

Shiksha Mandal's  
**Jankidevi Bajaj College of Science, Wardha**

**The Annual Quality Assurance Report**  
**AQAR**  
**2017-18**

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

All NAAC accredited institutions will submit an annual self-reviewed progress report to NAAC, through its IQAC. The report is to detail the tangible results achieved in key areas, specifically identified by the institutional IQAC at the beginning of the academic year. The AQAR will detail the results of the perspective plan worked out by the IQAC. (*Note: The AQAR period would be the Academic Year. For example, July 1, 2012 to June 30, 2013*)

### Part – A

#### AQAR FOR THE YEAR

2017-18

#### 1 Details of the Institution

1.1 Name of the Institution

Jankidevi Bajaj College of Science

1.2 Address Line 1

Jamnalal Bajaj Marg,

Address Line 2

Civil Lines,

City/Town

Wardha

Pin Code

442001

Institution Email Address

[jbsciencewardha@yahoo.co.in](mailto:jbsciencewardha@yahoo.co.in)

Contact Nos.

07152-230515, 230516  
9890845825

Name of the Head of the Institution

Dr. Om Mahodaya

Tel. No. with STD Code

07152-230515, 230516

Mobile

9890845825

Name of the IQAC Co-ordinator

Dr. S.S. Zade

Mobile

09823304696

IQAC e-mail address

[jbc.iqac@gmail.com](mailto:jbc.iqac@gmail.com)

1.3 NAAC Trac ID

(For ex. MHCOGN 18879)

MHCOGN10016

OR

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)

BC/66/RAR/139 Dt. 21.02.2014

1.5 Website Address

[www.jbsw.shikshamandal.org](http://www.jbsw.shikshamandal.org)

Web-link of the AQAR

For ex.

<http://www.ladykeanecollege.edu.in/>

AQAR2012-13.doc

<http://shikshamandal.org> under the quick link  
IQAC → AQAR 2017-18

<http://jbsw.shikshamandal.org/wp-content/uploads/2014/07/MHCOGN10016-Jankidevi-Bajaj-College-of-Science-Wardha-Maharashtra-AQAR-2017-18.pdf>

1.6 Accreditation Details

Sl. No.	Cycle	Grade	CGPA	Year of Accreditation	Validity Period
1	1 <sup>st</sup> Cycle	3star (***)	NA	09/10/1999	08/10/2004
2	2 <sup>nd</sup> Cycle	B+	NA	02/02/2006	01/02/2011
3	3 <sup>rd</sup> Cycle	A	3.21	2013	21.2.2014 to 20.2.2019

1.7 Date of Establishment of IQAC :  
DD/MM/YYYY

06/01/2000

1.8 Details of the previous year's AQAR submitted to NAAC after the latest Assessment and Accreditation by NAAC (*for example AQAR 2010-11 submitted to NAAC on 12-10-2011*)

- i. AQAR Session 2013-14 29/04/2014 (DD/MM/YYYY)
- ii. AQAR Session 2014-15 16/11/2015 (DD/MM/YYYY)
- iii. AQAR Session 2015-16 31/12/2016 (DD/MM/YYYY)
- iv. AQAR Session 2016-17 31/12/2017 (DD/MM/YYYY)

1.9 Institutional Status

University  State  Central  Deemed  Private

Affiliated College Yes  No

Constituent College Yes  No.

Autonomous College of UGC Yes  No

Regulatory Agency approved Institution (eg. AICTE, BCI, MCI, PCI, NCI) Yes  No

Type of Institution Co-Education  Men  Women

Urban  Rural  Tribal

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

Grant-in-aid + Self Financing  Totally Self Financing

1.10 Type of Faculty / Programme

Arts  Science  Commerce  Law  PEI (Phys Edu)

TEI (EDU)  Engineering  Helth Science  Management

Others Specify

1.11 Name of the Affiliating University (for the Colleges) | Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur (RTMNU)

1.12 Special status conferred by Central/ State Government-- UGC/CSIR/DST/DBT/ICMR etc

Autonomy by State / Central Govt. / University  Yes

University with Potential for Excellence  No

UGC-CPE  Yes

DST Star Scheme  Yes UGC-CE  No

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UGC-Special Assistance Programme

Yes

DST-FIST

No

UGC-Innovative PG programmes

No

Any other  
(Specify)

Minority

UGC-COP Programmes

No

## 2. IQAC Composition and Activities

2.1	No. of Teachers	<input type="text" value="5"/>		
2.2	No. of Administrative/Technical staff	<input type="text" value="1"/>		
2.3	No. of students	<input type="text" value="1"/>		
2.4	No. of Management representatives	<input type="text" value="1"/>		
2.5	No. of Alumni	<input type="text" value="1"/>		
2.6	No. of any other stakeholder and community representatives	<input type="text" value="1"/>		
2.7	No. of Employers/ Industrialists	<input type="text" value="1"/>		
2.8	No. of other External Experts	<input type="text" value="1"/>		
2.9	Total No. of members	<input type="text" value="12"/>		
2.10	No. of IQAC meetings held	<input type="text" value="4"/>		
2.11	No. of meetings with various stakeholders No.	<input type="text" value="12"/>	Faculty	<input type="text" value="8"/>
2.12	Has IQAC received any funding from UGC during the year?	<input type="text"/>	Yes	<input type="text"/>
			No	<input type="text" value="√"/>
	If yes, mention amount	<input type="text" value="---"/>		
2.13	Seminars and Conferences (only quality related)			

(i) No. of Seminars/Conferences/ Workshops/Symposia organized by the IQAC

Total No. : 1      Institutional : 0,    National : 1,    State : 0,    Institutional Level : 0

(ii) Themes : **Innervate 2018 - 'Accreditation and Autonomy : Ways and Constraints'**

#### **2.14 Significant Activities and contributions made by IQAC**

The IQAC planned various curricular, teaching-learning, co-curricular, extracurricular and extension activities, best practices to improve the academic and administrative performance of the institution. Some of the outcomes are improved results, reduction in dropout rate, NET, SET, JAM exam guidance, enhanced placement activity, NAAC 'A' grade and autonomy to college.

The IQAC focus is on the Preparation for the 4<sup>th</sup> cycle of accreditation by NAAC due in Feb 2019. A number of discussions were held to understand the new methodology. A one week program on 'SSR criteria presentation by conveners' was organised from 17-26 February 2018. The IQAC organized a national seminar Innervate 2018 - 'Accreditation and Autonomy : Ways and Constraints' on 5<sup>th</sup> March 2018.

Steps were taken for compliance of the 11 recommendations given by NAAC peer team for quality enhancement, Establishment of Central computer facility 'ICT centre', Establishment of Centralized instrumentation facility.

## 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 \*

S.N.	Activities chalked out by the IQAC in the beginning of the session 2017-18 towards quality enhancement of the institute	Outcome achieved at the end of session
1	Implementation of <b>academic autonomy</b>	College got autonomous status from session 2017-18. Various committees are formed for smooth working. BOS in all subjects framed syllabus which were passed in academic council. Teaching is according to new syllabus. College conducted the first examination under autonomy for B.Sc. Sem-I and M.Sc. Sem-I in Nov. 2107 successfully.
2	To apply for NIRF	The college applied to NIRF in Nov 2017.
3	To improve students' performance in exams and reduce drop-out rate	Topic-wise tests in addition to unit tests have been conducted by every department.
4	To start Skill enhancement Certificate courses	Four Skill enhancement courses have been proposed for 2017-18.
5	To start PG in Mathematics	College has applied to RTMNU for starting PG in Mathematics
6	To start activity for incubation of practical knowledge	'Astroclub'- an activity for getting practical knowledge of astrophysics has been started. Sky observation activity 'super moon, red moon' organised. Expert lectures were organized under Astroclub A Telescope was prepared by students under the guidance of Prof Tiple
7	Implementation of Teacher-guardian student cluster scheme for personal guidance and overall development	Teacher-guardian student cluster meetings have been fixed every Saturday where personal difficulties of students are solved. Students are provided with 'My academic diary'.
8	To create Centralized instrumentation facility for research work	Centralized instrumentation facility is created.



9	To promote research through collaborative activities, linkages, MoU, Ph.D etc.	<ul style="list-style-type: none"> <li>• Collaborative activities and Step Up Research Program: Training program for teachers under Edu-bridge of National Centre for cell Science (NCCS), Pune</li> <li>• Linkage with Mahatma Gandhi Institute for Rural Industrialization: MGIRI-Wardha</li> <li>• Internship Work of a PG student at Dept. of Instrumentation Science, S. P. Pune University, Pune</li> <li>• Enhancement in revenue generated through consultancy services</li> <li>• MoU with EdCIL (India) Limited, A CPSE Under MHRD, Implementing Partner for Study in India, A Programmer Under Ministry of Human Resource Development, Government of India.</li> <li>• Extension of Recognition as centre for higher learning and research for Chemistry and Botany laboratories as Centre for higher learning and research</li> <li>• Enrolment of the Ph.D. student through Research Advisory Committee (RAC) of the University</li> </ul> <p><b>Recommendations of Research committee to promote research:</b></p> <ul style="list-style-type: none"> <li>• Every department to propose Research Project to UGC and other funding agencies.</li> <li>• Provision of seed money to faculty for research</li> <li>• Hands-on training on instrumentation</li> <li>• Recommended to publish papers in UGC recognized peer reviewed/indexed National and International Journals</li> <li>• every department should subscribe atleast one Internationally recognized journal for library</li> <li>• Collaborative research should be enhanced by collaborating with industries and national research institutions.</li> </ul>
10	To enhance Career guidance and Placement activity	<p>A workshop on academic and Career opportunities for B.Sc. Mathematics students was organised by Dept of Mathematics in association with SGB Amaravati University.</p> <p>A pre placement training and counselling programme (PTCP) was organized.</p> <p>Campus recruitment program are conducted and the industries are invited for the campus selection.</p> <p>Six students placed in TCS and one in HCL.</p> <p>Corning India Ltd. has called 93 students for second phase of interview in Pune.</p>
11	To guide students for competitive examination like IIT JAM, NET, SET, GATE, PET	B.Sc. students are guided for various PG entrance examinations. 8 students were selected for PG courses in reputed institutes such as NIT, IIT, and Pune University. M.Sc. students are guided for NET, SET GATE and PET exams-
12	To organize National / state level seminars/ workshop.	The IQAC organized a national seminar Innervate 2018 - 'Accreditation and Autonomy : Ways and Constraints' on 5 <sup>th</sup> March 2018.

13	Participation in Rashtriya Avishkar Abhiyan (RAA)	JBC is the mentoring institute by RAA. It has been assigned the responsibility for carrying out RAA activities in schools of the region.
14	To conduct Academic audit	The college has applied for academic and administrative audit by RTMNU.
15.	To encourage students to participate in various curricular, co-curricular, and extra curricular activities, value education.	Two students participated in Aspen leadership programme at Sevagram. One student participated in state level youth parliament competition at RTMNU. 12 students participated in all india essay writing event 2017 organised by Shri ramchandra mission in association with United nations ICFIB Tree Plantation, world population day, Teachers day programmes. Student seminars are conducted in every department.
16.	To purchase quality reference books, and text books related to new Semester pattern.	More than 1000 Reference and text books related to new Semester pattern are purchased this year.
17.	Proper utilization of various grants: UGC CPE, XII plan, Additional assistance grant.	UGC CPE grant is being utilized for the required purpose. XII plan grants is being utilized for enhancing the academic activities, organizing additional co-curricular activities, procuring laboratory equipments,boosting research, upgrading laboratory facilities etc (Grant utilized = Rs7,15,362). CPE Phase II grant is being utilised for allocated purpose (Grant utilized = Rs 1,01,31,158). Star college scheme (Grant utilized = Rs 32,39,971).
18.	To enhance sport activity and achievements.	Participation →International = 2, National =10 University= 60 Achievement → Two Gold medals at international level, One Gold medal at University level. Inter-University players =10

\* Attach the Academic Calendar of the year as Annexure.

**Academic calendar is given in 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:

Governing body's Observation is provided herewith:

**Management's Remark about the AQAR 2017-18**

The AQAR of the IQAC of Jankidevi Bajaj College of Science, Wardha for the session 2017-18 was placed in the CDC of the college. After verification of the AQAR it is observed that adequate efforts are being taken by IQAC for academic and administrative improvement of the Institution. The IQAC planned various activities for quality enhancement of the institute. As a result, we have improved results, reduction in dropout rate, guidance for various competitive exams, ICT centre, instrumentation facility etc. The institution has been granted academic autonomous status from session 2017-18. Every support will be extended for improvement of infrastructure and other facilities in order to comply with the recommendations of NAAC Peer team and successful running of autonomy.

   
Joint Secretary  
Shiksha Mandal wardha

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	2(Chemistry; Botany)	-	-	-
PG (M.Sc.)	4(Chemistry; Botany; Microbiology; Zoology)	-	-	-
UG (B.Sc.)	1 with 10 combinations CBZ, CBBT, CZBT, CMBBT, CBMB, CZMB,  PCM, PEM, PECs, ECsM	-	Optional subjects at UG level Biotechnology & Computer Science is self financed departments.	-
PG Diploma	-	-	-	-
Advanced Diploma	-	-	-	-
Diploma	-	-	-	-
Certificate	Add on Course	1 Add on course (Statistical analysis using R)	3 (Add on Course)	3 add on course + 2 value added course
Others	-	-	-	-
<b>Total</b>	<b>4</b>	-	-	-

Interdisciplinary	3 (Add on Course) 2 (Value added course)	-	-	
Innovative	-	-	-	-

- 1.2 (i) Flexibility of the Curriculum: CBCS/~~Core/Elective option~~ / ~~Open options~~ ( CBCS at PG level )  
(ii) Pattern of programmes:

Pattern	Number of programmes
Semester	PG and UG
Trimester	
Annual	

1.3 Feedback from stakeholders\*

(On all aspects)

Alumni	<input checked="" type="checkbox"/>	Parents	<input checked="" type="checkbox"/>	Employers	<input checked="" type="checkbox"/>	Students	<input checked="" type="checkbox"/>
Mode of Feedback		Online	<input type="checkbox"/>	Manual	<input checked="" type="checkbox"/>	Co-operating school (for PE)	<input type="checkbox"/>

*\*Please provide an analysis of the feedback in the Annexure  
Analysis of the feedback is provided in the Annexure ii*

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

Autonomy has been implemented from 2017-18. Hence from 2017-18 college has formed its BOS & AC as per guidelines of UGC. The UG & PG syllabus has been revised & updated considering upgraded topics & topics as per local needs

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

Nil

## Criterion – II

### 2. Teaching, Learning and Evaluation

#### 2.1 Total No. of permanent faculty

Total	Asst. Professors	Associate Professors	Professors	Other
32	19	13 (Including Principal)	Nil	Nil

#### 2.2 No. Of permanent faculty with Ph.D : 23

#### 2.3 No. Of Faculty Positions Recruited (R) and Vacant (V) during the year 2014-2015

Asst.Professors		Associate Professors		Professors		Others		Total	
R	V	R	V	R	V	R	V	R	V
Nil	21	13	Nil	Nil	3	Nil	Nil	32	24

#### 2.4 No. Of Guest and Visiting faculty and Temporary faculty

Botany – 2
Chemistry – 3

#### 2.5 Faculty participation in conferences and symposia :

No. of Faculty	International Level	National Level	State Level
Attended	07	06	Nil
Presented Papers	07	06	Nil
Resource Persons	Nil	Nil	Nil

#### 2.6 Innovative processes adopted by the Institution in Teaching and Learning :

1. Lectures are taught through power-point presentation using DLP.
2. ICT facilities are provided to students in the Library and respective Departments.
3. E-learning resources such as science videos, audio-visuals, pvc models, computer assisted compound microscopes, advanced instruments such as UV-VIS, Centrifuge, Cryostats are taught to students and allowed the students to work on them under faculty supervisions.
4. Typewritten and laminated Charts are provided to students during Practicals, 3D videos of Structure and systems of animals are shown to students for better conceptual understanding
5. During theory classes classified notes are prepared and distributed and models are shown in teaching classes for interactive learning.
6. Seminars and group discussions are held as a frequent practice to evaluate the students' learning process and boost up their confidence.
7. Identification of slow and advanced learners- B.Sc. I sections were split into two depending on students' performance. Teaching organized according to academic development in two sections. Remedial coaching for slow learners and higher learning for advanced learners.
8. Adopted the use of MOOCS in some department.

2.7 Total No. of Actual teaching days during this Academic Year : 210 days

2.8 Examination/Evaluation Reforms initiated by the Institution (for example: Open Book Examination, Bar Coding, Double Valuation, Photocopy, Online Multiple Choice Questions):	Unit Tests are held for students during the session 2017-18.
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2.9 No. Of faculty members involved in curriculum restructuring / revision/syllabus development as member of Board of Study/Faculty/Curriculum Development Workshop	Board of Studies – 4	Curriculum Development - Nil
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2.10 Average percentage of attendance of students	Above 80%
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2.11 Course/Programme wise distribution of Pass Percentage :

Title of the Programme	Total No. of students appeared	No. of students passed	Division				Pass%
			Distinction	I	II	III	
B.Sc. I (Semester 1)	299	120	36	34	10	00	40.13
B.Sc. I (Semester 2)	282	115	24	67	24	00	40.78
B.Sc. II (Semester 3)	262	146	26	67	53	00	55.72
B.Sc. II (Semester 4)	253	130	25	64	38	03	51.38
B.Sc. III (Semester 5)	261	177	14	78	85	00	67.80
B.Sc. III (Semester 6)	261	179	18	84	31	06	65.58

2.12 How does IQAC contribute/monitor/evaluate the teaching and learning processes :

The IQAC contribute/monitor/evaluate the teaching-learning processes in the following manner:

1. The first meeting of IQAC is held in the beginning of every semester. Schedule related to teaching-learning (academic, Co-curricular, Extra-curricular activities) are prepared. Methods for their implementation are also planned and discussed
2. The HODs, and the members of IQAC, monitor the teaching plans throughout the session and any
3. Suggestions extended by members are discussed and implemented by IQAC if necessary.
4. Mid-term meetings are held to monitor the progress of the planned activities. Urgent meetings are held as and when needed.
5. Academic auditing / monitoring of teaching learning is done through academic diaries of teachers.
6. Feedback from students are used to for improvement in teaching learning.
7. Difficulties faced in execution are discussed and the methods for improvement are suggested.

2.13 Initiatives undertaken towards faculty development:

Faculty/ Staff Development Programmes	Number of faculties benefitted
Refresher Courses	02
UGC – Faculty Improvement Programme	Nil
HRD Programmes	Nil
Orientation Programmes	01
Faculty Exchange Programme	Nil
Staff training conducted by the University	Nil
Staff training conducted by other Institutions	06
Summer/ Winter Schools, Workshops etc.	Nil
Others (Workshop of University Adult Education)	Nil

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	21	08	Nil	Nil
Technical Staff	50	11	Nil	Nil



### Criterion – III

#### 3. Research, Consultancy and Extension

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

- Collaborative activities and Step Up Research Program: Training program for teachers under Edu-bridge of National Centre for cell Science (NCCS), Pune
- Linkage with Mahatma Gandhi Institute for Rural Industrialization: MGIRI-Wardha :A National Institute under the ministry of micro and medium enterprises, Govt. Of India: PG (Chemistry) students completed their projects under scientist of chemistry based division
- Internship Work of a PG student at Dept. of Instrumentation Science, S. P. Pune University, Pune
- Enhancement in revenue generated through consultancy services
- MoU with EdCIL (India) Limited, A CPSE Under MHRD, Implementing Partner for Study in India, A Programmer Under Ministry of Human Resource Development, Government of India.
- Extension of Recognition as centre for higher learning and research for Chemistry and Botany laboratories as Centre for higher learning and research
- Enrolment of the Ph.D. student through Research Advisory Committee (RAC) of the University

##### 3.2 Details regarding major projects

	Completed	Ongoing	Sanctioned	Submitted
Number	-	-	-	-
Outlay in Rs. Lakhs	-	-	-	-

##### 3.3 Details regarding minor projects

	Completed	Ongoing	Sanctioned	Submitted
Number	3	-	-	-
Outlay in Rs. Lakhs	69,778 (EXPENDITURE)	-	-	-

##### 3.4 Details on research publications

	International	National	Others
Peer Review Journals	7	0	-
Non-Peer Review Journals	9	0	-
e-Journals	-	-	-
Conference proceedings	6	3	-

##### 3.5 Details on Impact factor of publications:

Range: 0.553-11.99      Average    1.24  
h-index : Scopus =3      Web of science= 3  
Nos. in Scopus =6      Web of science = 6

3.6 Research funds sanctioned and received from various funding agencies, industry and other organisations (Lakhs)

Nature of the Project	Duration Year	Name of the funding Agency	Total grant sanctioned	Received
Major projects	-	-	-	-
Minor Projects	-	-	-	-
Interdisciplinary Projects	-	-	-	-
Industry sponsored	-	-	-	-
Projects sponsored by the University/ College	-	-	-	-
Students research projects (other than compulsory by the University)	-	-	-	-
Star College Scheme	-	-	-	-
College with potential for excellence (CPE)	2017-18	UGC	6,84,892 (Expenditure)	-
Seminar	-	-	-	-
Total			-	-

3.7 No. of books published i) With ISBN No.: 04 Chapters in Edited Books : 04(1 Book)

ii) Without ISBN No. Nil

3.8 No. of University Departments receiving funds from

UGC-SAP  CAS  DST-FIST

DPE  DBT Scheme/funds

3.9 For colleges Autonomy  CPE  DBT Star Scheme

Inspire CE

3.10 Revenue Generated through consultancy

Rs. 27,450/-

3.11 No. of conferences organized by the Institution	Level	International	National	State	University	College
	Number	1	-	-	-	5
	Sponsoring agencies	UGC	-	-	-	UGC/DBT

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

3.13 No. of collaborations International  National  Any Other

3.14 No. of linkages created during this year

3.15 Total budget for research for current year in lakhs :

From Funding agency

From Management of University/College

Total

3.16 No. 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 : **01**

Total	International	National	State	University	Dist	College
-	-	-	-	<b>01</b>	-	-

3.18 No. of faculty from the Institution who are **14** Ph.D. Guides And **8** students registered under them

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

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

JRF  SRF  Project Fellow  Any Other

\*Internship at Savitribai Phule University, Pune

3.21 No. of students Participated in NSS events:

University level	<input type="text" value="Nil"/>	State level	<input type="text" value="Nil"/>
National level	<input type="text" value="Nil"/>	International level	<input type="text" value="Nil"/>

3.22 No. of students participated in NCC events:

University level	<input type="text" value="25"/>	State level	<input type="text"/>
National level	<input type="text"/>	International level	<input type="text" value="Nil"/>

3.23 No. of Awards won in NSS:

University level	<input type="text" value="Nil"/>	State level	<input type="text" value="Nil"/>
National level	<input type="text" value="Nil"/>	International level	<input type="text" value="Nil"/>

3.24 No. of Awards won in NCC:

University level	<input type="text" value="Nil"/>	State level	<input type="text" value="Nil"/>
National level	<input type="text" value="Nil"/>	International level	<input type="text" value="Nil"/>

3.25 No. of Extension activities organized

University forum	<input type="text" value="Nil"/>	College forum	<input type="text"/>
NCC	<input type="text" value="6"/>	NSS	<input type="text" value="8"/>
		Any other	<input type="text" value="3"/>

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

### NSS

- (1) NSS Camp at Ashta Village (Works – soakpit, CCT, Street play for cleanliness and superstition, health camps for domestic animals, etc.)
- (2) ‘International day for Yoga’ celebrated on June 21,2017
- (3) Tree plantation.
- (4) ‘Swachhata Pakhwara i.e.'Cleanliness Week' was observed by NSS volunteers in the college in July 2017.
- (5) ‘NSS Day’ was celebrated, on 24/09/2017.
- (6) NSS volunteers and programme officers participated in the rally to BAPU-KUTI, Sewagram Ashram on account of Gandhi Jayanti & Shashtri Jayanti, on 02/10/17.
- (7) National Constitution day celebrated
- (8) National reading day celebrated

## **NCC**

- 1) Handicaped persons rally
- 2) AIDS awareness rally
- 3) Blood Donation Camp
- 4) Anti-Tobacco Activity
- 5) Awareness about Military, civil defence, first aid
- 6) Point to point march

## **CWSS & PEC**

- 1) 'World Population Day' was jointly organized by NSS, PEC & CWSS, on 11/07/2017.
- 2) Women empoverment programme was jointly organized with CWSS on topic
- 3) 'International Literacy Day' was organized by NSS volunteers on 08/09/2017 under which volunteers make street play related with illiteracy .

## 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	37.55Acres	-	-	37.66Acres
Class rooms	22	-	-	22
Laboratories	21	2 labs. (Rs.18181261)	Shiksha Mandal	23
Seminar Halls	01+01=02	-	-	01+01=02
No. of important equipments purchased (≥ 1-0 lakh) during the current year.	27	01	UGC,CPE I,II ,DBT, BSR	1
Value of the equipment purchased during the year (Rs. in Lakhs)	68,29,802/-	1,75,000	UGC	1,75,000
Others		48,00,000	Shiksha Mandal	48,00,000

#### 4.2 Computerization of administration :

**Administration:** The administrative office has CMS software for Admission , Issue of certificates, TC, bonafied certificate etc. Software 'Tally' is used for accounting. Various online softwares from RTM Nagpur university are used for affiliation, enrolment of students, exam form filling, uploading of internal and practical marks, etc. Processes of salary, GPF, scholarships, IT forms etc. are computerized.

#### 4.2 Computerization of library

**Library** is computerized with the help of customized library software "**LIBTECH**". Acquisition, cataloguing, housekeeping, etc . Operations are carried out through this software. Online Public Access Catalogue (OPAC) has been made available for the users. Books and Borrowers Ticket are provided with barcode to minimize the errors. CCD scanner is being used to scan the barcodes. Library has a dedicated server with fifteen computers connected in LAN, out of which twelve computers are for public access.

#### 4.3 Library services:

	Existing		Newly Added		Total	
	No.	Value	No.		No.	Value
Text Book	26786	2959065	643	269158	27429	3228223
Ref. Books	888	1058777	98	90580	986	1149357
<b>Other Books</b>	10874	607463	291	87260	11165	694723
e-Books	0	0	0	0	0	0
Journal/Periodicals	75	1025727	0	66574	75	1092301
e-Journals	0	0	0		0	0
Digital Database	0	0	0	0	0	0
CD & Video	121	23945	0	0	121	23945
Others (specify)	.	.			.	.

#### 4.4 Technology up gradation (overall)

	Total Computers	Computer Labs	Internet	Browsing Centres	Computer Centres	Office	Departments	Others
Existing	171	1	15 VPN 2 Broadband on 60 computers	2	1	12 Computers	104-Senior college Departments	
Added	Nil	-	1 Broadband		-	-		
Total	171	1	Available on 60 computers	2	1	12 Computers		

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

#### 4.6 Amount spent on maintenance (Rs.) (During 2017-18)

i) ICT	70335
ii) Campus Infrastructure and facilities	58329
iii) Equipments	321317
iv) Others (Senior)	2298126
Total	23431242

## Criterion – V

### 5. Student Support and Progression

#### 5.1 Contribution of IQAC in enhancing awareness about Student Support Services

- Students with good percentage in HSc are encouraged to apply for INSPIRE Fellowship.
- Coaching for MSc entrance exams.
- NET, SET exam Guidance
- Training & Placement cell
- Guardian-Teacher (cluster scheme), Teacher parent meet and Value based programs/lectures
- Educational tours to national laboratories, industries and University departments

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

Students are made aware of various higher learning opportunities. The faculties encourage and provide academic support to the UG students to pursue admission to PG courses and motivate the PG students for higher learning, research, Ph.D. etc. Every department keeps record of the student progression from UG to PG, and from PG to Ph.D. or other higher education. The career counselling and placement cell extends guidance to the students and organise campus interviews. The cell also keeps track of the students who are placed in various organizations.

#### 5.3 (a) Total Number of students

UG	PG	Ph. D.	Others
822	149	13	-

#### (b) No. of students outside the state

NIL

#### (c) No. of international students

NIL

Men	No	%	Women	No	%
	172	20.92		650	79.07

Last Year(16-17)							This Year(17-18)						
General	SC	ST	OBC	Physically Challenged	NT, SBC, VJ	Total	General	SC	ST	OBC	Physically Challenged	NT, SBC, VJ	Total
185	113	34	472	-	58	862	171	120	36	426	--	69	822

Demand ratio: 381.60 %

Dropout : 14.88 %

5.4 Details of student support mechanism for coaching for competitive examinations: Through the career guidance and placement cell guest lectures are arranged for preparing MPSC, UPSC, BANK and various competitive examinations (like IIT JAM Entrance cleared).

#### No. Of students beneficiaries

04



### 5.5 No. Of students qualified in these examinations :

NET	02	SET/SLET	NIL	GATE	NIL	CAT	NIL
IAS/IPS etc	NIL	State PSC	01	UPSC	NIL	Others (IIT-JAM)	04

### 5.6 Details of student counselling and career guidance

A workshop on academic and Career opportunities for B.Sc. Mathematics students was organised by Dept of Mathematics in association with SGB Amaravati University.

Campus recruitment program are conducted and the industries are invited for the campus selection.

### 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
02	175	7	Nil

Six students placed in TCS and one in HCL.

Corning India Ltd. has called 93 students for second phase of interview in Pune.

### 5.8 Details of gender sensitization programmes

Our college is a co-educational institute. Gender sensitization programmes were organized under NSS, NCC, CWSS, PEC. These include:

1. A workshop on responsibility and accountability towards female gender in collaboration with Datta Meghe Institute of Medical Sciences, Wardha.
2. Participation in 'Social status of women' in MGIMS Sewagram,

### 5.9 Students Activities

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

State / University level 05 National Level 04 International Level 03

No. of students participated in cultural events

State / University level 06 National Level 14 International Level NIL

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

Sports	State / University level	14	National Level	--	International Level	02
Cultural	State / University level	NIL	National Level	NIL	International Level	NIL

5.10 Scholarships and Financial Support

	Number of Students	Amount
Financial support from institution		
Financial support from government	609	6543465/-
Financial support from other sources		
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 : **NIL**

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 contribute in building a new India through well educated, socially conscious students with good values and make such education accessible to students of this region. This is the reason our parent organization Shiksha Mandal came into being in 1914. Its credo “A century of nationalistic, value based, quality education” expresses this vision.

##### **Mission:**

- To promote academic growth of students by running excellent graduate, post graduate and doctoral programs in Science
- To develop human potential to its fullest extent and inculcate sound human values in students

#### 6.2 Does the Institution has a management Information System: **Yes**

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

##### 6.3.1 Curriculum Development

- Institution has become autonomous from session 2017-18. BOS of all the subjects have members from college, parent university, other university, industry and academic institutions. The curriculum for all the UG and PG courses is designed according to the need of industry, and employability. Emphasis is also on developing the practical skills of students. Courses on spoken English and computer skills have been introduced.

##### 6.3.2 Teaching and Learning

The normal method of teaching is the conventional chalk and board method. For making the teaching effective, teachers use various audio-visual aids like DLP, educational CDs, charts, models, etc.

In order to bridge the knowledge gap between the board level and university level the college conducts a bridge course at the beginning of session for new entrants. Slow learners’ are identified on the basis of performance in previous academic year, classroom interaction, participation in academic and cultural activities, assignments, unit tests, projects, seminars and test examinations. Faculty takes efforts to motivate and encourage them. Some of the remedial measures taken by teachers are as follows:

- Explaining concepts and situations using real life practical examples.
- Remedial and tutorial classes
- Guidance in cluster meets

The advanced learners are encouraged to gain more knowledge by learning the subject in depth. The college organizes special classes to prepare them for IIT JAM, and guidance for NET, SET. Projects based on curriculum are assigned to them.

### 6.3.3 Examination and Evaluation

Institution has become autonomous from session 2017-18. The college conducts unit tests, semester test exam, practical exams and end sem exams for all the UG and PG courses. Question papers for the end sem exams are set and moderated by faculty from JBC, other colleges and universities. There is a central evaluation cell. Evaluation and moderation of answer papers is done by faculty from our college, other colleges and universities. A software is used to prepare gazette, marksheets result analysis etc.

### 6.3.4 Research and Development

- Training program for teachers under Edu-bridge of National Centre for cell Science (NCCS), Pune
- Linkage with Mahatma Gandhi Institute for Rural Industrialization: MGIRI-Wardha. students of PG (Chemistry) completed projects under scientist of chemistry based division
- Internship Work of a PG student at Dept. of Instrumentation Science, S. P. Pune University, Pune
- Revenue generation through consultancy services
- MoU with EdCIL (India) Limited, A CPSE Under MHRD, Implementing Partner for Study in India, A Programmer Under Ministry of Human Resource Development, Government of India.
- Extension of Recognition as centre for higher learning and research for Chemistry and Botany laboratories as Centre for higher learning and research
- Laboratories enriched with modern instruments and ICT facility

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

College has a new library building with more than 35000 books. LibTech software is used for acquisition, cataloguing, housekeeping operations. All the books are bar coded. The college has established a centralized instrumentation facility with sophisticated instruments. The facility is used for research work and testing samples. The college has ICT centre, Password protected Wi-fi campus, 100 mbps internet facility. Each laboratory has adequate instruments and required facilities.

### 6.3.6 Human Resource Management

Two faculties have completed refresher course. Faculties are encouraged to participate in seminars, workshops, and conferences organized by academic and research institutes. Faculties published seven papers in peer reviewed international journals. Faculties are encouraged to take research projects and to pursue Ph.D.

### 6.3.7 Faculty and Staff recruitment

To fill vacant posts, applications from candidates having required qualifications are invited as per the UGC, University, and Government norms. Institution screens the applications and conduct written test, classroom demonstration and personal interview for appropriate selections.

### 6.3.8 Industry Interaction / Collaboration

The college takes efforts to establish collaboration with reputed industries and institutes. The college has two Collaborations with CMET and NCCS Pune and linkage with Mahatma Gandhi Institute for Rural Industrialization (MGIRI), Wardha. Faculties are encouraged to visit the other labs for their major and minor research work as well as for research work.

### 6.3.9 Admission of Students

The college is Hindi linguistic minority college. Fifty percent of seats are reserved for linguistic minority students. The admission process is transparent and as per the Government and University norms regarding reservation for backward classes. The list of eligible students according to merit is displayed. The candidates are instructed to secure their admission by submitting original documents and paying requisite fees in scheduled time.

### 6.4 Welfare schemes for

Teaching	Credit co-operative society 'J.B.C.S. staff credit cooperative society Ltd.' It offers long term, short term, article and emergency loan.
Non teaching	
Students	1. GOI scholarships to all BC and OBC students 2. EBC concession 3. Fee waiver for meritorious students 4. Hostel facility at subsidised rates 5. Health check-up camp

5 Total corpus fund generated: Nil. (Available corpus fund = Rs. 2,60,311/-)

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	No		Yes	IQAC of College
Administrative	No		Yes	By assigning the internal auditor.

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

For UG Programmes Yes  No

For PG Programmes Yes  No

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

Earlier there were two papers for each subject. The college has combined the two papers in one paper. Gazette, result analysis are done using specialized software.

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

UGC granted **academic autonomy status** to the college from session 2017-18. The college has now its BOS in all subjects, academic council, and governing council. The college framed syllabus for its UG and PG programmes. The college has conducted semester exams for winter and summer 2017-18.

6.11 Activities and support from the Alumni Association

The Alumni association organized an interaction of students and faculty with Padmashree Nivedita Bhide, President, Swami Vivekanand Centre, Kanayakumari, on 13<sup>th</sup> march 2018.

It organized a sky watch program to observe the rare 'blue moon, super moon event' on 31<sup>st</sup> Jan 2018 in collaboration with astroclub of JBCS.

6.12 Activities and support from the Parent – Teacher Association

Two Teacher –parent meetings were organised

Issues regarding regularity, and performance were discussed.

Parent responsibilities were discussed.

6.13 Development programmes for support staff

A work shop on computer awareness was organised by dept. of C/S.

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

- Energy conservation, by having ventilated classrooms and laboratories with sufficient natural light, use of LED bulbs and use of solar water heater in Girls and Boys hostel
- Water harvesting in college and Check dam construction in nearby villages through NSS activity in order to conserve the run-off water.
- Tree plantation, Botanical garden, Apiculture garden

## **Criterion – VII**

### **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.
- College got academic autonomy in April 2017. College conducted B.Sc. and M.Sc. Sem I & II exams of 2017-18.
  - Central instrumentation facility was established. It resulted in enhancement of research activity and consultancy.
  - The IQAC organized a national seminar ‘Accreditation and Autonomy : Ways and Constraints’ to facilitate the institutions 4<sup>th</sup> cycle of accreditation and autonomous working.
  - Career guidance programmes were organised to enhance placement activity.
- 7.2 Provide the Action Taken Report (ATR) based on the plan of action decided upon at the beginning of the year

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

#### **Plan 1: Implementation of academic autonomy**

##### **Action Taken:**

As per directives of UGC various committees were constituted. BOS in all subjects were given the responsibility of framing syllabus. The syllabus were approved by academic council. Teaching is according to new syllabus. College conducted the first examination under autonomy for B.Sc. Sem-I and M.Sc. Sem-I in Nov. 2107

#### **Plan 2: To apply for NIRF**

**Action Taken:** A committee was formed and given responsibility to fill the NIRF format

#### **Plan 3: To improve students’ performance in exams and reduce drop-out rate**

**Action Taken:** Drop-out rate depends on result. To increase the result extra efforts are being taken especially for weaker students. Remedial classes arranged. Topic-wise tests in addition to unit tests have been conducted by every department.

#### **Plan 4: To start Skill enhancement Certificate courses**

**Action Taken:** Faculties were asked to propose skill enhancement courses. Four Skill enhancement courses have been proposed.

#### **Plan 5: To start PG in Mathematics**

**Action Taken:** College has applied to RTMNU for starting PG in Mathematics

#### **Plan 6: To start Astroclub for giving practical knowledge of astrophysics**

**Action Taken:** A Telescope was prepared by students under the guidance of Prof Tiple. Sky observation activity ‘super moon, red moon’ organised. Expert lecture were organized under Astroclub.

#### **Plan 7: Teacher Implementation of Teacher-guardian student cluster scheme for personal guidance and overall development**

**Action Taken:** Teacher-guardian student cluster meetings have been fixed every Saturday where personal difficulties of students are solved. Students are provided with ‘My academic diary’.

#### **Plan 8: To create Centralized instrumentation facility for research work**

**Action Taken:** Centralized instrumentation facility is established

#### **Plan 9: To promote research through collaborative activities, linkages, MoU, Ph.D etc.**

##### **Action Taken:**

- Collaborative activities and Step Up Research Program: Training program for teachers under Edu-bridge of National Centre for cell Science (NCCS), Pune
- Linkage with Mahatma Gandhi Institute for Rural Industrialization: MGIRI-Wardha
- Internship Work of a PG student at Dept. of Instrumentation Science, S. P. Pune University, Pune
- Enhancement in revenue generated through consultancy services

- MoU with EdCIL (India) Limited, A CPSE Under MHRD, Implementing Partner for Study in India, A Programmer Under Ministry of Human Resource Development, Government of India.
- Extension of Recognition as centre for higher learning and research for Chemistry and Botany laboratories as Centre for higher learning and research
- Enrolment of the Ph.D. student through Research Advisory Committee (RAC) of the University

**Plan 10:** To enhance Career guidance and Placement activity

**Action Taken:** A workshop on academic and Career opportunities for B.Sc. Mathematics students was organised by Dept of Mathematics in association with SGB Amaravati University. A training program on pre placement interview was organized. Some Industries were invited for the campus placement. Six students placed in TCS and one in HCL. Corning India Ltd. has called 93 students for second phase of interview in Pune

**Plan11:** To guide students for competitive examination like IIT JAM, NET, SET, GATE, PET

**Action Taken:** B.Sc. students are guided for various PG entrance examinations. 8 students were selected for PG courses in reputed institutes such as NIT, IIT, and Pune University. M.Sc. students are guided for NET, SET GATE and PET exams-

**Plan12:** To organize National / state level seminars/ workshop.

**Action Taken:** The IQAC organized a national seminar Innervate 2018 - 'Accreditation and Autonomy : Ways and Constraints' on 5<sup>th</sup> March 2018.

**Plan13 :** Participation in Rashtriya Avishkar Abhiyan (RAA)

**Action Taken:** JBC is the mentoring institute by RAA. It has been assigned the responsibility for carrying out RAA activities in schools of the region.

**Plan14 :** To conduct Academic audit

**Action Taken:** The college has applied for academic and administrative audit by RTMNU.

**Plan15:** To encourage students to participate in various curricular, co-curricular, and extra curricular activities, value education.

**Action Taken:** Students were encouraged to participate in Aspen leadership programme, state level youth parliament competition, all india essay writing event 2017, Tree Plantation, world population day, Teachers day programmes. Student seminars are conducted in every department.

**Plan16 :** To purchase quality reference books, and text books related to new Semester pattern.

**Action Taken:** A More than 1000 Reference and text books related to new Semester pattern are purchased this year.

**Plan17:** Proper utilization of various grants: UGC CPE, XII plan, Additional assistance grant.

**Action Taken:** A proper utilization of UGC CPE grant, XII plan grant, Star college scheme has been planned. The grants have been utilized for the required purpose.

**Plan18:** To enhance sport activity and achievements.

**Action Taken:** Efforts were taken by sport dept for enhances sport participation in various fames. Studentd excelled in various sports competitions.

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

**Two best practices are given in Annexure iii**

7.4 Contribution to environmental awareness / protection

- Energy conservation, by having ventilated classrooms and laboratories with sufficient natural light, use of LED bulbs and use of solar water heater in Girls and Boys hostel
- Water harvesting in college and Check dam construction in nearby villages through NSS activity in order to conserve the run-off water.
- Tree plantation, Botanical garden, Apiculture garden
- Solar water heater in girls hostel
- Polythene eradication and congress grass eradication drives were organised.
- Arranged lectures of eminent personalities on environment, health, population control etc.
- Provision for filtered purified water and use of water saving taps.
- Use of dustbins and maintenance of proper sanitation in college.



- Compost pits by NSS students
- Recycling of used papers

7.5 Whether environmental audit was conducted? Yes  No

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

### **SWOC Analysis of the Institution**

#### **Strengths**

- Legacy of 56 years (1962-2018) of J.B. College of Science which is running on Gandhian values, honesty, sincerity, commitment and integrity to the educational system
- NAAC 'A' grade, academic autonomy, College with Potential for Excellence, Star College Scheme, India today Ranked college, 'Best management award' by parent university
- Near perfect academic discipline especially in regular teaching and conducting practicals with no disruption in executing academic calendar. Additional subject tutorials to curb difficulty during regular classes
- Enhanced focus on research activity
- Enriched infrastructure of laboratories, ICT, central instrumentation facility with respect to instrumentation
- Better inculcation of research activities by adopting a method of assigning projects to the students
- Collection of more than 360000 books along with National and International Journals in the library
- Closeness between faculty and students through cluster mentor system
- Profound sports activities putting students at State, National and International level
- NET / SET guidance

#### **Weaknesses**

- Enrolment of students (at UG level) having good academic standards
- Placement/employment opportunity

#### **Opportunities**

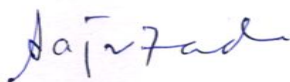
- Availing the honor of College with NAAC 'A' grade, academic autonomy, College with Potential for Excellence, Star College Scheme, India Today Ranked college
- Availing the honor of 'Best management award' by parent university
- Linkages / MoUs with industries and research institutions / laboratories
- Feasibility for consultancy and Hands on training with sophisticated instruments
- To remain updated and avail the facilities of University Grants Commission like RUSA, five year plans, basic science research grant, additional assistance grants, merged scheme, major, minor research projects
- Ability to offer new certificate courses, frame syllabus to suit the present needs (being an autonomous college)

#### **Challenges**

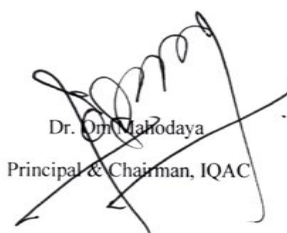
- To overcome the delay from parent university in getting approval of academic and administrative activities
- Enhancement in guidance for various competitive exams, establishment of NET / SET guidance cell, placement activity, employment opportunity
- Receiving Alumni support

## 8. Plans of institution for next year

1. Preparation for the 4<sup>th</sup> cycle of accreditation by NAAC  
(JBC is due for 4<sup>th</sup> cycle of accreditation by NAAC due in Feb 2019. To organize seven criteria presentations by criteria conveners in order to prepare a good quality SSR. To discuss measures to overcome weak areas. All the committees were asked to keep the previous five year reports ready. Tentative timeline for Submission of IIQA – Dec.2018, SSR submission – Jan 2019, DVV and SSS by NAAC – Feb 2019, NAAC Peer team visit -within 3 months - Feb –Apr 2019)
2. Implementation of academic autonomy for the second year.
3. To obtain approval for marklists of Sem-I & II autonomy examination from University
4. To comply with the 11 recommendations given by NAAC peer team during third cycle
5. To enhance guidance for competitive examination like IIT JAM, NET, SET, GATE, PET and placement activity
6. To start PG in Mathematics
7. To start IIT Spoken tutorials
8. To construct Life sciences complex, first floor of girls hostel
9. Renovation of laboratories



Dr. S.S. Zade  
Co-ordinator, IQAC



Dr. Orn Mahodaya  
Principal & Chairman, IQAC

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Academic Calendar

Month	Date / Day	Events / Activities	Date / Day	Events / Activities
June	1 <sup>st</sup> - 7 <sup>th</sup>	Issuing of Prospectus Admission of B.Sc. I Commencement of B.Sc. Semester I Classes	21 <sup>st</sup> (Wed)	International Yoga Day
	8 <sup>th</sup> - 18 <sup>th</sup>		24 <sup>th</sup> (Sat)	Knowing Instrumentation
	19 <sup>th</sup> (Mon)			
July	1 <sup>st</sup> (Sat)	Address of Principal to B.Sc. Semester I students Teacher Parent Meet World Population Day	15 <sup>th</sup> (Sat)	Departmental Seminars
	8 <sup>th</sup> (Sat)		22 <sup>nd</sup> (Sat)	Science Quiz
	11 <sup>th</sup> (Tue)		24 <sup>th</sup> - 29 <sup>th</sup>	Internal Class Exam (ICE – I)
August	5 <sup>th</sup> (Sat)	Extra Curricular Activity Departmental Seminars Independence Day Celebration	19 <sup>th</sup> (Sat)	Inter Cluster Competition
	12 <sup>th</sup> (Sat)		21 <sup>st</sup> - 26 <sup>th</sup>	Internal Class Exam (ICE – II)
	15 <sup>th</sup> (Tue)			
September	5 <sup>th</sup> (Tue)	Teachers Day Celebration International Literacy Day Extra Curricular Activity	16 <sup>th</sup> (Sat)	Allotment of Project
	8 <sup>th</sup> (Fri)		21 <sup>st</sup> (Thu)	World Peace Day
	9 <sup>th</sup> (Sat)		23 <sup>rd</sup> (Sat)	Project Review
October	2 <sup>nd</sup> (Mon)	Mahatma Gandhi Jayanti	3 <sup>rd</sup> - 14 <sup>th</sup>	College Test Exam
	16.10.2017 I 14.11.2017	Winter Vacation		
November	15 <sup>th</sup> - 27 <sup>th</sup>	First Semester Theory Exam. Commencement of First Semester Practical Exams.	28 <sup>th</sup> (Thu)	Commencement of Spoken English/Computer Evaluation
	28 <sup>th</sup> (Thu)			
December	1 <sup>st</sup> (Fri)	World AIDS Eradication Day Dr. Ambedkar Mahaparinirvan Day Commencement of Second Semester Classes Project work	20 <sup>th</sup> (Wed)	Declaration of First Semester Results
	6 <sup>th</sup> (Wed)		23 <sup>rd</sup> (Sat)	Project work
	7 <sup>th</sup> (Thu)		30 <sup>th</sup> (Sat)	Project work
January	1 <sup>st</sup> - 7 <sup>th</sup>	Special NSS Camp Savitribai Phule Jayanti Project work Mata Jankidevi Bajaj Memorial Day Rashtriya Yuva Din Project work	15 <sup>th</sup> - 20 <sup>th</sup>	Internal Class Exam (ICE – I)
	3 <sup>rd</sup> (Wed)		23 <sup>rd</sup> (Tue)	Birth Anniversary of Kamalnayan Bajaj & Kamalnayan Bajaj Memorial Inter-University Seminar/Elocution Competition
	6 <sup>th</sup> (Sat)		26 <sup>th</sup> (Fri)	Republic Day Celebration
	7 <sup>th</sup> (Sun)		25 <sup>th</sup> - 27 <sup>th</sup>	College Day Function
February	3 <sup>rd</sup> (Sat)	Project work Project work Submission of project	19 <sup>th</sup> - 24 <sup>th</sup>	Internal Class Exam (ICE – II)
	10 <sup>th</sup> (Sat)		28 <sup>th</sup> (Wed)	National Science Day
	17 <sup>th</sup> (Sat)			
March	1 <sup>st</sup> - 2 <sup>nd</sup>	National Seminar Innervate 2018 Popular Lecture International Women's Day Project Presentation & Evaluation	17 <sup>th</sup> (Sat)	Project Presentation & Evaluation
	3 <sup>rd</sup> (Sat)		23 <sup>rd</sup> (Fri)	World Environment Day
	8 <sup>th</sup> (Thurs)		12 <sup>th</sup> - 24 <sup>th</sup>	College Test Examination
April	4 <sup>th</sup> - 14 <sup>th</sup>	Second Semester Theory Exam Second Semester Practical Exam	16 <sup>th</sup> - 21 <sup>st</sup>	Spoken English/Computer Evaluation
	16 <sup>th</sup> - 21 <sup>st</sup>		28 <sup>th</sup> (Sat)	Declaration of Second Semester Results
May / June	1.05.2018 I 15.06.2018	Summer Vacation		

**Analysis of the feedback**

**Student feedback**

- Regarding curriculum – students are comfortable with new curriculum.
- One Paper of subject in each semester has been demanded so that they can have study time for the papers.
- Reading material is available in library & department.
- Students want to opt for higher education & competitive examination
- Students are satisfied regarding course, syllabus, library, classes and sports.

**Parent feedback**

**Suggestions regarding academic enhancement of the institution:**

- Competitive classes should be there.

**Opinion regarding course, atmosphere, teachers, principal , library, office:**

- Good.

**Opinion regarding cluster:**

- Good scheme.
- Opinion regarding curriculum
- Good ; Satisfactory. It is also taking care of overall personality development.
- Students should be updated with latest technologies instruments & should be trained.

**Alumni Feedback**

- Alumni are satisfied with facilities of J.B. College of Science, Wardha

## Best Practice 1

### 1. Title of the practice: Teacher- Guardian Student Cluster

**2. Goal:** Personal attention to each student is not feasible due to large volume of classes (100-120 students per class). A process of working with small target groups is found to be convenient and gives better results. This is the main goal of the formation of cluster.

Considering this need, JBC has divided the students of each class in small interactive groups in order to solve their personal difficulties related to the academics and other all-round development. Thus JBC has introduced the idea of teacher-guardian-Student cluster especially for the entrants, i.e. B.Sc. Part I students. The aim of this programme is as follows :

- To look after the personal academic difficulties of students in each subject
- To provide them the required educational inputs by the teachers in their subjects
- To solve their difficulties at educational front
- To inculcate confidence in students
- To involve them in co-curricular activities including student seminars and student projects
- To motivate them for participating in extra-curricular activities / sports and games
- To encourage them for participation in extension programs / add on courses
- To provide exposure for their all round development

**3. Context :** The institute has observed that the results of UG classes and particularly of B. Sc I is not up to the mark. Moreover, the participation of these students in co-curricular and extra-curricular activities is also not encouraging. While searching facts behind this, the Principal and faculties have pointed out the following:

1. B.Sc. I students are not acquainted with the writing of descriptive answers.
2. Most of the students suffer from inferiority complex
3. They are not well acquainted with English language
4. Since there is no guaranteed job potential before them even after passing B.Sc., they are not serious about their studies.
5. As relatively the science education is not fully employable, the sense of insecurity makes them insincere towards the studies which ultimately affect their result.
6. In the Indian context, most of the girls have their higher education for selecting the better marriage partners.
7. Last but not the least the other socio-economic factors adhered to the students affect their personality and thereby all-round development .

In order to overcome these difficulties of students, JBC has planned to form the smaller groups of students to create interest about studies and active involvement in co-curricular activities leading towards their all-round development.

**4. The Practice:** The practice and implementation of Teacher Guardian Student cluster in our institute is as follows :

- The students enrolled in B.Sc. I are divided into small groups called clusters of about 8 to 10 each on the basis of their subjects.
- In each cluster, almost all students have at least one common subject.

- The formed clusters are assigned to the teachers teaching the particular common subject.
- Cluster students and teacher have a regular meeting on a specific day and time (mostly on Saturday, 9.30-10.10 am).
- In cluster meetings, students report about their academic difficulties.
- The guardian teacher of the cluster guides the students in solving his/her subject difficulties and communicate to the other concerned teachers (if needed) for their subject difficulties
- The teacher helps in resolving difficulties related to infrastructure facilities (water, electricity, light, blackboard, library, time table, washroom, parking, etc) with the consultation of concerned administrative authorities.
- The guardian teacher motivates his/her cluster students for participating in co-curricular, extra-curricular and extension activities as well as for enrolment in career oriented programmes.
- The guardian Teacher encourages the students to participate in various competitions (including cluster competition). Students sometimes also use this platform to discuss their other difficulties faced during learning.
- The guardian teacher periodically reviews the academic and all round performance of students and guides them for their improvement.
- The guardian teacher also maintains the cluster diary in which the current information is shared with the parents.
- Thus, the guardian teacher forms the personal relationship with his/her students which helps them in solving their educational and even personal problems related to adolescent age.
- The practice of teacher guardian-student cluster is unique in the context of higher education in Indian scenario which otherwise is a part of schooling.
- Due to generation gap, impact of media and adolescent age, most of the students are in the confused state of mind and seek the help of trust worthy person. This requirement is fulfilled by his/ her teacher guardian with whom he/she can share his/her all sorts of personal problems.

**5. Evidence of Success:** This practice has helped the students in:

- Improving their self confidence
- Bringing them in a common mass
- Helping in curbing the absenteeism
- Overall personality development by encouraging them for participation in Extra-curricular/Cocurricular/Extension programmes etc.
- In bridging the gap between teachers and students
  - Slight improvement in the result.
  - Improvement in the attendance.

**6. Problems encountered and resources required:** The clusters (mentoring the students) are formed to encounter the various problems of the students through face to face interaction, which otherwise is not possible.

The various factors causing difficulties to the students in their studies and all round development are as follows:

**(a) Socio-economic background of students:** Majority of students in our institute are from remote and mofussil area where educational environment is not up to the mark. Family background doesn't provide requisite facilities due to poor economical conditions (most of them are farmers and labours) and put a hindrance in their mobility. Collectively this issues affects their confidence, communication skill which in turn makes them less interested for the higher education (cluster may act as a motivational aspect for committed students).

These problems cannot be solved at once. This requires a very long attention towards them which is possible every time. However, our small practice of clustering opens the window for them which help to overcome this.

**(b) Resources required:** In order to elevate their confidence and communication skill students are required to be exposed to such an environment where they can see, listen and learn with no burden. This could be possible by arranging residential camps in vacations. These camps should have programmed of exposing the students to various extra-curricular and co-curricular activities, computer learning and some visits to a places from where they can elevate themselves academic and all round development. For achieving above cited target necessary machinery is required.

### **7. Constraints/ limitations:**

1) Although the guardian teacher student cluster helps in solving the academic and other difficulties inside the institutions, the difficulties due to some socio-economic status cannot be solved. For example, train and bus transport timings, hostel facility, etc.

2) The academic up-liftment of the students is entirely based on the foundation of their basic knowledge acquired up to 12<sup>th</sup> standard. The students having weak foundation needs more personal attention and more practice for study beyond the institutional timing and it solely depends on their practice at home.

## **Best Practice 2**

### **1. Title of the practice: Additional subject tutorials (Remedial Classes)**

**2. Goal:** The Principal and the staff of the college from their experience have observed that students admitted to B.Sc. I are poor in basic sciences and cognitive skills. The clock hours assigned to the units of the curriculum seems to be insufficient. Therefore, additional subject tutorials with extra timings are incorporated in order to solve the queries out of the regular classes.

The objectives of this practice are as follows:

- To strengthen the basics of science of newly admitted students
- To provide personal attention towards students as the tutorial group is small
- To help students in concentrating and removing the short comings of related subjects
- To help them in building their confidence over the subject
- To develop their cognitive skills.

### **3. Context:**

- J.B.C. is affiliated to RTMNU, Nagpur in Maharashtra state which has large number of engineering colleges. Students with 40% are eligible for admission to these colleges.



Therefore, most of the students prefer to go for these courses. As a result of this the students admitting to B.Sc. courses are of low percentage.

- Students find difficult in shifting their momentum to understand the role of science education and its model.

**4. The Practice:** In the context of present Indian higher education system, the permitted strength of a class is 100-120. It is difficult for any faculty to pay personal attention to individual student in such a class. Since the tutorials incorporated in J.B.C. pattern are batch wise (1 to 2 batches), the number of students in the tutorial class is comparatively less. Hence, a teacher is able to give personal attention to the academic difficulties of individual student. The practice of additional subject tutorials is implemented in J.B.C. as follows:

- The regular tutorials/remedial classes are incorporated in the timetable.
- The maximum strength of students in tutorials goes up to 30.
- Each faculty member has been assigned the respective tutorials besides their regular classes

#### **5. Evidence of Success:**

This practice has helped the students in:

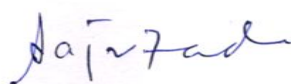
- Improving the cognitive skills
- Strengthening the basic fundamentals in all subjects
- Up-lifting their subject standard to the level of B.Sc. I
- Increasing the attendance in classes
- Improving their knowledge and understanding
- Creating interest in studies
- Minimising common writing mistakes
- Increasing sincerity
- Demotivating students to go for outside tuition classes
- Improves the mathematical skills and problem solving techniques.

#### **6. Problems encountered and resources required:**

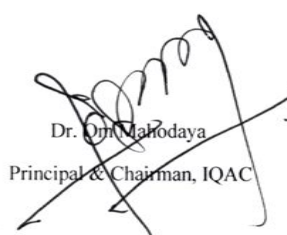
An incorporation of tutorials in regular time table is helping us to minimize the problems related to academics. Though, it has increased the workload of our faculties but no major problems are encountered while practicing the tutorial approach.

#### **7. Constraints/ limitations:**

- 1) Incorporation of additional tutorials in regular timetable due to time constraint.
- 2) Increased workload on faculty.



Dr. S.S. Zade  
Co-ordinator, IQAC



Dr. Om Mahodaya  
Principal & Chairman, IQAC

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