# ANNUAL QUALITY ASSURANCE REPORT (AQAR) 2015-16

Submitted to

National Assessment and Accreditation Council
(NAAC)

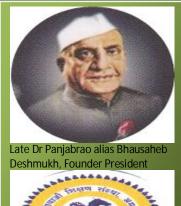
AQAR 2015-16

Affiliated to RTM Nagpur University, Nagpur Re-accreditated as 'A' Grade by NAAC

A College with Potential for Excellence

Institutional Member of Asia Pacific Quality Network (APQN)





SHRI SHIVAJI EDUCATION SOCIETY AMRAVATI'S SCIENCE COLLEGE

Congress Nagar, Nagpur-440012(M.S.)

# The Annual Quality Assurance Report (AQAR) of the IQAC

# Part - A

#### 1. Details of the Institution

1.1 Name of the Institution Shri Shivaji Education Society Amravati's, Science College, Congress Nagar, Nagpur. Humpy Yard Road, Congress Nagar, Nagpur 1.2 Address Line 1 Humpy Yard Road, Congress Nagar, Nagpur Address Line 2 Nagpur City/Town Maharashtra State 440012 Pin Code Institution e-mail address shivajiscience\_ngp@yahoo.com Contact Nos. 0712-2423432 Name of the Head of the Institution: Dr. D. K. Burghate, Principal Tel. No. with STD Code: 0712-2440955 Mobile: 9422306680 Name of the IQAC Co-ordinator: Dr. G. R. Avachar Mobile: 9421845390 IQAC e-mail address: g.avchar@rediffmail.com 1.3 NAAC Track ID (For ex. MHCOGN 18879) MICOXX1010167 1.4 NAAC Executive Committee No. & Date: EC(SC)/12/A&A/3.3 dated 19-2-2016 (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) www.http://shivajisciencecollegenagpur.in 1.5 Website address:

www.http://shivajisciencecollegenagpur.in/AQAR 2015-16.doc

Web-link of the AQAR:

# 1.6 Accreditation Details

Sl. No.	Cycle	Grade	CGPA	Year of Accreditation	Validity Period	
1	1 <sup>st</sup> Cycle	Five Star	-	2002	-	
2	2 <sup>nd</sup> Cycle	A	3.19	2010	27-03-2015	
3	3 <sup>rd</sup> Cycle	A	3.26	2016	18-02-2021	

	3	3 <sup>rd</sup> Cycle	A	3.26	2016	18-02-2021	
1.7	Date of Est	ablishment of	of IQAC: DI	D/MM/YY	YY 15/07/20	004	
1.8	AQAR for	the year (for	example 20	10-11)	2015-16		
		-	_		d to NAAC after 0-11submitted to		
ii. A	.QAR 2012 AQAR 2013	12 submitted -13 submitted 3-14 submitte 1-15 submitte	d to NAAC o ed to NAAC	on 28/09/20 on 20/10/2	013 014		
1.10	) Institution	nal Status					
	University		S	State $\sqrt{}$	Central	Deemed	Private
	Affiliated (	College	•	Yes v	No		
	Constituen	t College	•	Yes	No v		
	Autonomo	us college of	UGC	Yes	No 🗸		
	Regulatory	Agency app	roved Institu	ution	Yes V N	No	
(6	eg. AICTE,	BCI, MCI, l	PCI, NCI)				
Т	'ype of Inst	itution C	o-education	٧	Men W	omen	
		U	rban	V	Rural T	ribal	
	Financial S	Status C	rant-in-aid		UGC 2(f) $\sqrt{}$	UGC 12B	V
		G	rant-in-aid -	- Self Fina	ncing \( \sqrt{1}\) Tot	tally Self-financ	ing

Grant-in-aid + Self Financing

1.11 Type of Faculty/Programme								
Arts Science V Commerce Law PEI (Phys Edu)								
TEI (Edu) Engineering Health Science Management								
Others (Specify) BCA, MCA								
1.12 Name of the Affiliating University (for the Co	Rashtrasant Tukdoji Maharaj, Nagpur University, Nagpur.							
1.13 Special status conferred by Central/ State Gov	ernment UGC/CSIR/DST/DBT/ICMR etc							
Autonomy by State/Central Govt. / University								
University with Potential for Excellence	UGC-CPE   √							
DST Star Scheme	UGC-CE							
UGC-Special Assistance Programme	DST-FIST							
UGC-Innovative PG programmes	✓ Any other ( <i>Specify</i> )							
UGC-COP Programmes	V							
2. IQAC Composition and Activit	<u>ies</u>							
2.1 No. of Teachers	11							
2.2 No. of Administrative/Technical staff	02							
2.3 No. of students	01							
2.4 No. of Management representatives	01							
2.5 No. of Alumni	01							
2. 6 No. of any other stakeholder and	02							
Community representatives								
2.7 No. of Employers/ Industrialists	01							
2.8 No. of other External Experts	02							
2.9 Total No. of members	21							
2.10 No. of IQAC meetings held	04							

2.11 No. of meetings with various stakeholders: No. 05 Faculty 02
Non-Teaching Staff 02 Alumni 01 Others -
2.12 Has IQAC received any funding from UGC during the year? Yes No
If yes, mention the amount
2.13 Seminars and Conferences (only quality related)
(i) No. of Seminars/Conferences/ Workshops/Symposia organized by the IQAC
Total Nos International - National - State - Institution Level 1
(ii) Themes Training program for Non-Teaching staff on Office Management and performance expectation
2.14 Significant Activities and contributions made by IQAC
<ul> <li>Intercollegiate debate competition on <i>Can India become a super power in near future</i></li> <li>Student faculty exchange programme:         CMS College of Science and Commerce Coimbtore visited on December 8-9, 2015.</li> <li>Workshop on Communicative Skills and personality Development on October 3, 2015</li> <li>Guest lecture and workshop on Edible Mushroom Cultivation</li> <li>Blood Donation camp</li> <li>Organized street play "Beti Bachao-Beti Padhao"</li> <li>Celebration of Independance day, International Yoga Day, Nutrition day, Forest conservation day, Hindi Diwas etc.</li> </ul>
<ul> <li>Organized NSS camp at Village Yerla, Gohani</li> <li>Oragnized Organ donation rally</li> <li>Organized Aids awareness programme</li> <li>Organized biodiversity conservation programme: installation of wooden nests and water pots for birds</li> <li>Celebrated Helping Hand day on January 2, 2016</li> </ul>
<ul> <li>Cleanliness awareness programme under Swaccha bharat Abhiyan</li> <li>Organized workshop on Roof Top Farming</li> <li>Organized Interschool Drawing Competition</li> <li>Organized Alumni meet on January 3, 2016</li> <li>Organized cancer awareness programme</li> </ul>
<ul> <li>An awareness programme was organized for students about Traffic rules and discipline</li> <li>Organized workshop on Polysistic Ovarian Syndrome for staff in colleboration with KRIMS Hospital</li> <li>Organized Eco-friendly Rakhi as well as Eco-friendly Holi</li> <li>Organized Chennai flood relief rally: Fund collected handed over to District collector and clothes collected handed over to weaker section of people of Anandwan, Warora.</li> </ul>
<ul> <li>Organized workshop on Honey-Bee: Apiculture</li> <li>Sport Summer camp organized in collaboration with DNC, Nagpur</li> <li>Organized Parent-teacher meet</li> <li>Organized International Conference in collaboration with Vishwashanti Multipurpose Society May 19-21, 2015</li> </ul>

# 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  $\ast$ 

Sr. No	Plan of Action	Achievements
1	To Reconstitute of IQAC committee as per requirement	The IQAC is reconstituted which includes Technical staff, Stakeholder, Management Representatives, External Experts, Alumni, Student Representatives etc.
2	Preparation and electronic submission of AQAR 2014-15	IQAC prepared AQAR for the year 2014-15 and submitted on 3/11/2015 through email.
3	To encourage all departments to conduct Conference / Seminars / Workshops/Guest Lecture of Eminent Personalities	Department of Zoology organized International Conference on "Science and Technology for Society" at Colombo, Srilanka, May 19-21, 2015 and International Conference, on Science, Technology and Management at BITS Pilani Dubai Campus, Dubai, UAE, on November 22-23, 2015 Organised workshop on Mushroom Cultivation, and the workshop on Apiculture in collaboration with Science College, Paoni Organized biodiversity conservation programme: installation of wooden nests and water pots for birds Department of Botany organised Guest lecture and workshop on Edible Mushroom Cultivation Department of Electronics has organized a Guest Lecture by Dr. B N Raghvendra, Scientific Officer, Nuclear Power Corporation of India, Mumbai on August 26, 2015 on the topic entitled "Nuclear Science and its Principles" Department of English Workshop on Communicative Skills and personality Development on October 3, 2015 Organized workshop on Polysistic Ovarian Syndrome for staff in colleboration with KRIMS Hospital
4	To encourage faculty members and students to participate various conferences and seminars	Faculty members and students participated in various international, national and state-level conferences/ seminars/ workshops
5	To encourage students to participate in college, university and national level sports	Students actively participated in college, university and national level.
6	To Conduct Academic Audit	Academic Audit conducted by IQAC.
7	To arrange Parent Teacher Meet	The Parent - Teacher Meet was arranged and a feedback was taken.
8	To celebrate Birth Anniversary of Founder President Late Dr Panjabrao alias Bhausaheb Deshmukh	The Birth Anniversary of Founder President Late Dr Panjabrao alias Bhausaheb Deshmukh was celebrated on 27/12/2015. Various competitions, cultural functions, Games and sports events were organized during the celebration.
9	To take feedback from students	Feedback collected from students at the end of session.

<sup>\* (</sup>Note: Academic Calendar for the Academic Year 2013-2014 is attached- Annexure: I)

2.15 Whether the AQAR was placed in statutory	body Yes No						
Management   ✓ Syndicate Any other body							
Provide the details of the action taken							
The statutory body (The Local Managing Committee) discussed and has							
taken the note of AQAR submitted	taken the note of AQAR submitted to NAAC.						

#### 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	05	02	07	-
PG	05+1(MCA)	-	6	-
UG	13+1(BCA)	-	1+1	-
PG Diploma	1	-	1	-
Advanced Diploma	-	-	-	-
Diploma	2		2	-
Certificate	9	-	6	3
Others		-	-	-
Total	35	02	22	-
Interdisciplinary	2	-	-	-
Innovative	1	-	-	-

 $1.2 \quad \hbox{(i) Flexibility of the Curriculum: CBCS/Core/Elective option / Open options}$ 

# All PG programmes have CBCS system

(ii) Pattern of programmes:

Pattern	Number of programmes
Semester	21
Trimester	-
Annual	1

1.3 Feedback from stakeholders* (On all aspects)	Alumni	Parents	٧	Employers - Students	٧
Mode of feedback :	Online -	Manual	٧	Co-operating schools (for PEI)	-
(Note: Feedback Analysis Report				· · · · · · · · · · · · · · · · · · ·	
1.4 Whether there is any revision/u	apdate of regu	lation or sylla	abı, 1f	yes, mention their salient aspects	S.
	Nil				

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

Yes, College is recognized by R T M Nagpur University, Nagpur as a Centre for Higher Learning and Research in the Subject Botany and Zoology from the year 2015-16

# Criterion - II

# 2. Teaching, Learning and Evaluation

2.1	Total No. of
per	manent faculty

Total	Asst. Professors	Associate Professors	Professors	Others
40	16	23	1	-

2.2 No. of permanent faculty with Ph.D.

33

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

Asst. Profes	sors	Associa Profess		Profes	sors	Others	3	Total	
R	V	R	V	R	V	R	V	R	V
16	13	23	Nil	1	3	-	-	40	13 +3

2.4 No. of Guest and Visiting faculty and Temporary faculty

12	4	55

2.5 Faculty participation in conferences and symposia:

No. of Faculty	International level	National level	State level
Attended	24	15	-
Presented papers	24	15	-
Resource Persons	-	-	-

- 2.6 Innovative processes adopted by the institution in Teaching and Learning:
  - Bridge courses in the beginning of the session.
  - Students Seminars are organized by various departments.
  - Teacher Mentor scheme for students
  - Study materials are shared with students.
  - Teaching faculty and students are encouraged to use latest technology such as LCD, internet, smart board etc., in the teaching learning process
  - Remedial Classes for weaker students.
  - Student, Faculty Exchange Programs

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, ,	LOTALINO	OT actival	teaching	dave	aurina	thic	academic	VAQT
4.1	Total No.	or actuar	tcacinii2	uavs	uum	ипо	acaucinic	veai

180

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

Unit Test, Assignments, Assessment by Internal Examination, Seminars, Tutorials, Group Discussions, Group Assignments, Projects, Debates, Surprise Test, Quiz Competition on Syllabi, Open Book Examination etc.

2.9	No. of faculty m	embers involve	d in curriculur	n Restructuring	/revision/syllabus	devel	opmen
	as member of				r		

as member of					
Board of Study	-	Faculty	1	Curriculum Development workshop	-

#### 2.11 Course/Programme wise distribution of pass percentage:

Title of the Programme	Total no. of students	Division					
	appeared	Distinction	I	II	III	Pass %	
B.Sc.	298	31	62	100	48	80.87	
M.Sc. Micro	19	-	15	4	-	100	
M.Sc. Chemistry	16	-	1	-	-	06.25	
M.Sc. Comp Science	34	-	10	03	-	38.23	
M.Sc. Physics	07	-	3	-	-	42.85	
M.Sc. Mathematics	16	-	-	-	-	0	
MCA	26	-	26	-	-	100	

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

- Internal Academic Audit is conducted at the end of every semesters for the assessment of progress of Teaching & Learning processes
- Support is given to arrange Guest lectures / Conferences / Seminars/ Workshops / ISR for Teachers and Students in the College.
- Learning facilities are enhanced in the form of ICT support, Reference Books, Equipments etc.
- Result analysis is discussed in IQAC meetings, College Council's meeting and Local Management Committee's meeting
- Video lectures of few teachers are made viral on website of college
- Regular visit to the departments to monitor the functioning of the departments.
- Yearly Assessment of every teacher is conducted through Self Appraisal- Academic Performance Indicators. (API) for evaluation of Teaching activities, Extension Activities and Research.
- Parent-Teacher Meet are arranged to discuss the academic progress of the students
- Feedback from student on Teaching are collected, Analyzed and communicated to the respective teacher for improvement.

# 2.13 Initiatives undertaken towards faculty development

Faculty / Staff Development Programmes	Number of faculty benefitted
Refresher courses	2
UGC – Faculty Improvement Programme	-
HRD programmes	-
Orientation programmes	2
Faculty exchange programme	1
Staff training conducted by the university	-
Staff training conducted by other institutions	-
Summer / Winter schools, Workshops, etc.	5
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	10	6	-	6
Technical Staff	44	12	-	9

#### Criterion - III

# 3. Research, Consultancy and Extension

- 3.1 Initiatives of the IQAC in Sensitizing/Promoting Research Climate in the institution
  - Research Committee for monitoring, promoting and to encourage the faculty for research in the concerning subject.
  - Workshop on research methodology
  - Established linkages with institution / organizations for training and R & D
  - Steps had taken to seek recognition by university for more subject as a place of higher learning and research.
  - Regular posting of upcoming seminars, conferences, etc. by the research committee
  - Facilitated for minor / major project proposals for research/ research work/ paper presentations/ publications in suitable Journals
  - Faculties are felicitated by awarding them cash prize for their paper publication in the Journals of repute.
  - Best researcher award is instituted by the college
  - Financial Assistance is given to attend the International Conference/ Symposium.
  - Provision of Seed-money of Rs 10, 00,000/- to promote research activities.

#### 3.2 Details regarding major projects

	Completed	Ongoing	Sanctioned	Submitted
Number	3	1	-	-
Outlay in Rs. Lakhs	32,19,900	28,43,925	-	-

#### 3.3 Details regarding minor projects

	Completed	Ongoing	Sanctioned	Submitted
Number	6	6	-	5
Outlay in Rs. Lakhs	6, 37,000	13,62,000	-	-

#### 3.4 Details on research publications

	International	National	Others
Peer Review Journals	56	15	-
Non-Peer Review Journals	-	-	-
e-Journals	-	-	-
Conference proceedings	24	1	-

3.5	Details	s on .	Impact	tactor	ot	pub.	lica	tions
-----	---------	--------	--------	--------	----	------	------	-------

		i					
Range	0.0783-5.6	Average	2	h-index	1-4	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
Major projects	3	BRNS	28,43,925	24,48,490
Minor Projects 02	2	UGC	13,62,000	-
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	o. of books published	d i)	With ISBN No	ii) Witho	•	pters in Edite	d Boo	ks -	
2 9 No	o. of University Dep	ortm	ante ragaixina fe						
3.0 INC	o. of Offiversity Dep	artiii	ents receiving it	ilius IIoili					
		UG	C-SAP -	CAS	-	DST-F	IST	-	
		DP	E _	DBT S	Scheme/f	funds			
3.9 Fo	r colleges	Aut	onomy	CPE	٧	DBT S	tar Scl	neme	-
		INS	SPIRE V	CE	-	Any O	ther (s <sub>l</sub>	pecify)	-
3.10 R	evenue generated th	roug	th consultancy	54,360/-	_ ]				
3.11 N	No. of conferences of	rgan	ized by the Insti	tution					
	Level		International	National	State	University	Colle	ege	
	Number		2	-	-	-	_		
	Sponsoring agenc	ies	Vishwashanti	-			-		
				L					
3.12 N	o. of faculty served	as e	xperts, chairpers	sons or reso	urce pers	sons 4			
3.13 No. of collaborations  International 3 National 6 Any other -									
3.14 N	o. of linkages create	ed du	ring this year	1					
3.15 T	otal budget for research	arch	for current year	in lakhs:					
From Funding agency - From Management of University/College 5, 00, 000/-							00/-		
Total	5, 00, 000/-								

3.16 No. of patents received this year

Type of Patent		Number
National	Applied	-
National	Granted	-
International	Applied	-
International	Granted	-
Communicational	Applied	=
Commercialised	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
Nil	-	-	-	-	-	1

3.18 No. of faculty from the Institution who are Ph. D. Guides and students registered under them
30 46
3.19 No. of Ph.D. awarded by faculty from the Institution
3.20 No. of Research scholars receiving the Fellowships (Newly enrolled + existing ones)
JRF _ SRF _1 Project Fellows _1 Any other _
3.21 No. of students Participated in NSS events:
University level 100 State level - National level _
International level _ College level _ 134
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 1 National level - International level -
3.25 No. of Extension activities organized
University forum - College forum 9
NCC 2 NSS 7 Any other -

- 3.26 Major Activities during the year in the sphere of extension activities and Institutional Social Responsibility
  - Intercollegiate competition on Forest conservation day
  - Guest lecture and workshop on Edible Mushroom Cultivation
  - Blood Donation camp
  - Organized street play "Beti Bachao-Beti Padhao"
  - Celebration of Independance day
  - Organized NSS camp at Village Yerla, Gohani
  - Oragnized Organ donation rally
  - Organized Aids awareness programme
  - Organized biodiversity conservation programme: installation of wooden nests and water pots for birds
  - Celebrated Helping Hand day on January 2, 2016
  - International Yoga Day Celebrated
  - Cleanliness awareness programme under Swaccha bharat Abhiyan
  - Organized workshop on Roof Top Farming
  - Organized cancer awareness programme
  - An awareness programme was organized for students about Traffic rules and discipline
  - Celebration of Nutrition day
  - Organized workshop on Polysistic Ovarian Syndrome for staff in colleboration with KRIMS Hospital
  - Organized Eco-friendly Rakhi as well as Eco-friendly Holi
  - Organized workshop on Honey-Bee: Apiculture
  - Organized INSPIRE Camp to promote the students toward basic sciences

#### 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	3 Acre	-	Management	3 Acre
Class rooms	22	5	Management	27
Laboratories	33	15	Management	48
Seminar Halls	02	-	Management	02
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

- Libman web-software installed for effective management of library.
- Master software is used for office management including accounting, admission data, Identity Card, Library Card, Fee Collection, Scholarship, Transfer Certificate, Bonafied / Character / Attempt Certificate, etc.
- Office and Library are fully computerized.
- Main office is well equipped with computers, printers, photocopiers, fax etc.
- The campus is under surveillance of CCTV.
- Library is equipped with INFLIBNET system.

#### 4.3 Library services:

	Existing		Newly	Newly added		otal
	No.	Value	No.	Value	No.	Value
Text Books	35639	60,37,473	1807	5,13,494	37446	65,50,967
Reference Books	2218	13,78,446	45	60,000	2263	14,38,446
e-Books	35	46,520	10	4000	45	50,520
Journals(Main	25	50,959	1	5641	26	56,600
Library)						
e-Journals	2	5000	-	-	2	5000
Digital Database	-	-	1	1,20,000	1	1,20,000
(Web-software)						
CD & Video	500	28,760	10	3,500	510	31,260
Others (specify)	-	-	3	1,05.000	3	1,05.000
Biometric Database						

#### 4.4 Technology up gradation (overall)

	Total Computers	Computer Labs	Internet	Browsing Centres	Computer Centres	Office	Depart -ments	Oth ers
Existing	350	3	To all computers	1	1	Fully computeri sed	13	-
Added	-	-	-	-	-	-	-	-
Total	350	3	-	1	1	-	13	-

- 4.5 Computer, Internet access, training to teachers and students and any other programme for technology upgradation (Networking, e-Governance etc.)
  - Master software is used for office management including accounting, admission data, Identity Card, Library Card, Fee Collection, Scholarship, Transfer Certificate, Bonafied / Character / Attempt Certificate, etc.
  - Main office is well equipped with computers, internet, printers, photocopiers and fax.
  - The campus is under surveillance of CCTV.
  - The library is equipped with 35 computers along with Internet facility for faculty and students.
  - A library software LIBMAN is installed.
  - Book bank facility to economically weaker section of students.
  - Reprography facility to students.
  - The college provides the e-library facility, INFLIBNET to access e-resources and e-journals.
  - The computer department guides the other faculty members from time to time to use ICT resources in their respective classes, different workshops and seminars.
  - The Seminar Room and Conference Hall is well equipped with multimedia and are used frequently for conducting seminars and talks by experts.
  - Laptops given to all Departments.
  - Entire campus is Wi-Fi enabled.
  - Regular Training programme for Computer basics is offered by the Computer Department for Teachers, Non-teaching staff and students

8, 24, 294

4.6 Amount spent on maintenance in lakhs:

Total :	0 24 204
iv) Others	1, 63,779
iii) Equipments	1, 82, 450
ii) Campus Infrastructure and facilities	2, 40, 000
i) ICT	2, 38, 065

#### Criterion - V

# 5. Student Support and Progression

- 5.1 Contribution of IQAC in enhancing awareness about Student Support Services
  - Suggestions are welcomed in respect to all areas including infrastructure, administration, teaching methodology.
  - The suggestion Box/ Complaint Box is kept in front of every Department and Hostel. The issues raised are addressed immediately.
  - Students Grievance Cell functions effectively by redressing student's grievances.
  - Scholarship is provided to deserving backward students and economically backward students.
  - Information is circulated through Notice Board, through SMS services, through letter correspondence, through circulars and website.
  - All the activities in-charge are asked to organize respective academic activities in a frequent manner
  - Special sessions are arranged to make the students aware of the various techniques involved in getting jobs. Mock tests, discussions and interviews are organized.
  - Through extension activities, students are made familiar with how they can come close to community
  - Financial support is given to various students at UG, PG and research students through scholarship sponsored by King Edward Memorial Society.

#### 5.2 Efforts made by the institution for tracking the progression

- Internal tests are conducted regularly to monitor and measure students' academic performance.
- Remedial coaching is conducted for students who have not cleared university exams.
- Parent -Teacher meeting is conducted to keep the parents informed about their ward's performance.
- The alumni association was strengthened and alumni office bearers were selected.
- Progressions are regularly monitored on one to one basis.
- Through Career and Guidance Cell, students are told about various career and job Opportunities,
- Emphasis is laid on personality development of the students.
- The Placement Cell regularly organized brief training programmes for students.
- Student Mentor Scheme is functional.
- Each Department maintains and updates the alumnae directory.
- Feedback mechanism from student.
- Alumnae corner in the college website.

5	3	(a)	Total	Number	$\alpha f$	students

UG	PG	Ph. D.	Others
1418	292	3	5

(b) No. of students outside the state

100

(c) No. of international students

UG Male

No.	%
460	32.14

Female

No.	%
958	67.56

PG Male

No.	%	
68	23.3	Fe

Last Year				This Year							
General	SC	ST	OBC	Physically Challenged	Total	General	SC	ST	OBC	Physically Challenged	Total
891	193	25	456	4	1569	531	245	27	774	1	1578

Demand ratio 1:3

Dropout: 13 % (UG) and 10 % (PG).

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

- The college has centre for NET/SLET coaching in subject chemistry. For the other Competitive examinations like UPSC/MPSC, the facilities of coaching are shared with sister institute (Dhanwate National College).
- Career Guidance and Placement Cell assists in providing inputs for getting better opportunities in career making.
- Career Guidance and Placement Cell conducts various classes and programmes in connection with competitive examinations.
- Workshop, seminar are organized on personality development, facing interviews, group discussions etc.

No. of students beneficiaries

		П
1		- 1
1		- 1
	-	- 1

5.5 No. of students qualified in these examinations

NET	-	SET/SLET	-	GATE	-	CAT	ı
IAS/IPS etc	-	State PSC	-	UPSC	-	Others	-

#### 5.6 Details of student counselling and career guidance

- A separate Career Guidance and Placement Cell is established
- The Value Education classes provide a forum for discussion of issues.
- Guidance Counseling Cell provided help to students who approached them.
- Various personal, social and career issues were discussed with mentors.
- Seminars were organized by inviting professional organizations to provide career guidance.
- Pre-exam counseling was given to all students.
- Students who did not pass their university exams were given counseling.
- Guidance on higher education and job were given.

Nο	of students	benefitted
INO.	or students	benemited

28

# 5.7 Details of campus placement

	Off Campus		
Number of Organizations Visited	Number of Students Participated	Number of Students Placed	Number of Students Placed
Nil	Nil	Nil	Nil

5	Q	Dataila	of	gandar	conditization	nrogrammag
J.	ю.	Details	OI	gender	sensitization	programmes

- Celebration of National Women's Day
- Gender sensitization programme is conducted regularly
- NSS and Nature Club organised Save Girl Child, Rally
- Stop Cancer Programme
- Organized one day workshop on women empowerment and awareness about sexual Harassment on 15/8/2015

#### 5.9 Students Activities

5.9.1	.1 No. of students participated in Sports, Games and other events							
	State/ University level	125	National le	evel	-	Intern	national level	-
	No. of students participa	ted in cul	tural events					
	State/ University level	-	National le	evel - International level			-	
5.9.2	No. of medals /awards w	on by stu	idents in Spe	orts, C	Games and	dother	events	
Sports: State/ University level 3 Nat			National	al level _ International level			-	
Cultura	l: State/ University level	National 1	level International level			-		
5.10 Scholarships and Financial Support								
					Number of students	f	Amount	
	Financial support from inst	itution			8 45371			
	Financial support from gov	ernment		1222			8991982	
	Financial support from other	er sources		-			-	
	Number of students who r National recognitions	received In	nternational/		-		-	
5.11 Stud	dent organised / initiatives	1						
Fairs	: State/ University level	-	National le	evel	-	Intern	national level	-
Exhibition	: State/ University level	-	National le	evel	-	Intern	national level	-
5.12 No.	of social initiatives under	taken by	the students		28			
5.13 Major	grievances of students (i	f any) red	lressed:		_Nil			

#### Criterion - VI

# 6. Governance, Leadership and Management

#### 6.1 State the Vision and Mission of the institution

#### Vision:

"To create human resources through quality, Societal, progressive and affordable education"

#### Mission

- To provide students with an environment for all round development of their intellectual, physical, aesthetic and social potentials.
- To discover and develop the academic and intellectual skills of the students.
- To encourage attitudes of integrity, hard work, honesty, fairness and tolerance in students so that they give their best to the society based on human values.
- To inculcate passion for excellence through information and communication technology, industrial exposures and scientific projects leading to elevated career profiles and national development.
- To stimulate the students to perform at the peak of their potentials.

#### 6.2 Does the Institution has a management Information System

Yes.

The Management Information System is used in the functioning of the college for administrative process including Finances, Salary structure for employees, I-card generation, Income tax report, Arrears details, Loan details, Student Admission, Student registration, Fee details, Students details, Admission Slip generation, Students List, Library Management System.

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

#### 6.3.1 Curriculum Development

- The curriculum of the University is mandatory to all affiliating colleges.
- The institution encourages the faculty to organize the workshops in the college and attend the workshops organized by other colleges in various subjects on the syllabus framed by the university.
- The institution inspires the faculty to organize and attend national/international seminars/conferences.

#### 6.3.2 Teaching and Learning

- Faculties are provided with all essential facilities for effective teaching.
- Teachers are encouraged to use audio-visual instruments like LCD projector, OHP, PPT, molecular models and charts.
- To improve the quality of teaching, management encourages the faculty to attend orientation courses, refresher courses, workshops and seminars.
- The teaching performance of faculty is evaluated through PBAS proforma.
- The faculties are suggested to use interactive method for better learning.
- The academic progress of the Students is evaluated through internal assessment system

#### 6.3.3 Examination and Evaluation

The institution takes the following measures for internal and external evaluation processess:

#### Internal Assessment

The information about the tentative dates of time table of examinations such as unit tests, surprize tests, terminal/test examination, internal assessment is given in the prospectus, hand book, notices, academic calender and website.

- The principal discusses the norms of evaluation in the meeting of college council.
- A detailed time table for terminal/test examination and submission of assignment is put up on the notice board well in advance to help the students to plan and prepare effectively.
- The report of evaluation is made available to all stakeholders during the address by the principal and at the time of parent-teacher meet.

#### The Evaluation Reforms Initiated By College:

- The concerned department maintains the record of internal assignments.
- At the beginning of each semester, every teacher informs students about the scheme of marking for internal assessment.
- The college conducts surprize tests, terminal examination, viva-voce etc. for assessment and evaluation of the students.
- As per the direction of university, 10/15 marks are assigned for internal assessment for each paper
  of different subjects. The students are assessed on the basis of class test, attendance, project
  assignments, seminar, study tour, industrial visits, visit to educational institutions and research
  organizations, field work, group discussions or any other innovative practice / activity.

#### 6.3.4 Research and Development

- Research Committee is established in the college to promote & monitor research culture, regularly posts information about forthcoming workshops, seminars and conferences.
- 30 faculty members are recognized by University as a Supervisor.
- 7 Departments are recognized as a place of Higher Learning and Research.
- 10 research scholars are registered for Ph.D. in various subjects.
- Ph.D. is awarded to 1 faculty member in the academic session 2015-16.
- 54 Research papers are published in Various National and International Journals.
- Major and Minor Research Projects are encouraged
- Chapters in Curriculum Books are contributed by 6 faculty members.
- Incentives are given to teachers for publication of their research work in peer reviewed Journals in the form of cash prize.
- Best Researcher award is instituted at institute level.

#### 6.3.5 Library, ICT and physical infrastructure / instrumentation

- Staff and students have access to INFLIBNET (e- journal)
- Collection of reference and text books of various subjects, periodicals, magazines, digital resources, and audio visual collections. Most of the Departments have their own library to cater to immediate requirements.
- All the resources are catalogued and the functioning of the library is fully automated.
- The Departments are also equipped with computers, printers, internet connectivity, LCD projector, Wi-Fi and so on.
- The other facilities provided are TV, digital camera, Xerox Machine, Scanner etc.
- The College has consistently upgraded both the physical and learning infrastructure to meet the growing academic needs.
- Research Centre of every Department is established. Internet facility is made available to all students and faculty.
- Management Information System partially exists in the College library with LIBMAN software.

#### 6.3.6 Human Resource Management

The management is committed to the academic development of the college. The administration is fully decentralized and total functional freedom is given to the head of respective department. Various other committees are constituted to monitor the Co-curricular and other activities. The faculties are the members of various committees and they perform their responsibilities with the cooperation of nonteaching Staff. Regular feedback is taken from the stakeholders and if needed the suggestions if any, is implemented. There are many welfare schemes for staff and students like free medical check-up, group insurance, awards at College and Society level and financial support. Institution has a tradition to celebrate National and social events collectively.

#### 6.3.7 Faculty and Staff recruitment

- The Management is the authority to recruit staff as per the norms stipulated by the UGC, Government of Maharashtra and University.
- The vacancies that arise in the, general merit quota, as well as community merit quota are advertised separately in leading, dailies, sufficiently in advance. The interview panel comprises subject experts from university, a government, nominee, the principal and a representative of the management.
- Roaster System is strictly followed during Staff recruitment.

#### 6.3.8 Industry Interaction / Collaboration

- Visits and research interactions with various industries and institutions are carried out on a regular basis.
- Various Departments have both formal and informal linkages and collaborations with other institutes of higher learning and these are utilized for the fruitful completion of curriculum and research work.
- The authorities are open-minded in interacting with other institutes for collaboration. Linkages were established with reputed organizations for placement and Career counselling.

#### 6.3.9 Admission of Students

#### Admission Process

- Information about admission is advertised in News paper and as per norms fixed by state Govt. and RTM Nagpur University, Nagpur transparency is maintained.
- Admission related matter hosted on the website
- All reservation policies are followed
- All given admissions are as per merit
- Hostel facilities are available for girl students only.

#### **Programme for Admissions**

- Sale of prospectus started after the declaration the result of HSSC Examination
- Admission process starts immediately
- Online Registration system

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Teaching	Nil
Non teaching	Nil
Students	Student Book bank
	Student Aid fund

		Diudent 1	nu run	u	
6.5 Total corpus fund generated	Rs. 1, 00, 000	)/-			
6.6 Whether annual financial audit	has been done	Yes	٧	No	

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

Audit Type	External		Inter	mal
	Yes/No	Agency	Yes/No	Authority
Academic	No	-	Yes	IQAC & Society
Administrative	No	-	Yes	IQAC & Society

6.8	Ooes the University/ Autonomous College declares results within 30 days?
	For UG Programmes Yes No V
	For PG Programmes Yes No V
6.9	What efforts are made by the University/ Autonomous College for Examination Reforms?
	The University decides the schedule of examination. The college has no power to interfere with the system.
6.10	What efforts are made by the University to promote autonomy in the affiliated/constituent colleges?
	The Parent University has a provision of according the status of autonomy to affiliated Colleges, our college submitted proposal for obtaining autonomy.

- 6.11 Activities and support from the Alumni Association
  - · Alumni meets are conducted.
  - New office bearers were elected.
  - Guest Lectures are conducted through alumni.
  - Alumni in its annual meet freely and frankly present their views about the college and put up their suggestion what they deem fit for the betterment of the college.
  - Several Departments invite the alumnae for extension lectures and share their expertise with the students.
  - The alumnae of the college raised fund.
  - Alumni Association provides a scholarship of Rs. 10,000/- every year to each of the three Economically Backward Students.
- 6.12 Activities and support from the Parent Teacher Association
  - The College has active Parent Teacher Association.
  - The meeting of the Parent –Teacher Association held.
  - A feedback is also collected from the parents/guardians in the form of a structured questionnaire.
  - The parents get to know their ward's performance and their active participation in various activities.
  - Parent-Teacher Association through its annual meet provides an opportunity to the parents and guardians to come close to the teachers of their wards and better understand their progress

#### 6.13 Development programmes for support staff

The college organizes workshops for non-teaching staff to encourage them and to improve their working skills and sometimes the same is organized at parent society level.

- Computer Literacy programme.
- Personality Development Seminar.
- Communication class.
- ICT Basics Programme is organized.
- The faculties are sent for workshops and conferences organized by the UGC or other Institutions.
- Regular training programmes are organized for the entire faculty or faculties are sent for training program organized by other institutions.

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

- Use of polythene is strictly prohibited.
- Emphasis on more plantations to make environment clean and green.
- The initiative to make the campus eco-friendly.
- Various competitions were organized to create awareness on, use of Sanitary, waste disposal system, rain harvesting system.
- Greenery is maintained in the campus. The College makes all attempts to maintain a green campus by planting trees, landscaping, maintenance of floral gardens and so forth and keep the place as free of plastic as possible.
- Students are also required to switch off electric gadgets, and minimize the use of paper. Waste bins are provided extensively to prevent littering.
- A campus cleaning day is organized by NSS and NCC during Gandhi Jayanti.
- The Department of Botany has enhanced botanical garden in the campus.
- Solar panel for tapping solar energy is installed at Girls Hostel.
- The NCC/NSS unit of the College organized a campaign on anti plastic by distributing paper bags to the public.

#### 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.

The innovations introduced during the last four years which have created a positive impact on the functioning of the college are given below.

- The feed back is sought from students, parents, alumni and management.
- The library is computerized with LIBMAN Software/ Bar-code, Audio-visual aids, special collection of books / literature in respect of competitive examination, INFLIBNET, N-list, Reprography facility etc.
- Booklet of news paper cutting and display of important notifications in library.
- The office administration is computerized.
- Uniform to students, non-teaching staff and apron to Laboratory staff.
- An innovative programme on "P.G.Diploma in Nanotechnology", 3 UGC funded and 6 self financed COC are introduced.
- Workshop on "Soil-less Rooftop Organic Farming" is conducted
- Workshops on "Apiculture", "Sericulture" and "Bird Nesting Preparation" are conducted for farmers and students.
- A workshop on "Bags Preparation from old and used sarees" is conducted.
- Residential Inspire Camp is organized every year since 2012-2013
- The Best teacher, Best researcher, Best service, Best Library user and Best student Kalpana Chawla awards are instituted.
- 11 Major research projects and 19 Minor research projects are completed/ongoing
- 07 Recognized center for higher learning and research
- MoU with research centers of International/National repute
- Incentives to staff members for publication of research work in refereed journals and to attend/present their work overseas.
- College has organized "International Conference on Mathematical Sciences" during 28-31,
   December 2012 and 03 International Conferences were organized in collaboration with other Institutions.
- The college publishes biannual Journal namely "Journal of Innovation in Sciences: Interdisciplinary Research Journal".
- All the departments have ICT facility and smart classrooms.
- NET/SLET coaching in Chemistry and guidance for MPSC, UPSC examination.
- King Edward Memorial Society offer scholarship through college for UG/PG/research students belonging to Central Provinces and Berar region.
- Earn While Learn Scheme for needy students.
- Health awareness programmes and workshops are arranged.
- Teacher Mentor scheme and Student-teacher-parent meet
- Uniforms/Books are provided to needy and poor students.
- Student-faculty exchange programme is organized
- Seminars/workshops/ sensitization programmes are organized to empower women at work place.
- Ladies Gymnasium is set up in the college.
- The campus is under electronic surveillance.

- 7.2 Provide the Action Taken Report (ATR) based on the plan of action decided upon at the beginning of the year
  - Ozone day rally conducted
  - Slogan and message writing competition conducted
  - Excursion tour held
  - Mentoring provided throughout the year.
  - Report Card Provided.
  - Issuance of identity Card to the students provided.
  - Meeting of Staff Council held twice in a year
  - Outreach Programmes organized.
  - Parent Teacher Meeting held.
  - E-books for departmental libraries throughout the year.
  - Updating knowledge and skills of teachers, Seminars and workshops organized throughout the year.
  - Departmental Society Meetings As per the departmental plans.
  - Meetings of Academic Coordinators Once in 2 months.
  - Team formed to implement the plan of doing student admission.
  - Remedial Classes were conducted for weaker sections/slow learners.
  - Academic Audit was done for all the departments.
- 7.3 Give two Best Practices of the institution (please see the format in the NAAC Self-study Manuals)

See Annexure-III

#### 7.4 Contribution to environmental awareness / protection

#### **Efforts for Carbon neutrality:**

- Regular plantation of saplings in the campus and maintenance of the same by NCC / NSS achieves carbon neutrality
- Efforts have been taken to make plastic free campus.
- Vermicompost is prepared out of the dry leaves and bio-degradable waste instead of burning it.

#### Plantation:

- Variety of trees are planted to keep campus green and to maintain bio-diversity
- Seasonal potted flowering plants are nurtured

#### Hazardous waste management:

- The department of Chemistry has fume hood, exhaust fans and proper ventilation is provided to expel hazardous gases.
- Special drainage system is installed in the chemistry laboratory to dispose the chemical
  wastes. Acids, alkalis & other Chemical are drained with plenty of water so that they get
  diluted & does not cause harm in the laboratories.
- Use of paper cups in college canteen
- Waste is collected by municipal agency regularly.
- College has installed Incinerator to dispose the organic wastes.
- Semi-micro techniques are used in department of chemistry to minimize the hazardous chemical wastes.

#### e-Waste Management:

- E-waste is given to recycling agency to reuse or dispose.
- Unserviceable batteries are replaced with new on buy-back basis.
- Old working computers, printers etc. are donated to the schools run by parent society. Our college carries out the following activities.

#### Roof-top (soil less) farming:

- Roof top farming units are installed at the terrace area of block-A building as a part of ecofriendly activity and for resource generation.
- Vegetables produced in the roof top farming partly fulfill the need of fresh vegetables for ladies hostel.

#### **Installation of Bird nests:**

- Artificial nests for birds are installed on the trees in the college campus for protecting them from scorching heat of the sun during summer season.
- Earthen pots are kept at accessible places to quench the thirst of bird.

#### Use of plants in college programmes and functions:

 The college has a practice of greeting guest on various occasions with sapling of ornamental or medicinal plants.

#### **Eco-friendly activities:**

- Department of Botany celebrates Eco-friendly holi/rakhi.
- Making of sari/paper bag under Best out of Waste.

#### Awareness programmes:

- Ozone day rally is organized by Department of Botany.
- Save tiger campaign, Save Nag-river campaign, World snake day programme is organized by Department of Zoology.
- Guest lectures are organized in the college on Wild life conservation, global warming etc.

7.5 Whether environmental audit was conducted?	Yes	٧	No	

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

#### STRENGTHS:

- . A good infrastructure.
- Education at a low cost.
- Nationally recognized for providing high quality education.
- Well Qualified, Competent and Experienced Staff.
- Self financing PG Courses.
- Committed non- teaching staff.
- Interested and hard working students.
- Well furnished and equipped Laboratories.
- Safety environment for co-education.
- Number of options available with different subject.
- Certificate course in environmental studies.

#### **WEAKNESS:**

- Lack of land for future expansion of the campus.
- Lack of land for outdoor sports activities.
- · Short of skilled based courses.
- Less employment opportunity for B.Sc. students.

#### **OPPORTUNITIES:**

- Strategic alliances and partnerships with International.
- Diversification of sources of revenue through better exploitation of consultancy.
- Remedial teaching is provided to slow learners.
- Student faculty exchange.

#### THREATS:

- Competitions and growth of education institutions.
- Free education within the context of increasing trends of e-learning.
- To increase the qualifying rate of students in NET /SET examination.
- To reduce the dropout rate at UG & PG level.
- To increase the collaboration with external organizations, MOU with reputed Indian institute.

#### 8. Plans of institution for next year

- Enrichment of Ecofriendly Activities viz. Erecting solar lighting, solar water heater, plastic free campus
- Few State-of-Art class-rooms to be augmented.
- Enrichment of Academic activities viz. Organizing Seminars, Workshops in respective subjects, organizing Guest lectures, promoting faculties to attend Conference, Seminar, Workshop at different centres, Promoting Research activities by publishing their work in Journals, Recognition of faculties' work at different levels and rewarding them suitably, MOU to be established with concerned Departments, Promoting submission of Research projects with UGC, DST etc.

Name	Dr.G.R.Avachar	Name	Dr.D.K.Burghate
	Gleh		Options

Signature of the Coordinator, IQAC

Signature of the Chairperson, IQAC

#### Annexure I



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#### Shivaji Science College, Congress Nagar, Nagpur. Feedback analysis (2015-16) General feedback from students

Sr. no	Parameter	Marks awarded
		out of 10
1	Teaching method is appropriate and effective.	7.96
2	Able to make you more objective.	6.82
3	Library facilities	6.85
4	Laboratory facilities	7.14
5	Computer/internet facility	5.78
6	Maintenance of general amenities	5.81
7	The office staff attend to matters related to  a) Fees	6.66
	b) Examination work	6.66
	c) Scholarships	5.6
	d) General administration	6.14

- Suggestions: 1. Regular cleaning of wash rooms of block A
  - 2. Proper maintenance of microbiology and chemistry labs.
  - 3. Provide Wi-Fi facility to students
  - 4. Improvement in canteen facility
  - 5. Proper way of giving instructions and notices
  - 6. Improvement in parking facility as well as staff.

# Students' feedback on teachers' performance 2015-16

4 point scale is used to measure the quality level of each aspect. 3.50-4-Very Good (A) 2.50 -3.49 -Good (B) 1.50 -2.49 -Satisfactory (C) 1-1.49 -Unsatisfactory (D)

Sr. no.	Aspect	GPA
1	You are inspired in subject matter	2.97
2	Curriculum coverage	2.98
3	Your doubts are properly answered.	2.98
4	You are able to understand lecture clearly.	2.96
5	You are able to contact the faculty outside the class	2.87
6	Subject material provided by the faculty is sufficient.	2.86
7	The student-teacher relation is cordial.	2.94
	OVERALL RATING	2.93

# **Annexure II**

# Parents' feedback (2015-16)

Sr.	aspect	2015-16	
110.		yes	no
1.	During admission period have you accompanied your son / daughter?	100%	nil
2.	If not, did you visit our college any time after admission of your Ward?	0	0
3.	The course / subjects he/she offered are as per his/her own choice?	100%	
4.	Have you ever discussed about his studies with him?	Always 69.2%	sometimes 30.8%
5.	Have you ever seen mark list /answer papers after his result is declared?	100%	
6	Have you ever discussed about his progress with any teacher/HOD/Principal?	15.4%	84.6%
7	Are you satisfied with his/her academic performance?	92.3%	7.7%

#### **Best Practice-I**

- 1. Title of Practice "Soil-less Rooftop Organic Farming"
- 2. Goal: To provide low cost eco-friendly farming, an alternative to retrench agricultural land.
- 3. **The context:** The agriculturists in India are facing a big problem of supplying food to ever increasing population as agricultural land is decreasing due to fast growing urbanization and industrialization. The food we consume is contaminated due to extensive use of pesticides/insecticides/chemical fertilizers. The quality of soil is also degraded. These problems need to be addressed. An alternative solution to overcome above problems is the Soil-less Rooftop Organic Farming, wherein use of vermicompost and harmless biopesticides are promoted.
- 4. The practice: Staff & students of the college initiated the concept of Roof-top Organic Farming. 9' X 6' feet container is designed with underlying polymer sheets. Coco-peat and vermicompost is mixed in 60:40 ratios with addition of 20% azotobactor and30% neem powder. Drip irrigation system is used. Green nets are provided over the kits. During rainy season, it is further covered with plastic sheets. The ideas are derived from green house. The attributes of green house are inculcated in this practice. All small rooted crops can be cultivated such as chillis, brinjal, tomato, spinach, corriander, fenugreek, cucumber, bitter gourd, cabbage etc.
- 5. **Evidence of Success:** Students participated in 5<sup>th</sup> Indian Youth Science Congress Kolkata and 6<sup>th</sup> Indian Youth Science Congress, Guntur (A.P.), where the project on "Soil-less Roof Top Organic Farming" was selected as 3<sup>rd</sup> most relevant innovation to solve zero hunger challenge at national level. The vegetables produced through this best practice are sold to the staff member and nearby locality and also used in girls' hostel mess.
  - Prof. M. S. Swaminathan, father of green revolution visited the college and appreciated the project. Our students of B. Sc. Biotechnology have developed the further technology called Hydroponic-Organic roof top farming, which is cost effective as compared to conventional Soil-less Roof Top Organic Farming. This project was displayed at Raman Science Centre, Nagpur.
- 6. Problems encountered and resources required:

Polymer sheets, Coco-peat, vermicompost, azoato-bactor, neem powder, Green nets and plastic sheets, PVC Pipes.

7. **Notes:** The source of this project is available in the form of CD, Print-Media. Expertise on this project is available. The various News Channels and Print Media made this concept of "Soil-less Roof Top Organic Farming" popular.

Links: www.youtube.com/watch?v=Ng3hsRZ16ts
http://www.nagpurtoday.in/roof-top-organic-farming-an-a-unique-initiative-by-the-students-of-shivaji-science/02032152

#### 8. Contact Details:

Name of the Principal: Dr. D K Burghate

Name of the Institution: SSES Amravati's Science College, Congress Nagar

City: Nagpur Pincode: 440 012

Accreditated status: A grade with CGPA 3.26

Work phone: 0712-2423432

Website: <u>www.sscnagpur.edu.in</u>

Fax: 0712-244095 Mobile: 09422306680

e-mail: <u>drdkburghate@gmail.com</u>

#### **Best Practice-II**

- 1. Title of the practice: Residential Camp on "An Awareness About Future In Basic Sciences"
- **2. Goal:** The goal of the residential camp is to encourage brilliant students to take up basic sciences as career, to inculcate culture of science among new generation, to encourage them to carry out research in basic sciences and to expose them to new avenues and related career opportunities.

#### 3. The context:

The college has great potential and provides many career opportunities to the students. However, the present scenario depicts that the best brain go to medical and engineering streams and other professional courses. Therefore it is necessary to encourage young talent to take up science as career. In order to motivate young and enthusiastic brains in the field of research, Department of Science and Technology, New Delhi sponsored an awareness programme-Innovation in Science Pursuit for Inspired Research (INSPIRE) for the students.

The college is a premier institute in Central India and has potential to attract brilliant students in and around the region. To materialize the goal, the college organizes residential camp on *Awareness about future in basic sciences* every year since 2012.

#### 4. The practice:

It is a regular practice in the college since 2012 to organize a residential camp *on An awareness about future in Basic Sciences*. This practice helps to attract the brilliant students to seek admission in U G Programme of basic sciences.

The aim of the residential camp is

- To make the basic sciences more interesting
- To familiarize students with the concepts and innovations in science
- To create awareness among the students regarding various career opportunities
- To motivate the students for research career in basic sciences.

Duration of this residential camp is of five days in which 70% lectures and demonstrations are pertaining to *disciplinary content* in Physics, Mathematics, Chemistry, Biology and Earth sciences which emphasize key concepts while 30% lectures and demonstrations highlight the features of interdisciplinary approach.

The lectures and demonstrations/experiments/field visit are focused on various themes such as Energy, Earth, Environment, Wildlife conservation, India's Moon mission, Epidemic diseases, Unknown domains of science, Research and career opportunities etc.

The college provides registration kit containing list of mentors, resource persons, their affiliation, name of topic and contact number of local persons.

The college also provides T-shirts, caps, transportation facility, accommodation, local hospitality, certificate of participation, science books, prizes and home experimental kit.

The students have opportunity to interact with renowned academicians, distinguished researchers and eminent scientists of national and international repute.

The other academic activities carried out in the workshop are CD shows, discussions, experiment sessions, seminars, science quiz, sky watching programme and field visits.

Feedback about the workshop is collected from mentors and students.

The details of the residential camps organised by the college is given below.

S. No.	Activity	Fundin g Agency	Amount Sanctioned	Duration	Number of students
3	INSPIRE 2014-15	D.S.T.	9.75 Lac	12 <sup>th</sup> -16 <sup>th</sup> ,Jan 2015	185

Following Resource persons / Mentors of national and international repute are invited

Year	Name of Eminent Scientist, Designation, Event
2015	Dr. Jayant Narlikar, Ex-Director IUCAA Pune,
2015	Dr. C. P. Rao, Professor, Department of Chemistry, IIT Powai,
2015	Dr. P. D. Mujumdar, Former Advisor. ISRO, DST and RG S& T Commission,
2015	Dr. Deepak More, K. J. Somaiya College of Sc. & Comm. Vidyavihar (E), Mumbai,
2015	Dr. Shekhar C. Mande, Director, National Centre for Cell Science, Ganeshkhind, Pune
2015	Dr. B. Day, Professor of Physics, Department of Physics, University of Pune
2015	Dr. Deepankar Choudhury, Professor, Humboldt Fellow, JSPS Fellow, TWAS-VS Fellow, BOYSCAST Fellow, Department of Civil Engineering, IIT, Powai, Mumbai
2015	Dr. Mrs. Mangala Naralikar, A Mathematics Researcher, Writer,
2015	Dr. Sharmishtha Banerjee, Reader, Dept. Of Biochemistry, University of Hyderabad, Prof. C. R. Rao Road, P.O. Central University, Hyderabad
2015	Dr. T. M. Karde, Former Dean and Head of Mathematics Department, R.T.M. Nagpur University, Nagpur
2015	Dr. Sharmila Mande, Head of Bio-Sciences R&D, TCS Innovation Labs TCS Ltd.54-B, Hadapsar Industrial Estate Pune
2015	Dr. Hemant Pande, Head, Department of Chemistry, Hislop College, Nagpur.
2015	Dr. S. R. Deshmukh, Reader, Dept. of Statistics, University of Pune

#### 5. Evidence of Success:

Around 565 students are benefitted from three residential INSPIRE camps.

The INSPIRE scholarship instituted by DST to the tune of Rs. 80, 000/- per student per year has been awarded to eight students of this college. More students are motivated to make career in basic sciences. This is quite visible from the fact that the students with good percentage and the students from lower strata of society seek admissions for basic sciences.

The students became more confident in presentation of their work in the form of model, paper, quiz competition etc.

The residential camp encourages the students to take up careers in science.

#### 6. Problems encountered and Resources required:

Brilliant students are inclined towards professional studies since they are unaware of the avenues in pure sciences.

Technology oriented teachers, sincere students, spacious auditorium, well-equipped laboratories, ICT facility, renowned resource persons/ academicians /mentors with social commitment, distinguished researchers and eminent scientists of national and international repute.

#### 7. Notes:

Such camps help to develop Research and Development activities in basic sciences.

These activities elevate the thinking process among the stakeholders.

Print media has given a wide coverage to the deliberations of distinguished researchers and eminent scientists during the INSPIRE camp.

#### 8. Contact Details:

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Name of the Institution : SSES Amravati's Science College, Congress Nagar

City : Nagpur Pin code : 440 012

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