic product.	
6	Saraan Qureshi, Neha Rathore, Sidera Khan, K.M. Priyanka, Anam Shaikh	Radioactive pollution found in various ecosystems and its effect on human life	Dr. Sagrika Damle Mr. Gaurav Bingi
7	Yashvi Mepani, Jhanvee Kadakia Aryan Londe, Palak Parekh Muskan Gidwani, Shreya Kelkar	Menstruation, Awareness, Hygiene, Products and Health Effect	Dr. Shalini Rai
8	Ayushi Midya, Mohammed Muffasal Lari, Eshani, Nayal, Nisha Bishnoi, Preeti Mishra	A survey on stress related disorders	Mr. Gaurav Bingi

### B) HANDS – ON EXPERIMENTS 2019 – 2020 (30)

Sr.	Title	Beneficiaries
1.	Amino Acid Paper Chromatography using <i>Lichen</i> and <i>Soyabean</i>	F.Y.B.Sc Botany (45)
2.	Streaking of Micro Organisms-Extension to Aseptic Techniques	
3.	Staining of different Micro organisms	
4.	Preparation of Hay Infusion	F.Y.B.Sc Life
5.	Testing of pH of different commercial food samples	Sciences (47)
6.	Handling of Glasswares and caliberation of pippettes	
7.	Catalase from different biological sources: Potato and Yeast	
8.	Biostatistical evaluation of the results of the experiment	
9.	Streaking of Soil sample for identification of Soil Microflora	
10.	Comparative status of various brand for basic adulterants in milk,	F.Y.B.Sc Zoology
	jaggary, butter cheese, salt and honey	(45)
11.	Calculation of BMI and screening of obesity prevalence in F.Y	
	Zoology Class	
12.	Estimation of Maltose Content of different bread samples	
13.	Study of endangered species and location of national parks and	
	sanctuaries of world	
14.	Comparison of various antacids with milk	
15.	Comparison of commercial brands of drinks and juices for aeration	F.Y.B.Sc. Zoology
	with CO2 (40)	
16.	Study of Floral Morphology	S.Y.B.Sc Life
17.	Preparation of chemicals for Inorganic Phosphate	Sciences (43)
18.	Estimation of cholesterol from country egg	
19.	Comparison of Cholesterol content of Dalda, Coconut Oil and Castor	
	Oil	
20.	Clay Modeling of Brain	
21.	Lipid Extraction from different sources – Peanuts, Castor, Coconut	
22.	Thin Layer Chromatography of Alkaloids Using Strychnosnux-vomica	
	and Tobacco	
23.	Study and Presentation of different instruments: AGE, PAGE, HPTLC,	
	HPLC, Column Chromatography and Gas Chromatography	
24.	Phylogenetic Analysis using different softwares	

25.	Research Paper Reading regarding Circular Chromatography	
26.	Study of Drosophila Lifecycle	
27.	Isolation of Casein from different milk samples	
28.	Agarose Gel Electrophoresis	
29.	Saliva plate streaking using different types of streaking techniques on	T.Y.B.Sc. Life
	Nutrient Agar and Sabouraud's Agar	Sciences (25)
30.	Gram Staining of different organisms from different water samples	T.Y.B.Sc.
		Environmental
		Sciences (54)

### 2020 – 2021 (20)

Sr.	List of Practical/Demonstrations	Class and No. of
No.		Beneficiaries
1	Study of epidermal architecture of various plants	F. Y. B. Sc (39)
2	Chromatography of sketch pen Ink using cornflour starch as stationary	F. Y. B. Sc (57)
	phase at home	
3	Review of available literature on the study of economic importance of	F. Y. B. Sc (39)
	Gymnosperms	
4	Study of literature available on various economic uses of Pteridophytes	F. Y. B. Sc (39)
5	Study of Abnormal Karyotypes in Humans and students' presentations	S. Y. B. Sc (44)
6	Brain modelling to study comparative anatomy of brain	S. Y. B. Sc (44)
7	Phylogenetic tree building, UPGMA Method	S. Y. B. Sc (44)
8	Effect of macronutrients on germination of Vinca pollen	S. Y. B. Sc (44)
9	Comparative embryology of seed germination of dicot and monocot seeds	S. Y. B. Sc (44)
10	Introduction to different types of dicot and monocot seeds available at the	S. Y. B. Sc (44)
	students' home and the study of seed morphology	
11	Study of salient attributes and morphological features of various flowers	S. Y. B. Sc (44)
12	Study of different media for microbiological experiments	T. Y. B. Sc (14)
13	Extraction of DNA from cheek cells using method described by R.P. Hearn	T. Y. B. Sc (14)
	& K.E. Arblaster (2010)	
14	Analysis of soil texture using fractionation method	T. Y. EVS (30)
15	Understanding of Pollen germination and its viability via two different	
	research article and their presentation	T. Y. B. Sc (14)
16	Understanding the development of brain and Neurulation - Via 3D Clay	
	model	T. Y. B. Sc (14)
17	Understanding the Nervous system of Earthworm - By 3D -clay model	T. Y. B. Sc (14)
18	All the practical were supported with an extra reading of Research paper	F. Y. B. Sc Life
	related with different procedures/parameters/ methods of estimations to	Sciences (57)
	provide better understanding of the related topic under study. This was	S. Y. B. Sc (44)
	checked for the understanding by group presentation where teacher acted as	T. Y. B. Sc (14)
	a moderator.	
19	Precipitation of Casein from different samples of Milk	S. Y. B. Sc (44)
20	Analysis of pH from various samples using Red Cabbage Indicator	S. Y. B. Sc (44)

## C) NEW PRACTICALS

2019 – 2020 (12)

Sr. No.	List of Practical/Demonstrations	Class and No. of Beneficiaries
1.	Study of Urban Plant Families of economic importance	F.Y.B.Sc.
2.	Identification of algal specimens collected from fresh water	Botany (52)

3.	Handling of Glassware and calibration of pipettes	F.Y.B.Sc
4.	Aseptic techniques	Life Sciences (47)
5.	Thin Layer Chromatography of Alkaloids Using Strychnos nux-	
	vomica and Tobacco	
6.	Chromatographic Analysis of various essential amino acids and	F.Y.B.Sc
	comparing them with their standards	Zoology (50)
7.	Estimation of Body mass index of the class of F.Y.B.Sc Microbiology	
	and Life Sciences and compiling the data with the use of statistical	
	analysis and proposing the general health status of the group under	
	study	
8.	Software Tools used in Multalin Sequence Alignment	S.Y.B.Sc
		Life Sciences (43)
9.	Phylogenetic Tree building using Clustal Omega	S.Y.B.Sc (43)
10	Understanding of Concept, technique and applications of standard	S.Y.B.Sc (43)
	protocols with study of published research data	
11.	Literature Survey of Eminent Scientists and their contribution and	S.Y.B.Sc (12)
	create a Calendar highlighting the "Scientist of the Month"	
12.	Demonstration of Sterilization and aseptic technique for laboratory	F.Y.B.Sc.
	glassware and Media.	Life Sciences (47)

	NEW PRACTICALS (07)			
Sr.	List of Practical/Demonstrations	Class and No. of		
No.		Beneficiaries		
1	Comparative study of excretory system of a rat with human using virtual dissection	S. Y. B. Sc (44)		
2	Study of plant family Apocynaceae with an emphasis on its medicinal uses	F. Y. B. Sc Botany (39)		
3	Analysis of soil structure using different techniques.	T. Y. EVS (30)		
4	Preparation of Herbal products.	F. Y. B. Sc (39)		
5	Quantification of RNA	S. Y. B. Sc (38)		
6	Understanding Anatomy of Earthworm- With the help of Clay model	T. Y. B. Sc (14)		
7	Understanding the nervous system of Cockroach	T. Y. B. Sc (14)		

## D) TRAINING RECEIVED BY FACULTY

## 2019 - 2020: 02 (04 faculties)

Sr.No.	Name of the Faculty	Trainings	Resource persons
1.	Dr. Mayuresh Joshi Mr. Gaurav Bingi	Gender Issue	Ms. Geeta Chaddha and Dr. Chayanika Shah
2.	Dr. Shalini Rai, Dr. (Ms.) Aashu Vajpai	Advanced Excel	Mr. Paresh Pandya

#### 2020 - 2021 (05)

Sr. No.	Name of the Faculty	Trainings	Resource persons
1.	Dr.Sagarika Damle,Dr.Tejashree Shanbhag,Dr.Shalini Rai,Dr.(Ms.)Aashu Vajpai,Dr.Suvarna Sharma,Dr.Mayuresh Joshi and Mr.Gaurav Bingi	COVID-19 Impact and Strategies	Dr. Manvi Porwal,Scientist,WHO, Germany
2.	Dr.Sagarika Damle,Dr.Tejashree Shanbhag,Dr.Shalini Rai,Dr.(Ms.)Aashu Vajpai,Dr.Suvarna Sharma,Dr.Mayuresh Joshi and Mr.Gaurav Bingi	Blended Learning and Challenges for On-line Teaching	Dr Kuldeep Kumar, Professor, Bond University, Australia
3.	Dr.Sagarika Damle,Dr.Tejashree Shanbhag,Dr.Shalini Rai,Dr.(Ms.)Aashu Vajpai,Dr.Suvarna Sharma,Dr.Mayuresh Joshi and Mr.Gaurav Bingi	Basic and Advance excel course by K.C. College	Mr Kaushal Shah, Senior Manager, Reliance Power Ltd
4.	Dr.Sagarika Damle, Dr.(Ms.) Aashu Vajpai, Dr. Mayuresh Joshi	Mathematical Modelling of Models of Tipping Points of Ecosystem.	Dr. Vishwesha Guttal, Associate Professor, Centre for Ecological Sciences, IISc, Bengaluru, India
5.	Dr.Sagarika Damle,Dr.Tejashree Shanbhag,Dr.Shalini Rai,Dr.(Ms.)Aashu Vajpai,Dr.Suvarna Sharma,Dr.Mayuresh Joshi and Mr.Gaurav Joshi	Cyber Security	Mr.Sai Satish, Founder and Chief Executive Officer, India Servers, Andhra Pradesh, India

#### E) EXHIBITION

#### 2019 - 2020 (02)

SCICODE#19: An Interdepartmental activity, entitled 'Sci-Code #19' was organized by all five departments, under the banner of DBT Star Status College and was extended to all Science departments of K. C. College. Participation was invited from colleges across Mumbai to showcase the innovative ideas in various activities organized under Sci Code#19. It included science projects, working models, training sessions and workshops on various themes.

Sr.No.	Events:	No. of Participants	
1.	SciCodE #19		
	a. Treasure Hunt	28 (14 teams)	
	b. Bio beauty (Bio Jewelry)	11	
	c. Nature Photography	12	
2.	Herbal Products 2020	F.Y.B.Sc (50)	

#### 2020 - 2021(02)

SCICODE#20 - An Interdepartmental activity, entitled 'Sci-Code #20' was organized. Department of Life Sciences organized a two-day informative Webinar titled 'Pawse For A Second To Hear: Tail Tales' In association with The Welfare of Stray Dogs (WSD), Mumbai, India

Sr.No.	Events:	No. of Participants
	Two Day National Level Webinar titled	Participants from F.Y.B.Sc., S.Y.B.Sc and
1.	'Pawse for A Second to Hear: Tail Tales'	T.Y.B.Sc.Life Sciences and Participants across
		India (283)
2.	Creative Sciencia	Participants from various colleges across India
		(127)

## F) TRAINING COURSES/WORKSHOPS

2019 - 2020 (04)

Sr.	Title	Type and No. Of	Resource Persons
No.		Beneficiaries	
	Hands on Training	F.Y.B.Sc Botany, Life	Dr.Neelima Kulkarni,
1	'Zero Garbage'	Sciences and Zoology (80)	Chairperson, Mulund Vibhaag,
			Hariyali NGO
2	Hands –on Demonstration	Students of S.Y.B.Sc.,	Mr. Rakesh Khatri - Eco Roots
	Workshop	T.Y.B.Sc. Life Sciences	foundation, New Delhi
	'Artificial Bird Nest	KCC, Students from other	
	Making'	colleges and schools (86)	
3	Entrepreneurial Activity	F.Y.B.Sc. Botany (50)	Dr Mona Kejariwal, Assistant
	Herbal Plant Products		Professor, R. D. National College,
			Bandra
4	Hands on Training	F.Y.B.Sc Life Sciences	Mr. Rajendra Bangera,
	Workshop on "Setting up	(46)	Non-Teaching Staff, Dept of Life
	Paramecium Culture"		Sciences, K. C. College

## 2020 - 2021 (08)

Sr.	Title	Type and No. Of	Resource Persons
No.		Beneficiaries	
1	Hands On Training in "Use	T.Y.B.Sc. Life Sciences	Dr. Shalini Rai, Dr.(Ms.) Aashu
	of Google Classroom as a	(16)	Vajpai, Dr. Suvarna Sharma,
	Teaching Learning Aid"	S.Y.B.Sc. Life Sciences	Dr. Mayuresh Joshi and Mr.
		(52)	Gaurav Bingi,
		F.Y.B.Sc Botany, Life	Assistant Professors, Department
		Sciences and Zoology	of Life Sciences, K. C.
		Students (120)	College,Mumbai.
2	Three-day workshop	S.Y.B.Sc. and T.Y.B.Sc.	Dr. Anuttama
	on Research paper	Life Sciences (24)	Kulkarni
	Reading in		INSPIRE Faculty
	collaboration with		Fellow at Homi
	Homi Baba Center for		Bhabha Centre for
	Science Education		Science Education
			(HBCSE), TIFR, Mumbai
			Ms.Deepika Jauhar
			Remedial lecturer at
			Sophia College, Mumbai.
3	'Grow Microgreens'-	Participants from S.Y.B.Sc	Mr. Husain Bharmal,
	Super foods	and T.Y.B.Sc Life	Farm Studios, Mumbai
	By Farm Studios -	Sciences, Faculty	
	Practical Hand-on training	members from K. C.	

4	for growing microgreen.  Workshop on "How to make a flyer" using Microsoft Powerpoint and	College and 10 participants from Colleges across Mumbai. (79) S.Y.B.Sc. and T.Y.B.Sc. Life Sciences (45)	<b>Dr. Mayuresh Joshi</b> , Assistant Professor, Department of Life Sciences, K.C.
	Canva		College, Mumbai.
5	State Level Three-Day Hands-on Training Workshop in techniques "Band It Up!!! An Inter- Disciplinary Approach to Techniques in Chromatography"	F.Y.B.Sc, S.Y.B.Sc. and T.Y.B.Sc. Life Sciences and Chemistry Students, K. C. College and Student participants across the state(149)	Dr.Yogita Shinde and Dr.Charulata Chaturvedi Assistant Professor, Department of Chemistry, Dr. Mayuresh Joshi, Assistant Professor, Department of Life Sciences, K.C. College, Mumbai.
6	Two Day Workshop on 'Managing Biological Data and its analysis using MS Excel'	S.Y.B.Sc. and T.Y.B.Sc. Life Sciences (55)	<b>Dr. N. R. Hegde,</b> Former Faculty, Dept of Statistics, SIES College, Sion, Mumbai, Maharashtra, India.
7	State Level Hands -on training titled 'Cyber Suraksha'	Non-Teaching Staff from colleges across Maharashtra (25)	Mr.Sai Satish,F ounder and CEO,India Servers,Andhra Pradesh,India
8	BioInformatics (Clustal Omega and RASMOL) - Hands-on Software application	S.Y.B.Sc. Life Sciences (43)	<b>Dr.Suruchi Jamkhedkar</b> , Assistant Professor, University Department of Life Sciences, university of Mumbai, Kalina, Mumbai, Maharashtra, India.

# G) FIELD TRIPS AND INDUSTRIAL VISITS 2019 – 2020 (08)

Sr No.	No.of Students/Beneficiaries	Place	
1.	T.Y.B.Sc Life Sciences (25)	Metropolis Laboratory, Vidyavihar, Mumbai	
2.	T.Y.B.Sc Environmental Sciences (54)	BARC, Trombay, Mumbai	
3.	T.Y.B.Sc Life Sciences (25)	Department of Life Sciences, Sophia College, Peddar Road, Mumbai	
4.	F.Y.B.Sc Botany (50)	Algae Collection at Banganga, Walkeshwar, Mumbai	
5.	F.Y.B.Sc Life Sciences(50)	Saguna Baug, Neral, Thane	
6.	F.Y.B.Sc Botany (50)	FOT Exhibition, D.G. Ruparel College, Matunga West, Mumbai	
7.	F.Y.B.Sc Botany (50)	Sagar Upvan Colaba - BPT Mumbai's Botanical Garden.	
8.	F.Y.B.Sc Botany (50)	Introduction to flora around University of Mumbai.	

### 2020 – 2021 (04)

Sr No.	No.of Students/Beneficiaries	Place
1.	Participants from S.Y.B.Sc and T.Y.B.Sc Life Sciences, Faculty members from Dept	A virtual visit to Share Labs, Oslo Dr. Nanda Tarte, Share Labs, Oslo, Norway

	of Life Sciences, K. C. College (40)	
2.	Participants from F.Y.B.Sc Life Sciences, Faculty members from Dept of Life Sciences, K. C. College. (140)	A Virtual tour of Department of Life Sciences exhibiting the Instruments and Museum Specimens, Dept of Life Sciences, K. C. College, Churchagte, Mumbai.
3.	Participants from F.Y.B.Sc Life Sciences, Faculty members from Dept of Life Sciences, K. C. College (60)	A virtual field trip to SAGAR UPAVAN, Colaba, Mumbai
4.	Participants from F.Y.B.Sc Life Sciences, Faculty members from Dept of Life Sciences, K.C.College (150)	A Virtual Field Trip to Velas, Ratnagiri Marvel of Marine Ecosystem at Velas, Beach, Mr. Mohan Upadhye, Livelihood Assistant, Mangrove Foundation, Velas, Maharashtra

## H) SUMMER TRAINING 2019 – 2020 (01)

Sr.	No. of the students	Institute/College	Department
1.	Ms.Bhakti Tari	National facility for Biopharmaceuticals, G.N.Khalsa College,Matunga	Protein and Molecular Biology

#### I) SEMINARS 2019 – 2020 (02)

	One Day National Level Geriatric Management Lecture Workshop entitled '100 Not Out' in				
assoc	association with NSS Unit				
Sr.	Title of the session	Beneficiaries	Resource Person		
No.					
1.	Meditation and its Importance	Student s Faculty	Dr. Nutan Pakhare		
2.	'60 not out-Life after retirement'	Members and Senior	Mrs. Nirmala Bathija		
	at Neuropathy Research and	Citizens,			
	Training Academy	Participants from			
3.	It's all about our Attitude	NGO,Old Age Homes (70)	Dr. Manju Nichani		
4.	Care of Spine in Elderly – what		Dr. Hrishikesh Sarkar		
	I can't do to I can did				
5.	Multidisciplinary Perspective on		Dr. S Siva Raju		
	Population Aging in India				
6.	Eating Right - A Mantra to		Dr. Sharad Kasarle		
	Graceful ageing				
7.	Fall Prevention Exercises and		Dr. Sriniwas Thakur		
	Memory EnhancingActivities				
8.	Cyber Security		Ms. Aparna Thakker		
9.	Is Old Age Home an issue or a		Dr.Rekha Bhatkhande		
	need of current society?		Mr. Shripad Kuvelkar		
			Dr. Sushila Gupta		
			Ms. Aparna Thakker		
10.	Legal Aspects of Elderly Care		Smt. Nirmala Samant		
			Prabhavalkar		
	Day Interdisciplinary Faculty I				
Asso	ciation with Department of Physic	cs, Gender Issue Cell of Kisl	ninchand Chellaram College		
Sr.	Title of the session	Beneficiaries	Resource Person		
No.					
1.	What is Gender? How does it	Faculty Members	Ms.Geeta Chaddha		

	applies in social status?	(23)	
2	What is Science? How is science		Dr. Chayanika Shah
	gender bias a gender influenced?		-

## 2020 - 2021 (04)

Sr. No.	Title of the session	Beneficiaries	Resource Person
1	Three Day International Webinar titled "Combating Infertility -An Embryologist's Approach"	Participants from various colleges across India and Abroad (953)	<b>Dr. Kersi Avari</b> , Program Director, Embryology Academy for Research and Training, Mumbai.
2	Three Day International Webinar titled "One Earth One Love - 2020"	Participants from various colleges across India and Abroad (1005)	Dr. Anish Andheria President, WCT Dr. Parvish Pandya Consultant – Sanctuary Nature Foundation Dr. Nishith Dharaiya Asso. Professor, HNG University, Gujarat Mr. Stalin Dayanand, Vanashakti Ms. Sharada Balasubramanian Environmental Journalist, Coimbatore Prof. Sudhakar Solomanraj HOD, Political Science, Wilson College Ms. Madhavi Joshi CEE, Ahmedabad Mr. Laxmikant Deshpande Manager, Wetland Management System, Godrej and Boyce, Mfg. Co. Ltd., Mumbai
3	Five Day Digital Training Workshop on on Fundamentals of Molecular Biology & Genetic Engineering'	F.Y.B.Sc. ,S.Y.B.Sc. and T.Y.B.Sc. Life Sciences Students (90)	Dr. Ankur Gautam, Dr. Shubham Dixit, Dr. Parul Tomar, Ms. Pooja Narang, MERCK High End Skill Development Center, Chandigarh, India
4	Two Day National Level Webinar titled 'Pawse For A Second To Hear: Tail Tales'	Participants from F.Y.B.Sc., S.Y.B.Sc and T.Y.B.Sc.Life Sciences and Participants across India (283)	Dr. Freya Jhaveri, Small Animal Veterinarian, Ahmedabad, Gujarat, India Adv. Meet Ashar, Remediate Response Team, People for Ethical Treatment of Animals, India Mr. Abodh Aras, Chief Executive Officer Welfare of

	Street Dogs, Mumbai
	Dr. Komal Raul,
	Veterinary Officer, Jijamata
	Udyan, Mumbai
	Mr.Pawan Sharma, Founder
	and President, RAWW, India

### J) EXTENTION AND OUTREACH ACTIVITIES 2019 – 2020 (04)

Sr.	Title	Class and No. Of Beneficiaries	Resource Persons
1.	Handling of Foldscope	Faculty Members and T.Y.	Dr. Sagarika Damle and
	(Inter-departmental)	students, Botany Department, R.	Dr. Archana Thite;
		D. National College (25)	Resource person: Mr. Atul
			Kotian (Former CHB Staff,
			Dept. of Life Sciences, KCC)
2.	Artificial Bird Nest	Students of S.Y., T. Y. B. Sc. LSc	Mr. Rakesh Khatri-Eco Roots
	Making Hands – on	KCC, Students from other	foundation, N. Delhi
	Workshop	colleges and schools (86)	
	(Inter-departmental)		
3.	Foldscope- A tool for	Participants from tribal district	Dr. Sagarika Damle
	learning from the Green	(40)	
	World (Inter-		
	departmental)		
4.	Foldscope Training	F.Y.B.Sc. Life Sciences (40)	Ms. Manasi, Ms. Niharika, Ms.
	Visualizing objects with		Bhakti, Mr. Vikas
	paper microscope		
	Workshop as Peer		
	Mentoring		

#### 2020 - 2021 (02)

	- 2021 (02)	T	T
Sr.	Title	Class and No. Of Beneficiaries	Resource Persons
1.	Creative Sciencia -	Participants from various colleges across	A web-based competition
	A Covid 19 -	India (127)	with 10 judges
	Creative Expressions		
	- Web-based state		
	level Competition for		
	Colleges across		
	Mumbai		
2.	Cybersuraksha –	Non-Teaching Staff from colleges across	Mr.Sai Satish, Founder
	Activity for Non-	Maharashtra (25)	and CEO, India Servers,
	teaching Staff of K.		Andhra Pradesh, India
	C. College and for		
	other Colleges in		
	Mumbai		
	(Interdepartmental		
	with CS)		

## **K) INVITED LECTURES 2019 – 2020 (10)**

Sr. No.	- 2020 (10) Title	Type and No. of Beneficiaries	Resource Persons
1.	Survey based Research Methodology	S.Y.B.Sc Life Sciences(43)	<b>Dr. Vivek Patkar,</b> Independent Researcher
2.	Emotional Pie	S.Y.B.Sc and T.Y.B.Sc Life Sciences (60)	Ms. Jai Bapat, Founder, Synergistic Minds
3.	Careers in Life Sciences	F.Y.B.Sc, S.Y.B.Sc and T.Y.B.Sc Life Sciences (100)	<b>Dr. Suruchi Jamkhedkar,</b> University Department of Life Sciences, University of Mumbai
4.	Designing Google Forms for Online Survey	S.Y.B.Sc Life Sciences (43)	Mrs. Pratiksha Kadam, Dept of Statistics, K. C. College, Churchgate (In House Faculty)
5.	Skills for Future Careers Edu –Link Lecture	S.Y.B.Sc Life Sciences (45)	Dr. Jubin Shah, Ambassador for Higher Education in Germany Conference head at XPOMET Innovation in Medicine, Berlin, Germany
6.	Being Healthy: "What does it actually mean?"	F.Y.B.Sc Botany, Life Sciences and Zoology(60)	Ms. Harshi Shah, Dietitician, Bhatia Hospital, Tardeo, Mumbai
7.	Building of Phylogenetic Tree	S.Y.B.Sc Life Sciences (43)	<b>Dr. Suruchi Jamkhedkar,</b> University Department of Life Sciences, University of Mumbai
8.	Finance	T.Y.B.Sc Environmental Sciences (54)	<b>Mr. Justin M N,</b> Department of Commerce, K.C. College, Churchgate, (In House Faculty)
9.	Lecture on "Artificial Intelligence"	F.Y.B.Sc Life Sciences+ Micro Biotech+ IT (163)	<b>Dr. Abhijeet Gole,</b> Assistant Professor, Ruia College
10.	'Sci Shots' Lecture in Documentary and Short film making in Association with Shamiana	S. Y. B. Sc (100)	<b>Dr. Cyrus Dastoor,</b> Shamiana

#### 2020 - 2021 (37)

Sr. No.	Title	Type and No. of Beneficiaries	Resource Persons
1.	Career Guidance	T.Y.B.Sc Life Sciences (27)	Dr. Sanjay Deshmukh (Faculty, University Department of Life Sciences; Former Vice Chancellor, University of Mumbai)
2.	Guidance for Competitive Exams and PG Courses w.r.t Life Sciences	T.Y.B.Sc Life Sciences (27)	Mr. Gaurav Bingi (In-house Faculty)
3.	Real Facts about Real Time PCR with relevance to COVID-19	F.Y.B.Sc., S.Y.B.Sc and T.Y.B.Sc.Life Sciences (73)	<b>Dr. Suvarna Sharma</b> (In-house Faculty)

4.	Herbarium- The directory	F.Y.B.Sc., S.Y.B.Sc and	Dr. Archana Thite
	of plant	T.Y.B.Sc. Life Sciences (54)	(Former Faculty)
5.	Managing the OOPS!!	F.Y.B.Sc., S.Y.B.Sc and	Dr. Shalini Rai
		T.Y.B.Sc. Life Sciences (70)	(In-house Faculty)
6.	Architecture – Mysteries	F.Y.B.Sc., S.Y.B.Sc and	Dr. Mayuresh Joshi
	of Ancient India	T.Y.B.Sc. Life Sciences (79)	(In-house Faculty)
7.	Sacred Secrets of the	F.Y.B.Sc., S.Y.B.Sc and	Ms. Sharon K.
	Forest	T.Y.B.Sc. Life Sciences +	(Ph.D. Student)
		Biotech (78)	
8.	Shine through Whine	F.Y.B.Sc., S.Y.B.Sc and	Dr. (Ms.) Aashu Vajpai
		T.Y.B.Sc. Life Sciences +	(In-house Faculty)
		Biotech (70)	*
9.	Quarantine and Dance	F.Y.B.Sc., S.Y.B.Sc and	Mr.Gaurav Bingi
•		T.Y.B.Sc. Life Sciences +	(In-house Faculty)
		Biotech (70)	(in nouse rucuity)
10.	Positive Thinking and	F.Y.B.Sc., S.Y.B.Sc and	Dr. Tejashree Shanbhag and
10.	Prayers in Tough Times	T.Y.B.Sc. Life Sciences +	Dr. Suvarna Sharma
	Trayers in Tough Times		
11	Coffee with Amente and	Biotech (66)	(In-house Faculties)
11.	Coffee with Amruta and	F.Y.B.Sc., S.Y.B.Sc and	<b>Dr. Amruta Kothare</b> (Alumini
	Anupma	T.Y.B.Sc. Life Sciences +	Ph.D. Student) and <b>Dr.</b>
		Biotech (64)	Anupma Harshal (Former
			Faculty)
12.	Being a hero in the strife	F.Y.B.Sc., S.Y.B.Sc and	Ms. Ashoi Dantra (S.Y.B.Sc.
		T.Y.B.Sc. Life Sciences +	Student)
		Biotech (41)	
13.	Bake it Away	F.Y.B.Sc., S.Y.B.Sc and	Mr. Siddharath Nakhwa
		T.Y.B.Sc. Life Sciences +	(S.Y.B.Sc. Student)
		Biotech (39)	
14.	Happiness: 'Happens or	F.Y.B.Sc., S.Y.B.Sc and	Dr. Sonal Dasani
	you make it happen'	T.Y.B.Sc. Life Sciences +	(Former Faculty)
		Biotech (58)	
15.	Knock Knock Doctor	F.Y.B.Sc., S.Y.B.Sc and	Ms. Durga Shinde
		T.Y.B.Sc. Life Sciences +	(Ph.D.Student)
		Biotech (61)	(1 m2 m m m)
16.	Out of Africa –An	F.Y.B.Sc., S.Y.B.Sc and	Dr. Sagarika Damle
10.	Archeological Perspective	T.Y.B.Sc. Life Sciences +	(Head of the Department)
	I hencological i elspective	Biotech (60)	(110dd of the Department)
17.	Furiends in need are	F.Y.B.Sc., S.Y.B.Sc and	Ms. Shreya Kelkar
1/.	friends indeed are	T.Y.B.Sc. Life Sciences	(F.Y.B.Sc. Student)
	menus muceu		(1.1.D.Sc. Studellt)
10	Cotting A sate	+Biotech Students; (55)	Ma Covinc Hands
18.	Getting Arsty	F.Y.B.Sc., S.Y.B.Sc and	Ms. Savina Hegde
		T.Y.B.Sc. Life Sciences +	(F.Y.B.Sc. Student)
4.0		Biotech Students; (62)	12. 32. 32. 32.
19.	Its just a straw	F.Y.B.Sc., S.Y.B.Sc and	Ms. Nandini Jha
		T.Y.B.Sc. Life Sciences +	(F.Y.B.Sc. Student)
		Biotech Students; (55)	
20.	Everyone is an artist	F.Y.B.Sc., S.Y.B.Sc and	Ms.Bhoomi Dubal
		T.Y.B.Sc. Life Sciences +	(T.Y.B.Sc. Student)
		Biotech Students; (57)	

21.	One Day National Webinar titled "Birds of Mangroves"	Participants from various colleges across India (442)	Mr. Laxmikant Deshpande, Senior Manager, Wetland Department, Godrej &Boyce Co. Ltd, Vikroli, Mumbai.
22.	International Invite Lecture titled 'Advances in Neurodegenerative disease research with references to Amyotrophic Lateral Sclerosis (ALS)'	Partcipants from various colleges across India (189)	Mr. Ankur Gadgil, Ph.D. Scholar, Adam Mickiewicz University, Poznan, Poland
23	'Living with The Novel Coronavirus - What Science Tells Us'	Participants included students and faculty members from various college and organizations across 7 states of India and International participants from Singapore (150)	Dr. Sasikumar Menon, Director of the Institute for Advanced Training and Research in Interdisciplinary Sciences (IATRIS), Sion, Mumbai, India
24.	Department of Life Sciences, Q – Rius Series – Lecture 1 Entitled 'Scientific Approach and Temperament and its importance in pursuing Science and day today life'	Participants included S.Y.B.Sc and T.Y.B.Sc Life Sciences students. (52)	<b>Dr. Geetha Menon,</b> I/C Principal, R. K. Talreja College, Ulhasnagar, Mumbai, India
25	Department of Life Sciences, Edu-Link Series (2020 - 21) - Lecture 1 entitled 'Need For Complementary And Alternative Medicine Therapy'	Participants included S.Y.B.Sc and T.Y.B.Sc Life Sciences students, Ex- students of the College, Students from S.Y.B.A and all the Faculty Members from Department of Life Sciences. (42)	Ms. Foram Shah Alternative Medicine Therapy Practitioner, Founder, Palash – Heal the Eternal Soul, Chembur, Mumbai, India
26	'Genomics and its impact on everyday life'	Participants included S.Y.B.Sc and T.Y.B.Sc Life Sciences, Alumni Students and Ex-faculty (77)	Mr. Avinash Dhar, Program Manager for Bionivid Technologies Pvt. Ltd, Bengaluru, India
27	Department of Life Sciences, Q-Rius Series – Lecture 2: 'Understanding Literature Survey'	Participants included S.Y.B.Sc and T.Y.B.Sc Life Sciences students. (51)	Dr.Amruta Kothare, Ph.D. Life Sciences, Dept of Life Sciences, K. C. College, Churchgate, Mumbai, India
28	Department of Life Sciences, Q-Rius Series – Lecture 3: Survey based research – importance and challenges	Participants included S.Y.B.Sc and T.Y.B.Sc Life Sciences students.(49)	Mrs. Shailaja Rane, Assistant Professor, Department of Statistics, K. C. College, Churchgate, Mumbai, India
29	Department of Life Sciences, Q-Rius Series – Lecture 4: 'Making and analyzing a questionnaire'	Participants included S.Y.B.Sc and T.Y.B.Sc Life Sciences students.(47)	Mrs.Shailaja Rane, Assistant Professor, Department of Statistics, K. C. College, Churchgate, Mumbai, India

30	Department of Life Sciences, Edu-Link Series (2020 - 21) - Lecture 2 Entitled "Pannexin1 – The centre piece in the puzzle of Alzheimer's disease"	Participants included S.Y.B.Sc and T.Y.B.Sc Life Sciences students and Faculty Members.(50)	Mr. Chetan Patil Ph.D. Scholar, Neuroscience, University of Manitoba, Canada.
31	Department of Life Sciences, Edu-Link Series (2020 - 21) - Lecture 3 – Beyond the horizons of Science – A management prospective	Participants included S.Y.B.Sc and T.Y.B.Sc Life Sciences students and Faculty Members.(45)	Mr. Pratik Sindwad Senior Consultant, EY, Bangalore, India
32	SWAGAAT Guest Lecture Entitled 'Careers post B. Sc in Life Sciences'	Participants included F.Y.B.Sc, S.Y.B.Sc and T.Y.B.Sc Life Sciences students and Faculty Members.(76)	Ms. Nilofer Kotwal HOD, Department of Life Sciences, Jai Hind College (Autonomous), hurchgate, Mumbai, Maharashtra, India
33	Department of Life Sciences, Edu-Link Series (2020 - 21) - Lecture 4 - "What's Next"	Participants included S.Y.B.Sc and T.Y.B.Sc Life Sciences students and Faculty Members.(50)	Mr.Sohel Gazi, Senior Executive, Reliance Life Sciences, Belapur, Navi Mumbai, Maharashtra, India
34	Lecture on 'Groove It Out'	Participants included F.Y.B.Sc, S.Y.B.Sc and T.Y.B.Sc Life Sciences students and Faculty Members.(40)	Mr.Gaurav Bingi, Assistant Professor, Department of Life Sciences, K. C. College, Churchgate, Mumbai, Maharashtra, India
35	Department of Life Sciences, Edu-Link Series (2020 - 21) - Lecture 5 - "Genetic Counselling: A journey to Decode your Genome"	Participants included S.Y.B.Sc and T.Y.B.Sc Life Sciences students and Faculty Members.(44)	Ms. Shreya Saraiya, Genetic Counsellor and Rare Disease Advocate at Rare Disease India, Bengaluru, Karnataka, India
36	Online awareness and sensitization program, entitled 'Enhancing Skilling and Talents of Senior Citizens in Old Age Homes'	Participants included S.Y.B.Sc and T.Y.B.Sc Life Sciences students and Faculty Members.(78)	Dr. Nirmala Samant Prabhavalkar, Ex – Mayor and Chief Functionary, Rehabilitation Research and Training Center and Dr. Hemlata K Bagla, Principal K. C. College
37	College Level Webinar on 'Mobile and Web Security'	F.Y.B.Sc., S.Y.B.Sc. and T.Y.B.Sc.Students form Star Status and Star Scheme Departments, K.C.College (100)	Mr.Sai Satish, Founder and CEO,India Servers,Andhra Pradesh

### N) ANY OTHER SUPPORTING DOCUMENT 2019 - 2020



SAGARIKA DAMLE <sagarika.damle@kccollege.edu.in>

### Fwd: Invitation As mentor for Department of Botany, Under Star DBT Scheme

Mona Kejariwal <dbtstarrdnc@gmail.com>

Wed, Jul 17, 2019 at 10:18 AM

To: sagarika.damle@kccollege.edu.in

----- Forwarded message ------

From: Mona Kejariwal <dbtstarrdnc@gmail.com>

Date: Mon, 8 Jul 2019, 18:07

Subject: Invitation As mentor for Department of Botany, Under Star DBT Scheme

To: <sagarika.damle@kccollege.edu>

Cc: <mehravibha@gmail.com>

Respected madam,

Department of Botany, R.D. & S.H.National College, invites you on 24th, 2019, Wednesday, as mentor for conducting a session on STAR DBT activities in Department of Botany. Kindly acknowledge the same.

Regards, Dr. Vibha Mehra HOD, Botany

Dr. Mona Kejriwal

Coordinator, STAR DBT, RDNC

#### 2020 - 2021



### NES RATNAM COLLEGE OF ARTS, SCIENCE & COMMERCE



NAAC Re-accredited 'A' Grade (3" Cycle) July,2017 University of Mumbai Best College Award Urban Area (2013-14) DBT Star College Scheme (2017-2020)

16th June 2021

Dr. Sagarika Damle DBT Coordinator, DBT-Star Status Scheme KC College, Churchgate, Mumbai.

Dear Dr.Sagarika Damle,

Sumtalhahar

We thank you for spending your valuable time in mentoring our DBT- activities.

Your suggestions and inputs are of great benefit to us. Our heartfelt thanks for your support in providing guidance.

Thanking you,

Dr.Sunita Chahar DBT-Coordinator Vimachana

Dr.Mary Vimochana Principal

### **MICROBIOLOGY**

### A) RESEARCH PROJECTS

2019 - 2020

Ong	Ongoing Projects: 04			
Sr No	Name of the students	Title of the project	Name of Guiding Teacher	
1	Rane Sanskruti	Study of awareness about benefits of probiotics and evaluation of prebiotic activity of some plant extracts	Dr. Sejal Rathod	
2	G Anurag, Chinta Chirag Chintakindi Ganesh	Green Synthesis of silver nanoparticles and antimicrobial coating of masks, gloves and fabrics	Dr. Pratibha Shah	
3	Agrol Namrata. Singh Shalini, Tiwari Jaya	Evaluation of antibacterial activity of vegetable biocleaners	Mrs. Rajitha Satish	
4	Mishra Kiran	Determining the efficiency of commercial handwash and sanitizer on normal flora	Ms. Amina Dholkawala	
Con	pleted Projects: 10			
1	Chaurasia Jay, Kalani Mohit, Kadam Chaitanya	Isolation of plastic degrader organisms from soil and to check its degradation activity (Interdepartmental)	Dr. Pratibha Shah	
2	Jain Netra, Shaikh Anas	Extraction of bacteriocin from lactic acid bacteria and check its effect on gastro-intestinal organisms	Dr. Sejal Rathod	
3	Chouhan Tanisha, Gaziani Shahida	Study of extra polysaccharide produced by microorganisms in extreme environments.	Dr. Pratibha Shah	
4	Elangikal Janice	Factors affecting biofilm formation in bacteria.	Dr. Pratibha Shah, Mrs. Rajitha Satish	
5	Yadav Kiran	Isolation and extraction of pigment producing organisms from rice samples	Dr. Sejal Rathod, Ms. Amina Dholkawala	
6	Kothari Gitika	Study of antibacterial activity of <i>Averrhoa</i> bilimbi on skin pathogens	Dr. Sejal Rathod, Mrs. Rajitha Satish	
7	Aire Aniruddha, Chorghe Parita, Trikamdas Dimple, Patel Bhavika, Sankpal Sakshi	Analysis of Physiochemical and microbial Parameters to evaluate the drinking water quality in five different villages in the vicinity of Saphale of Palghar district in Maharashtra. (Interdepartmental)	Dr. Pratibha Shah, Mrs. Rajitha Satish Dr Satish Kolte	
8	S.Y.B.Sc (57)	Enrichment, cultivation, isolation and identification of Extremophiles	Dr. Pratibha Shah, Mrs. Rajitha Satish	
9	F.Y.B.Sc (60)	Analysis of pH of commercial and homemade beverages.	Mrs Rajitha Satish, Ms. Priyanka Yadav	
10	F.Y.B.Sc (60)	Production and efficacy testing of Biofertilizers	Mrs Rajitha Satish, Ms. Priyanka Yadav	

Con	Completed Projects (2020-21): Total: 04			
Sr. No	Name of the students	Title of the project	Name of Guiding Teacher	
1	Sanskruti Rane (SHP-01)	Study of awareness about benefits of probiotics and evaluation of prebiotic activity of some plant extracts	Dr. Sejal Rathod	

2	Anurag Chirag Chinta Ganesh Chintakindi (SHP-03)	Green Synthesis of silver nanoparticles and antimicrobial coating of masks, gloves and fabrics	Dr. Pratibha Shah
3	Namrata Agrol, Shalini Singh, Jaya Tiwari (SHP-03)	Evaluation of antibacterial activity of vegetable biocleaners	Mrs. Rajitha Satish
4	Mishra Kiran	Determining the efficiency of commercial handwash and sanitizer on normal flora	Ms. Amina Dholkawala
Ong	oing projects (2020-21): To	tal 05	
Sr No	Name of the students	Title of the project	Name of Guiding Teacher
1	Sankar Rajput and Darshan Jain (SHP-02)	Evaluation and Analysis of herbal and Ayurvedic plant products commonly used in Phytotherapy in India	Dr. Sejal Rathod
2	Samay Dwivedi (SHP-01)	To study the antimicrobial activity of Cyanadon Dactylon and its comparison with antibiotics	Dr. Pratibha Shah
3	Hanisha Mehta, Aroob Nadim, Salooni Khanvilkar (SHP-03)	Identification and antibiogram study of bacteria isolated from different street foods	Dr. Pratibha Shah and Ms. Priyanka Yadav
4	Vrushika Gujjar (SHP-01)	Study of bacteriophages against skin pathogens	Mrs. Rajitha Satish
5	Debanjana Bhaumik, Khyati Champaneri, Shreya Joshi (SHP-03)	Evaluation of masks used and determining the efficiency of household disinfection methods	Ms. Amina Dholkawala

## B) HANDS – ON EXPERIMENTS 2019 – 2020

Sr.	List of Extension Practicals	Class and No. of
No.		Beneficiaries
01	Potability of water from various drinking outlets	S.Y.B.Sc (57)
02	Winogradsky column: Study of Stratification zones using soil and water	S.Y.B.Sc (57)
	samples from Sanjay Gandhi National Park	
03	Determination of MIC by agar dilution method	S.Y.B.Sc (57)
04	Extraction of genomic DNA from fruits	S.Y.B.Sc (57)
05	Optimization studies for cultivation of phages	F.Y.B.Sc (60)
06	Flagella staining by silver impregnation method	F.Y.B.Sc (60)
07	Studying effect of desiccation on bacterial growth	F.Y.B.Sc (60)
08	Micrometry for measurement of cell size	F.Y.B.Sc (60)
09	Study of spirochetes from tooth tartar	F.Y.B.Sc (30)
10	Study of selective media- Cetrimide and its role as surfactant	F.Y.B.Sc (60)
11	Analysis of growth of bacteria under stressed conditions and determination	F.Y.B.Sc (60)
	of generation time	
12	Study of Normal Flora of Gastrointestinal tract and respiratory tract	F.Y.B.Sc (30)
13	Restriction digestion of Lambda DNA and E.coli genomic DNA using	T.Y.B.Sc (29)
	BamHI and HindIII	
14	Determination Of Sugar Concentration in Commercial Drinks by Cole's	T.Y.B.Sc (29)
	Ferricyanide Method using Calculation Method	
15	Agarose gel electrophoresis for genomic DNA analysis	T.Y.B.Sc (29)

Sr.	List of Extension Practical	Class and No.of
No.		Beneficiaries
1	Replica plate for isolation of antibiotic resistant mutants- Virtual lab	T.Y.B.Sc (30)
2	Gradient plate technique for isolation of streptomycin resistant mutants- Virtual lab	T.Y.B.Sc (30)
3	Determination of Bombay blood group- Virtual lab	T.Y.B.Sc (30)
4	Agarose gel electrophoresis for genomic DNA analysis- Virtual lab	T.Y.B.Sc (30)
5	Restriction mapping problem solving	T.Y.B.Sc (30)
6	AST by Stoke's method	T.Y.B.Sc (30)
7	Antimicrobial activity of commercial disinfectants using disc diffusion	S.Y.B.Sc (45)
	method	
8	Estimating approximate bacterial load in drinking water sample	S.Y.B.Sc (45)
9	Estimating approximate bacterial load in soil sample.	S.Y.B.Sc (45)
10	Studying fomites on crude media.	S.Y.B.Sc (45)
11	Calculation of sedimentation rate of air microflora using homemade solid	S.Y.B.Sc (45)
	medium.	
12	Preparation of Winogradsky column	S.Y.B.Sc (45)
13	Food Adulteration	S.Y.B.Sc (45)

## $\begin{array}{c} C) & NEW\ PRACTICALS \\ 2019-2020 \end{array}$

Sr.	List of New Practicals	Class and No. of
No.		Beneficiaries
1	Quality assurance of media	S.Y.B.Sc (57)
2	Extraction of phytochemicals by Soxhlet's method	S.Y.B.Sc (57)
3	Use of R2A agar for the isolation of heterotrophic organisms from water sample	S.Y.B.Sc (57)
4	Handling of UV-Vis spectrophotometer	S.Y.B.Sc (57)
5	Screening of Antibiotic producers from soil	S.Y.B.Sc (57)
6	Green synthesis of nanoparticles and checking its antibacterial activity	S.Y.B.Sc (57)
7	Study of antibacterial spectrum of insoluble sulpha drug by ditch plate method	S.Y.B.Sc (57)
8	Isolation of Antibiotic resistant organisms from fomites – (Dustbin, table, knobs, floor, mobiles, labcoats)	S.Y.B.Sc (57)
9	Platform tests for analysis of milk samples	S.Y.B.Sc (57)
10	Thin layer chromatography for separation sugars	S.Y.B.Sc (57)
11	Isolation of Pectin degraders	S.Y.B.Sc (57)
12	Isolation of Corynebacterium diphtheriae using selective media	S.Y.B.Sc (57)
13	Column chromatography for separation of plant pigments	S.Y.B.Sc (57)
14	Determine Minimum Bactericidal concentration of various disinfectants of alcoholic and phenolic origin	S.Y.B.Sc (57)
15	Study antibacterial spectrum by agar strip method	F.Y.B.Sc.(60)
16	Aseptic transfer of Media	F.Y.B.Sc (48)
17	Determination of quantity of a compound using graphical intrapolation method	F.Y.B.Sc.(60)
18	Bioautography for detection of Vitamin B12	T.Y.B.Sc (29)
19	Major Minor Cross-matching of blood samples	T.Y.B.Sc (29)
20	MIC of antibiotics by Microdilution Method	T.Y.B.Sc (29)
21	Analysis of Synergistic activity of drugs	T.Y.B.Sc (29)

22	Amplification of DNA using PCR	T.Y.B.Sc (29)
23	SDS-PAGE and Western Blot	T.Y.B.Sc (29)

2020	2020-21			
Sr.	List of New Practicals	Class and No.of		
No.		Beneficiaries		
1	Use Amrita Vlab for study of Triple Sugar Iron Agar slant	T.Y.B.Sc (30)		
2	Analysis of Synergistic activity of drugs	T.Y.B.Sc (30)		
3	E- test	T.Y.B.Sc (30)		
4	Single Radial Immunodiffusion Assay	T.Y.B.Sc (30)		
5	Double Immunodiffusion or Ouchterlony's test	T.Y.B.Sc (30)		
6	SDS-PAGE- Virtual lab	T.Y.B.Sc (30)		
7	Checkerboard Assay	T.Y.B.Sc (30)		
8	Media formulation at home	S.Y.B.Sc (45)		
9	Learning to sterilize working tools at home	S.Y.B.Sc (45)		
10	Estimate Minimum Bactericidal concentration of various disinfectants	S.Y.B.Sc (45)		
11	Thin layer chromatography for separation sugars.	S.Y.B.Sc (45)		
12	Column chromatography for separation of natural and synthetic pigments	S.Y.B.Sc (45)		
	and dyes			

### D) TRAINING RECEIVED BY FACULTY 2019 – 2020

	2019 – 2020		
Sr No	Trainings attended	Resource person	Name of the Faculty
1	Faculty development Programme on 'Workshop on Excel', on 31st January 2020	Mr Paresh Pandya, Proprietor, Creative Line Computer Institute	Dr. Sejal Rathod, Dr. Pratibha Shah, Mrs. Rajitha Satish
2	Basic and Advance excel course by K.C. College	Mr Kaushal Shah, Senior Manager, Reliance Power Ltd	Dr. Sejal Rathod, Dr. Pratibha Shah, Mrs. Rajitha Satish, Ms. Amina Dholkawala, Ms Priyanka Yadav
3	Blended Learning and Challenges for On-line Teaching	Dr Kuldeep Kumar, Professor, Bond University, Australia	Dr. Sejal Rathod, Dr. Pratibha Shah, Mrs. Rajitha Satish
4	Advanced Nanomaterials for energy and environmental applications on 7th December 2019	Dr Pradeep Sarawade, Assistant Professor, Dept of Physics, University of Mumbai	Dr. Pratibha Shah, Ms. Amina Dholkawala
5	2-day workshop on 'Gender and Science', on 14 <sup>th</sup> & 15 <sup>th</sup> February, 2020 at K.C. College	Ms Gita Chadha, Dept of Sociology, University of Mumbai Ms Chayanika Shah, activist	Dr. Pratibha Shah, Ms. Amina Dholkawala
6	ICT Enabled Research tools and Techniques in Teaching Methodologies on 18 <sup>th</sup> December 2019	Mr Gaurav Ghelani TCS	Mrs. Rajitha Satish

#### 2020 - 2021 = 02

Sr No	Trainings	Resource person	Name of the Faculty
1	Training on the use of	Mr. Shiv Shankaran, Esquire	Dr. Sejal Rathod,
	Lyophiliser	Biotech	Ms. Amina Dholkawala
2	Basic and Advance excel	Ms. Neha Patel, Ms. Kaushal	Dr. Sejal Rathod
	course by K.C. College (26 <sup>th</sup>	Shah, Assistant Professor,	Dr. Pratibha Shah
	and 27 <sup>th</sup> May, 2020)	Department of Information	Mrs. Rajitha Satish
		Technology, K. C. College	Ms. Amina Dholkawala
		_	Ms. Priyanka Yadav

#### E) EXHIBITION2019 - 2020 = 01

Microfiesta 4.0	Total: 319
(Sci-code # 19)	School students from two different schools (156), school students
1. Working Model	from two different NGO's(19)
competition	(Degree and junior college students (125), as well as teachers (9) and
2. Video making	parents (10)
competition	

#### 2020 - 2021 = 03

Exhibitions/ Extension			
Title	Class and No. of Beneficiaries		
Microfiesta.5.0	Number of Beneficiaries: 220 School, Junior college and Degree		
1. Working Model competition	college students.		
<ol><li>Video making competition</li></ol>			
Sci Flick - Documentary Film	78- F. Y. B.Sc, S. Y. B.Sc and T. Y. B.Sc Microbiology and		
Screening	Biotechnology		
Research paper-reading and	22- S. Y. B. Sc students presented Research papers;		
presentation	45 beneficiaries		

### F) TRAINING COURSES/WORKSHOPS 2019 – 2020

Sr	Title	Type and No. Of	Resource Persons
No		Beneficiaries	
1	Workshop for	Intercollegiate,	Prof. Shripad D. Banavali
	Teachers	Inter-Departmental	Director Academics,
	Molecular and	T.Y.B.SC students	Tata Memorial Center
	Immunological	(120)	Dr. Surekha Zingde
	Diagnostic	and	Former Dy. Director, Cancer Research
	Techniques,	intercollegiate	Institute, ACTREC
	Organised by	<b>faculty</b> from different	Dr. Swarup Shah
	Department of	colleges of	Senior Molecular Scientist, Human Genetics,
	Biotechnology and	Maharashtra(26).	Hinduja Hospital, Mumbai.
	Microbiology		Dr Somnath Ghosh
			Scientific Officer F, Radiation Biology & Health
			Sciences Division, BARC
			Dr.Dhanashree Jagtap
			Scientist C, Structural biology, NIRRH, Mumbai.

			Dr. Nafisa Balasinor Scientist F, Neuroendocrinology Dept, NIRRH, Mumbai.
2	Session on Stress Management	Teaching (15), Non- teaching (5)members	Mr. Vijay Thigle Former HOD, Department of Microbiology and Art of Living Faculty
3	Two Day Training Program for DNA Extraction and Real Time PCR, ELISA in association with Hi Media	T.Y.B.Sc (30)	Dr Girish Pai Technical officer, Hi Media Pvt. Ltd

Sr No	Title	Type and No. Of Beneficiaries	Resource Persons
1	Character Strength Workshop	30 students T.Y. B.Sc	Dr. Sejal Rathod HOD, Microbiology
2	5 Day Training Workshop in Biotechniques (organized by Biotechnology, Life Sciences, Microbiology Department)	12 Faculty and 204 students	Mr Ankur Gautam Lab Services Manager Merck High-End Skill Development Centre IMTech, Chandigarh, India
3	Know thy Intelligence (15 <sup>th</sup> May 2020)	Total Registrations - 1114 Number of Participants – 773 (500 on Zoom and 273 on Youtube)	Dr. Bhavna Dave, Teacher- Educator, Pillai College of Education and Research, New Panvel
4	The Training on the use of Camag Linomat 5 and SmartDIGI	Mr. Ramakant Yadav, Anchrom Enterprise Pvt. Ltd	Teaching and Non-teaching staff (10) (Hands-on + Virtual)
5	Training of teachers and students for using online portal "Zoom"	Dr Sejal Rathod, HOD, Microbiology	Teachers (9) + F.Y.B.Sc, S.Y.B.Sc and T.Y.B.Sc Microbiology and Biotechnology (98)
6	Training on the use of Google classroom for students (Interdepartmental)	Dr Sejal Rathod, HOD, Microbiology	T.Y.B.Sc (29)
7	Hands-on Training on the use of Trinocular Microscope and Rotary vacuum Evaporator (6 <sup>th</sup> January, 2021) (Interdepartmental)	Mr. Sameer Shah, Mr. Jayesh Kalbhor Product Manager, Educational and Research Aids, co; Sr. Business Development Executive	Teaching (12) and Non-teaching (5) members (In college lab)
8	Hands- on Training on the use of Eppendorf Centrifuge, Microscope and Microfuge (15 <sup>th</sup> January, 2021) (Interdepartmental)	Mr. Sameer Lendy Eppendorf India Limited.	Teaching (10) and Non-teaching (5) members (In college lab)

## G) FIELD TRIPS AND INDUSTRIAL VISITS 2019 – 2020

Sr No.	No. of Students	Place
1	T.Y.B.Sc. and S.Y. B.Sc along with Faculty (90)	Sanjay Gandhi National Park, Mumbai.
2	T.Y.B.Sc along with Faculty (16)	Advanced Centre for Treatment, Research and Education in Cancer (ACTREC), Kharghar
3	T.Y.B.Sc and S.Y. B.Sc along with Faculty (48)	Mapro farms, Wai
4	T.Y.B.Sc and S.Y. B.Sc along with Faculty (48)	Maharashtra State Khadi and Village Industries Board, Directorate of Bee keeping, Mahabaleshwar
5	T.Y.B.Sc and S.Y. B.Sc along with Faculty (48)	Katraj Dairy, Pune
6	F.Y.B.Sc along with Faculty (19)	Bhabha Atomic Research Center, National Science Day
7	Faculty and students (36)	NIRRH (Molecular and cellular biology, Structural Biology, Toxicology, Gamete immuno-biology, Primate Biology, Animal House and common instrumentation facility)

#### 2020 - 2021

	2020 2022			
Sr No.	No. of Students	Place		
1	30- T.Y.B.Sc	Common Instrumentation Facility, K. C. College		
2	50- S. Y. B.Sc and T.Y.B.Sc	Advanced Centre for Treatment, Research and Education in Cancer, Mumbai		
3	370- F.Y. B. Sc, S.Y. B.Sc and T.Y.B.Sc (Intercollegiate)	Anchrom Enterprise Pvt Ltd		
4	30-T.Y.B.Sc	Cell culture Basics Virtual lab by Thermofischer		

### I) SEMINARS 2020 – 2021

	2020 - 2021			
Sr No	Title	Type and No. Of Beneficiaries	Resource Persons	
1	Been There, Done That- An	88 - Departmental	Dr Mehul Rajpurkar	
	Interaction With Our	F.Y.B.Sc,	Regional Manager, SRL diagnostics	
	Prestigious Alumni from	S.Y.B.Sc,	Ms. Shara Batliboi Siddarth	
	various fields of Microbiology	T.Y.B.Sc and MSc students	Senior Global Marketing Manager,	
	(25 <sup>th</sup> April, 2020)	students	GlaxosmithKlein	
	(23 11pm, 2020)		Mr. Sameer Chorghe	
			Senior process specialist, IQVIA	
			Mr. Hiren Dodia	
			PhD student, Institute of Life Science,	
			Bhubaneshwar	
			Ms.Dilfrina Vakil	
			Patent Agent	
			Dr. Ojas Natarajan	

	Postdoc at University of Florida
	Dr. Zuzer Dhoondia
	Postdoc at Harvard Medical School
	(Genetics, Department of Medicine)
	Dr. Niraj Joshi
	Postdoc at Harvard Medical School (Cancer
	institute)
	Ms. Shara Batliboi Siddarth
	Senior Global Marketing Manager,
	GlaxosmithKlein

## J) EXTENTION AND OUTREACH ACTIVITIES 2019 – 2020

2019-20		
Outreach activity	Class and No. of Beneficiaries	
Lab on the Move	School students of 9 <sup>th</sup> standard (21) and teachers of SL &SS Girls	
(Interdepartmental)	Municipal High School (3) (Kamlabai High School), Mumbai.	
Sharing is Caring: donating our	For the Students of Colaba municipal School [9 <sup>th</sup> standard(167)	
science working models and charts	and 10 <sup>th</sup> standard(119)]	
to Colaba municipal School		
Lectures of workshop	S.Y.B.Sc & T.Y.B.Sc students of BN Bandodkar ,SIES College	
Molecular and Immunological	students and KC College(120)	
Diagnostic Techniques	<b>5</b> \ \ \ \ \ \ \	
Sponsored by Lady Tata Memorial		
Trust		
(Interdepartmental)		
Scishots- Video making session	S.Y.B.Sc students from Departments of Chemistry, Physics,	
(Interdepartmental)	Microbiology, Biotechnology and Life Science(114)	
Workshop on AI: A Tool to	F.Y.B.Sc students from Departments of IT, Microbiology,	
Understand Nature	Biotechnology and Life Science (163)	
(Interdepartmental)		

Outreach Activity	Number of Beneficiaries:
Lecture on Chromatography-	Total Registrations - 1243
Types and its recent Applications	Number of Participants – 743 (500 on Zoom and 243 on
by Dr. Ajit Datar, Advisor,	Youtube)
Shimadzu Analytical India, Pvt	
Ltd.(14 <sup>th</sup> May, 2020)	

## K) INVITED LECTURES 2019 – 2020

Sr	Title	Type and No. of	Resource Persons
no		Beneficaries	
1	Microjourney	Departmental	Ms Nikki Dutt,
		T.Y.B.SC and S.Y.B.SC	PhD Research Scholar, Indian Institute of
		(85)	Science Education and Research (IISER), Pune

Inv	2020 - 2021 Invited talks= 09				
Sr	Title	Type and No. of Beneficaries	Resource Persons		
no					
1	Understanding COVID- 19: A Microbiological Perspective	Zoom platform (Faculty and students from academic and research institutes from Mumbai, Bangalore, Jaipur, Chennai and London (295)	Dr. Sandeepan Mukherjee Scientific Officer, Head, Department of Virology at Haffkine Institute, Mumbai		
2	Understanding Food Psychology (13 <sup>th</sup> May, 2020)	Total Registrations – 810 Number of Participants – 500	Ms. Swechha Soni Manager, Food and Nutrition, Protein Foods and Nutrition Development Association of IndNDAI)		
3	Power of Words (8 <sup>th</sup> July, 2020)	65- SYBSc and TYBSc Microbiology and Biotechnology students	Mr. Umesh Soman World's first trainer in Neuro- Linguistic Programming		
4	Hiding in Plain Sight:(+) RNA Virus Replication Compartments (23 <sup>rd</sup> July, 2020) Organised by Department of Biotechnology and Microbiology	230- Students, Teachers and Research fellow from all over India	Dr. Nuruddin Unchwaniwala Post-Doctoral Research Associate, Morgridge Institute for Research University of Wisconsin-Madison		
5	Growth Factor Receptors: Mechano- organizers Regulating Cell Spreading and Tension (31st July, 2020) Organised by Department of Biotechnology and Microbiology	222- Students, Teachers and Research fellow from all over India	Dr. Tejashwar Rao Post-Doctoral Research Associate, University of Alabama, USA		
6	Microjourney (3 <sup>rd</sup> October, 2020)	77- S. Y. B. Sc and T. Y. B. SC students	Ms. Priyanka Yadav Assistant Professor, K. C. College		
7	FutureVista (17 <sup>th</sup> October 2020)	165- S. Y. B. Sc and T. Y. B. SC Biotechnology and Microbiology students	Mr. Dhaval Gandhi Chief consultant, K. C. Management Services Chief consultant, K. C. Management Services		
8	Microbe: Biome to Application (4 <sup>th</sup> January, 2021)	140-Faculty and students from academic and research institutes across the state	Dr. Anjali Bose Assistant Manager, Zytex Biotech Pvt Ltd.		

9	Happy Mind, Happy	105-Students, Faculty from different	Ms. Inderpreet Kaur Gupta
	Life, Mental Wellness	departments	Psychologist, Personality
	(11 <sup>th</sup> February, 2021)		Development, Soft skill
	(Organised by		mentor, Aptech Aviation, Vashi
	department of		
	Biotechnology,		
	Computer Science and		
	Microbiology)		

# M) PUBLICATIONS IF ANY 2020 – 2021

2020-21		
Publication:01		
Optimization of universal Chrome	Jakhad Sushma, Kothari Neeti,	Research Journal of Chemistry and
Azurol S (CAS) siderophore	Rampurawala Sarrah, Shah	Environment Vol 25 (4) April
detecting media with an economical	Pratibha, Hajra Gupta*	(2021); ISSN: 09720626
dye substitute using Pseudomonas		
flourescens as a test organism		
(Interdepartmental)		

### **STATISTICS**

## A) RESEARCH PROJECTS 2019 – 2020

Com	pleted Projects (15)			
Sr. No.	Name	Title of the project	Name of Guiding Teacher	
1.	Tandon Satvik Sunil, Rathod Alpesh Mukesh, Gaurav Jadhav Prashant T.Y.B.Sc (3)	Analyzing Happiness Development Index using Python	Dr. Asha Jindal, Mr. Pravesh Tiwari and Mr.	
2.	Rajesh Kalal, Shubham Gupta - T.Y.B.Sc (2)	Air Quality and India	Shubham Niphadkar	
3	Archit Joshi, Kamlesh Bhagat T.Y.B.Sc (2)	IGN Game Reviews using Python		
4	Shreya Singh, Pratiksha Kadian T.Y.B.Sc (2)	Comparative Study of Performances of various Players of Cricket matches		
5	Tai Mohammed Moheed, Shreenath Nishad T.Y.B.Sc (2)	Main Constitutes of Air Pollution in Italian City		
6	Aditya Shrivastava, Hruturaj Nikam T.Y.B.Sc (Computer Science) (02)	Analysis of Diabetes		
7	Ansari Zeenat, Isha Chikane, Pranali Dhawadi T.Y.B.Sc (3)	Awareness of Swayam Online Course among graduate students		
8	Yadnesh Potdar, Siddarth Yadav, Sudhanshu Karale T.Y.B.Sc (3)	Suicides in India		
9	Ms. Priyanka Chataule, Ms. Anjali Sutar Faculty (02)	Case Study of Polio in Greater Mumbai		
10	Mayuri Sandge, Aaliya Bansar T.Y.B.Sc (2)	Consumer Complaints Resolution		
11	Mrs. Beenarani Karutharan, Mrs. Shalini A. Maheshgauri Faculty (Computer Science) (02)	Analysis of Student Performance		
12	Tandon Satvik Sunil, Rathod Alpesh Mukesh, Shukla Jitesh Kamlesh T.Y.B.Sc (3)- (SHP)	Prospective Study of Life Insurance Sector in India	Mrs. Shailaja Rane	
13	Jain Siddhi Kishor, Shah Simran Kaushik, Morakia Shanvi, Vora Janvi Vikas T.Y.B.Sc (4)- (SHP)	Mechanisms used by retailers against online shopping	Dr. S. B. Muley	
14	Gaurav Jadhav Prashant, Shetty Chinmay Shankar, Fagniya Chelsi Sanjay, Potdar Sharvari Shrikant T.Y.B.Sc (4)- (SHP)	Effect of Economic Decisions on BSE	Mrs. Shailaja Rane	
15	Sharma Nakul Shishapal, Parmar Rishabh Manoj, Karle Sudhanshu Nilesh T.Y.B.Sc (3)- (SHP)	Wealth distribution	Dr. S. B. Muley	
Onge	oing Projects (03)			
1	Abhay Deshpande	Selection of Candidate for a Post using Agglomerative Hierchical Cluster Analysis	Dr. Asha Jindal	

2	Aneesha Robert, Darshana	Analysis of Student Behavior	Dr. S. B. Muley
	Surendran, Shreya Venkatesan		
	S.Y.B.Sc (3)- (SHP)		
3	Soham Halbandge S.Y.B.Sc (1)-	Which is better of Binary Machine	Mrs. Shailaja
	(SHP)	Learning classification model &	Rane
		improvisation for better machine	
		learning model.	

Com	pleted Projects 2020-2021 (12)		
Sr. No.	Name	Title of the project	Name of Guiding Teacher
1.	Abhay Deshpande	Selection of Candidate for a Post using Agglomerative Hierchical Cluster Analysis	Dr. Asha Jindal
2.	Goyal Aanchal Samit, Jayita Arvind Gupta, Kala Aayush Devendra, Prajakta Bhalerao, Priyamvad Prasad Ranade	Fitting of Binomial Distribution	
3	Aayushi Sanjeev Gala, Amey Yadav Ashujeet Hembrom, Pulkit Mohta Patil Tushar Ashok	Fitting of Poisson Distribution	
4	Kartikeya Tiwari, Kashish Seth Sharma Aditi Darshan, Sagar Deep Vijay, Harsh Punia	Fitting of Discrete Uniform Distribution	
5	Jain Tisha Bankat, Kashish Singh Pandya Jayalee Anil, Kadam Mrunmai Narendra Parson, Gitika Ravin	Fitting of Discrete Uniform Distribution	
6	Shrushti Borkar, Satam Nihira Sameer, Shreya Brajagopal Roy, Sourjadip Pramanik, Patel Shreya Sureshbhai	Fitting of Continuous Uniform Distribution	
7	Chaithanya Dinesh, Damankar Anushree Hemant, Varghese Blessy Anna Reji, Maku Ojasvi Siddhesh	Fitting of Exponential Distribution	-
8	Jagtap Manoj Gautam, Shrutal Suresh Musale, Sondkar Sanskriti Vijay, Varma Dev Mohanlal, Naik Maaz Sajid	Fitting of Normal Distribution	
9	Kadam Riya Rajesh, Yash Nanik Matlani, Doshi Mahima Bipin, Chadaram Tarakeshwar, G K Murty, Ghelani Meet Hasmukh	Fitting of Negative Binomial Distribution	
10	Kaniz Fatima Mustafa Ahmed Barai Khushboo Deenanath, Samridh K Gupta	Fitting of Discrete Uniform	
11	Aneesha Robert, Darshana Surendran, Shreya Venkatesan	Analysis of Student Behavior	Dr. S. B. Muley

12	Soham Halbandge	Which is better of Binary Machine Learning classification model & improvisation for better machine learning model.	Mrs. Shailaja Rane
	Ongoing	Projects 2020-2021 (15)	
1	Sanjeev Das, Purva Kothekar, Jeryl Gonsalves (TYBSc)	Crime Analysis in India	Dr. Asha Jindal
2	Bhavya Dharamsey, Soham Halbandge, Jaydeep Ashtamkar (TYBSc)	Bitcoin Time Series Analysis using Python	
3	Mallika Manu, Anush Shaikh, Khyati Desai (SYBSc)	Modelling Genotypic Variation in photosynthetic Competence of Sorghum bicolour (Jowar)	
4	Nishna Paria, Sonia Kanojiya, Siddhi dhphale (SYBSc)	Sentiment Analysis of Fake News	
5	Manasi Bhoite, Mansi Dake, Mukta Rewale, Riya PurwarSYBSc	Forest Diversity Analysis of Andaman Island	
6	Advait Shirali, Kalash Kelkar, Ram Chavan (SYBSc)	Statistical Analysis of Effect of Brushing using Dental Score	
7	Sakshi Kumar, Latika Palyekar, Gopika Krishnan, Shruti Nyare, Isha Kini (SYBSc)	Statistical Analysis of Seasonality in Sales of Plastic Granules	
8	Murtaza Kazi, Sujata Biswas Shloka Nerurkar, Sarvesh Pakale (SYBSc)	Analysis and Modelling of Earthquake after Shocks in Bhuj in 2001	
9	Jayesh Ledwani, Jay Makhija, Pallika Lodha, Sejal Jadhav, Aziz Dhanerwala (SYBSc)	Tracking the Geographical Shift of Ivory Trafficking over Two Decades	
10	Pradnya Gandhi, Shravani Bane, Samiksha Shinde	Statistical Study of Literacy in two States of India	
11	Nishna Paria, Siddhi Daphane, Sonia Kanojia, Khalid Shaikh	Comparative study between different cures of Diabetes a systematic review	Shailaja.Rane
12	Mansi Bhoite, Mansi dake, Isha kini, Mukta Rewale	Greenhouse effect and Global warming	Shailaja Rane
13	Riya Purwar, Sakshi kumar	Quantifying Covid 19	Shailaja.Rane
14	Anush Shaikh	Study of Survivorship Bias in Education System	Pratiksha Kadam
15	Sejal Jadhav	Healthcare Model to Connect Patients to Doctor of their need	Dr. S. B. Muley

# B) HANDS – ON EXPERIMENTS 2019 – 2020

2019	2019-20		
Sr.	List of Practical/Demonstrations	Class and No.of	
No		Beneficiaries	
1	Standard Discrete Distributions using R	F.Y.B.Sc.(52)	
2	Standard Continuous Distributions using R	F.Y.B.Sc.(52)	
3	Testing of Hypothesis and Z test using R	F.Y.B.Sc.(55)	
4	Descriptive Statistics-I using Excel and R	F.Y.B.Sc.(55)	
5	Descriptive Statistics-II using Excel and R	F.Y.B.Sc.(55)	

6	5	Tora Package for Operations Research Problems-I	S.Y.B.Sc.(11)
7	7	Tora Package for Operations Research Problems-II	S.Y.B.Sc.(61)
8	3	Non- Parametric Test using R	T.Y.B.Sc.(18)

Sr.	List of Practical/Demonstrations	Class and No.of
No		Beneficiaries
1	ANOVA: Post-Hoc Analysis and reading documentation on python libraries	T.Y.B.Sc41
2	Time Series: Estimation of Trend in Excel	T.Y.B.Sc28
3	Time Series: Estimation of Trend in Excel	S.Y.B.Sc29
4	Python code to solve LPP	T.Y.B.Sc23
5	Examples of LPP solved using Python programming	T.Y.B.Sc23
6	Introduction of TORA Software and Solving LPP(Simplex, Dual Simplex and Two Phase Method) using TORA Software	TYBSc(25)
7	ANOVA using R Programming( One way, Two way, Two with more than one observation per cell)	TYBSc(18)
8	Performing Non-paramertic tests on MS Excel a Star DBT activity	TYBSC (24)
9	Continuous distribution using R Software(plot of PDF and CDF, fitting of distribution)	FYBSc(40)
10	Reviewing research articles of COVID pandemic. (An extension activity for application of different statistical techniques analysis in Excel)	T. Y. B. Sc. (35)
11	Quizz based on Probability for the purpose of understanding level of learning.	T. Y. B. Sc(67)
12	Quizz based on Order Statistics for the purpose of understanding level of learning.	T. Y. B. Sc(66)

## C) NEW PRACTICALS 2019 – 2020

Sr.	List of Practical/Demonstrations	Class and No. of
No.	2019-20	Beneficiaries
1	Basics of R-Software	F.Y.B.Sc. (26)
2	Introduction to Google Forms	F.Y.B.Sc. (52)
3	Question a Questionnaire	F.Y.B.Sc. (44)
4	Continuous Distributions using Ms Excel	F.Y.B.Sc. (42)
5	Swayam (Exploring the courses & Registration)	F.Y.B.Sc (29)
		F.Y.B.A (10)
6	Geometric and Negative Binomial distribution using MS-Excel	S.Y.B.Sc. (31)
7	Geometric and Negative Binomial distribution using R-Software	S.Y.B.Sc. (49)
8	One way ANOVA Using Excel	S.Y.B.Sc. (49)
		T.Y.B.A (04)
9	One way ANOVA and Two-way ANOVA using R Software	SYBSc(27)
10	Advanced Continuous Distributions using Ms Excel	S.Y.B.Sc. (31)
11	Transhipment Problems	S.Y.B.Sc. (18)
12	Application of Chi- Square Test using Ms Excel and R Software	S.Y.B.Sc. (26)
13	Two-way ANOVA Using Excel	S.Y.B.Sc. (40)
14	Application of T-Distribution using MS-Excel and R Software	S.Y.B.Sc. (46)
		T.Y.B.A (03)
15	Use of Dummy Variables in Regression Analysis	T.Y.B.Sc. (18)
16	Simulation using MS – Excel Software	T.Y.B.Sc. (12)

17	Logistics Regression Analysis	T.Y.B.Sc. (28)
18	Public Tableau for Data Visualisation	T.Y.B.Sc., M.Sc.
		(18)
19	Annuities using Excel and R	T.Y.B.Sc. (35)
20	Case Studies Solving [Biostatistics & Assurance]	T.Y.B.Sc. (30)
21	Cluster Analysis using R	T.Y.B.Sc. (36)

Sr.	List of Practical/Demonstrations	Class and No.of
No.		Beneficiaries
1.	Geometric and Negative Binomial Distribution Using R	S.Y.B.Sc. – 40
2.	Installation & Introduction to Interface of R & R studio	F.Y.B.Sc. – 39
3.	Basic Codes in R	F.Y.B.Sc. – 39
4.	Introduction to Typesetting Using Latex	T.Y.B.Sc36
5.	Generating Latex document including tables, equations, figures etc.	T.Y.B.Sc38
6.	Solving LPP using R	S.Y.B.Sc. (40)
7.	Solving Transportation and Assignment problems using R	S.Y.B.Sc. (40)
8.	Z, t and F tests using Excel	S.Y.B.Sc. (35)
9.	Chi Square Test using Excel and R	S.Y.B.Sc. (29)
10.	Advance Visualization (Heat Map, 3D plot, Word Cloud, mosaic plot, correlogram)	T.Y.B.Sc. (37)
11.	Advance Visualization (Waterfall Chart, pareto diagram, thermometer graph, Gantt Chart)	F.Y.B.Sc. (36)
12.	Quality Control Chart using R (qcc-library) a star DBT Activity	T.Y.B.Sc. (40)
13.	Quality Control Chart using MINITAB a star DBT Activity	T.Y.B.Sc. (34)
14.	Decision Theory (Using Excel Qm) a star DBT Activity	T.Y.B.Sc. (38)
15.	Data visualization using Google studio (Star DBT activity)	T.Y.B.Sc(46)
16.	One way ANOVA and Two-way ANOVA using R Software	SYBSc (27)
17.	Solving LPP (Dual Simplex and Two-Phase Method) using TORA Sodtware	TYBSc (25)
18.	Simulation using MS Excel	TYBSc (43)
19.	Statistical Distribution family	FYBSc (26)
20.	One way ANOVA and Two-way ANOVA using EXCEL	SYBSc (27)
21.	One way ANOVA and Two-way ANOVA using R Software	SYBSc (27)
22.	Solving LPP (Dual Simplex and Two-Phase Method) using TORA Sodtware	TYBSc (25)
23.	Simulation using MS Excel 25/03/21	TYBSc (43)
24.	Statistical Distribution family24/03/21	FYBSc (26)
25.	One way ANOVA and Two-way ANOVA using EXCEL	SYBSc (27)
26.	Linear Models: ANOVA	T.Y.B.Sc23
27.	Data Simulation using R	T.Y.B.Sc25

## D) TRAINING RECEIVED BY FACULTY 2019 – 2020 = 03

Sr. No.	Name	Trainings	Resource person
1	Mr. Shubham Niphadkar, Ms. Priyanka Chataule, Ms. Anjali Sutar	Android App Development	Faculties of Microsoft and IIT
2	Mr. Shubham Niphadkar,	ONE DAY STATE LEVEL FDP	Mr. Pritesh Kalan Asst.

	Ms. Priyanka Chataule, Ms.	ON NET & SET Examination	Professor, Department of
	Anjali Sutar	Preparation	Mathematics, Elphinstone
			College, Dr. Homi Bhabha
			State University, Mumbai
			Dr. Ganesh Phad Asst.
			Professor, Department of
			Statistics, K.T.H.M.
			College, Nasik
			Dr. Nilesh Mundlik asst.
			Professor, Department of
			Mathematics, Nowrosjee
			Wadia College,
			Manish Agalave, Assistant
			Professor, Department of
			Mathematics, Fergusson
			College, Pune
3	Ms. Priyanka Chataule, Ms.	Python Programming	Mr. Pravesh Tiwari
	Anjali Sutar		Senior Data Analyst,
			Accenture

#### 2020 - 2021 = 02

Sr.	Name of Faculty	Trainings	Resource Persons
No.			
1.	Dr. Asha Jindal,	Training on "Structural Equation	Dr. Suresh Sharma, Professor,
	Mrs. Shailaja Rane,	Modeling using AMOS"	Department of Statistics,
	Mrs. Pratiksha Kadam,		Panjab University
	Dr. S. B. Muley.		
	Ms. Priyanka Chataule,		
	Ms. Anjali Sutar		
2	Dr. Asha Jindal,	International Webinar on	Dr. Kuldeep Kumar, Professor
	Mrs. Shailaja Rane,	Blended Learning and	and Head, Bond University,
	Mrs. Pratiksha Kadam,	Challenges in Online Teaching	Australia
	Mr. Shubham Niphadkar		
	Ms. Priyanka Chataule,		
	Ms. Anjali Sutar		

#### E) EXHIBITION

#### SCICODE#20 and SCICODE#19

An Interdepartmental activity, entitled 'SciCode#20' and 'SciCode#19' was organized by all five departments, under the banner of DBT Star College scheme and was extended to all Science departments of K. C. College. Participation was invited from colleges across Mumbai to showcase the innovative ideas in various activities organized under Sci Code#20. It included science projects, working models, training sessions and workshops on various themes.

Sr.	Title	Class and No. of Beneficiaries
No.		
1	Intercollegiate Sankhya Astra-Dashboard presentation,	All three years of U.G. (19
	Crossword, Poker	teams-65 Students)
2	Statistical Housie	Intercollegiate (24)

Sr. No.	Title	Class and No. of Beneficiaries
1.	International Webinar on "Clinical Development of Vaccines"	40-Students, Research Scholars and Teachers

### F) TRAINING COURSES/WORKSHOPS 2019 - 2020 = 05

Sr.	7019 – 2020 = 05 Title	Type and No. of	Resource Persons
No.		Beneficiaries	Resource rersons
1	Data Analysis Using JAMOVI software (National Statistics Day)	S.Y.B.Sc. and T.Y.B.Sc. of Statistics and Life Sciences (65)	(In-House Faculty) Dr. Asha Jindal Mrs. Shailaja Rane Mrs. Pratiksha Kadam Dr. S.B.Muley Mr. Shubham Niphadkar
2	Introduction to R-Program	F.Y.B.Sc. and F.Y.B.A. (39)	Mr. Prashant Shah, Associate Professor and Head, K. J. Somaiya College
3	Interdisciplinary FDP in collaboration with SAS Institute (India) Pvt. Ltd on Shaping a Data science curriculum: Unleashing potential of IoT, Machine Learning and A.I.	Faculties from Inhouse and other colleges (29)	Mr. Akshay, Dixit, Faculty, SAS Institute (India) Pvt. Ltd
4	Training Program in Python Programming	T.Y.B.Sc. and M.Sc. Students- Statistics and Computer Science (60) and Faculties (04)	Mr. Pravesh Tiwari, Senior Data Analyst, Accenture
5	ONE DAY STATE LEVEL FDP ON NET & SET Examination Preparation	Faculties from Inhouse and other colleges (32)	Mr. Pritesh Kalan, Assistant Professor, Department of Mathematics, Elphinstone College Dr. Ganesh Phad, Assistant Professor, Department of Statistics, K.T. H. M. College, Nasik Dr. Nilesh Mundlik, Assistant Professor, Department of Mathematics, Nowrosjee Wadia College, Pune Manish Agalave, Assistant Professor, Department of Mathematics, Fergusson College, Pune

### 2020 - 2021 = 05

Sr.	Title	Type	and	No.	Of	Resource Persons
No.		Beneficia	aries			
1	National Training Program in	Participa	nts (Stud	lent,		Dr. Suresh Kumar Sharma,
	Structural Equation Modelling	Research	er and te	achers) f	rom	Professor, Panjab University,
	Using AMOS	India and abroad		Chandigarh		
		No. of Be	eneficiar	ies: 275		
2	Two Days Online National	Participa	nts (Stud	lents,		Mrs. Suruchi Bhargava,

	Level Workshop on	Researcher and teachers)	Senior Actuarial Consultant at
	"Introduction to the World of	No. of Beneficiaries: 190	M/s. K.A.Pandit Consultants
	General Insurance, Life		and Actuaries (KAP).
	Insurance and Investment"		Dr. Pankaj K. Agarwal,
			Professor, Department of
			Finance, Institute of
			Management Studies, C-238,
			G T Road, Lal Quan,
			Ghaziabad-201009
3	Webinar on "Introduction to	Interdisciplinary- Dept. of	Mr. Miheer Moghe, Manager
	Indian Securities Market"	Statistics, Kishinchand	(Investor Education
		Chellaram	Department) in NSDL
		College in association with	Mr. B M Khaja Mohideen,
		NSDL, MUMBAI,	Assistant Vice President at
			Metropolitan stock Exchange
			of India Ltd.
4	Workshop on "Data Analysis	Workshop cum Hands on	Dr. Sangita Chaudhari
	& Visualization using Orange	Trainin; Beneficiaries: 79-	Professor, Dept. of Computer
	Software	Students, Research Scholars	Engineering, Ramrao Adik
		and Teachers	Institute of Technology, Nerul
5	Know your Rights	Majlis -72	Majlis Advocates

## I) SEMINARS 2019 - 2020 = 02

Sr.	Title	Type and No. of	Resource Persons
No.		Beneficiaries	
1	Remote Sensing And GIS Based	T.Y.B.Sc., F.Y.B.Sc.	Dr. Shailesh Kanade, Water Quality
	Mapping For Water Supply and	M.Sc (75)	Consulant, Water Supply and
	Sanitation using High		Sanition Dept., Govt. of Maharashtra
	Resolution Satellite Data		
2	Future Career Opportunities in the field of Actuarial Science	T.Y.B.Sc., F.Y.B.Sc. S.Y. B.Sc (72)	Mr. Hiten Kothari, Appointed Actuary, HDFC Ergo

### 2020 - 2021 = 01

Sr.	Title	Type and No. of	Resource Persons
No.		Beneficiaries	
1	Application of Statistics	Students of all	Dr. Sandhya Saste, Dr. Aradhana
		Classes (70)	Srivastva, Kismat Qurashi, Ayesha
			Shaikh

## J) EXTENTION AND OUTREACH ACTIVITIES 2019 - 2020 = 01

Sr. No	Name of the Activity	Type of Beneficiaries	Resource person
1.	Publication of K. C.	All students and Teachers.	(In-house Faculty, K.C. College)
	Environmental Committee		
	magazine- Titled		
	"Environmental Space"		1

Sr.	Name of the Activity	Type of Beneficiaries	Resource person
No			
1.	International Webinar on	Students of all Classes,	Dr. Kuldeep Kumar, Professor
	Blended Learning and	Teachers of schools, colleges	and Head, Bond University,
	Challenges in Online	& University and parents from	Australia
	Teaching	various parts of India (320)	
2.	Skill oriented Curriculum	Students admitted to HSNCU	In House Faculty,
	Designing for Data Science	presently and future, aspiring	Mukesh Jain, CTO@Capgemini
	and Business Analytics	& needy teachers for jobs,	Dr. Suresh Sharma, Punjab
	Subject from knowledge	Future industry requirement	University
	gained from DBT	fulfilment	Prashant Nair, Director, Neilsen
	Activities and experience		Dr. Santosh Gite, MU,
			Principal Dr. Anjum Ahmed,
			Rizvi College

### K) INVITED LECTURES 2019 – 2020

Sr. No.	Title	Type and No. of Beneficaries	Resource Persons
1	Role of Data Analytics in	T.Y.B.Sc. And	Dr. Sandhya Krishnan, Meghnad Desai
	Economics	T.Y.B.A. (42)	Academy of Economics, Mumbai
2	Guidance Lecture on M.Sc.	F.Y.B.Sc. (38)	Mr. Shubham Niphadkar, Assistant
	Entrance IIT JAM		Professor, K.C. College

#### 2020 - 2021

Sr. No.	Title	Type and No. of Beneficaries	Resource Persons
1	Introduce Yourself Effectively	T.Y.B.Sc (39)	Dr. Asha Jindal, In house Faculty
2	Applications of Factorial Designs for Questionnaire	T.Y.B.Sc, S.Y.B.Sc. M.Sc. (60)	Sujay Bhandary, N. L. Dalmia College of Arts, Com. & Science

## L) BOOKS 2019 - 2020 = 26

Sr.	Tilte of Books	Publisher	Date of
No.			Purchase
1	Applied regression Analysis	Wiley	16/10/19
2	Basic Course in Real Analysis	CRC	16/10/19
3	Linear Models	Wiley	16/10/19
4	Linear Regression Analysis	Wiley	16/10/19
5	R for statistics	T&F	16/10/19
6	Modern Probability Theory	New Age	16/10/19
7	Mathematical Analysis	New Age	16/10/19
8	Design and Analysis of Experiments	Wiley	16/10/19
9	Applied Multivariate Statistical Method	Pearson	16/10/19
10	Regression Analysis with example	Wiley	16/10/19
11	Applied Logistic Regression	Wiley	16/10/19
12	Categorical Data Analysis	Wiley	16/10/19
13	Matrix Algebra useful for Statistics	Wiley	16/10/19

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(With Seal)

14	Probability-A Graduate Course	Springer	16/10/19
15	Mathematical Analysis	Narosa	16/10/19
16	Fundamentals of Probability Theory	Narosa	16/10/19
17	Survey Sampling	Narosa	16/10/19
18	Design and Analysis of Experiments	New Age	25/01/19
19	An Introduction to Multivariate Statistical Analysis	Wiley	25/01/19
20	Business Statistics	Sultan Chand	28/01/20
21	Modern Probability Theory: An Introductory Textbook	New Age	14/02/20
22	Applied Multivariate Statistical Analysis	Pearson	14/02/20
23	Advanced Linear Models Theory & Application	CRC	28/02/20
24	Modern Survey Sampling	CRC	28/02/20
25	Analysis of Binary Data	Chapman & Hall	28/02/20
26	Analyzing and Visualizing Data using free Open-Source	Shailja Prakashan	2020
	Software: Python Programming with Case Studies	and K.C.	
		College ISBN	
		No. 978-93-	
		80788-93-7.	

Course Coordinator (With Seal)

Dame

Dr. Sagarika Damle Course Coordinator DBT - Star Status @KC College

Mumbai