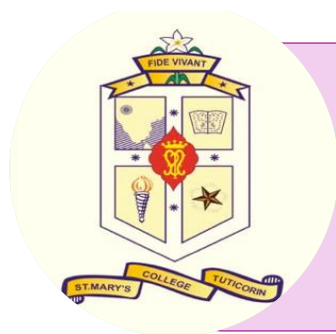




St. Mary's College (Autonomous)
Reaccredited with 'A+' Grade by NAAC (Cycle IV)
Thoothukudi



Criterion: III – Research Innovation and Extension
3.4.3 Details of research papers per teacher. Year: 2018-2023

3.4.3 Number of research papers published per teacher in the Journals as notified on UGC CARE list during the last five years

3.4.3 Details of research papers per teacher in CARE Journals notified on UGC website during the year							
S.No	Name of the Author(s)	Department of the Author(s)	Title of the Paper	Name of the Journal	Month and Year of publication	ISSN with Page no	Link to article/paper/abstract of the article
1	Ms. A. Malini Apsala	History	Legacy of Buddhism on Indian Culture	Shanlax Foreign Tamil Research Journal	Jun-19	2454-3993 / 27-29	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/History/1.%202019-%20Dr.%20A%20Malini%20Apsala.pdf
2	Dr. F. Maria Jenifer Thaya	History	Humanism in Buddhism	Shanlax Foreign Tamil Research Journal	Jun-19	2454-3993 / 11-15	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/History/2.%202019-%20Dr.%20F.%20Maria%20Jenifer%20Thaya.pdf

3	Ms. S.M. Rojapoo	History	Relevance of Buddhist ideology Today	Shanlaz Foreign Tamil Research Journal	Jun-19	2454-3993 / 7-10	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/History/3.%202019-%20Dr.S.M.%20Rojapoo.pdf
4	Dr. S. M. Vimala	History	Social Harmony in Buddhism	Shanlaz Foreign Tamil Research Journal	Jun-19	2454-3993 / 20-26	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/History/4.%202019-Dr.%20S.M.%20Vimala.pdf
5	K. Mary Vino Lobo	History	Contribution of Buddhism to Art and Architecture	Shanlaz Foreign Tamil Research Journal	Jun-19	2454-3993 / 16-19	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/History/5.%202019%20K.%20Mary%20Vino%20Lobo.pdf
6	Keerthana Santhosh	History	Social Development in Kerala and the Kerala Model Development	International Journal of Scientific Research and Review	Sep-19	2279-543X/ 5-11	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/History/6.%202019%20Keerthana%20Santhosh.pdf
7	Dr.G. Stella Beatrice Nirmala & Ajitha	Commerce	A Study on Investor's Perception towards Mutual Funds in Thoothukudi	JETIR	Feb-19	2349-5162 pp 351-354	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/Commerce/1%20Dr.%20Stella%202019.pdf

8	Dr. G. Stella Beatrice Nirmala	Commerce	Green Marketing Practices in Thoothukudi-An Industrial Perspective	JETIR	Feb-19	2349-5162 pp 538-544	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/Commerce/2%20Dr.Stella%202019.pdf
9	J.Ajitha	Commerce	Need and Impact of Startup Scheme in India	The International Journal of Analytical and experimental modal analysis	Aug-19	0886-9367	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/Commerce/3%20Ajitha.%20J%202019.pdf
10	Dr.K.Vinith a	Library	Use of E-resources, Current trends and Technology among the Students in Theni Medical College- A Study	Journal of Applied Science and Computations	Jan-19	(339-342)	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/Library/Dr.K.Vinitha%20%20UGC%20Research%20Paper.pdf
11	Ms. S. Jeyaselvi	Tamil	Pudhukavithai kazhivi Sinthanai		Jul-19	2278-2311	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/Tamil/paper%20Jselvi%20(4.10.2019).pdf
12	Ms. S. Jeyaselvi	Tamil	Sanga Illakiya Kodaisirappu	Shanlax International Journal	Jul-19	2454-3993	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/Tamil/paper%20Jselvi%20(2019%20May).pdf

13	Dr. C. Reena, P. Vijayalakshmi	Mathematics	Semi $\ast\delta$ locally closed and continuous functions	Journal of Emerging Technologies and Innovative Research	Jun-19	2349-5162	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/P G%20Mathematics/Reena1.pdf
14	Dr. C. Reena, P. Vijayalakshmi, Dr. S. Pious Missier	Mathematics	A New Type of Quasi Open and Quasi Closed functions in Topological Spaces	Journal of Emerging Technologies and Innovative Research	Feb-19	2349-5162	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/P G%20Mathematics/Reena2.pdf
15	Dr. C. Reena, P. Vijayalakshmi, Dr. S. Pious Missier	Mathematics	On Semi $\ast\delta$ homeomorphism in Topological Spaces	International Journal of Advanced Scientific Research and management	Jun-19	2455-6378	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/P G%20Mathematics/Reena3.pdf
16	Ms. A. Robina Tony, Dr. A. Punitha Tharani	Mathematics	A Study on Restrained Triple Connected Two domination number of a graph	Journal of Emerging Technologies and Innovative Research	Mar-19	2349-5162	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/P G%20Mathematics/Tony1.pdf
17	Ms. A. Robina Tony, Dr. A. Punitha Tharani	Mathematics	Restrained Triple Connected Two domination number of Central, Total and Line Graphs of a path and Cycle	International Journal of Computational Engineering Research	Mar-19	2215-3005	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/P G%20Mathematics/Tony2.pdf
18	Dr. G. Priscilla Pacifica, Ms. S.	Mathematics	Some Topological Concepts In Penta Topological Space	International Journal of Mathematics Trends and Technology	Feb-19	2231-5373	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/P

	Shehnaz Fathima						G%20Mathematics/Priscilla.pdf
19	Dr. P. Anbarasi Rodrigo, Ms. J. Harlin Jebaseeli	Mathematics	Functions on α^* g Open Sets in Topological Spaces	International Journal of Mathematics Trends and Technology	Jul-05	2231-5373	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/P G%20Mathematics/Anbarasi.pdf
20	P. Subavathy	Zoology	Histological Investigation of the Digestive System and SEM study of Radula in Fusinus nicobaricus (Gastropoda:Fasciolarii dae)	Indian Journal of Animal Research	October, 2019	ISSN: 0367-6722 ISSN:0976-0555(Online) Pg. No.: 191-195	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/Zoology/Dr.P.Subavathy%20-%202020%20-%20SCOPUS%20-%20HISTOLOGICAL%20INVESTIGATION.pdf
21	Dr. A. Sudha	Economics	Industrial labour relations	Outreach ISRA Journal	2019	ISSN(p):0975 1246	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/P G%20ECONOMIC S/2019%20SUDHA.pdf
22	S.A.Rahmat h Ameena Begam, S.G ayathri ,Dr. Magesh Kuttalam	BBA	Brading of native specialty products:A case of Dummada	International Journal of Recent Technology and Engineering (IJRTE)	May-19	ISSN: 2277-3878, Issue- 1C2, Volume-8 & Page No:185-190	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/BBA/dummada%20branding_merged.pdf

23	S.Gayathri, Dr.Magesh Kuttalam	BBA	Stumbling block of Women Entrepreneurs- A Case in Thoothukudi District.	Sadakath –A Research Bulletin	Mar-19	ISSN :2347-7644 Volume VI,Special Issue 1& Page 102-106	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/BBA/SATHAKATH%202019.pdf
24	Dr. D. Amutha	Economics	An analysis of Deposits and Lending behavious of ICICI Bank	SSRN Block	26th - Feb - 2019.	9 Pages	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/Economics/1.%20An%20analysis%20of%20Deposits%20and%20Lending%20behavious%20of%20ICICI%20Bank..pdf
25	Dr. D. Amutha	Economics	Trend and Growth of World Traffic Handled and Freight Earning of India	Journal of Social Welfare and Management	Oct- Dec 2019	pp 349-354	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/Economics/2.%20Trend%20and%20Growth%20of%20World%20Traffic%20Handled%20and%20Freight%20Earning%20of%20India.pdf
26	Dr. D. Amutha	Economics	Trend and Growth of Export from Medicinal Plants and Aswahagandha in India	Journal of Social Welfare and Management	July - Sep- 2019	pp 317-321	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/Economics/3.%20Trend%20and%20Growth%20of%20Export%20from%20Medicinal%20Plants%20and%20Aswahagandha%20in%20India.pdf

27	Dr. D. Amutha	Economics	Growth of Demand and Time Deposits of Thoothukudi District Central Co-Operative Bank	AEIJMR	2019		http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/Economics/4.%20Growth%20of%20Demand%20and%20Time%20Deposits%20of%20Thoothukudi%20District%20Central%20Co-Operative%20Bank.pdf
28	Y. Ebenezer, & Dr. D. Amutha	Economics	The study of National Rural Health Mission and its impact on IMR in India with special reference to the southern states of rural and urban area in India	Think India Journal	Dec-19	ISSN:0971-126, pp 5843-5851	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/Economics/1.DR.D.AMUTHA-%20Dec-19-The%20study%20of%20National%20Rural%20Health%20Mission%20and%20its%20impact%20on%20IMR%20in%20India.pdf
29	Dr. D. Amutha	Economics	ICT-Based Education Reform to Development		31-Jul-19		http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/Economics/5.%20JULY%202019.pdf

30	Dr. Muthu Maha Laxmi	Economics	Trend and Growth of Exports of Medicinal Plants and Aloe Vera from India	History Research Journal (HRJ) UGC Care Listed International Indexed and Referred Multidisciplinary Journal	Aug-19	ISSN: 0976-5425 Pg Nos. 67 - 75	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/Economics/5.%20Trend%20and%20Growth%20of%20Exports%20of%20Medicinal%20Plants%20and%20Aloe%20Vera%20from%20India.pdf
31	Dr. Muthu Maha Laxmi	Economics	Users Satisfaction Towards Libraries: A Study With Special Reference to Tuticorin District	Thematics Journal of Geography, UGC Care Listed International Indexed and Referred Journal	Dec-19	ISSN: 2277-2995 Pg. Nos. 226-326	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/Economics/6.%20Users%20Satisfaction%20Towards%20Libraries.pdf
32	Dr.A.Amala Arul Arasi	Tamil	Kalithogail Pazhakkavazhakkangalum Nampikaigalum	Shanlax International Journal of Tamil	Jan-19	ISSN;2454-3993, Pp.23-29	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/Tamil%20R/Amala%20%202019-20%20May.pdf
33	Dr.A.Amala Arul Arasi	Tamil	Purananootril Poriyalvazhkayum Soozhal Paathukaapum	Ayidha Ezhuthu	May-19	ISSN;2278-7550, Pp.24-28	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/Tamil%20R/Amala%202019-20%20April%20-%20June.pdf
34	Dr.A.Amala Arul Arasi	Tamil	Nattinaiyil Thozhilgalum Vanibamum	Journal of classical Tamil	Jun-19	ISSN; 2321-0737, Pp.1-8	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/Tamil%20R/Amala

							%202019-20%20April.pdf
35	Dr.A.Amala Arul Arasi	Tamil	Kalithogail Vilaiyattum Pozhuthupokkum	Shanlax International Journal of Tamil	Jul-19	ISSN;2454-3993, Pp. 23-29	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/Tamil%20R/Amala%202019-20%20Jan%20-%20Mar.pdf
36	Dr.S.Arul Josephine	Tamil	Sanga Elakkiam Kattum Nunkalaigal	Internatoinal Tamizh Research	Jan-19	ISSN:2321- 984X, Pp.12-15	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/Tamil%20R/Josphine%20202019-20%20July.pdf
37	Dr.S.Arul Josephine	Tamil	Pen Kavingargal Katum Pengal	Shanlax International Journal of Tamil	Apr-19	ISSN;2454-3993, Pp. 111-115	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/Tamil%20R/Josphine%202019-20%20Jan.pdf
38	Dr. Maria Shanthi	Tamil	Nedujalaiil vazhakai	Interdisplinary Research Journal for Humanities	Sep-19	ISSN: 22-250X, Vol 11(01)	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/Tamil%20R/Dr.maria%20shanthi%20%20paper%202019.pdf
39	Dr. Maria Shanthi	Tamil	Muduraiil Manuda Vilumiyankal	Interdisplinary Research Journal for Humanities	Sep-19	ISSN: 22-250X, Vol 11(01)	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/Tamil%20R/Dr.mariya%20shanthi%20paper%202019.pdf

40	Dr. A. Judit Sheela Dhamayanthi	English	Gender Perspective in Virginia Woolf's To the Light House	International Journal of English Language, Literature in Humanities (IJELLH)	Jun-19	2321-7065 (916-924)	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/English/1.%20Dr.A.judit%20Sheela%20DamayanthiGender%20Perspective%202019.pdf
41	Dr. A. Josephine Alangara Betsy	English	Marginalisation: A Paradigm Shift in Chimamanda Ngozi Adiche's Purple Hibiscus	Think India Journal	Dec-19	0971-1260 (12781-12787)	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/English/2.%20Dr.%20Josephine%20Alangara%20Betsy%20Marginalization%202019.pdf
42	Dr. R. Sudha Rani	English	Breaking Boundaries in Kate Grenville's Lilian's Story	INFOKARA Research	May-19	1021-9056 (255-260)	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/English/3.%20Dr.%20Sudha%20RaniBreaking%20the%20boundaries%202019.pdf
43	Dr. R. Sudha Rani	English	Cherished Values and the Significance of Life in Marilynne Robinson's Gilead	INFOKARA Research	May-19	1021-9056 (108-116)	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/English/4.%20Dr.%20Sudha%20Ranicherished%20values.pdf

44	Dr. R. Sudha Rani	English	Carol Ann Shield's The Stone Diaries As a Mimic of Feminine Quest	INFOKARA Research	May-19	1021-9056 (340-346)	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/English/5.%20Dr.%20Sudharani%20Carol%20Ann%202019.pdf
45	Ms. G. Sharon Roque Corera	English	Commingling of the Magic and the Real: A Post Modern Reading of Paulo Coelho's Brida	International Journal of English Language, Literature in Humanities (IJELLH)	Aug-19	2321-7065 (28-43)	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/English/6.%20GS%20Commingling%20of.pdf
46	Dr. F. Mary Priya	English	Cultural Conflicts in Manju Kapur's The Immigrant	INFOKARA Research	May-19	1021-9056 (336-339)	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/English/7.%20MP%20-%2061-nov-062.pdf
47	Ms. Maria Sahaya Sharmila	English SSC	"Cultural Feminism in Suniti Nanjoshi's The Mother's of Maya Diip"	Infokara Research, An UGC –Care approved Group A Journal	2019	ISSN No: 1021-9056 Pg 180-184	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/English%20ssc/Lily%20-%20infokara.pdf
48	Ms. Maria Sahaya Sharmila	English SSC	"A Study of Disability in Kiran Desai's Hullabaloo in the Guava Orchard"	Think India (Quarterly Journal), An UGC Care Approved International Indexed and Refereed Journal,	October 2019	ISSN: 0971-1260 Pg 414-418	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/English%20ssc/Sharmla%20St.%20Mary_s%20(think%20India).pdf

49	M. Hermina	English SSC	Cherished Values and the Significance of Life in Marilynne Robinson's Gilead	Infokara Research, An UGC –Care approved Group A Journal	2019	ISSN No: 1021-9056 Pg 108 - 116	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/English%20ssc/Hermina%20-%20Infokara.pdf
50	Dr. D. Shunmugajothi	English SSC	Self- Exploration and Reality in Dorris Lessing's Martha Quest and The Summer Before the Dark	Literary Endeavour UGC Approved Quaterly International Refereed Journal	2019	ISSN No. : 0976-299X Pg. - 8 - 12	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/English%20ssc/Jothi%20-%20Literary%20Endeavour.pdf
51	B. Lily Pushpam	English SSC	Cultural Studies in V.S. Naipaul's <u>A House for Mr. Biswas</u>	Infokara Research, An UGC –Care approved Group A Journal	2019	ISSN No: 1021-9056 Pg 169-173	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/English%20ssc/Sharmita%20infokara%20.pdf
52	S. Anusia	English SSC	Challenging Gender Discrimination: Measuring Women Status in Khaled Hosseini's A Thousand Splendid Suns	Infokara Research, An UGC –Care approved Group A Journal	2019	ISSN No: 1021-9056 Pg 24 - 29	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/English%20ssc/ANUSIA%20-%20Infokara%20research.pdf
53	P. Maria Sahaya Rossiyana	Commerce	A study on College Students Preference towards Cosmetics with reference to Thoothukudi District	The International Journal of Analytical Experimental Modal Analysis	February, 2019	0886-9367	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/Commerce/29-SP-OCTOBER-2019%20(1).pdf

54	P. Maria Sahaya Rossiyana	Commerce	Brand Prefrence of women towards Lakme Products - An Empirical study with refrence to Thoothukudi	Journal of Emerging Technologies and Innovative Research	June, 2019	2349-5162	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/Commerce/JETIR1907622.pdf
55	Dr. T. Priyanka	Commerce	Food Safety Pratices among Mothers and their Impact in Infant Mortality Rate	The International Journal of Analytical Experimental Modal Analysis	October, 2019	0886-9367	
56	Dr. A. Sudha	Economics	Industrial labour relations	Outreach ISRA Journal	2019	ISSN(p):0975 1246	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/P G%20ECONOMIC S/3.4.3.pdf
57	Dr. Antony Rajam	Chemistry	An Analysis of Reduction of Oxygen at MWCNT Coated Glassy Carbon Electrode in 2-Hydroxy-1, 4-Naphthoquinone Solution	Sadakath: A Research Bulletin	2019	Vol. VI, No. 2 J	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/p g%20chemistry/2019%20-%20JA%20Paper.pdf
58	Dr.A.Punit ha Tharani and A. Robina Tony	Mathematics	A Study on Restrained Triple Connected Two Domination Number of a Graph	Journal of Emerging Technologies and Innovative Research	March 2019	ISSN 2349-5162 Pg no 27-29	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/Mathematics/1.%20Dr.A.Punitha%20Tharani.pdf
59	A.Punitha Tharani and A.Ferdina	Mathematics	Detour Global Domination Number of a Graph	International Journal of Engineering Science and Computing	2019	ISSN 2250 -1371 Pg no	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/Mathematics/2.Dr.A

							.Punitha%20Tharani.pdf
60	A.Punitha Tharani and T.Delcia	Mathematics	$G^*\alpha$ -lclosed sets and $G^*\alpha$ -locally closed sets in Bitopological Spaces	International Journal of Computational Engineering Research (IJCER)	2019	ISSN 2250 - 3005 Pg no 363-365	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/Mathematics/3.Dr.A.Punitha%20Tharani.pdf
61	A.Punitha Tharani and T.Delcia	Mathematics	A New Quotient mappings in topological Spaces	International Journal of Computational Engineering Research (IJCER)	2019	ISSN 2250 - 3005 Pg no 69-71	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/Mathematics/4.Dr.A.Punitha%20Tharani.pdf
62	A.Punitha Tharani and T.Delcia	Mathematics	On Contra $g^*\alpha$ -continuous functions	International Journal of Computational Engineering Research (IJCER)	2019	ISSN 2250 - 3005 Pg no 50-53	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/Mathematics/5.Dr.A.Punitha%20Tharani.pdf
63	Dr.A.Punitha Tharani and A. Robina Tony	Mathematics	Restrained Triple Connected Two Domination Number of Central, Total, and Line Graphs of Path and Cycle	International Journal of Computational Engineering Research (IJCER)	March 2019	ISSN 2250 - 3005 Pg no: 5-7	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/Mathematics/6.Dr.A.Punitha%20Tharani.pdf
64	V.L,Stella Arputha Mary, S.Navaneetha Krishnan and A.Nagaraan	Mathematics	L-Magic labeling on divisors of 6	Arscombinatoria	Jan 2019	91-107	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/Mathematics/7.Dr.V.L.Stella%20Arputha%20Mary.pdf

65	S.Kulandai Therese and K.Romila	Mathematics	Cube Root Cube Mean Labelling of Graphs	International Journal of Mathematics Trends and Technology	Feb-19	130-135	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/Mathematics/8.Dr.Sr.Kulandai%20Therese.pdf
66	G. Priscilla Pacifica and S. Shehnaz Fathima	Mathematics	Some Topological Concepts in Penta Topological Space	International Journal of Mathematics Trends and Technology	February 2019	ISSN: 2231-5373 pg.no: 109-116	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/Mathematics/9.Dr.G.Priscilla%20Pacifica.pdf
67	B. Divya	Chemistry	Synthesis and characterization of silver nanoparticles using seaweed Sargassum tennerimum and their antioxidant activity	Journal of emerging technologies and innovative research	2018	ISSN NO:2349-5162, volume 6, issue 2, 2019, pp. 416 - 421	http://117.241.71.15/aqar/2019-2020/C%203/3.4.3/chemistry/B.%202019.pdf

