KISHINCHAND CHELLARAM COLLEGE
CHURCHGATE, MUMBAI 400020

DBT STAR SCHEME

REPORT OF COMPLETED ACTIVITIES

Period: July 2019 - March 2020

File No. BT/HRD/11/039/2019

Department of Physics   **Department of Mathematics**

Department of Computer Science & Information Technology

**Proforma for submission of progress reports for Annual Review of Colleges
supported under Star College Scheme**

(**Kindly note that the annual report from Point 6 to 10, should not be more than 5 A4 size sheets, with font size
12pt and line spacing 1.5)**

1. Name of the College: **Kishinchand Chellaram College**

2. Name of Coordinator: **Dr. Shalini R. Sinha**
    Designation: Vice-Principal & Co-ordinator
                            Department of Computer Science, K.C. College
    Address: 124, Vidyasagar Principal K.M Kundnani Chowk,
                            Dinshaw Wachha Road, Churchgate, Mumbai- 400 020.
    Phone no's: 9869431342
                            College: 022-66981000

3. Assessment duration: **01/07/2019 to 30/03/2020**   Duration in years: **01 year**

4. Details of Departments Supported

SR No.	Name of Department	Courses (B.Sc./M.Sc./PG Diploma, certificate etc.) offered	Regular Faculty members	
			Total = 17	
			With Ph.D.	Without Ph.D.
1.	Physics	B.Sc.	02	03
2.	Mathematics	B.Sc. - (up to S.Y B.Sc.)	01	02
3.	Computer Science	B.Sc. (CS), M.Sc. (CS)	-	04
	Information Technology	B.Sc. (IT), M.Sc. (IT)	01	04

5. **Number & Date of Advisory committee meeting:**
    - Physics – 18th January 2020 (Advisor – Prof. G.P Kothiyal)
    - Mathematics – 30st August 2019 (Mentor – Dr Shivaji Ganesh Sista)
    - Computer Science & Information Technology – 13th July, 2019, 14th January, 2020 and   9th March, 2020. (Advisor - Mr Shreekant Shiralkar)

6. **Qualitative improvements due to DBT support. Please highlight 5 salient points (within 500 words).**
    (You may enumerate 5 minor projects where students were involved and their impact or similar activities and their outcome; this is for representative purpose and coordinator may include details as per his own choice; kindly refrain from providing philosophical data Avoid any introduction. All the justifications must be very crisp like any aspect non-existent pre-STAR Scheme and you achieved after the grant).

Department of Physics

1. The funds provided by DBT added support to the college's constant efforts to provide all necessary and quality infrastructure to students to enhance the learning process. Some of the apparatus purchased by the department of Physics under DBT scheme are:-
   a) Laser beam sources – replaced sodium and mercury sources to demonstrate several optical phenomena such as interference and diffraction.
   b) Optical bench – better quality ones which could be adjusted finely to provide better quality images in the demonstration of optical phenomena.
   c) Logarithmic decrement apparatus – sophisticated apparatus which reduced the duration and drudgery of obtaining the decrement of an oscillating system and difficulty encountered with earlier models.
2. The banner of a DBT funded program added more value to workshops and Hands-on training sessions held under it. This enabled us to conduct very relevant sessions - Hands on workshop on UV-VIS spectrophotometer by Equiptronics resource person, a lecture on 'Future of Space Exploration' by Dr. Jaydeep Mukherjee, Director, NASA Space center, Florida.
3. Allowed scope to conduct interdisciplinary workshops for widening the knowledge base of faculty - Workshop on "Advanced Excel to prepare Attendance reports", Faculty Development Programme on "Use of Advanced Nanomaterials for Energy and Environmental Applications".
4. The department initiated some projects which were taken up by a few students under the guidance of teacher mentors.
5. Besides enhancing the quality of knowledge imbibed by the students the certificates awarded for participation in these programs added credence to their Curriculum Vitae.

Projects Under Star DBT Scheme – (S.Y. B.Sc.) (04)			
Sr. No.	Name of the Students	Title of the project	Name of Guiding Teacher
1.	Mr. Rishabh Pandey Mr. Rishabh Mishra	Growth of Crystal Using Slow evaporation technique	Dr. Jyotsna Pandey Assistant Professor
2.	Mr. Razi.Shaikh Mr. Dipesh Salve Mr. Nishant Kumar	Refractive index of liquid (salt and sugar solution) with changing concentration using Spectrometer	Dr. Jyotsna Pandey Assistant Professor
3.	Mr. Venugopal	Use of Diode as a Clipper Circuit	Mr. Tahir Rajgoli Assistant Professor
4.	Mr. Abbas Dalvi Ms. Krishna Bulchandhai	Optical characterization of KDP doped with cittrucilline (Amino Acid) crystals	Dr. Jyotsna Pandey Assistant Professor

Department of Mathematics

1. The grant has enabled the department to organize various inter-departmental, inter-disciplinary and inter– collegiate activities such as lecture series, workshops, training sessions, field visits and competitions.
2. The guest lectures by eminent Mathematicians increased the awareness of the students about various topics in the subject and made them think beyond the syllabus.
3. Due to hands-on practical sessions in Python and Advanced Excel, the students of the department as well as those from other disciplines and colleges got to know how these programming languages and software can be applied to both Mathematical problems and to real life situations.
4. The department along with the other departments in the Star Scheme could donate the necessary teaching aids, books to the school of under privileged children because of DBT grants.
5. The funds received under the Star college Status, enabled the departments to purchase books and enrich the college library to which the students and teachers have an easy access.

Projects Under Star DBT Scheme (F.Y B.Sc.) (02)			
Sr. No.	Name of the Students	Title of the project	Name of Guiding Teacher
1.	Ms. Nishna Paria Ms. Siddhi Daphale Mr. Anush Shaikh	Review: Vedic Mathematics	Mrs Gollakota Usha VVH
2.	Mr. Imran Ansari	Differential Equation and applications	
Research Projects Under Star DBT Scheme (S.Y B.Sc.) (01)			
1.	Mr. Prasad Shinde Ms. Hafsa Anware Mr. Bhushan Wagle Mr. Goldi Rai	Development of resource material on theory and applications of line integral	Mrs. Mrunal Hardikar

Department of Computer Science & Information Technology

1. The grant has enabled the department to organize workshops, training modules and other inter-departmental, inter-disciplinary and inter – collegiate activities and eminent industry personnel have been invited to conduct guest lectures.
2. More hands-on exposure to students and introduction of new practicals made them understand theoretical concepts. Exposure to experimental-design and execution of projects enabled UG students to take-up small in-house projects. This helped them to gain an insight into research methodology.
3. There is now a noticeable change in the curiosity about different aspects of the subject, thinking beyond classroom and students have started asking interesting questions. This has led to teachers getting more involved in interacting with the students. Learning by doing has made learning process enjoyable.
4. The star college scheme has enabled the students to develop new and novel Apps which can be very beneficial to society like Continuous Monitoring Thermometer, Footstep Power Generating System and the patenting process for these Apps is being explored.
5. The grant has made it possible to organize field visits to widen the scope of learning and evoke an interest in exploring the practical aspects of knowledge gained in the classroom.

Sr. No.	Projects Under Star DBT Scheme (T.Y B.Sc. CS) (05) (Python Web based app/Windows.net/android app/IOT based		
	Name of the Students	**Title of the Project**	**Name of Guiding Teacher**
1.	Mr. Santosh Bhashani	Student Educational Document Verification using Blockchain technology	Ms. Geeta N. Brijwani Mrs. Vimala Rani R
2.	Ms. Nirupama Das Ms. Shalini Jhanjharia Ms. Sonam Yadav	Continuous Monitoring Thermometer	
3.	Mr. Mahmood Sayeed	Chat application based on Speech Recognition	
4.	Ms. Disha Rajawat Ms. Muzna Qazi	Ingredient based Recommender System for Food Recipe	
5.	Mr. Aditya Srivastava	Heartbeat Measuring Analysis	

Sr. No.	S.Y B.Sc. CS (15) Python GUI/ Python Web App		
	Name of the students	**Title of the project**	**Name of Guiding Teacher**
1.	Ms. Rishika Agrawal	College Social Networking System	Ms. Geeta N. Brijwani
2.	Ms. Adeethi Ajithkumar	Cyber Café Management System	
3.	Mr. Yusuf Borkar	Modern Portfolio Web application with Chabot Neural Network and database Cloud Storage	
4.	Mr. Aniket Chaudhary	Online Pizza Ordering Web Application	
5.	Ms. Urvi Dedhia	Online Movie Streaming Web Application	
6.	Mr. Kalpesh Jain	Student Management System	
7.	Ms. Khushi Kansara	Online Gift Shopping Web Application	
8.	Mr. Ajay Mandani	Social Network for Musicians Web App	
9.	Mr. Akash Ramola	Online Medicine Delivery Web App	

10.	Mr. Saurabh Singh	Online Voting System Web App	
11.	Mr. Sandeep Yadav	Student Result Management Web App	
12.	Ms. Saachi Sharma	Car Dealership Web App	
13.	Ms. Mariya Rangwala	Online Library Management Web App	
14.	Mr. Harsh Vekariya	Online Patient Doctor Appointment Web App	
15.	Ms. Yukta Shirodkar	Restaurant Management Web App	

S.Y B.Sc. CS (20) Android App			
Sr. No.	Name of the students	Title of the project	Name of Guiding Teacher
1.	Ms. Adeethi Ajithkumar	Indian Tours and Travel guide App	Mrs. Vimala Rani R
2.	Mr. Yusuf Borkar	WhatsApp Clone Chat Application	
3.	Mr. Aniket Chaudhary	Speech to Text pdf convertor App	
4.	Ms. Priya Chaursiya	Music player App	
5.	Ms. Urvi Dedhia	Movie Review and Rating App	
6.	Mr. Umar Haque	Unit Converter App	
7.	Ms. Aditi Jain	Restaurant Survey App	
8.	Ms. Khushi Kansara	General Knowledge Quiz	
9.	Mr. Ajay Mandani	Password protection App	
10.	Ms. Tanya Panchal	Stopwatch App	
11.	Ms. Achala Pal	Book store App	
12.	Mr. Akash Ramola	Railway Fare Checker App	
13.	Ms. Mariya Rangwala	Student Record Management App	
14.	Ms. Haripriya Ravindran	Coffee ordering App	
15.	Mr. Suraj Salvankar	Login management system App	
16.	Ms. Urooj Sayyed	Tic Tac Toe Game App	
17.	Ms. Saachi Sharma	Drive-n-Jive-Car Rental App	
18.	Mr. Ayush Srivastava	Student management system App	
19.	Mr. Yogesh Surve	Vehicle rental system App	
20.	Mr. Harsh Vekariya	Cab Booking Information App	

F.Y B.Sc. CS (10) Green Technologies			
Sr. No.	Name of the students	Title of the project	Name of Guiding Teacher
1.	Mr. Kartik Sharma Mr. Monish Jeswani Ms. Riddhi Gupta Mr. Rohan Suram Mr. Rishab Jain	Report on Sustainable software development	Mrs. Shalini A. Maheshgauri
2.	Ms. Jill Patel Mr. Karan Surana Ms. Shreya Shetty	Report on recent developments in Green Networks and Communications	

Sr. No.	Name of the students	Title of the project	Name of Guiding Teacher
	Ms. Janvi Mehta Ms. Grishma Mody		
3.	Ms. Nishika Sharma Mr. Sachin Gope, Mr. Sachin Yadav Mr. Katik Mishra Mr. Sourab Dolui	Study of Sustainable information system and green metrics	
4.	Ms. Deeksha Mishra Ms. Harshika Santoshi Ms. Nidhi Jain Ms. Roshni Gupta Mr. Shivam Mishra	Innovations in Green data storage	
5.	Mr. Akshay Nair Ms. Munisha Singhrane Ms. Payal Khandelwal Mr. Rohit Ghosh Mr. Adarsh Singh	Report on recent developments in Green Nanotechnology	
6.	Ms. Jagruti Chaudhari Ms. Lakshmi Nadar Mr. Owais Sayyed, Ms. Raksha Khandge Mr. Shivam Patel	Innovations in Green Data Centre	
7.	Mr. Sohil Tadvi Mr. Pradeep Gupta Mr. Sohail Shaikh Mr. Krishna Dora Mr. Krishna Patel	A study into Green enterprises and role of IT	
8.	Mr. Rahul Pongde Mr. Shivam Gautam Mr. Smeet Mestry Mr. Umang Patel Mr. Yash Tare	Predicting Green IT Readiness	
9.	Ms. Aamna Mirza Mr. Husain Huzefa Ms. Malika Bulchandani Mr. Nirbindu Bor Mr. Mihir Lohar	Exploring Renewable energy sources	
10.	Ms. Meghna Gowda, Ms. Renuka Raghuveeran, Ms. Sneha Mogaveera, Ms. Vrushali Kalantre, Ms. Saloni Jain	Innovations in Green Software	

T. Y B.Sc. (IT) (06)			
Sr. No.	Name of the students	Title of the project	Name of Guiding Teacher
1.	Mr. Saffat Gazi Mr. Hussain Kothawala	Gesture Based Robotics - Control the robotic arm using human gestures.	Ms. Pragati Thawani Mr. Sagar Mehta
2.	Ms. Anchal Jain Ms. Safa Shaikh	Augmented Reality - Enhances the real world by virtual objects.	Ms. Pragati Thawani Mr. Lokesh Iyer
3.	Ms. Shruti Varpe	Footstep power generating system - As a source of renewable energy while walking.	Ms. Pragati Thawani Ms. Sandhya Bhavsar

Sr. No.		Title	Guiding Teacher
4.	Ms. Nikita Singh, Ms. Rutuja Khaire	Online Classes System - Develop the technical skills and online learning strategies.	Ms. Pragati Thawani Ms. Neha Patel
5.	Ms. Alka Mishra	IoT Health Monitoring System. Reduce health care costs by reducing physician office visits, hospitalizations, and diagnostic testing procedure.	Ms. Pragati Thawani Ms. Nashrah Gowlkar
6.	Mr. Hitesh Bhanushali	Serfnet Viewer – Transfer of data within specific location.	Ms. Pragati Thawani Mr. Kaushal Shah

S. Y B.Sc. (IT) (18)

Sr. No.	Name of the students	Title of the project	Name of Guiding Teacher
1.	Mr. Ishan Agarwal, Ms. Bhumika Golani, Ms. Gauri Guglani, Ms. Pratishtha Gupta	Social Networking Privacy using two tables of privacy algorithm.	Dr. Rakhi Gupta Ms. Pragati Thawani
2.	Ms. Rifath Zahraa Ahmed, Ms. Bushra Lokhanwadala, Ms. Madeeha Shaikh	Sentiment Analysis for Twitter - Analyzing sentiment score in noisy twitter streams.	
3.	Ms. Sonal Singh, Mr. Daksh Sawant, Ms. Nikhita Nair	Android PC Controller - Controlling PC from Android.	
4.	Mr. Shiven Makwana, Mr. Sudesh Rajak, Mr. Mateen Shaikh, Mr. Pritesh Surolia, Mr. Vinod Yadav	Online Mobile Recommender System - to provide recommendations of items or services to users.	
5.	Mr. Hyder Khokhawala, Mr. Yash Lodha, Mr. Mohammed Lateef	Canteen Automation System -to accelerate customer orders	
6.	Mr. Arnold Mendis, Mr. Abhishek More, Mr. Rohan Saalim, Mr. Ranjit Sethi	Bikers point System - Bike service Registration.	
7.	Mr. Ashish Ahuja, Ms. Rishta Samel	Online Event Hall Booking – Manage venue with ease.	
8.	Mr. Husain Ghadiyali, Ms. Disha Poojari, Mr. Jay Sanghavi, Ms.Sakina Sanjana	Parking Management System - To avoid congestion in parking area.	
9.	Mr. Soham Salunke, Mr. Aniket Dhongre, Mr. Omkar Kadam	Student Academic Management System - Centralize management projects for students.	
10.	Mr. Kashyap Giri, Mr. Ashraf Kasmani, Mr. Nasir Valiyani, Mr. Prashant Kumar, Mr. Aliasgar Lukmani	Software D-Bug System - Tool to track the performance of the developer to make an application bug free.	Dr. Rakhi Gupta Ms. Pragati Thawani

Sr. No.		Title of the project	
11.	Mr. Abhishek More, Mr. Prashant Rajak, Mr. Akash Nigam, Mr. Rahul Padhy	Virtual Classroom - Engaging students with lesson material online.	
12.	Ms. Sameera Momin, Ms. Latika Mahajan, Ms. Niyati Chauhan	Speech Emotion Recognition - Recognizing human emotion from human.	
13.	Ms. Trushi Kothari, Mr. Sahil Jain, Mr. Darshan Bohra, Ms. Siddhi Atre, Ms. Tehniyat shaikh	Music Android Application with Audio Book.	
14.	Mr. Radheshyam Vaishnav, Mr. Vinayak Surshetthy	Auto Text Summarization – To detect Repetitive Phrases	
15.	Mr. Surendra Chaurasia, Mr. Vinit Jain	QR proxy system – In order to avoid proxy attendance.	
16.	Mr. Ansari Salman, Mr. Batliwala Sadiq, Mr. Manan Katariya , Mr. Nabeel Khan, Mr. Ali Khatri, Mr. Sabir Mullah	Smart guest management system - Efficiently and effectively welcome your guests.	
17.	Mr. Kuldeep Dave, Mr. Himanshu Chawla	Automatic Toll Tax Collection - Technology for fast and efficient collection of tolls at the toll booths.	
18.	Mr. Satvik Mittal, Ms.Parul Negi	Gym Management System - To handle large growing numbers of members.	

F. Y B.Sc. (IT) (05)			
Sr. No.	Name of the Students	Title of the project	Name of Guiding Teacher
1.	Ketaki Dane and Asma Parkar	Smoke Absorber Machine – to filter the interior air	Mr. Sagar Mehta
2.	Karan Rathod and Aysuh Jain	Women Safety Ring – A Smart Security wearable device	
3.	Pravin Kumar Mahto	Home Automation System - To control or monitor signals from different appliances, or basic services.	
4.	Anurag Pandey	Use of Skates in Green Computing To reduce the electric power consumption, energy.	
5.	Dipesh Chandiramani	Motor car Handler – Handling Motor Car from Remote Device	

7. **Any Novel aspect introduced or planning to introduce during the Scheme duration.**

Department of Physics

- Lectures, workshops and hands-on training conducted to add to the scope of prescribed syllabus. Such as
  - A lecture on 'Future of Space Exploration' by Dr. Jaydeep Mukherjee, Director, NASA Space center, Florida.
  - Hands on workshop on UV-VIS spectrophotometer by Equiptronics resource person.
  The first by an eminent scientist from NASA and the second a resource person directly from the industry. We plan to have more of such programs involving scientists from our very own institutions such as ISRO, IISc, DRDO and resource persons from the industries to develop a direct connect with them.
- Faculty Development Workshop on 'Gender in Science' organized by the Department in collaboration with Gender Issue Cell (GIC) of K. C. College, with Resource Persons from WDC, University of Mumbai and TISS, Mumbai as well as in association with Department of Life Sciences. This was a totally new concept and helped in sensitizing teachers towards gender issues, so that they could impart learning in a sensitive and inclusive manner.
- We propose to have a Support Staff Development Program in Printed Circuit Board preparation and wiring of a circuit on it for nonteaching staff of our college and also others which do not have the benefit of the DBT scheme.

Department of Mathematics

- The intercollegiate lecture series for Financial Mathematics and for Actuarial Science, were organized for the students of all disciplines.
- The first issue of the newsletter GanitamNmore ,2019-20, with articles from alumni of the Department of Mathematics is ready for release after lock down.
- The group of students of the department contributed an article on Vedic Mathematics to the booklet made under DBT scheme to be distributed to school children after lockdown.
- The department organized training workshops for IIT JAM for the benefit of the students of various colleges in Mumbai.
- The Dept of Mathematics with Environment Committee of K.C College proposes to organized a National Webinar on "Mathematical Models of Tipping Points in Ecosystem" which will be conducted by Dr. Vishwesha Guttal, Associate Professor, Centre for Ecological Sciences, IISc Bengaluru.

Department of Computer Science & Information Technology

- DBT Star Scheme support helped in inviting professional organizations like India Tech and Skynet Secure Solutions to conduct hands-on workshops in Cyber Security and Social Media Security for CS and IT students of S.Y and T.Y.
- Final year Computer Science and Information Technology students need effective communication skills to perform well at placement interviews. Hence, a number of sessions on Overall Personality Development of students and Inculcating Interview Skills was organized.
- Students have been encouraged to submit well researched articles. The journal was ready for publishing earlier but could not be carried out because of the lockdown. An online publication is now planned.
- Both departments are planning to organise Webinars conducted by notable alumni of the departments, called Alumni Lecture Series as well as an All India level Faculty Development 6 Days Webinar will also be organised in the coming Academic year.

8. **Lessons learnt / difficulties faced/suggestions if any, in implementation of the programme and utilization of DBT grant. (Max 3 points within 300 words).**

- Since this was the first year of the grant, it was realized that the duration available for the extra activities to be planned and conducted during an academic year is only 6-7 months. Scarcity of time to complete activities in view of various hurdles such as delays in delivery by vendors, finding a suitable time slot for students from the regular college schedule and various examinations, was challenging. This challenge was compounded by the long lockdown period in Mumbai due to Covid 19, as completing planned educational activities, procuring equipment and materials for the orders placed and disbursement of funds became very difficult.

- As there is no provision for separate fund allocation for instrument AMCs, there is a need for a separate technical or support staff for the maintenance of the instruments and for other STAR related documentation/clerical work.

- Both the Departments of Information Technology and Computer Science had a number of activities planned but limited funds within which to carry out their activities under recurring head.

9. Key performance indicators

Sr. no	Indicator	Pre-support								During /After Support (Only 1 year of grant, admissions and final examinations, not yet taken place)								Rem arks
1	No. of students admitted	Total =								Total =								
		M=				F=				M=				F=				
		SC	ST	OBC	G	SC	ST	OBC	G	SC	ST	OBC	G	SC	ST	OBC	G	
	No. of students admitted	A-I								NA								
2	No. of students passing out (%) Students Admitted/passing out (pass %)	A-I								NA								
3	Drop-out rates	Physics – Nil Mathematics – Nil CS & IT- Nil								NA								
4	No. of students opting for MSc	CS- 22 IT – 08								NA								
5	Average marks	Physics – 60% Mathematics – 65% CS- 71% IT- 75%								NA								
6	No. of hands-on experiments being conducted	Physics – 01 Mathematics – 01 CS & IT- 05								Physics – 01 Mathematics – 04 CS- & IT – 11								
7	No. of new experiments introduced	Physics – 01 Mathematics – 01 CS & IT- 30								Physics – 05 Mathematics – 03 CS & IT- 91								
8	Publications (scopus indexed) /patents, if any.	Physics – Nil Mathematics – Nil CS & IT- Nil								Physics – Nil Mathematics – Nil CS & IT -Nil								
9	Training received by faculty	Physics – 02 Mathematics – 03 CS & IT- 10								Physics – 05 Mathematics – 09 CS & IT - 15								
10	Exhibitions/seminars/training courses conducted	Physics – 02 Mathematics – 02 CS & IT- 05								Physics – 04 Mathematics - 13 CS & IT - 09								
11	Books/journals subscribed from grants	Physics – 20 Mathematics – 5 CS & IT- 20								Physics – 36 Mathematics – 42 CS & IT –60								
12	Outreach activities (Popular lectures)	Physics – Nil Mathematics – Nil CS & IT- Nil								Physics – 01 Mathematics – 02 CS & IT - 01								
13	Colleges mentored to apply for DBT Star College grants	NA								NA								
14	Invited lectures	Physics – 02 Mathematics – Nil CS & IT- 04								Physics – 01 Mathematics – 03 CS & IT - 06								

- Proofs (S.No. 6-14 not more than 5 pages, 1.5 line spacing 11 times roman font size) to be provided duly attested by Principal and Coordinator.

Department of Physics

Hands-on Training (01)

Sr. No.	Name of the Activity	Resource person	Date (DD/MM/YY)	No of Beneficiaries
1.	Uv-Vis Scanning Spectro-Photometer	**Mr. Chandrakant Kapale** Senior Technician, Equiptronics, Mumbai	12.02.2020	T.Y.B.S (Life Sciences) (22 students) & S. Y B.Sc. (Physics) (20 students) Total-42

List of New Practicals /demonstrations introduced in Physics departments in last one year:(05)

New Practicals: F.Y B.Sc.

Class and No. of Beneficiaries: F.Y B.Sc. (70)	
Sr. No.	**List of Practical/Demonstrations**
1.	To determine surface tension/angle of contact of different liquids by capillary rise method

New Practicals: S. Y B.Sc.

Class and No. of Beneficiaries: S.Y B.Sc. (40)	
Sr. No.	**List of Practical/Demonstrations**
1.	Modification of Passive Low pass filter into Active low pass filter using IC 741
2.	Graph plotter software for plotting different types of curves using data obtained in regular experiments

New Practicals: T.Y B.Sc.

Class and No. of Beneficiaries: T.Y B.Sc. (15)	
Sr. No.	**List of Practical/Demonstrations**
1.	Digital Storage Oscilloscope to measure voltage, time period etc.
2.	Study of Logarithmic decrement in rarer medium

Training Received by Faculty (05)

Sr. No.	Training	Resource person	Name of the Faculty	Date (DD/MM/YY)
1.	Development of Template for Integrating Project Based Learning into Practice	**Mr. Shreekant Shiralkar** Head – India Solution Center for SAP, Tata Consultancy Services, Advisory Member for CS and IT	Dr Jyotsna Pandey	17.07.2019
2.	Use of Advanced Nanomaterials for energy and environmental Applications	**Dr Pradeep Sarwade** Assistant Professor Dept of Physics University of Mumbai	Mrs. Anita Ravi Dr. Jyotsna Pandey	07.12.2019
3.	Following the trails of square root	**Dr. S.G Dani,** Faculty, UM-DAE Centre for Excellence in Basic Sciences	Mrs. Anita Ravi Dr. Jyotsna Pandey	13.01.2020
4.	Use Of Advanced Excel for Teaching Methodologies	**Mr Paresh Pandya** Proprietor, Creative Line Computer Institute	Mrs. Anita Ravi Dr. Jyotsna Pandey	31.01.2020
5.	Gender within Science	**Dr.Gita Chaddha** Associate Professor Dept of Sociology University of Mumbai & **Dr.Chayanika Shah** Former Faculty TISS, Mumbai	Mrs. Anita Ravi Dr. Jyotsna Pandey	04.02.2020 & 05.02.2020

Extension Activity (01)

Sr. No.	Name of the Activity	Resource person	Date (DD/MM/YY)	No of Beneficiaries
1.	Autumn School for Science Honors Programe and Certificate Programme for Commerce & Arts batches. 'Research Methodology'	**Dr. Sunita Shailajan** Head, Department of Botany Ruia College, Mumbai	14.10.2019	S.Y B.Sc. (42) & S.Y.B. A &S.Y.B. Com (44)

Interdisciplinary Activity (02)

Sr. No.	Name of the Activity	Resource person	Date (DD/MM/YY)	No of Beneficiaries
1.	Paint A Picture' (Poster Competition)	**Mr Mahesh Falke** Assistant Professor Department of Physics S.I.E.S College, Sion (East)	22.12.2019	Students of S. Y B.Sc. and F.Y B.Sc. Participated in the event Total -10
2.	Training in Documentary and short –Film Making- Workshop 'SCI-SHOTS'	**Mr Cyrus Dastur** Noted Short Film make	19.11.2019	S. Y B.Sc. (40)

Industrial Visit (01)

Sr. No.	Name of the Activity	Resource person	Date (DD/MM/YY)	No of Beneficiaries
1.	"Mathematical Modelling: Lab Visit" to ICT, Mumbai	**Dr. Ajit Kumar,** Professor and Head, Department of Mathematics, ICT,Mumbai **Dr. Amiya Bhowmick** Assistant Professor, Department of Mathematics, Institute of Chemical Technology, Mumbai	03.08.2019	(S. Y B.Sc.) 30

Outreach Activity (01)

One Common Outreach activity was conducted with all the Star DBT departments. A number of academic equipment, books, and appliances were supplied to schools run by the Municipal Corporation of Mumbai.

Invited Lectures (01)

Sr. No.	Name of the Activity	Resource person	Date (DD/MM/YY)	No of Beneficiaries
1.	Future of space exploration	**Dr Jaydeep Mukharjee,** Director, NASA Florida Grant Consortium, Florida Space Institute, USA	02.12.2019	F.Y.J.C, S.Y.J.C, F. Y B.Sc., S. Y B.Sc. T. Y B.Sc. (Total 200 students)

Department of Mathematics

Hands-on Training (04)

Sr. No.	Name of the Activity	Resource person	Date (DD/MM/YY)	No of Beneficiaries
1.	Workshop on "Python Programming"	**Dr. Ajit Kumar**, Associate Professor and Head, Department of Mathematics, ICT,Mumbai	28.08.2019 & 30.08.2019	35 (S. Y B.Sc.)
2.	"Python: Applications to Mathematics"	**Mr. Maunash Jani** Proprotor and Software Developer, Genius Lynx	25.11.2019	31 (S.Y B.Sc.)
3.	"Mathematics Problem Solving using Python"	**Mr. Maunash Jani** Proprotor and Software Developer, Genius Lynx	28.12.2019	40 (F.Y B.Sc.)
4.	A part of Lecture Series "Applications of Mathematical and Statistical Tools to Finance"	**Ms. Jayashree Shetty,** Associate Professor, KPB Hinduja College	06.08.2019 To 10.08.2019	56 (S.Y B.Sc., F. Y B.Sc., F.Y B.Com., S.Y B.Com., T.Y B.Com., T.Y B.A.-Economics)

Hands-on New Practicals (03)

Class and No. of Beneficiaries: 110 (F. Y B.Sc. And S. Y B.Sc.)	
Sr. No.	**List of Practical/Demonstrations**
1	Solving system of linear equations
2	Finding sum product and inverse of matrices
3	Sketching graph of IR to IR functions

Training Received by Faculty (09)

Sr. No.	Name of the Activity	Resource person	Date (DD/MM/YY)	Faculty
1.	Two-day international level faculty development program on "Learning Technologies: Learning an Overview".	**Dr Thomas McManus** & **Dr Robert Furey,** Faculty from University of Harrisburg, PA,	10.06.2019 & 11.06.2019	Dr. Pankit Gandhi

		USA.		
2.	Development of Template for Integrating Project Based Learning into Practice	**Mr.Shreekant Shiralkar** Head – India Solution Center for SAP at Tata Consultancy Services, Advisory Member for CS and IT	17.07.2019	Mrs. G Usha Dr. Pankit Gandhi
3.	Two-day faculty development program on "Shaping a Data Science Curriculum: unleashing Potential of Iota, Machine Learning and Artificial Intelligence"	**Mr. Akshay Dixit**, Faculty, SAS Institute (India) Pvt. Ltd.	09.09.2019 & 10.09.2019	Dr. Pankit Gandhi
4.	CAS procedures in the view of Seventh Pay Commission	**Mr Sunil Mantri,** Former Principal, Narsee Monjee College, Mumbai	11.09.2019	Mrs. G Usha Dr. Pankit Gandhi
5.	Participated in RUSA sponsored refresher course in Financial Mathematics conducted by UGC-HRDC, University of Mumbai.	Various Faculty members from IITs, TIFR, ICT and experts from industry	13.12.2019 to 27.12.2019	Mrs. Mrunal Hardikar
6.	One-day workshop on Excel	**Mr. Paresh Pandya** Proprietor, Creative Line Computer, Mumbai	31.01.2020	Dr. Pankit Gandhi
7.	Latex with hands -on training session	**Mr. V Nandagopal** Scientific Officer, School of Mathematics, TIFR	08.02.2020	Mrs. G Usha Dr. Pankit Gandhi Mrs. Mrunal Hardikar
8.	Two-day workshop on "Gender & Science"	**Dr.Gita Chadha** Associate Professor Dept of Sociology Mumbai University & **Dr.Chayanika Shah** Former Faculty TISS, Mumbai	14.02.2020 & 15.02.2020	Dr. Pankit Gandhi
9.	NET & SET Examination Preparation	**Mr. Pritesh Kalan,** Assistant Professor, Department of Mathematics, Elphinstone College **Dr. Ganesh Phad**, Assistant Professor, Department of Statistics,	03.03.2020	Mrs. G Usha Dr. Pankit Gandhi Mrs. Mrunal Hardikar

| | | KHTM College, Nasik **Dr. Nilesh Mundlik**, Assistant Professor, Department of Mathematics, Wadia College, Pune **Mr. Manish Agalave** Assistant Professor, Department of Mathematics, Fergusson College, Pune | | |

Workshop by Alumni (01)

Sr. No.	Name of the Activity	Resource person	Date (DD/MM/YY)	No of Beneficiaries
1.	Workshop on "Interview skills"	**Ms. Aman Kaur** Co-Founder, RAH Consultants	06.12.2019	20 (S. Y B.Sc.)

Inter-disciplinary Activities (07)

Sr. No.	Name of the Activity	Resource person	Date (DD/MM/YY)	No of Beneficiaries
1.	Autumn School for Certificate Programme for Commerce & Arts on "Goal Settings for Arts and Commerce Students"	**Dr. Vineet Agrawal,** Resource Person, Youth for Global Peace and Transformation	15.10.2019	44(CPCA)
2.	Autumn School for Science Honors Program on "Goal Settings for Science Students"	**Dr. Sharad Patel,** Resource Person, Youth for Global Peace and Transformation	15.10.2019	41(SHP)
3.	Autumn School for SHP on "Importance of Literature Review in Research"	**Dr. Mayuresh Joshi,** Assistant Professor, Ramnarain Ruia College, Mumbai	16.10.2019	41(SHP)
4.	Autumn School for SHP on "Research Methodology"	**Dr. Vivek Patkar** Researcher & Author	16.10.2019	41(SHP)
5.	Autumn School for SHP, CPCA on	**Ms. Shweta Raina,** Founder, Talerang	17.10.2019	41(SHP) + 44(CPCA)

Sr. No.				
	"Advanced Communication Skills"	Career Training		
6.	Workshop on "Group Discussion and interview skills"	**Ms. Aman Kaur** Co-Founder, RAH Consultants	05.02.2020 & 06.02.2020	21 (T.Y.B.A. Economics and T. Y B.Sc. Computer Science)
7.	Training in Documentary and Short-Film Making-" SCI-SHOTS"	**Mr. Cyrus Dastur** The Founder of SHAMIANA	19.11.2019	90 (S. Y B.Sc.)

Extension Activity (03)

Sr. No.	Name of the Activity	Judges	Date (DD/MM/YY)	No of Participants
1.	Workshop for IIT-JAM	**Mr. Shriprasad Tambe,** IIT-JAM & Math Olympiad Trainer **Ms. Saee Joshi,** Asst. Professor, Dept of Maths, Ramnarain Ruia College, Mumbai **Ms. Samiksha Mahajan,** Asst. Professor, Dept. of Maths, Jai Hind College, Mumbai	16.01.2020 & 17.01.2020	39 (State Level)
2.	MATHnAPP Students' Seminar Intercollegiate Competition	**Dr. Dhvanita Rao,** Visiting Faculty, UM-DAE Centre of Excellence in Basic Sciences, Mumbai **Ms. Meenal Kolkar**, Associate Professor and Head, Department of Mathematics, St. Xavier's College, Mumbai	21.12.2019	6 Teams (9 Students)
3.	MATHnAPP Mathematical Modelling: Poster Competition Intercollegiate	**Dr. Dhvanita Rao,** Visiting Faculty, UM-DAE Centre of Excellence in Basic Sciences, Mumbai **Ms. Meenal**	21.12.2019	4 Teams (5 Students)

Sr. No.	Name of the Activity	Resource person	Date (DD/MM/YY)	No of Beneficiaries
		Kolkar, Associate Professor and Head, Department of Mathematics, St. Xavier's College, Mumbai		

Non-Teaching Activity (01)

Sr. No.	Name of the Activity	Resource person	Date (DD/MM/YY)	No of Beneficiaries
1.	Laughter Yoga Session for non-teaching staff	**Mr. Aatmaram Torane, Mr. Nandakishore Bhat, Mrs. Seema Bhat**	14.12.2019	14

Field Visit (01)

Sr. No.	Name of the Activity	Resource person	Date (DD/MM/YY)	No of Beneficiaries
1.	"Mathematical Modelling: Lab Visit" to ICT, Mumbai	**Dr. Ajit Kumar,** Professor and Head, Department of Mathematics, ICT,Mumbai **Dr. Amiya Bhowmick** Assistant Professor, Department of Mathematics, Institute of Chemical Technology, Mumbai	03.08.2019	30 (S. Y B.Sc.)

Outreach Activity (02)

- One Common Outreach activity was conducted with all the Star DBT departments. Several academic equipment, books, and appliances were supplied to schools run by the Municipal Corporation of Mumbai.
- A booklet "Brain Teasers" was designed for the workshop on Geriatrics - "100 + Not Out" (This workshop was organized by Life Science Department)

Invited Lectures (03)

Sr. No.	Name of the Activity	Resource person	Date (DD/MM/YY)	No of Beneficiaries
1.	Master Lecture: "Following the Trails of Square Root"	**Dr. S. G. Dani**, Faculty, UM-DAE Centre for Excellence in Basic Sciences, Mumbai	13.01.2020	63 (11 faculty members and 52 students)
2.	Lecture Series "Applications of Mathematical and Statistical Tools to Finance"	**Mr. Navin Punjabi,** Assistant Professor, Department of Accountancy, HR College of Commerce and Economics **Ms. Jayashree Shetty,** Associate Professor, Department of Mathematics, Hinduja College, **Ms. Nidhi Manchanda,** Senior Manager (Training), Financial Training Academy	06.08.2019 To 10.08.2019	56 (S.Y B.Sc., F.Y B.Sc., F.Y.B.Com, S.Y.B.Com., T.Y.B.Com., T.Y.B.A.-Economics) Intercollegiate
3.	Lecture Series: "Mathematics for Actuarial Science"	**Ms. Nidhi Manchanda**, Senior Manager-Training, Financial Planning Academy	13.12.2019 & 23.12.2019	23 (F.Y B.Sc., S.Y B.Sc.)

COMPUTER SCIENCE & INFORMATION TECHNOLOGY DEPARTMENT

Hands-on Training (11)

Sr. No.	Name of the Activity	Resource person	Date (DD/MM/YY)	Class & No of Beneficiaries
1.	Photoshop	**Mr. Paresh Pandya,** Proprietor, Creative Line Computer, Vile Parle	09.01.2020	64 (FYCS & IT)
2.	Advanced Excel	**Mr. Paresh Pandya**, Proprietor, Creative Line Computer, Vile Parle	10.01.2020	57 (FYCS)
3.	Responsive Web Development using Bootstrap	**Mr. Shiv Kumar** Varma, Research and Development Engineer Anvira Edustation, Kandivali, Mumbai	11.01.2020 & 13.01.2020	47 (SYCS)
4.	Mongo DB	**Mr. Sajan Kamble,** Web Developer, Escholar Mr. Sharad Karnekar, CEO, Digital Connext, Thane	27.01.2020 & 28.01.2020	77 (TY&SY CS)
5.	Firebase	**Ms. Hinaben Chauhan**, Software Developer, Freelancer, Mumbai	30.01.2020	27 (SYCS)
6.	Node JS	**Mr. Maunash Jani**, Software Developer, Genius Lynx, Mumbai	03.02.2020 & 04.02.2020	27 (TYCS)
7.	Cyber Security and Ethical Hacking	**Mr. Harish Chandar**, Director, India Tech International Pvt. Ltd., Mulund	07.02.2020	88 (SY&FY CS)
8.	2D and 3D Animation	**Mr. Paresh Pandya**, Proprietor, Creative Line Computer, Vile Parle	28.02.2020	63 (FYCS)
9.	Applied Statistics and Introduction to Machine Learning Techniques	**Mr. Naveen Pahuja**, Freelancer, Mumbai	05.03.2020	25 (TYCS)
10.	Advanced Web Programming with C#	**Ms.Jayshri Parab** Assit.Professor B.Sc(IT) Department. Lala Lajpat Rai College of Commerce	08.02.2020	F. Y B.Sc. (IT) (55)

11.	YouTube Technical content Development	**Mr. Manoj Kavedia** Asst.Professor Thadomal Shahani Engineering College.	18.02.2020	F. Y B.Sc. (IT) (27)

New Practicals: F.Y B.Sc. CS (20)

Sr. No.	List of Practical/Demonstrations
	Class and No. of Beneficiaries: F.Y BSc. CS (71)
1.	Construct 1-bit comparator using Multiplexers and verify the truth
2.	To design and verify truth table of a combinational circuit with 3-bit binary input and output would be double the input using de-multiplexer
3.	Python program to implement function recursion
4.	Python program to implement Object Oriented Concepts
5.	Installed free and open source text editors in windows
6.	Contributing to open source project using Wikipedia and Github
7.	Understanding open source tools to use Linux software
8.	Drawing ER diagram for given case study
9.	Designing and solving recurrence relation for a given problem, Algorithms for Binary Tree traversals, Binary Search Tree operations, and Graph traversals. Problem solving on counting principles and finite state automata.
10.	Control Statements in R, Writing R scripts, exercise questions on measures of central tendency, Working with data frames and its operations.
11.	Installing prob library for solving questions on probability theory.
12.	Importing and working with CSV files in R
13.	C programs on pointers and file handling
14.	Python program to create chat application using GUI
15.	Python program for Reading and Writing URL
16.	Mongo DB using python
17.	Installing software package in Ubuntu in VM Ware
18.	Understanding group and user management in Ubuntu
19.	Demonstrate concept of random variables using suitable functions in R
20.	Demonstrate probability distributions using suitable functions in R

New Practicals: S.Y B.Sc. CS (13)

Sr. No.	List of Practical/Demonstrations
	Class and No. of Beneficiaries: S. Y. BSc. CS (71)
1.	Reading and writing data from URL using java code
2.	Creating a GUI using Applet code
3.	Java program to draw lines circle and rectangle
4.	Python/Java program to detect deadlock in the system at given time snapshot
5.	Understanding Microsoft SQL Server
6.	Python/Java program to find shortest path between nodes of a graph
7.	Java program to create JTable and JTree and Advanced controls of Swing
8.	Database connectivity in Java using different databases
9.	Creating a web application for Query analyzer
10.	Understanding UML diagrams

11.	Using Cisco Packet tracer connect two computers using Router
12.	Using Cisco Packet tracer connect two computers, two laptops, one printer using a HUB
13.	Create an android app using web view to display html pages

New Practicals: T.Y B.Sc. CS (10)

Class and No. of Beneficiaries: T.Y BSc. CS (67)	
Sr. No.	**List of Practical/Demonstrations**
1.	To apply DFS algorithm to find the goal node in the tree
2.	Installing FTP server on Ubuntu 16.04 LS
3.	Java program to create worms
4.	Create a home automation simulator using cisco packet tracer
5.	Email phishing
6.	To check the origin of email sender
7.	Python program for web scrapping
8.	Understanding Simple and multiple linear regression
9.	Understanding Decision tree and time series analysis
10.	To perform Steganography

New Practicals: F.Y B.Sc. (IT) (12)

Class and No. of Beneficiaries: F.Y B.Sc. (IT) (72)	
Sr. No.	**List of Practical/Demonstrations**
1.	Program to find Normal and Trace of a Square Matrix using Arrays.
2.	To study standard graphics symbols for digital logic.
3.	Deadlock Avoidance Using Semaphores.
4.	Perform an experiment which demonstrates function of 4 bit or 8 bit ALU.
5.	To look up words in a Dictionary.
6.	Introducing oneself, others and leave taking.
7.	Write an 8085-assembly language program to covert given hex digit to its equivalent ASCII number.
8.	Create links on the words e.g. "Wi-Fi" and "LAN" to link them to Wikipedia pages.
9.	Write a program that uses co-ordinate to model a point.
10.	Write a program for database Connection to display all the values in the table (ASP).
11.	Write 8086 ALP to perform non-overlapped and overlapped block transfer (with and without string specific instructions). Block containing data can be defined in the data segment.
12.	Write an assembly language program in 8085 Microprocessor to count number of elements which are less than 0A in series of 10 numbers.

New Practicals: S.Y B.Sc. (IT) (20)

Class and No. of Beneficiaries: S.Y B.Sc. (IT) (65)	
Sr. No.	**List of Practical/Demonstrations**
1.	Implementation of Database Connectivity.
2.	Define the Normalize table from E-R diagram.
3.	Write a template class for sorting method. Using this class write a test program for sorting using different data types..
4.	Perform 8 Queens problem in data structure using c++

5.	Develop an application for working with Menus and Screen Navigation.
6.	Design a simple to-do list application using SQLite.
7.	Study the complete Software Development Life Cycle (SDLC) and analyze various activities conducted as a part of various phases.
8.	Consider any project to be developed in any technology as a Software Architect or Project Manager.
9.	Study of various structured Analysis tools.
10.	Implementation of prototyping of project in any Object-Oriented Language.
11.	A program to draw a C-Curve of nth order.
12.	Implementation of gaming and also perform animation on it.
13.	Write a Python program to access dictionary keys element by index.
14.	Write a Python program to iterate over two lists simultaneously.
15.	Write a Python program to print a list of space-separated elements.
16.	Write a Python program to compute the similarity between two lists.
17.	Write a Java program to get specific files by extensions from a specified folder.
18.	Write a Java program to sort an array of given integers using Quick sort Algorithm.
19.	Write a program to interface Stepper motor with ARM7.
20.	Write a program to verify Timer operation in different modes.

New Practicals: T.Y B.Sc. (IT) (16)

Class and No. of Beneficiaries: T.Y B.Sc. (IT) (64)	
Sr. No.	**List of Practical/Demonstrations**
1.	How software has been leveraged extensively in different domains.
2.	Identify the requirement development activities associated with each of the Given scenarios.
3.	Identify the requirements in the given software Requirements Specification document.
4.	Introduction to MS Project.
5.	Write a program to create TCP server on Arduino/Raspberry Pi and respond with humidity data to TCP client when requested.
6.	To install MySQL database on Raspberry Pi and perform basic SQL queries.
7.	Create Examination preparation timetable using table tag.
8.	Create a Website for any organization.
9.	Installation of VirtualBox (VMWare) on a PC having other operating system.
10.	Write program that illustrates two processes communicating using shared memory.
11.	Implement Concurrent TCP Server programming.
12.	Implement Authentication filter using filter API.
13.	Configure and verify a site-to-site IPSec VPN using CLI.
14.	Use of BI tools in multiple applications.
15.	Introduction to ArcMap.
16.	Develop an application for working with graphics and animation.

Training Received by Faculty (15)

Sr. No.	Name of the Activity	Resource person	Date (DD/MM/YY)	Faculty
1.	Two-day International Programme- Learning Technologies – Learning an overview	**Dr. Thomas McManus** & **Dr. Robert Furey,** Faculty from University of Harrisburg, PA, USA.	10.06.2019 & 11.06.2019	Ms. Geeta N. Brijwani, Ms. Neha Patel
2.	Development of Template for Integrating Project Based Learning into Practice	**Mr. Shreekant Shiralkar** Head – India Solution Center for SAP at Tata Consultancy Services, Advisory Member for CS and IT	17.07.2019	Dr. Shalini R. Sinha, Mrs. Shalini Maheshgauri, Ms. Geeta N. Brijwani, Mrs. Vimala Rani R., Mr. Narendra Maurya, Mrs. Beena S. Karutharan, Dr. Rakhi Gupta, Ms. Pragati Thawani, Ms. Neha Patel, Ms. Sandhya Bhavsar, Ms. Nashrah Gowalkar
3.	Computer Forensics Investigation & Cyber Law	**Mr. Ramesh Ogania,** Founder, Principal Trainer at National Institute of Cyber Intelligence & Investigations.	20.07.2019	Mrs. Shalini Maheshgauri
4.	Two-day Programme on Shaping a Data Science Curriculum	**Mr. Akshay** Dixit, Faculty, SAS Institute (India) Pvt. Ltd.	09.09.2019 & 10.09.2019	Mrs. Shalini A. Maheshgauri, Ms. Geeta N. Brijwani, Mrs. Vimala Rani R., Mrs. Beena S. Karutharan, Dr. Rakhi Gupta, Ms. Pragati Thawani
5.	Blockchain at Indian Institute of Technology Bombay (IIT)	**Mr. Revanth Kumar,** Asst. Director, Research & Development, Rotech Smart Ventures,	28.09.2019 & 29.09.2019	Ms. Geeta N. Brijwani,

		Mumbai.		
6.	Use of Advanced Nanomaterials for Energy and Environmental Applications	**Dr. Pradeep Sarawade,** Assistant Professor, Dept of Physics, University of Mumbai	07.12.2019	Ms. Geeta N. Brijwani
7.	Use of ICT for Teaching Methodologies	**Mr. Gaurav Ghelani** Academic Relationship Manager - TCS India West & Central at Tata Consultancy Services Mumbai.	18.12.2019	Mrs. Shalini A. Maheshgauri, Dr. Rakhi Gupta, Ms. Pragati Thawani, Ms. Neha Patel, Ms. Sandhya Bhavsar, Ms. Nashrah Gowlakar
8.	Two days National Level Programme on E-content Development	**Mr. Bhushan Kulkarni, Mr. Eknath Kore**, Trainers for E Content Development, Knowledge Bridge, Ahmednagar	10.01.2020 & 11.01.2020	Ms. Geeta N. Brijwani
9.	Python Programming	**Mr. Pravesh Tiwari** Senior Data Analyst, Accenture	Nov ,2019-jan,2020	Mrs. Shalini Maheshgauri, Mrs. Beena S. Karutharan
10.	Two days UGC Paramarsh Training Programme "Preparatory workshop for NAAC"	**Mr. Piyush Pahade,** Associate Professor & Head, H.V Desai College, Pune	23.01.2020 & 24.01.2020	Ms. Geeta N. Brijwani, Dr. Rakhi Gupta, Ms. Pragati Thawani
11.	Gender within Science	**Dr. Gita Chaddha** Associate Professor Dept of Sociology Mumbai University & **Dr. Chayanika Shah** Former Faculty TISS, Mumbai	04.02.2020 & 05.02.2020	Mr. Narendra Maurya, Ms. Neha Patel
12.	Cyber security	Various Faculty	05.02.2020 To	Ms. Nashrah

		members from IITs, TIFR, ICT and experts from industry	18.02.2020	Gowalkar
& Cyber Law				
13.	Latex	**Mr. V Nandagopal** Scientific Officer, School of Mathematics, TIFR	08.02.20	Mrs. Shalini Maheshgauri, Ms. Geeta N. Brijwani, Mrs. Beena S. Karutharan
14.	Workshop on "Academic Audit and its importance from the perspective of NAAC"	**Mr. Piyush Pahade,** Associate Professor & Head, H.V Desai College, Pune	29.02.2020	Ms. Geeta N. Brijwani, Dr. Rakhi Gupta, Ms. Paragti Thawani
15.	Data Centricity and Digital Documentation with NAAC perspective	**Ms. Keya Mukherjee,** Office Superintendent. Maniben Nanavati College, Mumbai.	29.02.2020	Mrs. Beena S. Karutharan, Ms. Paragti Thawani

Extension Activities (05)

Sr. No.	Name of the Activity	Resource person	Date (DD/MM/YY)	No of Beneficiaries
1.	Data Analysis using Hadoop MapReduce	**Dr. Madhavi Vaidya**, Assistant Professor, VES College, Chembur	13.09.2019	77 (TY&SY CS, IT) + other college students (Jai Hind & Siddharth College)
2.	Automation Testing Tools	**Mr. Sunil Sabat**, Associate Consultant, Capgemini, Mumbai	19.12.2019 To 21.12.2019	18 (TYCS, IT) + 9 (other college students from Siddharth College)
3.	Implementing Distributed System on Windows and Linux and Configuring Linux Server for File Sharing	**Ms. Kirti Bhatt** Guest Lecturer	20.09.2019	T. Y B.Sc. (IT + CS) (31) Other college students (15) Total- 46
4.	Cyber Security & Social Media Security	**Mr. Sachin Dedhia** Founder & CEO, Skynet Secure Solutions	09.01.2020	S.Y B.Sc. (IT+CS) T.Y B.Sc. (IT+CS) (68) Siddharth College students (08)
5.	Stress Management	**Dr. Jaya Jayaram,** Formerly Medical	27.02.2020	Students, Teaching Staff,

		Officer, Mumbai Port Trust, Mumbai.		Non-Teaching Staff, Staff from BTTC College. (120)

Inter-disciplinary Activities (02)

Sr. No.	Name of the Activity	Resource person	Date (DD/MM/YY)	No of Beneficiaries
1.	Word press for Autumn School of CPCA and SHP	**Mr. Maunash Jani**, Software Developer, Genius Lynx	19.10.2019	41 (CPCA) 44 (SHP)
2.	AI: Tool to understand nature	**Mr. Abhijeet Gole** Co-Ordinator, Computer Science Department, Ramnarain Ruia College, Mumbai.	24.02.2020	Students from DBT STAR STATUS Departments Life- Sciences, Microbiology, Bio-Technology) And DBT STAR SCHEME Information Technology, Computer Science (163)

Non-Teaching Activity (01)

Sr. No.	Name of the Activity	Resource person	Date (DD/MM/YY)	No of Beneficiaries
1.	Training on Basic and Advanced Excel	**Mr. Kaushal Shah** Senior Manager, Reliance Power Ltd. Mumbai.	31.08.2019	Non-Teaching Staff Of College (11)

Field Visit (01)

Sr. No.	Name of the Activity	Resource person	Date (DD/MM/YY)	No of Beneficiaries
1.	Industrial Visit	International Institute of Information Technology, Pawna Lake, Pune.	19.02.2020 To 21.02.2020	B.Sc. (IT) students (50)

Outreach Activity (01)

- One Common Outreach activity was conducted with all the Star DBT departments. Several academic equipment, books, and appliances were supplied to schools run by the Municipal Corporation of Mumbai.
- Common resource material created for the benefit of municipal school students of class VII to X in the field of Physics, Mathematics, Computer Science and Information Technology.

Invited Lectures (06)

Sr. No.	Name of the Activity	Resource person	Date (DD/MM/YY)	No of Beneficiaries
1.	Income Tax Awareness	**Mrs. Dhivya Ruth,** Deputy Commissioner of Income Tax, Mumbai	23.07.2019	68 (SY&TY CS, IT)
2.	Personality Development – Group Discussion & Personal Interview	**Mrs. Pratibha Jha, Mr. Rajesh Patel, Mr. Ratan Gupta,** ICFAI Business School	14.08.2019	57 (TY, CS, IT)
3.	Writing Research Paper	**Dr. Ashwini Kunte**, Professor, Head of Electronics and Telecommunication Dept. Vice-Principal, Thadomal Shahani Engineering College. **Mrs. Anjali Singh**, Former, Sales Tax Dept. **Mr. Asif Rampurawala** Vice –Principal, Information Technology Vidyalankar School of Information Technology	27.09.2019	T. Y B.Sc. (IT+CS) (50)
4.	Subnets and LAN	**Mr. Asif Rampurawala** Vice –Principal, Information Technology Vidyalankar School of Information Technology	27.11.2019	F. Y B.Sc. (IT + CS) S. Y B.Sc. (IT + CS) (100)
5.	Sustainable ICT Management for Green Computing	**Mr. Ahtesham Shaikh** Co-ordinator A.P College, Mumbai.	15.01.2020	F. Y B.Sc. (IT) (60)
6.	Introduction to Unity	**Mr.Vishal Kawji** Technical General Manager, Frameboxx.	20.01.2020	F. Y B.Sc. (IT) S. Y B.Sc. (IT) T. Y B.Sc. (IT) (150)

10. Self-evaluation

Department	*Objective (as stated in proposal)	% achieved	Reasons for underachievement / If achieved, state in quantitative metrics
Physics	To upgrade existing facilities and to introduce newer instruments in the laboratory according to today's requirements	Marks = 1.6 80%	Quite a few equipment procured even though finding the right vendor took time.
	To train stakeholders in the usage of these equipment	Marks = 1 50%	Coordination of time for performing activity for all Non-Teaching staff was a challenge
	To infuse Project work into the current curriculum to promote better understanding of concepts and applications	Marks = 1.2 60%	4 projects introduced for TY students. Will be extended to FY and SY next year who could not participate due to their lecture and exam schedules.
	To conduct Faculty Development Programmes at an intercollegiate level to share ideas and learn latest technologies in teaching-learning process	Marks = 1.6 80 %	3 such FDPs conducted. Advanced Excel, Gender within Science and Use of Advanced Nanomaterials
	To conduct workshops and seminars on Interdisciplinary topics for deeper insights into primary subject.	Marks = 1.4 70%	Some novel workshops were organized especially that of Dr Jaydeep Mukherjee. Others could not be conducted due to paucity of activity time.
	TOTAL	**68 %**	

Department	*Objective (as stated in proposal)	% achieved	Reasons for underachievement / If achieved, state in quantitative metrics
Mathematics	Keeping in mind the future prospects offered by the subject the department wants to introduce Mathematics at T.Y.B.Sc level. Now an environment created for maximum number of students to get an opportunity to study Mathematics at the graduate level.	Marks = 1.2 60 %	T Y B Sc Mathematics being started for F. Y B.Sc. students of 2020-21
	To create facilities and to enhance expertise for better understanding and create interest in the subject as well as its applications to other disciplines.	Marks = 1.6 80%	#13 workshops were organized. #3 laptops and 3 graphic calculators purchased.

			#1Poster exhibition organized (Sci code19) #Student projects on application of mathematics #1 Lecture series on Financial Mathematics, Actuarial Science, 1 IIT JAM training *A few programmes planned in March had to be cancelled due to Covid 19.
	To get guidance from experts in the field, for enhancement of subject knowledge and hands-on skills to further understanding in the subject.	Marks = 1.2 60%	Masters lecture on Vedic Mathematics and Mathematical Modelling (4)
	To promote, learning new technologies related to present day Mathematics learning by the application of programming languages like Python, R etc.	Marks = 1.6 80%	Workshop on Python(3),Latex(1) Excel(1) *Cancelled advanced Latex session due to lockdown.
	To improve the academic engagements across disciplines and institutions through training programs, and collaborative teaching.	Marks = 1.6 80%	Field trip (with Physics), NET SET Workshop (with Dept. of Statistics), Latex Workshop with Dept. of Computer Science, Sci code(4). 5 planned 4 conducted
	Total	**72%**	

Department	*Objective (as stated in proposal)	% achieved	Reasons for underachievement / If achieved, state in quantitative metrics
Computer Science & Information Technology	Developing various automated Software and Hardware Applications for use in different fields like programming, networking, administration, computing, security etc.	Marks = 1.6 80%	A number of Web based, Android and IOT Apps were made in many different fields like Student Educational Document Verification App using Blockchain Technology, Social Networking Privacy, IOT based Continuous Monitoring Thermometer, Student academic management System etc.
	To get guidance from experts in the field of technology for enhancement of knowledge and hands-on skills.	Marks = 1.8 90%	12 planned 11 conducted
	To learn new technologies related to cloud computing, big data analysis, Linux programming and cross platform development (using programming languages Java, Python, R etc.) as well as using Mathematical and Statistical Methodologies.	Marks = 1.2 60%	5 were planned but only 3 could be conducted due to lack of time in completing activities in view of various exam schedules.
	To improve the academic engagements within and across other institutions through training programs for students and teachers.	Marks = 1.4 70%	07 planned and 05 conducted.
	To engage with various sections of society through outreach programs.	Marks =1.0 50%	2 activities planned 1 conducted
	Total	**70%**	

* For quantitative analysis you may fix five objective (max) each having 2 marks and accordingly can calculate the matrix.

Annexure 1 *

Annexure -I

No of Students	Admitted							Total Students	Course
Male				Female					
SC	ST	OBC	General	SC	ST	OBC	General		
0	1	5	41	0	0	2	22	71	F. Y B.Sc. Computer Science 19 - 20
4	0	8	41	0	0	2	17	72	F.Y B.Sc. Information Technology 19 - 20
1	0	2	35	1	1	2	20	62	FYBSC Physics 19 - 20
2	0	3	50	1	1	4	36	97	FYBSC Mathematics 19 - 20

TY result Analysis

No of Students	O	A+	A	B+	B	C	D	Fail ATKT	Pass %	Course
71	0	13	23	24	10	0	1	0	100	TYBSC Computer Science
66	0	22	26	7	4	3	0	4	93.94	TYBSC Information Technology
10	0	0	2	6	0	0	0	2	80.00	T.Y B.Sc. Physics
									N.A	**T.Y B.Sc. Mathematics Not there.**

Course Coordinator
(With Seal)

Head of the Institution
(With Seal)

Principal.
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