



SARVAJANIK EDUCATION SOCIETY
**P. T. SARVAJANIK COLLEGE
OF SCIENCE, SURAT**



AFFILIATED TO
VEER NARMAD SOUTH GUJARAT UNIVERSITY
SURAT

*** AQAR ***

For the year 2015-2016



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Part – A

1.Details of the Institution:

1.1 Name of the Institution

P. T. Sarvajani College of Science, Surat

1.2 Address Line 1

M. T. B. College Campus,

Address Line 2

Jawaharlal Nehru Marg, Athwalines

City/Town

Surat

State

Gujarat

Pin Code

395001

Institution e-mail address

pruthuldesai@gmail.com

Contact Nos.

(0261) 2240028

Name of the Head of the Institution:

Dr.Pruthul R. Desai

Tel. No. with STD Code:

(0261) 2240028

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09426854713

Name of the IQAC Co-ordinator:

Dr. Anita Bahadur

Mobile:

09825454366

IQAC e-mail address:

anita26p@gmail.com

1.3 NAAC Track ID

GJCOGN13102

1.4 NAAC Executive Committee No. &Date:

(For Example EC/32/A&A/143 dated 3-5-2004.
This EC no.is available in the right corner-bottom
of your institution's Accreditation Certificate)

EC(SC)/05/RAR/114

1.5 Website address:

www.ptscience.org

Web-link of the AQAR:

<http://www.ptscience.org/AQAR2015-16.doc>

1.6 Accreditation Details:

Sr.No.	Cycle	Grade	CGPA	Year of Accreditation	Validity Period
1	1 st Cycle	B ⁺⁺		2007	5 years
2	2 nd Cycle	A	3.03	2015	5 years
3	3 rd Cycle				
4	4 th Cycle				

1.7 Date of Establishment of IQAC:

1st July, 2007

1.8 AQAR for the year(for example 2010-11)

2015-2016

1.9 Details of the previous year's AQAR submitted to NAAC after the latest Assessment and Accreditation by NAAC AQAR: 2014-15 submitted to NAAC on 20/10/2015

1.10 Institutional Status

University: State College Deemed to be University

Affiliated College Yes No

Constituent College Yes No

Autonomous college of UGC Yes No

Regulatory Agency approved Institution Yes No

Type of Institution Co-education Men Women

Urban Rural Tribal

Financial Status: Grant-in-aid UGC 2(f) BC 12B

Grant-in-aid +Self Financing Totally Self-financing

1.11 Type of Faculty/Programme

Arts Science Commerce Law PEI (PhysEdu)

TEI (Edu)Engineering Health e Management

Others(Specify)

Nil

1.12 Name of the Affiliating University (*for the Colleges*)

Veer Narmad South Gujarat University (VNSGU), Surat

1.13 Special status conferred by Central/ State Government—

UGC/CSIR/DST/DBT/ICMR etc

Autonomy by State/Central Govt. / University -

College with Potential for Excellence UGC-CPE -

DST Star Scheme - UGC-CE -

UGC-Special Assistance Programme DST -FIST

UGC-Innovative PG programmes - Any other (*Specify*) -

UGC-COP Programmes -

2.IQACComposition and Activities:

2.1No. of Teachers	<input type="text" value="06"/>					
2.2No. of Administrative/Technical staff	<input type="text" value="01"/>					
2.3No. of students	<input type="text" value="01"/>					
2.4No. of Management representatives	<input type="text" value="02"/>					
2.5No. of Alumni	<input type="text" value="02"/>					
2. 6No. of any other stakeholder and community representatives	<input type="text" value="01"/>					
2.7 No. of Employers/ Industrialists	<input type="text" value="01"/>					
2.8 No. of other External Experts	<input type="text" value="01"/>					
2.9 Total No. of members	<input type="text" value="15"/>					
2.10No. of IQAC meetings held :	<input type="text" value="02"/>					
2.11 No. of meetings with various stakeholders:	No. <input type="text" value="0"/> Faculty <input type="text" value="2"/>					
Non-Teaching Staff	<input type="text"/>	Alumni	<input type="text" value="01"/>	<input type="text" value="01"/>	<input type="text" value="0"/>	
2.12Has IQAC received any funding from UGC during the year?	Yes <input type="text"/>	No <input checked="" type="text" value="v"/>				
If yes, mention the amount	<input 5"="" type="text" value="---</input></td></tr><tr><td>2.13Seminars and Conferences (only quality related):</td><td colspan="/>					
(i) No. of Seminars/Conferences/Workshops/Symposia organized by the IQAC						
Total Nos.	International	<input type="text" value="-"/>	National	<input type="text" value="-"/>	State	<input type="text" value="1"/>
Institution Level	<input type="text" value="-"/>					
(ii) Themes	<input type="text" value="UGC sponsored -1. Potential applications of ionic liquids."/>					

2.14 Significant Activities and contributions made by IQAC :

1. A seminar slot is provided in the time table in which various talks, invited lectures, informative lectures are arranged.
2. Special seminars were arranged by the bright students for the slow learners in the class.

2.15 Plan of Action by IQAC/Outcome:

The plan of action chalked out by the IQAC in the beginning of the year towards quality enhancement and the outcome achieved by the end of the year *See annexure 1

Plan of Action	Achievements
1. To arrange seminar/workshop by students on different themes	State level seminar on “ The Potential Applications of Ionic Liquids”, on 28/12/2015 See annexure 1
2. To arrange a series of lectures on “Nobel Prize” in different subjects.	Arranged lecture by 1. Dr. Hari S Misra, Mol Biology Division, BARC, Mumbai. Nobel prize in Chemistry 2015 2. Dr. Amol Dighe, “ Nobel Prize in Physics 2015 ” on 4 th February, 2016
3. It was decided to add a seminar slot in the time table	Executed
4. To take students to educational tours – arranged by individual departments	Zoology Department 1. Kosmada (Induced breeding) 2. Sarthana nature’s park 3. Nargol (Marine animals Collection) Physics Department 4 Night Sky Gazing with an aim to explore the sky and other celestial objects at Visalkhadi, 5 Visit to (i) KAPS, Vyara (ii) Science City, Ahmedabad (ii) IPR, Gandhinagar and (iv) PRL, Ahmedabad Chemistry Department 6. Visits to (i) JK paper mill (ii) Chalthan Sugar Factory

<p>5. To encourage students to participated in national/state level exam/competition/symposia/seminars/workshops/conventions</p>	<ul style="list-style-type: none"> • Five students of our college were selected for poster presentation and participation in the 3rd NSSP held at the Department of Physics, PunjabUniversity,Chandigarh during 17th September to 19th September, 2015. • 80 students of Mathematics Department Annual Convention of “Gujarat GanitMandal” held at B. K. M. Science College, Valsad during 25th to 27th December, 2015 • Three students of our college participated in “Natl Comp on Essay Writing in Physics (NCEWP)” organized by IAPT. • Twelve students participated and presented poster in the Student Symposium held at Kadi SarvaVishva vidyalaya during 19th and 20th Jan, 2016 to commemorate International Year of Light and 100 years of General Theory of Relativity. • A National Level Competition is organized by IAPT for UG students in the month of January every year. This year, students participated in it out of which students got merit certificates. It was conducted by Physics Department. • Students of the Department were encouraged to participate in the National level <i>Madhava Mathematics Competition</i> and state level <i>Prof. A. R. Rao Mathematics Competition</i>
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* Attach the Academic Calendar of the year as Annexure. I

2.15 WhethertheAQAR was placed instatutory body: Yes

No

Management

 -

Syndicate

 -

Anyother body

 -

Provide the details of the action taken

It is placed in the Local Administrative Committee (LAC).

Part – B

Criterion – I

1. Curricular Aspects:

1.1 Details about Academic Programmes:

Level of the Programme	Number of existing Programmes	Number of programmes added during the year	Number of self-financing programmes	Number of value added / Career Oriented programmes
PhD/M Phil	4	-	-	-
PG	2	-	-	-
UG	5	-	-	-
PG Diploma	-	-	-	-
Advanced Diploma	-	-	-	-
Diploma	-	-	-	-
Certificate	-	-	-	-
Others	-	1 (Academia)	-	-
Total	11	-	-	-
Interdisciplinary	-	-	-	-

1.2 (i) Flexibility of the Curriculum: CBCS/Core/Elective option / Open options

(ii) Pattern of programmes:

Pattern	Number of programmes
Semester	5 (UG) +2 (PG)
Trimester	-
Annual	-

1.3 Feedback from stakeholders* **(On all aspects)**

Alumni Parents Employers Students

Mode of feedback: Online Manual Co-operating schools (for PEI)

1.4 Whether there is any revision/update of regulation or syllabi, if yes, mention their salient aspects.

University has a board that revises the syllabus from time to time. Some senior staff of Physics, Chemistry and Zoology dept of this college are members of this board.

1.5 Any new Department/Centre introduced during the year. If yes, give details.

No

Criterion – II

2. Teaching, Learning and Evaluation:

2.1 Total No. of permanent faculty:

Total	Asst. Professors	Associate Professors	AdhyapakSahayak	Others
30	6	18	6	

2.2 No. of permanent faculty with Ph.D. 20

2.3 No. of Faculty Positions Recruited (R) and Vacant(V) during the year

Asst. Professors		Associate Professors		Professors		Others		Total	
R	V	R	V	R	V	R	V	R	V
1	-	-	-	-	-			-	-

2.4 No. of Guest, Visiting faculty and Temporary faculty: 02 10 7

2.5 Faculty participation in conferences and symposia: **(Refer to Annexure II):**

No. of Faculty	International level	National level	State level
Attended	1	6	11
Presented papers	3	4	4
Resource Persons	-	1	3

2.6 Innovative processes adopted by the institution in Teaching and Learning:

- Conducted regular study tours
- NPTEL lectures for the students
- Add-on course started
- Multimedia technology adopted and implemented
- ICT enabled in teaching and learning process

2.7 Total No. of actual teaching days During this academic year 190

2.8 Examination/ Evaluation Reforms initiated by the Institution (for example: Open Book Examination, Bar Coding, Double Valuation, Photocopy, Online Multiple Choice Questions)

As per university rules

2.9 No. of faculty members involved in curriculum restructuring/revision/syllabus development

7

as member of Board of Study/Faculty/Curriculum Development workshop

2.10 Average percentage of attendance of students

82%

2.11 Course/Programme wise distribution of pass percentage:

Title of the Programme	Total no. of students appeared	Division				
		Distinction	I	II	III	Pass %
B. Sc.	392	157	157	47	08	94..13
M. Sc.	47	34	11	02		100

2.12 How does IQAC Contribute/Monitor/Evaluate the Teaching & Learning processes:

Meetings are regularly held for monitoring and evaluating the teaching and learning processes and necessary steps are taken.

2.13 Initiatives undertaken towards faculty development:

<i>Faculty / Staff Development Programmes</i>	<i>Number of faculty benefitted</i>
Refresher courses	1
UGC – Faculty Improvement Programme	0
HRD programmes	0
Orientation programmes	0
Faculty exchange programme	0
Staff training conducted by the university	0
Staff training conducted by other institutions	0
Summer / Winter schools, Workshops, etc.	1
Others	

2.14 Details of Administrative and Technical staff

Category	Number of Permanent Employees	Number of Vacant Positions	Number of permanent positions filled during the Year	Number of positions filled temporarily
Administrative Staff	5	7	0	4
Technical Staff	11	09	0	11

Criterion – III

3. Research, Consultancy and Extension:

3.1 Initiatives of the IQAC in Sensitizing/Promoting Research Climate in the institution

- Some faculty members have applied for the minor/major research project to various funding agencies.

3.2 Details regarding major projects:

	Completed	Ongoing	Sanctioned	Submitted
Number	1			2
Outlay in Rs. Lakhs	11.268			

3.3 Details regarding minor projects:

	Completed	Ongoing	Sanctioned	Submitted
Number		1		7
Outlay in Rs. Lakhs		1.25		

3.4 Details on research publications (Refer to Annexure III)

	International	National	Others
Peer Review Journals	3	2	1
Non-Peer Review Journals	7	4	5
e-Journals			
Conference proceedings			

3.5 Details on Impact factor of publications:

Range Average h-index Nos. in SCOPUS

3.6 Research funds sanctioned and received from various funding agencies, industry and other organisations:

Nature of the Project	Duration Year	Name of the funding Agency	Total grant sanctioned	Received
Minor Projects	02	GUJCOST	1,25,000/-	1,25,000/-
Interdisciplinary Projects				
Industry sponsored				
Projects sponsored by the University/ College				
Students research projects (other than compulsory by the University)			****	
Any other(Specify)				
Total				

3.7 No. of books published) With ISBN No.Chapters in Edited Books

With ISBN no ii) Without ISBN No.

3.8 No. of University Departments receiving funds from : NA

UGC-SAPCASD
 DPE DBT Scheme/funds

3.9 For colleges: N.A.

Autonomy CPE DBT Star Scheme
 INSPIRE Any O (specify)

3.10 Revenue generated through consultancy

3.11No. of conferences organized by the Institution

Level	International	National	State	University	College
Number	-	-		-	-
Sponsoring agencies	-	-		-	-

3.12No. of faculty served as experts, chairpersons or resource persons

3.13No. of collaborations: International National Anyother

3.14No. of linkages created during this year

3.15Total budget for research for current year in lakhs :

From Funding agency From Management of University/College

Total

3.16No. of patents received this year:

Type of Patent		Number
National	Applied	-
	Granted	-
International	Applied	-
	Granted	-
Commercialised	Applied	-
	Granted	-

3.17 No. of research awards/ recognitions received by faculty and research fellows of the institute in the year

Total	International	National	State	University	Dist	College
-	-	-	-	-	-	-

3.18 No. of faculty from the Institution who are Ph.D. guides and students registered under them

6

13

3.19 No. of Ph.D. awarded by faculty from the Institution

2

3.20 No. of Research scholars receiving the Fellowships (Newly enrolled + existing ones)

JRF/SRF Project Fellows Any other

3.21 No. of students participated in NSS events:

University level State level

National level International level

3.22 No. of students participated in NCC events:

University level State level

National level International level

3.23 No. of Awards won in NSS:

University level State level

National level International level

3.24 No. of Awards won in NCC:

University level State level

National level International level

3.25 No. of Extension activities organized:

University forum College forum

NCC NSS Any other

3.26 Major Activities during the year in the sphere of extension activities and Institutional Social Responsibility:

a. Eco club organised elocution competition for Sem II students on 20/02/2016.

b. Save birds during uttarayan – lecture by ShriShaktiPathak on 07/01/2016

Criterion – IV

4. Infrastructure and Learning Resources

4.1 Details of increase in infrastructure facilities:

Facilities	Existing	Newly created	Source of Fund	Total
Campus area	14339.99m ²	0		
Class rooms	14	0		
Laboratories	18	0		
Seminar Halls/Conference hall	2	0		
No. of important equipments purchased (≥ 1-0 lakh) during the current year.				
Value of the equipment purchased during the year (Rs. In Lakhs)				
Others				

4.2 Computerization of administration and library

The library and the college office are computerized

4.3 Library services:

	Existing		Newly added		Total	
	No.	Value	No.	Value	No.	Value
Text Books	1438	159714/-	305	33100/-	1743	192814/-
Reference Books	8839	2104573.51/-	410	203067/-	9249	2307640.67/-
e-Books	1002	0.00	0		1002	0.00
Journals	195	3163360.00/-	25	478667/-	220	364227/-
e-Journals						
Digital Database						
CD & Video	11	60.00/-	0	0	11	60.00/-
CD-accompanied with books	125		1		126	
Back Volumes of Journals					6299	

4.4 Technology up gradation (overall)

	Total Computers (Desktop+ Laptops)	Computer Labs	Internet	Browsing Centres	Computer Centres	Office	Departments	Others
Existing	47	1	9		15			
Added	0	0	0		0			
Total	47	0	9		15			

4.5 Computer, Internet access, training to teachers and students and any other programme for technology up gradation (Networking, e-Governance etc.)

ICT enabled teaching learning process.

4.6 Amount spent on maintenance in lakhs :

i) ICT

70,589/-

ii) Campus Infrastructure and facilities

1,30,589/-

iii) Equipments

4,69,917/-

iv) Others

9 21208.05/-

Total :

1516714.05/-

Criterion – V

5. Student Support and Progression

5.1 Contribution of IQAC in enhancing awareness about Student Support Services

An orientation program for the new entrants was arranged in the beginning of the academic year to inform them about the Institute, the facilities available to them and the activities carried out for them during the year.

5.2 Efforts made by the institution for tracking the progression

We have regular meetings for the self-assessment and after an open ended discussion with all, we try to improvise.

5.3 (a) Total No. of students

UG	PG	Ph. D.	Others (Project Fellow) M. Phil.
-	-	13	8

(b) No. of students outside the state

(c) No. of international students

-

Men-

No.	%
-	-

Women

No.	%
-	-

Last Year						This Year					
General	SC	ST	OBC	Physically Challenged	Total	General	SC	ST	OBC	Physically Challenged	Total
855	85	192	436	1	1568	744	70	164	402	0	1380

5.4 Details of student support mechanism for coaching for competitive examinations (If any)

Nil

No. of students beneficiaries

Nil

5.5 No. of students qualified in these examinations

NET SET/SLET GATE CAT

IAS/IPS etc State PSC UPSC Others (JAM)

5.6 Details of student counselling and career guidance

Counselling to the students during class hours

No. of students benefitted

5.7 Details of campus placement

<i>On campus</i>			<i>Off Campus</i>
Number of Organizations Visited	Number of Students Participated	Number of Students Placed	Number of Students Placed
07	252	21	

5.8 Details of gender sensitization programmes

- Abhayam – by Dr Priti Joshi – Mahilashashaktikaran
- Women empower celebration from date 1.8 2015.
- Women education day, Taekwondo for self-defense
- Importance of yoga in women health
- Betibachavo Lecture by Dr C L Jain
- Celebration of Breast week awareness week

5.9 Students Activities:

5.9.1 No. of students participated in Sports, Games and other events

State/ University level National level International level

No. of students participated in cultural events

State/ University level National level International level

5.9.2 No. of medals/awards won by students in Sports, Games and other events

Sports: State/ University level National level International level

Cultural: State/ University level National level International level

5.10 Scholarships and Financial Support:

	Number of students	Amount (in Rs.)
Financial support from institution		
Financial support from government		
Financial support from other sources	15	73 000/-
Number of students who received International/National recognitions		

5.11 Student organised / initiatives:

Fairs: State/ University level National level International level

Exhibition: State/ University level National level International level

5.12 No. of social initiatives undertaken by the students

- Tree plantations
- Plastic free campus
- Green audit of

5.13 Major grievances of students (if any) redressed: Nil

Criterion – VI

6. Governance, Leadership and Management

6.1 State the Vision and Mission of the institution

Vision: To promote experimental scientific pursuit and to provide conducive environment to students, to develop aptitude and to sharpen skills of students to meet the challenges of rapidly changing world and to instil a spirit of camaraderie amongst students and sensitize them regarding their role and duty towards nation building.

Mission: To make the Education of Core Science subjects “Sarvajanic” in true sense to create scientific thrust and to make the students explore new horizons of science through research.

6.2 Does the Institution have a management Information System

Yes

6.3 Quality improvement strategies adopted by the institution for each of the following:

6.3.1 Curriculum Development

Curriculum is prepared by the university in a meeting with board

6.3.2 Teaching and Learning

ICT enabled teaching using LCD projectors

6.3.3 Examination and Evaluation

Regular tests and internal examinations (both theory and practical) are conducted as per the instruction of the university

6.3.4 Research and Development

Teachers are encouraged to pursue research and attend conferences

6.3.5 Library, ICT and physical infrastructure / instrumentation

New course based books purchased in good numbers

6.3.6 Human Resource Management

Teachers are given additional charges for various extra-curricular and co-curricular activities such as NCC and NSS (Ann IV)

6.3.7 Faculty and Staff recruitment

Faculty and staff recruitments are done as per the rules and regulations of the university. Ad-hoc staffs as per requirement are appointed by SES

6.3.8 Industry Interaction / Collaboration

Academy industry meet arranged with Nutan dye chem, Macson products, Snow dyechem and Delta high-tech coating and prints and MOU signed

6.3.9 Admission of Students

- Admissions are conducted as per the university norms and government orders.
- Strict transparency and admission rules are adhered to by the college.

6.4 Welfare schemes for

Teaching/non teaching staff and students	-A health centre with a full time doctor is there for 24 h for the treatment and medicines are available at a negligible cost
--	---

6.5 Total corpus fund generated -

6.6 Whether annual financial audit has been done: Yes No

6.7 Whether Academic and Administrative Audit (AAA) has been done?

Audit Type	External		Internal	
	Yes/No	Agency	Yes/No	Authority
Academic	Yes	GOG		
Administrative	Yes	GOG	Yes	CA

6.8 Does the University/ Autonomous College declare results within 30 days? NA

For UG Programmes Yes No

For PG Programmes Yes No

6.9 What efforts are made by the University/ Autonomous College for Examination Reforms?

Examinations are conducted as per the university norms and regulations

6.10 What efforts are made by the University to promote autonomy in the affiliated/constituent colleges?

N/A

6.11 Activities and support from the Alumni Association

The Alumni Association works hand in hand with the college management. Two invited talks were sponsored by our alumni association. It provides scholarships to the needy students

6.12 Activities and support from the Parent – Teacher Association

Nil

6.13 Development programmes for support staff

Nil

6.14 Initiatives taken by the institution to make the campus eco-friendly

It has been resolved to mount solar lights in the campus to make the campus eco-friendly
Training is imparted to students for a green, clean campus drive
A Vermicompost unit is established in the college campus

Criterion – VII

7. Innovations and Best Practices:

7.1 Innovations introduced during this academic year which have created a positive impact on the functioning of the institution. Give details.

An orientation program was arranged for the new entrants in which they were informed about the facilities available in the institute, the activities carried out in the institute during the academic year and also they were guided about the career opportunities available after their graduation in all the subjects

7.2 Provide the Action Taken Report (ATR) based on the plan of action decided upon at the beginning of the year

- The plan of action conceived during the beginning of the academic year has been successfully initiated and completed.

7.3 Give two Best Practices of the institution (please see the format in the NAAC Self-

Seminars arranged by the institution, delivered by Research Scholars to the T.Y. students to cover the new research developments and methodologies as being implemented in the campus. The following topics were covered:

- a. Immobilization of enzymes on macro, micro and nanoparticles
- b. Fish Toxicity by Metal and Metal Ion nanoparticles
- c. Fish Toxicity by Ionic Liquids
- d. Antimicrobial activity of surfactants and their effects on fish histopathology.
- e. Polymeric micelles nano-sphere on controlled Drug delivery

**Provide the details in annexure (annexure need to be numbered as i, ii, iii)*

7.4 Contribution to environmental awareness / protection

- An Eco club is established under whose aegis campus is cleaned time to time
- A lecture on wildlife awareness was arranged
- A Bicycle club of the college was established through which some interested meritorious students are distributed cycle to come and go to college regularly.
-

7.5 Whether environmental audit was conducted? Yes No

7.6 Any other relevant information the institution wishes to add. (For ex. SWOT Analysis)

- An “Inter-College Staff Tournament” was arranged in which many of the staff members participated and won the trophies

8.Plans of institution for next year:

1. To arrange Bridge Courses in all the subjects that we offer at the UG level
2. To arrange invited talks on different topics of current affairs and others
3. To organize state level workshop/seminar in different subjects
4. To take our students to various places of academic interest
5. To inspire the students to participate in various academic activities on and off the campus
6. To motivate them to prepare power point presentations in their fields of interest and present them in front of the other students
7. Any other student-centric program that is possible
8. To arrange orientation courses for B Sc and MSc.
9. To continue Add on courses in different subjects.
10. To organize “Health Run” to bring awareness about their health

Name _____

Name _____

Signature of the Coordinator, IQAC

Signature of the Chairperson, IQAC

Abbreviations:

CAS	-	Career Advanced Scheme
CAT	-	Common Admission Test
CBCS	-	Choice Based Credit System
CE	-	Centre for Excellence
COP	-	Career Oriented Programme
CPE	-	College with Potential for Excellence
DPE	-	Department with Potential for Excellence
GATE	-	Graduate Aptitude Test
NET	-	National Eligibility Test
PEI	-	Physical Education Institution
SAP	-	Special Assistance Programme
SF	-	Self Financing
SLET	-	State Level Eligibility Test
TEI	-	Teacher Education Institution
UPE	-	University with Potential Excellence
UPSC	-	Union Public Service Commission

Annexure I

Details of academic calendar

- “Advanced B. Sc. **Summer Program**” - organized by “Vikram A. Sarabhai Community Science Centre, Ahmedabad” students who appeared in S. Y. B. Sc. Exam with Physics as their principal subject all over Gujarat participated based on their entrance examination.
- To commemorate “Physics Day”, Prof. Vipul Kheraj from SVNIT, Surat was invited to deliver a talk. He talked on “LASERs & Quantum Mechanics”.
- Prof. V. H. Thakkar of the Department delivered a talk on LED. The Department of Physics organized video lectures for the T. Y. B. Sc. students in the afternoon session in the beginning of the year.
- 1^{9th} August, 2014 - Physics Club was established by the auspicious hands of Prof. K. N. Joshipura, Retd. Head, Department of Physics, S. P. University, Vallabh Vidyanagar.
- To celebrate International Year of Light (IYL) 2015, Physics Department organized “An Inter-College Essay Writing Competition” in August, 2015 under the banner of Physics Club and the topic of essay was “Light and Its Applications”. Prof. Niket Shastri, Head, Department of Physics, SCET, Surat was the judge.
- 100 years of Einstein’s General Theory of relativity were completed in 2015. Physics Department organized “An Inter-College Power Point Presentation Competition” on 27th August, 2015 on “Theory of Relativity” under Physics Club.
- An educational tour was organized to the Kakrapar Atomic Power Station on 18th August, 2015 led by Prof. R. B. Patel (HOD) and six other faculty members. Another educational tour was organized to IPR (Bhat, Gandhinagar), Science city (Ahmedabad), VASCSC (Ahmedabad) and PRL (Ahmedabad) during 7th September, 2015 to 8th September, 2015.
- In PRL, the students visited three laboratories wherein the scientists explained the experiments, the students met Prof. R. Rangrajan, a senior scientist in PRL.
- Five students of our college were selected for poster presentation and participation in the 3rd NSSP held at the Department of Physics, Panjab University, Chandigarh during 17th September to 19th September, 2015.
- Three students participated in “National Competition on Essay Writing in Physics (NCEWP)” by IAPT. While Prof. V. H. Thakkar participated in the teacher’s category.
- A national level examination is conducted throughout the country on the same day at the same time, called NGPE for the students pursuing B. Sc. (Physics), organized by IAPT, Kanpur. 41 students College got enrolled in NGPE-2016. The examination was conducted on 24th January, 2016 in our college. Prof. V. H. Thakkar served as the center-in-charge.
- Prin. Pruthul Desai delivered talks on “Detecting a Poltergeist” on 12th January and then on 1st February, 2016 and “Gravitational Waves” on 15th March, 2016.

Annexure II

Conferences / Workshop / Symposium

Conference

i. Attended

1. Dr. Anita Bahadur of Dept of Zoology **participated** in Process Development & Scale-Up seminar Woodbridge Hotel in Iselin, NJ, USA on May 7th, 2015.
2. Prof. S. A. Sutar of Physics dept **attended** a **National** Conference on “Recent Advances in Engineering for Sustainability” organized at Uka Tarsadia University, Bardoli during 29th and 30th May, 2015
3. Prof. V. H. Thakkar **attended** A Day Long seminar on “Sustaining Quality in University and College Education (SQUCE-15)” organized by the Internal Quality Assurance Cell of Shree Jayendrapuri Arts and Science College, Bharuch on October 15, 2015.
4. Ms. Krishna Soni (ad-hoc lecturer of the department of physics) attended “**National** Conference on Material Characterization” organized by The Faculty of Science, M. S. University, Vadodara held during 18th and 19th March, 2016.
5. All the staff members of all department participated in UGC sponsored **State** level seminar on “**The Potential Applications of Ionic Liquids**” organized by Sir P. T. Sarvajani College of Science, Surat on 28th December, 2015.
6. Dr A H Dholaki **participated** in **National** conference on “Innovative practices in higher education and digital India as changing paradigm” at Seth C. L. Commerce college & Hindi high school campus, Ahmedabad on 17th January, 2016.
7. Dr A.H. Dholaki **participated** in a seminar on Sustaining Quality in University/College Education at Shree Jayendrapuri Arts and Science College on 15th October, 2015.
8. All the staff members of all the departments **participated** in potentials of ionic liquids a UGC sponsored seminar organized by Chemistry dept on 28/12/2015.
9. Dr. Giraben Tambawala, Dr. Sandip Joshi, Dr. M. B. Mahida, Dr. H. D. Desai, Dr. K. C. Desai, Dr. H. B. Gajjar, Dr. S. P. Vora, Dr. N. C. Patel, Dr. M. H. Chaudhary, Dr. B. M. Patel, Dr. K. C. Parmar, Dr. N. R. Kamdar, Dr A. H. Dholaki **attended** one day **State** level seminar on Environmental awareness Government science college, Vankal.

10. Dr. K. J. Chauhan attended annual conference of "Gujarat GanitMandal" at B. K. M. Science College, Valsad during 25th to 27th December, 2015.
11. Anjali V. Varshney and Jaishree D. Chaudhari **attended** UGC sponsored, **National** seminar on "Conservation of natural resources and environment" organized by biology department B. K. M. Science College, Valsad on 13th September, 2015.
12. Dr. Jatin M. Desai **attended National** seminar on "Role of Statistics in Current Scenario" organized by Department of Statistics, VNSGU, Surat on 27th March, 2016.

ii. Presented

1. Dr. P. R. Desai - **Poster presentation** in "The 5th **International** Conference on Collective Motion in Nuclei under extreme Conditions" by Inst of Nuclear physics held in Krakow (Poland) during 14th September to 18th September, 2015
2. "Detection of heat wave using Kalpana-1 VHRR land surface temperature product over India" was accepted in SPIE Asia-Pacific Remote Sensing **International** conference held at New Delhi, India 4th April to 7th April, 2016.
3. Prof. N. D. Patel - "Structural and Electrical Properties of Nanocrystalline Barium Strontium Titanate" presented in the "5th **International** Conference on Material Processing and Characterization" held at GRIET, Hyderabad during 12th March and 13th March, 2016.
4. Dr. A. H. Dholakia A study on general health & hygiene of Muslim adolescent girls of Surat city, Gujarat, ICWSTCSC-2016.
5. Dr. Anita Bahadur **presented a** poster on "Immobilization of lipase on chitosan: macro, micro, nanospheres." at XXX Gujarat Science Congress, Bhuj during 6th – 7th February, 2016.
6. Dr. Anita Bahadur **presented a** poster on "Effect of silver nanoparticles on the haematological parameters of Indian major carp." at XXX Gujarat Science Congress, Bhuj during 6th – 7th February, 2016.
7. Dr. Anita Bahadur **presented a** poster on "Immobilization of lipase on alginate: macro, micro, nanospheres." at BTSE, VNSGU Surat on 19th – 20th February, 2016.
8. Dr. Anita Bahadur **presented a** poster on "Hematological alterations in Indian major carp *Catla catla* (ham) under the stress of ZnO nanoparticles." at BTSE, VNSGU Surat on 19th – 20th February, 2016.
9. Dr. Anita Bahadur **presented a** poster on "Toxic effects of a cationic surfactant on different organs of fish *Catla catla*: a histopathological study." at BTSE, VNSGU

Suraton 19th – 20th February, 2016.

10. Dr. D.V. Shah **presented** research paper entitled “On the Generalized Fibonacci numbers” at ‘**National** Conference on ‘Multidisciplinary Research in Science and Engineering’ organized by Christ University, Bengaluru during 25 – 30 May, 2016
11. Dr.HB. Gajjar presented a poster at UkaTarsadia University,Bardoli,Dec-2015

iii. Resource person

1. Dr.D.V.Shah delivered talk entitled “GanitSamachar - 2015” at the ‘52nd annual conference of Gujarat GanitMandal’ held at State level at B. K. M. Science College, Valsad during 25 – 27 Dec. 2015.

Workshop

i. Attended

1. Prof. V. H. Thakkar and Dr. D. B. Shah **participated** in a “Training Programme on PLASMA SCIENCE & TECHNOLOGY for Resource Teachers from Schools and Colleges” jointly organized by IPR (DAE), Gandhinagar, GUJCOST, Gandhinagar and Regional Community Science Center, Vadodara held at Regional Community Science Center, Vadodara during 16th October and 17th October, 2015.
2. Dr. D. B. Shah **participated** in 1st MOM-AO Science Workshop held at Space Applications Centre (ISRO), Ahmedabad during December 21-22, 2015.
3. Prin. P. R. Desai, Prof. S. A. Sutar and Prof. V. H. Thakkar **attended** a workshop on “Innovative Laboratory Experiments in Physics” organized by the Department of Physics, Patidar Jin Science College, Bardoli on 6th January, 2016.
4. Dr A H Dholakia **participated** in workshop on “Human – Wildlife conflict” at Serenity Library & Botanical Garden on 9th April,2016.
5. Dr. K. J. Chauhan **attended State** level workshop on “Use of open source software in Mathematics” organized by V.P. & R.P.T.P Science College, VallabhVidyanagar on 3rd and 4th August, 2015.
6. Dr. K. J. Chauhan**attendedState** level workshop on “Models in Mathematics” organized by V. S. Patel College of Arts and Science, Bilimora during 2nd to 4thDecember,2015.

ii. Presented -

iii. Resource person

1. Dr. D.V. Shah worked as a **resource person** in ‘Workshop for the technical terms in Mathematics (English – Hindi – Gujarati)’ organized by Commission for Scientific & Technical Terminology, Ministry of HRD, Govt. of India, N. Delhi held at Sir P. T. Sarvajani College of Science, Surat during 29 Feb. – 04 March 2016

2. Dr. D.V. Shah worked as a **resource person** and **delivered invited talk** entitled “ Some problems from Number Theory ” at ‘Workshop on Problem solving and Enrichment in Mathematics’ organized by St. Xavier’s College, Ahmedabad during 30 Dec. 2015 – 1 Jan. 2016.

3. Dr. D.V. Shah **delivered invited talk** entitled “Mathemagical Black Holes” at the workshop organized by Smt. S. H. Gajera High School, Surat during 09 – 10 July 2015.

Annexure III

Research papers:

1. Department of Zoology

Dr A H Dholakia

- I. Water bird diversity of TenaWetland ,Surat **Jalplavit6 ,2016.**
- II. A primary study on mental health status of people of Surat city with different occupation” in National seminar on Environmental and occupational health, organized by National Institute of Occupational Health, Ahmedabad, Gujarat, India, **June – 2016**

Dr A.Bahadur

- III. Immobilization of urease in alginate beads for urea estimation, **Research** (ISSN: 2334-1009) 2015. Bahadur, A., Cabana-Montenegro, S., Aswal, V.K., Lage, E.V., et al.
- IV. NaCl-triggered self-assembly of hydrophilic poloxamine block copolymers. (2015) **International Journal of Pharmaceutics**, 494 (1), pp. 453-462.
- V. “Histopathological effects of silver nanoparticles on gills and liver of freshwater fingerlings *Catla catla* (Ham.)” in **Research & Reviews: A Journal of Toxicology** ISSN: 2231-3834(online), ISSN: 2349-1264(print) Volume 6,

Issue 1 pp 18-27 2016. www.stmjournals.com

- VI. Preparation of lipase loaded chitosan nanoparticles and its estimation using different additives in **Research & Reviews: A Journal of Life sciences 6 (2), 2016**

2. Department of Mathematics

Dr D. V. Shah:

- VII. Explicit and recursive formulae for the class of generalized Fibonacci sequence **InternJ of Adv Res in Engi, Sci and Manag**1,1 – 6 2015
- VIII. An Interesting generalization of Fibonacci and Lucas sequence **International Journal of Science and Research**4,1942 – 1953,2015
- IX. Left k-Fibonacci sequence and related identities **Journal Club for Applied Sciences**2,20 -26,2015
- X. Extended Binet's formula for the class of generalized Fibonacci sequences **VNSGU Journal of Science and Technology** 4,205 -210,2015
- XI. Closed form continued fraction expansions for the powers of Lucas ratio **VNSGU Journal of Science and Technology** 4,211 -215,2015
- XII. Identity of unknown term in a Tetranacci-like sequence **InternJ of AdvRes in Engi, Sci and Manag**,2,1 -14,2016
- XIII. Some interesting properties and extended Binet formula for the Generalized Lucas sequence **Internat J of Innovat res in Sci, Engi and Tech** 4,12832 – 12837,2015.
- XIV. Closed form continued fraction expansions for the powers of Generalized Lucas golden proportion **Inter J of Trends and Tech**,20,2,113 – 119,2015
- XV. Moderate Distribution: A modified normal distribution which has Mean as location parameter and Mean Deviation as scale parameter **VNSGU J of Sci and Techno** 4,256 -270,2015

3. Department of Physics

Dr.Dhiraj Shah

- XVI. Development of a scheme for atmospheric correction of Resources at-2AWiFS Data Journal of applied earth observation and Geoinformation 40,65 -73,2016.

Ms N D Patel

- XVII. . Study of One of the Largest Space Weather Event of Solar Cycle 23: Events of November 2004"Internat J of Sci and Res (IJSR), Volume 5 Issue 3, March 2016.
- XVIII. Statistical Study of Coronal Mass Ejections during Rising Phase of Solar Cycle 24"International Journal of Science and Research (IJSR), Volume 5 (4), April 2016.(Online): ISSN 2319-7064

Ms V Vansola

- XIX. Measurement of $^{197}\text{Au}(n, \gamma)^{198}\text{Au}$ reaction cross-section at the neutron energies of 1.12, 2.12, 3.12 and 4.12 MeV **Radiochim. Acta** 2015; 103(12):817-823
- XX. Determination of $^{110}\text{Cd}(n, c)^{111}\text{mCd}$ and $^{111}\text{Cd}(n, n0)^{111}\text{mCd}$ reaction cross-sections at the neutron energies of 1.12, 2.12, 3.12 and 4.12 MeV **Journal of Radioanalytical and Nuclear Chemistry**, 307(2), 1481-1487
- XXI. $^{151}\text{Eu}(n, c)^{152}\text{mEu}$ reaction cross-section measurement at the neutron energies of 1.12, 2.12, 3.12 and 4.12 MeV **Journal of Radioanalytical and Nuclear Chemistry**, 307(2), 1385-1390

4. Department of Chemistry

Dr. Hetal Gajjar

- XXII. Studies in synthesis, characterization and microbicidal activity of metal chelates with novel amic acid derivative derived from 9,10,11,15-tetrahydro-9,10-(3,4)-furananthracene-12,14-dione **Journal Of Chemical And Pharmaceutical Research** ISSN: 0975-7384, 7(10), 994 -999, 2015.

Annexure IV

Field visits

- Field visit to Kevdi- reserved forest and eco-tourism spot.
- Educational tour of 80 students from mathematics department to attend Annual conference of Gujarat Ganit Mandal Valsad during 25 to 27 December 2015

NSS REPORT 2015-16

During this year the volunteers of NSS participated in the following activities:

1. 14/07/15 – Lecture on general awareness on traffic rules and regulations, "Bharatvasi on duty- Kartavyakranti" by Hiten Patel.
2. 27/07/15 – Meeting organized by Government at Jilla Seva Sadan with Deputy Election Officer of students' representative Jenish Patel and Programme officer Dr. Jaya Patel.
3. 30/07/15 – lecture given by Nilesh Mandlewala on "Donate life – Organ donation."
4. 01/08/15 to 14/08/15 - Women empowerment celebration.
5. 01/08/15 – lecture given by Advocate Smt. Preeti Joshi on "181 – Abhayam".
6. 07/08/15 – 50 girls of our college participated at VNSGU in "Women Education Day" celebration.
7. 10/08/15 – Lecture organized by Sheth P.T. Mahila College of Arts and Home science on "Importance of breast feeding for girl students" in our college.

8. 12/08/15 – Demo of “Taekwondo-For Self Defence for Women” shown by Dr. RakeshBarot and Vikas Sharma.
9. 13/08/15 to 19/08/15 – Annual camp organized at VansiyaTalav.
10. 14/08/15 – Lecture given on “Importance of Yoga in Women Health” by Prof. Joshi.
11. 24/08/15 – Hb test conducted for girl students by Youth Health Empowerment Organisation.
12. 25/08/15 – Presentation given by “ PC and PNDT CELL, Dept. of District Panchayat, Surat” on “BETI BACHAO, BETI PADHAO”.
13. 31/08/15 – “ SwachchhataSankalpAbhiyan” organized by Disha Foundation and oath were taken by tying wrist bands to all.
14. 02/09/15 to 06/09/15 – Kidney awareness week celebrated by organizing a lecture by Dr. DipakTamakuwala and NileshMandlewala.
15. 09/09/15 – Lecture organized by Dr. Maulik Patel on “Ergonomic Advice”.
16. 10/09/15 – Celebration of Suicide Prevention day and presentation given by UrveshChauhan.
17. 12/01/16 – Elocution competition held on Swami VivekanandJayanti.
18. 26/01/16 – “SwachchhataAbhiyaan” organized by Sarvajanic Society at Dumas, in which 30 volunteers of our college had participated.
19. 27/01/16 – Under World Thyroid Awareness Campaign, Thyroid check up camp was organized by Dr. SoniyaChandanani.
20. 12/02/16 – Under “Road safety-Traffic Education Programme”, Lecture was given by R.T.O.Surat for the awareness of traffic rules and regulations.
21. 14/02/16 – Volunteers painted compound wall of playground and footpath.
22. 16/02/16 – Thalessemia test for all the students of F.Y.B.Sc.
23. 23/02/16 – Blood donation camp was organized.
24. Prize awarded for :
 1. Best Performance: AshishChothani – (PM-16)
MaulikRadadiya – (PM-70)
 2. VaktanaSheild: ChiragBodra – (CZ-05)
NileshVala– (CZ-62)