### Shri Shivaji College of Arts, Commerce and Science, Akola Department Profile

1. Name of the Department :Mathematics

2. **Year of Establishment** : UG - 1967

:PG - 2014

#### 3. Details of the staff members:

Sr.	Name of the	Educational	Designation	Experie	ence	Specialization
No.	Faculty members	Qualifications		Teachi ng	Researa ch	
1	Prof.Dr. A. M. Metkar	M. Sc., B. Ed., M. Phil., Ph.D.	Professor	15	07	Relativity
2	Mr.C. C. Hire	M. Sc., B. Ed.	Assistant Professor (Adhoc)	05		
3	Mr. R. G. Mangle	M. Sc.	Assistant Professor( Adhoc)	01		
4	Mr. P.P.Kale	M. Sc.	Assistant Professor( Adhoc)	01		
5	Ku. S.M. Kalmegh	M.Sc. , B.Ed.	Assistant Professor( Adhoc)			
6	Ku. H.S. Thakare	M.Sc.	Assistant Professor( Adhoc)			
7	Ku. P. V. Bathe	M.Sc.	Assistant Professor( Adhoc)			
8	Ku. D. T. Fokmare	M.Sc.	Assistant Professor (Adhoc)			

#### **4.Student Profile to Program (Ratio of Teachers to students):**

Year	Class	Boys	Girls	Total	Grand Total	Ratio
	B. Sc. I	102	53	155		
	B. Sc. II	72	43	115	376	1:126
2016-2017	B. Sc. III	62	44	106		
	M.Sc. I	20	28	48	76	1.16
	M.Sc .II	07	21	28	/0	1:16

	B. Sc. I	78	69	147		
	B. Sc. II	84	51	135	361	1:121
2017-2018	B. Sc. III	50	29	79		
	M.Sc. I	13	33	46	76	1.16
	M.Sc .II	10	20	30	70	1:16
	B. Sc. I	85	72	157		
	B. Sc. II	79	60	139	412	1:138
2018-2019	B. Sc. III	67	49	116		
	M.Sc. I	09	39	48	81	1 17
	M.Sc .II	08	25	33	01	1:17
	B. Sc. I	75	66	141		
	B. Sc. II	62	68	130	381	1:127
2019-2020	B. Sc. III	66	44	110		
	M.Sc. I	04	44	48	99	1.20
	M.Sc .II	13	38	51	77	1:20
	B. Sc. I	73	64	137		
2020-2021	B. Sc. II	63	68	131	428	1:143
	B. Sc. III	77	83	160		
	M.Sc. I	6	51	57	105	1.01
	M.Sc .II	04	44	48	103	1:21

# 5.Success rate of each program, its comparison with University results.

Year	Class		Boys	Girls	Total	Percentage	Uni. Result
	B. Sc. I	(SemI)	102	53	155	52.94	32.54
	D. Sc. 1	(SemII)	102	33	133	63.82	46.00
	B. Sc. II	(SemIII)	72	43	115	54.86	
2016	D. Sc. 11	(SemIV)	12	43	113	47.57	
2016-	B. Sc. III	(Sem V)	62	44	106	74.28	61.79
2017	D. Sc. III	(SemVI)	02	44	100	92.31	60.00
	M.Sc. I	(SemI)	20	28	48	8.88	
	W1.5C. 1	(SemII)	20		70	19.51	
	M.Sc. II	(SemIII)	07	21	28	29.16	
		(SemIV)				4.76	
	B. Sc. I	(SemI)	78	69	147	54.67	
		(SemII)				64.54	
	B. Sc. II	(SemIII)	84	51	135	47.57	
2017		(SemIV)	0-			72.38	42.58
2017-	B. Sc. III	(Sem V)	50	29	79	69.23	60.00
2018	D. Sc. III	(SemVI)	30	29	19	85.89	58.75
	M.Sc. I	(SemI)	13	33	46	33.33	
	W1.5C. 1	(SemII)	13	33	40	17.07	
	M.Sc. II	(SemIII)	10	20	30	3.70	
	W1.SC. 11	(SemIV)	10	20	30	52.63	
2010	R Sc I	(SemI)	85	72	157	50.64	
2018-	B. Sc. I	(SemII)	0.5	12		66.44	

79	60	130	55.71	
19		139	62.40	
67	40	116	87.50	49.00
0/	49	110	95.65	57.82
00	20	40	32.32	
09	39	48	34.04	
00	25	22	58.06	
08	25	33	54.55	
75	((	1 / 1	55.31	
15	66	141	98.58	
<i>(</i> 2	68	120	69.04	
62		130	99.23	
66	44	110	96.26	
		110	100.00	
04	11	10	43.75	
	44	40	100.00	
12	20	<i>5</i> 1	43.13	
13	38	31	100	
73	64	137		
13	04	137	96.35	99.56
63	68	131		
03	08	131	100.00	100.00
77	83	160		
, ,	03	100		99.36
6	51	57		
U	51	37	100.00	
04	11	10	100.00	
U4	44	40	100.00	· · · · · · · · · · · · · · · · · · ·
	67 09 08 75 62 66	67     49       09     39       08     25       75     66       62     68       66     44       04     44       13     38       73     64       63     68       77     83       6     51	67       49       116         09       39       48         08       25       33         75       66       141         62       68       130         66       44       110         04       44       48         13       38       51         73       64       137         63       68       131         77       83       160         6       51       57	67     49     116     87.50       09     39     48     32.32       08     25     33     58.06       75     66     141     98.58       62     68     130     99.23       66     44     110     96.26       100.00     43.75     100.00       13     38     51     100       73     64     137     96.35       63     68     131     100.00       77     83     160     100.00       6     51     57     100.00       04     44     48     100.00

# 4. Success rate of each program, its comparison with University results

Program	Semester	2016-17	2017-18	2018-19	2019-20	2020-21
B.Sc. I	Sem I	52.94	54.67	50.64	55.31	
<b>D.SC.</b> 1	Sem II	63.82	64.54	66.44	98.58	96.35
II. Dagult	Sem I	32.54				
Uni. Result	Sem II	46.00				94.56
B.Sc. II	Sem III	54.86	47.57	55.71	69.04	
<b>D.</b> Sc. II	Sem IV	47.57	72.38	62.40	99.23	100.00
Uni.Result	Sem III					
OIII.Resuit	Sem IV		42.58			100.00
B.Sc. III	Sem V	74.28	69.23	87.50	96.26	
	Sem VI	92.31	85.89	95.65	100.00	100.00

Uni. result	Sem V	61.79	60.00	49.00		
Om. result	Sem VI	60.00	58.75	57.82	100.00	99.36
MCI	Sem I	08.88	33.33	32.32	43.75	98.21
M.Sc. I	Sem II	19.51	17.07	34.04	100.00	100.00
Uni. result	Sem I					
Om. result	Sem II					
M.SC. II	Sem III	29.16	3.70	58.06	43.13	100.00
W1.5C. 11	Sem IV	4.76	52.63	54.55	100.00	100.00
Uni. result	Sem III					
	Sem IV					

# 5. No. of faculty members on University Bodies and other academic bodies and social organizations. Their role in curriculum designing and college development.

- The syllabus of the UG is designed by Board of Studies in Mathematics, SantGadge Baba Amravati University, Amravati. The syllabus is constructed mainly by following the model syllabus of UGC and also by considering the syllabus of NET/SET and MPSC. The syllabus of UG was revised in 2010-11 with semester pattern being introduced for UG.
- Prof. Dr. A. M. Metkar, HOD is a member of Board of Studies in the subject Mathematics (2012-2017) had an active contribution in reframing the syllabus. Also he takes part in suggesting deletion and addition of articles in the syllabus as per the requirement. He suggested to implement the internal evaluation system in the subject.
- Prof. Dr. A. M. Metkar, member of Board of studies in SGB Amravati University, Amravati takes part in the decisions made by board of studies from time to time. Also actively participate in setting of questions papers, valuation and moderation activities conducted by SGB Amravati University, Amravati.
- Faculty member Dr. A. M. Metkar is member of Board of Studies in Mathematics (2012-2017).

#### 6. Learning resources of the Department (Laboratories/ Computers/Internet/Department library etc.)

• The department has a departmental library with nearly 182 titles. A Collection of research papers on the subject relativity is also kept in the departmental library. The department has one Magazine "The Mathematical Intelligencer", published by Springer and Journal "Mathematics Newsletter" published by Ramanujan Mathematical Society. The department also provide paperwise&unitwise notes to the students as per prescribed syllabus. The set of University question papers are also kept in the departmental library. One personal computer with HP laserjet p1008 printer having internet broad brand facility is provided for the staff and research students.

• The learning resources related to the department are mainly Teachers, Library, Internet, Departmental Library.

#### 7. Enhancement of the resources during last five years.

- The department was established in 1967 with Degree Course B. Sc. having Optionals Physics, Chemistry and Mathematics. In the Starting, Mr. K. M. More was Head of the Department and Mr. Marathe was the second faculty member.
- Initially upto 2006-07 the Department was in very small space of about 75 sq. ft. area but from October 2007, the Department is transferred in the new location on the western side of the college in the Shatapdi Building at ground floor with spacious area of 450 sq. ft.
- Further furniture is added like Almira (three no.), Table (Two), Chairs, High quality display boards (no. three), Dust free teaching board, Personal Computer with Broad Band Connectivity etc.
- In 2004-05 only one faculty member Mr. A. M. Metkar was full time in the department. The remaining workload was completed on CHB basis. He has gone under FDP XIth plan from 2004 to 2006. Another faculty member Dr. H. R. Ghate has been transferred from Jijamata Mahavidyalaya, Buldana to Shri Shivaji College, Akola and joined duties in this college on 9 October, 2007. So meanwhile from 2005 to 2007 the complete workload of the department was conducted on CHB basis. But after 2007 onwards, we are proud to said that both the faculty members of the department are with Doctor's degree. 2010, faculty member Dr. H. R. Ghate has been transferred to Chikhli. Dr. A. M. Metkar taken the charge of Head on 14 Oct 2021. From Nov. 2010 to Feb. 2012 the workload of Dr. H. R. Ghate was distributed among CHB lecturers. In March 2012, Miss M. T. Sarode joined as one of the faculty member in the Department.In September 2019, faculty member Miss M. T. Sarode has been transferred to Akot. From September 2019the workload of Miss. M. T. Sarode was distributed among CHB lecturers. Dr. A. M. Metkar was promoted as Professor from 05 March 2020.
- In June 2020 the Department is transferred in the new location on the northern side of the college in the Dyanyog Building at second floor with spacious area of 145.98 sq. mts.
- The departmental library is developed from the funds of minor research projects of both staff members by taking titles of around (Rs. 20,000/- + Rs. 20,000/-) along with the text books to the faculty members. The department is using OHP and LCD projector for delivering the lectures. Visiting lectures of eminent persons are arranged for the students.
- In March 2018 the department organized Post Graduate University Seminar Competition on Analysis. And in Jan 2020, Department Organized the National Conference on "Recent Advances in Physical and Mathematical Sciences NCRAPMS-2020.

#### 8. Modern Teaching Methods:

• Other than lecture method, the department is making use of LCD projectors wherever possible. Also the students facilitates to use LCD projectors for delivering their seminars. Apart from unit tests and college test, frequent tests are taken on the articles taught in the classroom so that students study that articles. Assignments are given on the subject by staff members. Seminars are arranged to increase their confidence in the subject. For online teaching we used zoom, Google classroom, Google meet apps etc.

# 9. Faculty members participated in National and International Conferences / Workshops / Seminars etc.

Dr. A. M. Metkar

Sr. No.	Conference / Symposium / Seminar/ Workshop	Duration From To	Institute / Collage / University wherethe course is organised
(1)	National Symposium on Mathematical Sciences	1 to 5 March 2001	Post Graduate Department of Mathematics, Nagpur University, Nagpur
(2)	State Level Seminar on Recent Trends in Mathematics	5 to 6 March 2002	Post Graduate Department of Mathematics, Nagpur University, Nagpur
(3)	One Day University Level Workshop on New Syllabi of Mathematics	14th September 2003	Organized by Amravati University Teachers association & Brijlala BiyaniMahavidyalaya, Amravati
(4)	National Seminar on Recent Advances in Mathematical Physics	4 <sup>th</sup> January, 2004	BhartiyaShikshanSanstha, Shri DnyaneshMahavidyalaya, Nawargaon (Dist. Chandrapur)
(5)	National Seminar on Recent Advance in Applied Mathematics	1 <sup>st</sup> July, 2004	Department of Applied Mathematics, Andhra University, Vishakhapattam (A.P.)
(6)	National Seminar on Recent Trands in Mathematics & its Applications	24 to 26, 2004	Department of Mathematics, Govt. P. G. College, Dhamtari (Chhatisgarh)
(7)	National Seminar on theory of Relativity	21 <sup>st</sup> August, 2004	Post Graduate Teaching Department of Mathematics, Nagpur University, Nagpur
(8)	Workshop on Mathematica	15 to 16 October 2004	Department of Mathematics, Shri SantGajananMaharaj Collage of Engineering, shegaon.
(9)	International Conference on Relativity ICR-2005	11 to 14 January 2005	Post Graduate Department of Mathematics, Amravati University, Amravati
(10)	Functional English	22 to 23	Botanical Society, GVISH,

		September, 2005	Amravati.
	Interdisciplinery National	9 to 10	
(11)		December, 2005	Sir Parshurambhaun College, Pune
(12)	National Seminar on Recent Advance Physics & Mathematics	28 <sup>th</sup> January, 2006	Department of Physics, Electronics &mathematics, L. A. D. & Smt. R. P.College for Women, Nagpur
(13)	Workshop on Latex	5 to 7 March, 2007	Departement of Mathematics, RTMNagpur University, Nagpur
(14)	National Seminar on Current Trends in Chemical Sciences Research	28 <sup>th</sup> March, 2008	Shri Shivaji College of Arts, Commerce& Science, Akola
(15)	The Relevance of Dr. Babasaheb Ambedkar's Philosophy in the 21 <sup>st</sup> Century of India	31 <sup>st</sup> March, 2008	Shri Shivaji College of Arts, Commerce & Science, Akola
(16)	State level seminar on recent trendsin teaching basics and appliedsciences	3 <sup>rd</sup> January, 2009	PhulsingNaikMahavidyalaya, Pusad
(17)	State Level Seminar on Recent Trends in Mathematics & Their Applications	21 <sup>st</sup> March, 2009	Sardar Patel Mahavidyalaya, Chandrapur
(18)	National Seminar on Information Technology enabled Services- 2009	11 <sup>th</sup> April, 2009	Shri Shivaji College of Arts, Commerce& Science, Akola
(19)	Total Solar Eclipse-09 Workshop	13 <sup>th</sup> & 14 <sup>th</sup> June, 2009	Post Graduate Department of Mathematics, Amravati University, Amravati
(20)	National Conference on Recent Trends in Mathematics	18 <sup>th</sup> & 19 <sup>th</sup> Sept. 2009	GVISH, Amravati
(21)	UGC Sponsored National Seminar on Dr B. R. Ambedkar's Economic Philosophy and Indian Economic Policy in the Global Scenario	24 <sup>th</sup> Oct. 2009	organized by Dr B. A. Studies Centre of Shri Shivaji College, Akola and Shri Shivaji College of Arts, Commerce and Science, Akola
(22)	UGC Sponsored State Seminar Level on Recent Developments in Relativity	18 <sup>th</sup> Dec. 2009	Department of Mathematics, Mahatma Fule Arts, Comm. And Sitaramji Chaudhari Science College, Warud
(23)	UGC Sponsored State Seminar Level on Expanding Wings of Mathematics in the Field of Science and Social Sciences,	4 <sup>th</sup> Jan. 2010	Department of Mathematics, R. L. T. College, Akola
(24)	UGC Sponsored National Conference on Recent Trends in Mathematics and it's Application in Astronomy	21 ,28 Feb.	Department of Mathematics, MungasajiMaharajMahavidyalayaD arwha

(25)	UGC Sponsored National Level Conference on Developing Frontiers of Physics, Astronomy and Space Sciences organized	24 <sup>th</sup> & 25 <sup>th</sup> Sept. 2010	Dept. of Phy. And Maths, R. L. T. College, Akola
(26)	State Level Workshop on Research Methodologies in Science	26 <sup>th</sup> Feb. 2011	Faculty of science ShankarlalKhandelwal Art, Science and Commerce College, Akola
(27)	UGC Sponsored National Seminar on Mahatma Gandhi and Pt. Jawaharlal Nehru's thoughts on socio-economic and political issues	28 <sup>th</sup> Feb. 2011	Shri Shivaji College of Arts,Commerce and Science, Akola
(28)	One Day District Level Workshop on Role of Teacher for Quality Education with Reference to Sixth Pay Commission	10 <sup>th</sup> April 2011	Shri Shivaji College of Arts,Commerce and Science, Akola
(29)	Reginal Level Interdisciplinary Workshop on Research Methodology	30 <sup>th</sup> Dec. 2011	TakshashilaMahavidyalaya, Amravati
(30)	Interdisciplinary International Conference on Dr. BabasahebAmbedkar's Buddhism and Emancipatory Potential	27 <sup>th</sup> and 28 <sup>th</sup> Jan. 2012	Dr. BabasahebAmbedkar Studies Centre, Shri Shivaji College of Arts,Commerce and Science, Akola
(31)	Workshop on SantGadge Baba's Dashasutri and RashtrasantTukdojiMaharhj'sGra mgeeta	7 <sup>th</sup> Feb. 2012	R. L. T. Science College, Akola
(32)	UGC Sponsored National Conference on Innovative Research Trends in Biological Sciences	8 <sup>th</sup> & 9 <sup>th</sup> Sept. 2012	Shri Shivaji College of Arts,Commerce and Science, Akola
(33)	Interdisciplinary International Conference on "Relevance of Dr. BabasahebAmbedkar,Mahatma Gandhi &Pandit Nehru's Ideology in the present scenario"	29 <sup>th</sup> & 30 <sup>th</sup> October 2012	Shri Shivaji College of Arts, Commerce & Science, Akola
(34)	International Conference on Mathematical Sciences	28-31 Dec 2012	Shri Shivaji Science College,Nagpur
(35)	Symposium on Number Theory and Related Topics	15 <sup>th</sup> &16 <sup>th</sup> January 2013	ShantaramJanorkar Foundation of Mathematics,,Tq. Barshitakli, Dist. Akola
(36)	National Conference on Mathematical Sciences NCMS- 2013	18 <sup>th</sup> & 19 <sup>th</sup> January 2013	Shri. Dr. R.G.Rathod Arts & Science College,Murtizapur
(37)	National Conference on Recent Trends in Mathematical NCRTM -2013		GopikabaiSitaramGawandeMahavid yalayaUmarkhed Dist. Yavatmal
(38)	National Conference on "Recent Trends in Mathematics, Physics	19 <sup>th</sup> March 2014	ShankarlalKhandelwal Arts,Science

and their Applications NCRTMPA-2014"		& Commerce College, Akola
University level Research oriented Workshop	10-11 Jan. 2015	Shri DnyaneshwarMaskujiBurungale science & arts college, Shegaon
State level Seminar on "Role of IQAC in Quality Enhancement in Higher Education"	17 <sup>th</sup> April 2015	Shri Shivaji College of Arts, Commerce & Science, Akola
National Conference on "Recent Trends in Mathematics & Its Applications(NCRTMA-2015)"	12 <sup>th</sup> & 13 <sup>th</sup> Sept. 2015	MungasajiMaharajMahavidyalaya,Da rwha,Dist. Yavatmal
International Conference on	25-28 Nov. 2015	Dept. of Mathematics, S. G. B. Amravati University, Amravati
National conference on recent advanced in mathematical science		Dept. of Mathematics, S. G. B. Amravati University, Amravati
University Level Workshop on Credit, Grade and semester system introduce by SGB Amravati University and Maharashtra Public University act, 2016	22 <sup>nd</sup> July 2017	IQAC , Shri Shivaji College of Arts, Commerce & Science, Akola
University Level Seminar Competition for UG Students on Advanced Calculus	23 <sup>rd</sup> september 2017	Mahatma Fule Arts, Commerce and SitaramjiChaudhari Science Mhavidyalaya,Warud.
	26-27 <sup>th</sup> Feb 2018	Shri. Shivaji Arts, Commerce and Scince College, Akola
	1 <sup>st</sup> & 2 <sup>nd</sup> Feb 2019	Vidya Bharti Mahavidhyalay , Amravati
UGC Sponsored National Conference on Emerging Trends in Science	2019	Vidya Bharti Mahavidhyalay , Amravati
UGC Sponsored National Conference on Emerging Trends in Science	1 <sup>st</sup> & 2 <sup>nd</sup> Feb 2019	Vidya Bharti Mahavidhyalay , Amravati
UGC Sponsored One Day Regional Level Workshop on New Accreditation Methodology :An Overview	28 <sup>th</sup> March 2019	Shri. Shivaji Arts, Commerce and Scince College, Akola
Research Trends in Mathematics	5-6 <sup>th</sup> December 2019	Government Vidarbha Institute of Science and Humanities ,Amravati
Impact of Values Based on M.K. Gandhi ,Pt.J.Nehru ,Dr.B.R. Ambedkar and Dr. PanjabraoDeshmukh's Philosophies in Present Situation	2020	Shri. Shivaji Arts, Commerce and Scince College, Akola
	28 <sup>th</sup> January 2020	YashvantraoChavan Maharashtra Open University ,Amravati
	NCRTMPA-2014"  University level Research oriented Workshop  State level Seminar on "Role of IQAC in Quality Enhancement in Higher Education"  National Conference on "Recent Trends in Mathematics & Its Applications(NCRTMA-2015)"  International Conference on  National conference on recent advanced in mathematical science University Level Workshop on Credit, Grade and semester system introduce by SGB Amravati University and Maharashtra Public University act, 2016  University Level Seminar Competition for UG Students on Advanced Calculus National Conference on recent Advances in Chemical Sciences  UGC Sponsored National Conference on Emerging Trends in Science UGC Sponsored National Conference on Emerging Trends in Science UGC Sponsored One Day Regional Level Workshop on New Accreditation Methodology :An Overview  National Workshop on Recent Research Trends in Mathematics One Day International Conference on Impact of Values Based on M.K. Gandhi ,Pt.J.Nehru ,Dr.B.R. Ambedkar and Dr. PanjabraoDeshmukh's Philosophies in Present Situation Workshop on Assessment and Accreditation of Open Universities	NCRTMPA-2014"  University level Research oriented Workshop  State level Seminar on "Role of IQAC in Quality Enhancement in Higher Education"  National Conference on "Recent Trends in Mathematics & Its Applications(NCRTMA-2015)"  International Conference on 25-28 Nov. 2015  International Conference on recent advanced in mathematical science University Level Workshop on Credit, Grade and semester system introduce by SGB Amravati University and Maharashtra Public University Level Seminar Competition for UG Students on Advanced Calculus National Conference on recent Advances in Chemical Sciences  UGC Sponsored National Conference on Emerging Trends in Science  UGC Sponsored National Conference on Emerging Trends in Science  UGC Sponsored National Conference on Emerging Trends in Science  UGC Sponsored National Conference on Emerging Trends in Science  UGC Sponsored National Conference on Emerging Trends in Science  UGC Sponsored National Conference on Emerging Trends in Science  UGC Sponsored National Conference on Emerging Trends in Science  UGC Sponsored National Conference on Emerging Trends in Science  UGC Sponsored National Conference on Emerging Trends in Science  UGC Sponsored National Conference on Emerging Trends in Science  UGC Sponsored National Conference on Emerging Trends in Science  UGC Sponsored National Conference on Emerging Trends in Science  UGC Sponsored National Conference on Emerging Trends in Science  UGC Sponsored One Day Regional Level Workshop on New Accreditation Methodology :An Overview  National Workshop on Recent Research Trends in Mathematics  One Day International Conference on Impact of Values Based on M.K.  Gandhi ,Pt.J.Nehru ,Dr.B.R.  Ambedkar and Dr.  PanjabraoDeshmukh's Philosophies in Present Situation  Workshop on Assessment and Accreditation of Open Universities

Attendance in University Level Students Seminar:

Sr. No.	Name of the Seminar	Date	Place & Name of the sponsoring College
1	University Level seminar for Mathematics Students	1st February 2003	R. A. Arts, Shri S. K. Rathi Science CollageWashim.
2	University Level Seminar for Mathematics Students	9 <sup>th</sup> October 2005	Organised by SantGadge Baba Amravati University Teachers Association & JagdambaMahavidyalaya, Achalpur
3	University Level Seminar for Mathematics Students	17 <sup>th</sup> Dec 2009	Department of Mathematics, Mahatma Fule Arts, Comm. And Sitaramji Chaudhari Science College, Warud
4	University Level Seminar for Mathematics Students	22 <sup>nd</sup> January 2011	Department of Mathematics,BharatiyaMahavidyalaya, Amravati
5	University Level Seminar for Mathematics Students	22 <sup>nd</sup> Dec.2012	Organised by SantGadgeBaba Amravati University Teachers Association & Shri Shivaji College,Akot
6	Intercollegiate University Level "Mathematical Sciences Seminar Competition"	21 <sup>st</sup> Dec. 2013	Organized by Shri Shivaji College,Akola
7	12 <sup>th</sup> University Level Seminar Competition in Mathematics 2014	16 <sup>th</sup> Feb. 2014	MungasajiMaharajMahavidyalayaDarw ha Dist. Yavatmal

#### Miss. M. T. Sarode:

Sr N o.	Conference / Symposium / Seminar / Workshop	Duration From To	Institute / Collage / University where the course is organised
(i)	State Level Seminar on "Expanding Wings of Mathematics in the field of Science & Social Sciences"	4 <sup>th</sup> January 2010	Shri R.L.T. College of Science,Akola
(ii)	National Level Conference on "Developing Frontiers of Physics, Astronomy & Space Sciences"	24 <sup>th</sup> &25 <sup>th</sup> September 2010	Shri R.L.T. College of Science, Akola
(iii)	Interdisciplinary National Seminar on "Impact of Climate Chang on Agriculture Production in India"	6 <sup>th</sup> October 2012	Shri Shivaji College of Arts, Commerce & Science, Akola
(iv)	Interdisciplinary International Conference	29 <sup>th</sup> & 30 <sup>th</sup> October	Shri Shivaji College of Arts, Commerce & Science, Akola

	on "Relevance of Dr. BabasahebAmbedkar,Mah atma Gandhi &Pandit Nehru's Ideology in the present scenario"	2012	
(v)	Symposium on Number Theory and Related Topics	15 <sup>th</sup> &16 <sup>th</sup> Jan uary 2013	ShantaramJanorkarFoundation of Mathematics, Mahan, Tq. Barshitakli, Dist. Akola
(vii )	National Conference on Mathematical Sciences NCMS-2013	18 <sup>th</sup> &19 <sup>th</sup> January 2013	Shri. Dr. R.G.Rathod Arts & Science College, Murtizapur
(vii i)	University Level Research Oriented Workshop	9 <sup>th</sup> &10 <sup>th</sup> February 2013	Department of Mathematics, Amravati University, Amravati & S.G.B.A.U. Mathematics Teachers Association, Amravati
(ix)	UGC Sponsored Capacity Building of Women Managers In Higher Education Sensitivity/Awareness/Mo tivation Workshop	19-23 March 2013	L.A.D. College,Nagpur
(x)	National Conference on "Recent Trends in Mathematics,Physics and their Applications NCRTMPA-2014"	19 <sup>th</sup> March 2014	ShankarlalKhandelwal Arts,Science & Commerce College,Akola
(xi)	State level Seminar on "Role of IQAC in Quality Enhancement in Higher Education"	17 <sup>th</sup> April 2015	Shri Shivaji College of Arts, Commerce & Science, Akola
(xii )	National Conference on "Recent Trends in Mathematics & Its Applications(NCRTMA- 2015)"	12 <sup>th</sup> & 13 <sup>th</sup> Sept. 2015	MungasajiMaharajMahavidyalaya,D arwha,Dist. Yavatmal

## Attendance in University Level Students Seminar:

Sr. No.	Name of the Seminar	Date	Place & Name of the sponsoring College
1	University Level Seminar for Mathematics Students	22 <sup>nd</sup> Dec 2012	Organised by SantGadgeBaba Amravati University Teachers Association & Shri Shivaji College,Akot
2	Intercollegiate University Level "Mathematical Sciences Seminar Competition"	21stDec. 2013	Organized by Shri Shivaji College,Akola

#### **10. Evaluation Process:**

• The students are continuously assessed through frequently

taking tests, unit tests, annual college Examinations, seminar, and personal observation regarding their academic performance. Also by asking questions on the conceptual parts. By giving assignments and projects to the students.

# 11. Participation of teachers in academic activities other than teaching and research:

#### Dr. A. M. Metkar

- Coordinator, Feedback Committee
- Member, Cycle Stand Committee
- Member, Examination Committee
- Member, Prize Distribution Committee
- Member, Admission Committee
- Member, Criterion V Governance & Leadership Committee

#### Miss. M. T. Sarode

- Member, Admission Committee
- Member, Cultural Committee
- Member, NSS
- Member, Staff & Girls common room
- Member, Teaching aid committee
- Member, Criterion III Research, Consultancy & Extension.
- The teachers participates in co-curricular and extra curricular activities of the college and worked in the organization committees of several activities like conferences, youth festivals and sport meets etc. as per the requirement.
- Dr. A. M. Metkar, member of Board of studies in SGB Amravati University, Amravati take part in the decisions made by board of studies from time to time. He is also member of subject examination committee in Mathematics, SGB Amravati University, Amravati. Both the faculty members of the department actively participate in setting of questions papers, valuation and moderation activities conducted by SGB Amravati University, Amravati.
- Both the faculty members of the department actively participate in setting, valuation, Invigilation programme of college examination and attend the difficulties of the students.

#### 12. Research activities:

#### (A) Research Papers published:

#### Dr. A. M. Metkar

Sr. No.	Title with page nos.	Journal	ISSN /ISBN No.
1	Plane gravitational waves in four dimensional space	Science Journal of	

	mr.		
	time for $Z = \frac{\sqrt{3}t}{x+y+z}$	GVISH, Vol. I, Feb.	
	P. No. 18 - 20	2004.	
	Plane gravitational waves in four dimensional space	Science Journal of	
2	time for $Z = \frac{x+y+z}{\sqrt{x}} - t$	GVISH, Vol. I, Feb.	
	P. No. 1 - 3	2004	
	The coordinate system in which $g_{\alpha\alpha} = 0$ , for the		
_	plane gravitational waves for $Z = (z - t)$ and $Z = (t / z)$	ActaCienciaIndica,	ISSN No.
3	types in six dimension	Vol. XXXI M, No. 3, 2005	0970 - 0455
	P. No. 855 - 860	2003	
	Plane gravitational waves $g_{ij}(\mathbf{Z})$ of the Einstein's	Bulletin of Pure and	******
4	field equation for $Z = \frac{x+y+z}{\sqrt{3}} - t$	Applied Sciences, Vol.	ISSN No. 0970 - 6577
	P. No. 217 - 220	24E, No. 1, 2005	0970 - 0377
	Plane symmetric inhomogeneous models in presence		
5	of massive scalar field and perfect fluid distribution in	ARJPS, Vol., 9, No	ISSN No.
3	general relativity	1-2,2006	0972 - 2432
	P. No. 25 - 29		
	The coordinate system in which $g_{\alpha\alpha} = 0$ , for the	Applied Science	ICCNI NI
6	plane gravitational waves for $Z = (z - t)$ and $Z = (t / z)$	Periodical Vol. VIII,	ISSN No. 0972 - 5504
	type P. No. 263 - 267	No 4, Nov. 2006	0972 - 3304
		A - ( - C' - u - i - I u - i'	
7	Plane wave solution of Einstein – Maxwell equation with the coexistence of null fluids and null currents	ActaCienciaIndica, Vol. XXXII M, No. 2,	ISSN No.
,	P. No. 619 - 623	2005	0970 - 0455
	Plane gravitational waves of $Z = (t / z)$ types of	Bulletin of Calcutta	
8	weakened field equations in general relativity	Mathematical Society,	ISSN No.
	P. No. 425 - 432	99, (4), 2007	0970 - 8596
	Some properties of purely plane gravitational waves	Bulletin of Calcutta	
9	Sig	Mathematical Society,	ISSN No.
	P. No. 7 - 12	Vol. 30, No. 1 – 3,	0970 - 8596
	Non-existence of plane gravitational waves with	2007	
4.0	massive meson complex scalar waves and coupled	Mathematical	ISSN No.
10	with electromagnetic waves	Education in Vol. XLI,	0047 - 6269
	P. No.	No. 3, Sept. 2007	
	Some geometrical aspects of the plane symmetric	Applied Science	ISSN No.
11	space - time	Periodical Vol. XI,	0972 - 5504
	P. No.	No. 3, Aug. 2009 Reflections des ERA,	
	√3 t	Journal of	
12	On plane gravitational waves $g_{ij}(Z)$ , $Z = \frac{\sqrt{3} t}{x+y+z}$	Mathematical	ISSN No.
	P. No. 37 - 44	Sciences, Vol. 5,	0973 - 4597
		ISSUE, Feb. 2010	
	[z-t]-Type Plan Wave Solutions of Weakened Field	Prespacetime Journal,	ISSN No.
13	Equations	Vol. 2, Issue 11, Nov.	2153 - 8301
	P. No. 1845-1851  Conveyliged Line Florent for $Z = (t/z)$ Type Plan	2011	
14	Generalized Line Element for $Z = (t/z)$ -Type Plan Gravitational Waves	Prespacetime Journal, Vol. 2, Issue 11, Dec.	ISSN No.
14	P. No. 1900 - 1903	2011	2153 - 8301
	Plane Symmetric Mesonic Cosmological Models	Vidarbha Journal of	ICCNINI
15	With Perfect Fluid in Barber's Second Self-creation	Sciences, Vol. 7, No.	ISSN No. 0973 - 8932
	Theory	1, 2, 2012	0713 - 8734

16	Dr. Ambedkar and Buddha's Path to Equality	Proceeding on Interdisciplinary International Conference "Dr. BabasahebAmbedkar's Buddhism and Its Emancipatory Potential" 28 <sup>th</sup> and 28 <sup>th</sup> Jan. 2012	ISBN No. 978-81- 955414-5-6
17	Ambedkar's Theory of Education and its Relevance in the Present Era	Proceeding of International Conference on Relevance of Dr. BabasahebAmbedkar Ideology in the present Scenario 29 <sup>th</sup> & 30 <sup>th</sup> Oct. 2012.	ISBN 978-93- 82414-13-1

# (B) Papers presented in Conferences, Seminars, Workshops, Symposia:

Sr. No	Title of the Paper presented	Title of Conference / Seminar	Organized by	Whether international /national / state /regional /College or university level
1	Plane gravitational waves in four dimensional space time for $Z = \frac{\sqrt{3} t}{x+y+z}$	National Conference on Advances in Applied Mathematics	Andhra University, Visakhapatnam held on 1 <sup>st</sup> July 2004	National
2	On plan— $\frac{ty+z}{t}$ ition waves $g_i \stackrel{\xi}{z}$ ravita $\frac{\sqrt{3} t}{x+y+z}$ The goor	National Conference on Recent Trends in Mathematics and Its Applications	Govt.P.G. College, Dhamtari, Chhathisgarh held on 24 <sup>th</sup> to 26 <sup>th</sup> Oct. 2004	National
3	The co $\frac{-\text{rdinate}}{\text{rdinate}}$ system in which $\frac{-\text{rdinate}}{ga\alpha} = d$ for the plane gravitational waves for $Z = (z - t)$ and $Z = (t / z)$ type	International Conference on Relativity-2005	P G T D of Mathematics, Amravati held on 11 <sup>th</sup> to 14 <sup>th</sup> Jan. 2005	International
4	Generalized line element for $Z = (t/z)$ -type plane gravitational wave	National Conference on Recent Trends in Mathematics	G V I S H, Amravati held on 18 <sup>th</sup> ,19 <sup>th</sup> Sept. 2009	National
5	Plane symmetric mesonic cosmological models with perfect fluid in Barber's Self Creation theory	State Level Seminar on Recent Development in Relativity	Mahatma Fule Arts, Comm. And SitaramjiChaudhari Science College, Warud held on 18 <sup>th</sup> Dec. 2009	State
6	Dr. Ambedkar and Buddha's Path to Equality	Interdisciplinary International Conference " Dr. BabasahebAmbedkar's Buddhism and Its	Dr. BabasahebAmbedkar Studies Centre Shri Shivaji College of Arts, Commerce and Science, Akola, <i>In</i>	International

		Emancipatory Potential"	collaboration with Dr.	
			BabasahebAmbedkar	
			Teacher's Association,	
			Amravati held on 27 <sup>th</sup> & 28 <sup>th</sup>	
			Jan. 2012.	
7	Ambedkar's Theory of	Interdisciplinary	Dr.	International
	Education and its	International	BabasahebAmbedkar,Mahat	
	Relevance in the Present	Conference on Relevance	ma Gandhi and Nehru Study	
	Era	of Dr.	Centers Shri Shivaji College	
		BabasahebAmbedkar,	of Arts, Commerce and	
		Mahatma Gandhi and	Science, Akola held on	
		Pandit Nehru's Ideology in	29th& 30th Oct. 2012.	
		the present Scenario		

#### Miss.M.T.Sarode

## A) Research Papers published :-

Sr. No.	Title with page nos.	Journal	ISSN /ISBN No.
1	Changing climate & soil degradation process	Proceeding of Interdisplinary national seminar on Impact of climate on Agricultural production in India,6th Oct. 2012. P.N.118	ISBN: 978-93-82414- 04-9
2	Ambedkar's Theory of Education and its Relevance in the Present Era	Proceeding of International Conference on Relevance of Dr. BabasahebAmbedkar Ideology in the present Scenario 29th& 30th Oct. 2012.P.N.11-12	ISBN 978-93-82414- 13-1
3	Mahatma Gandhi and Rural Development	Proceeding of International Conference on Relevance of Dr. BabasahebAmbedkar Ideology in the present Scenario 29th& 30th Oct. 2012.P.N.97-98	ISBN:978-93-82414- 15-5
4	"Teaching Mathematics with Innovative Methods"	New Interdisciplinary National Research Journal P. No. 76 to 80	ISSN-2279-0349
5	"Application of Linear Algebra"	Proceeding of National Conference on "Recent Trends in Mathematics, Physics and their Applications NCRTMPA-2014" 19th March 2014,P.No. 39 to 43	ISBN: 978-81-929160- 2-6
6	"Some Applications of Graph Theory"	New Interdisciplinary National Research Journal ,Vol. IV,Issue-I,Oct.2014- March 2015, P. No. 22 to 24	ISSN-2279-0349

# (B) Papers presented in Conferences, Seminars, Workshops, Symposia:

Sr.N o.	Title of the Paper presented	Title of Conference / Seminar	Organized by	Whether international /national / state /regional / college or university level
1	Changing climate & soil degradation process P.N.118	Interdisplinary national seminar on Impact of climate on Agricultural production in India,	Shri Shivaji College of Arts, Commerce and Science, Akola held on 6 <sup>th</sup> Oct. 2012.	National
2	Ambedkar's Theory of Education and its Relevance in the Present Era P.N.11-12	Interdisciplinary International Conference on Relevance of Dr. BabasahebAmbedkar, Mahatma Gandhi and Pandit Nehru's Ideology in the present Scenario	Dr. BabasahebAmbedkar, Gandhi and Nehru Study Centres Shri Shivaji College of Arts, Commerce and Science, Akola held on 29 <sup>th</sup> & 30 <sup>th</sup> Oct. 2012.	International
3	Mahatma Gandhi and Rural Development P.N.97-98	International Conference on Relevance of Dr. BabasahebAmbedkar Ideology in the present Scenario	Dr. BabasahebAmbedkar,Mahat ma Gandhi and Nehru Study Centres Shri Shivaji College of Arts, Commerce and Science, Akola on 29 <sup>th</sup> &30 <sup>th</sup> Oct. 2012.	International
4	"Application of Linear Algebra" P.No. 39 to 43	National Conference on "Recent Trends in Mathematics, Physics and their Applications NCRTMPA-2014"	organized by ShankarlalKhandelwalArts,S cience& Commerce College,Akolaon 19 <sup>th</sup> March 2014	National