



Nanded Education Society's
Science College, Nanded

Tel: 02462-250 465, 251 648

www.sciencecollegenanded.org

(Affiliated to Swami Ramanand Teerth Marathwada University, Nanded)

(Reaccredited with 'A' grade by NAAC with (CGPA 3.38)

3rd Cycle, CPE Status, DST-FST, Best College Award (SRTMUN)

SELF STUDY REPORT
FOR
IV CYCLE OF REACCREDITATION



Criterion- III

Research, Innovations and Extension

(Key Indicator 3.3- Research Publication and Awards)


- 3.3.2. Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years

Science College, Nanded.

List of books /book chapters and conference proceedings (2018-19 to 2023-24)


Sl. No	Name of the teacher	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	Name of the conference	National / International	Calendar Year of publication	ISBN number of the proceeding
1	Dr. Aruna Shukla	PhanishwarnathRen u ka sahitya	PhanishwarnathRen u ki Kahaniyamaianchlikta	--	--	National	2021-22	976-93-85620703-1
2	Dr. Aruna Shukla	Badlataurmai hindi sahitya ka vaishwikaran	swadhinataandolan aur hini kavya	--	--	National	2022-23	978-93-005231-0
3	Dr. B. D. Gachande	Integrated mangement of crop diseases	In Vitro Antimycotic Efficacy of Plant Latex Against Seed-Borne Storage Fungi of Sunflower and Safflower in Plant Systematics and Biotechnology	--	--	National	2018	978-81-70196-02-2
4	Dr. B. D. Gachande	Integrated mangement of crop diseases	Fungal Diversity in Rhizosphere soil of different varieties of pigeonpea [cajanuscajan (L.) Millsp.] in Plant Systematics and Biotechnology	--	--	National	2018	978-81-70196-02-2
5	Dr. B. D. Gachande	Plant systematic and Biotechnology : Challenges and opportunities	In vitro antimycotic effect of leaf extracts against Fusarium causing wilts in some crop plants	--	--	National	2017	--
6	Dr. B. D. Gachande	Exprimental methods in plant pathology	--	--	--	National	2018	978-93-83411-80-1
7	Dr. B. D. Gachande	Introduction to research methodology	--	--	--	National	2018	978-93-89066-74
8	Dr. B. D. Gachande	Introduction to computer application	--	--	--	National	2018	978-93-89066-74
9	Dr. D. M. Jadhav	Diversity of Microbes and Mycorrhiza	--	--	--	National	2021	978-81-950373-6-0



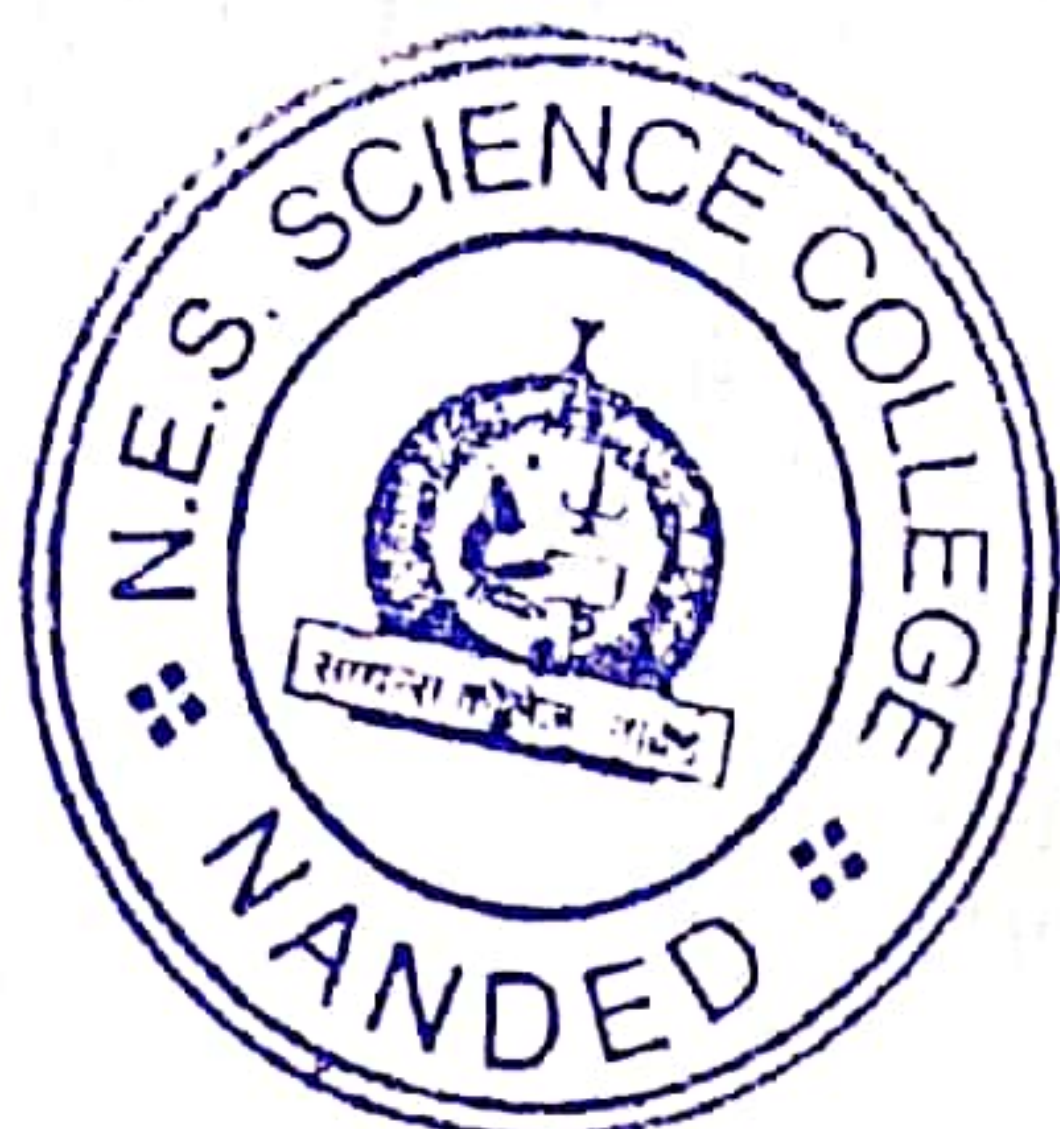

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10	Dr.D.U.Gawai	Fungi and their role in sustainable development	Role of fungi as biocontrol agents for the control of plant diseases in sustainable agriculture	--	--	International	2018	--
11	Dr. K. R. Gaikwad	Industrial Engineering and Management, pp. 79-86,	Non-Homogeneous Transient heat conduction problem and its thermal stress of a thin solid circular plate	--	--	International	2017	978-8-193-28501-5
12	Dr. K. R. Gaikwad	Latest Progress in Mathematics	Thermoelastic Stress Analysis of a Thin Circular Plate subject to Axi-symmetric Temperature Distribution	--	--	International	2017	978-9-387-38813-0
13	Dr. K. R. Gaikwad	Latest Progress in Mathematics	Thermal Deflection of a Thin Circular Plate Due to Internal Heat Generation	--	--	International	2017	978-9-387-388-130
14	Dr. K. S. Shillewar	Biochemical Composition of Fishes (Advances in multidisciplinary and current research)	--	--	--	International	2022	978-3-96492-450-6
15	Dr. K. S. Shillewar	Manual of Fishery Science	--	--	--	International	2022	978-620-5-48926-0
16	Dr. K. S. Shillewar	Manual drcienciassdelaPesca" (Spanish)	--	--	--	International	2022	978-620-5-25011-2
17	Dr. K. S. Shillewar	"Manual di Scienzadellapesca" (Italian)	--	--	--	International	2022	978-620-525011-2
18	Dr. K. S. Shillewar	"Handbuch der Fischereiwissenschaft" (German)	--	--	--	International	2022	978-620-525002-0
19	Dr. K. S. Shillewar	"Manual dela science des peches" (French)	--	--	--	International	2022	978-620-525008-2
20	Dr. K. S. Shillewar	Pykoboactbo no pbioxoHagke" (Russian)	--	--	--	International	2022	978-620-525013-6
21	Dr. K. S. Shillewar	"Manual das ciencias da pesca" (Portuguese)	--	--	--	International	2022	978-620-525012-9
22	Dr. K. S. Shillewar	"A Hand Book of Fishery Science" (English)	--	--	--	International	--	
23	Dr. K. S. Shillewar	"Libro de texto de ciencias de la pesca" (Spanish)	--	--	--	International	--	978-47-941-44205




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24	Dr. K. S. Shillewar	"Un libro di testo di scienzadellapesca" (Italian)	--	--	--	International	--	--
25	Dr. K. S. Shillewar	"Ein Lehrbuch der Fischereiwissenschaft" (German)	--	--	--	International	--	978-62-039-42019
26	Dr. K. S. Shillewar	"Un manuel de sciences halieutiques"(French)	--	--	--	International	--	978-62-039-41999
27	Dr. K. S. Shillewar	"Yucqhnk pblqoxo3nctbeh" (Russian)	--	--	--	International	--	--
28	Dr. K. S. Shillewar	"Um Livro de texto de ciencias da pesca" (Portuguese)	--	--	--	International	--	978-62-039-41975
29	Dr. K. S. Shillewar	Research Trends in Fisheries and Aquatic Science	Biology of fish	Notopterusnotopterus	--	International	2019-2020	978-93-5335-441-1
30	Dr. K. S. Shillewar	A text book of fish seed production	--	--	--	International	2017	978-613-7-43194-8
31	Dr. K. S. Shillewar	Fabrication of Aquarium	--	--	--	National	2018	97893-87374-66-9
32	Dr. K. S. Shillewar	A Hand book of Aquarium fishes	--	--	--	National	2019	978-93-89116-16-8
33	Dr. K. S. Shillewar	A Hand book of Fishery Science IIndEdition	--	--	--	National	2019	978-93-873774-91-1
34	Dr. K. S. Shillewar	Un librodiltesto di scienzadellapesca	--	--	--	International	2021	978-620-3-94198-2
35	Dr. K. S. Shillewar	Un de manual Sciences halieutiques	--	--	--	International	2021	978-620-3-94199-9
36	Dr. K. S. Shillewar	Libro de textotexto de ciencias de la pesca	--	--	--	International	2021	978-620-3-94200-2
37	Dr. K. S. Shillewar	EinlehrbuchderFischereiwissenschaft	--	--	--	International	2021	978-620-3-94201-9
38	Dr. K. S. Shillewar	A Text Book of Fishery Science	--	--	--	International	2021	978-620-3-58256-7
39	Dr. K. S. Shillewar	Fishing craft and gears, in book entitled Advances in Agricultural and life sciences	--	--	--	International	2021	978-3-96492-307-3
40	Dr. Mrs. V.V. Kulkarni	Published a chapter in a book entitled as <i>An Ontology of Indian Tribes</i> edited by Dr. Manmohan Singh on the topic <i>An Essence of Bastar Folk Art and Culture: A Critical Study of the Significant Tribal Life'</i>	--	--	--	National	2021	978-93-90618-62-0,



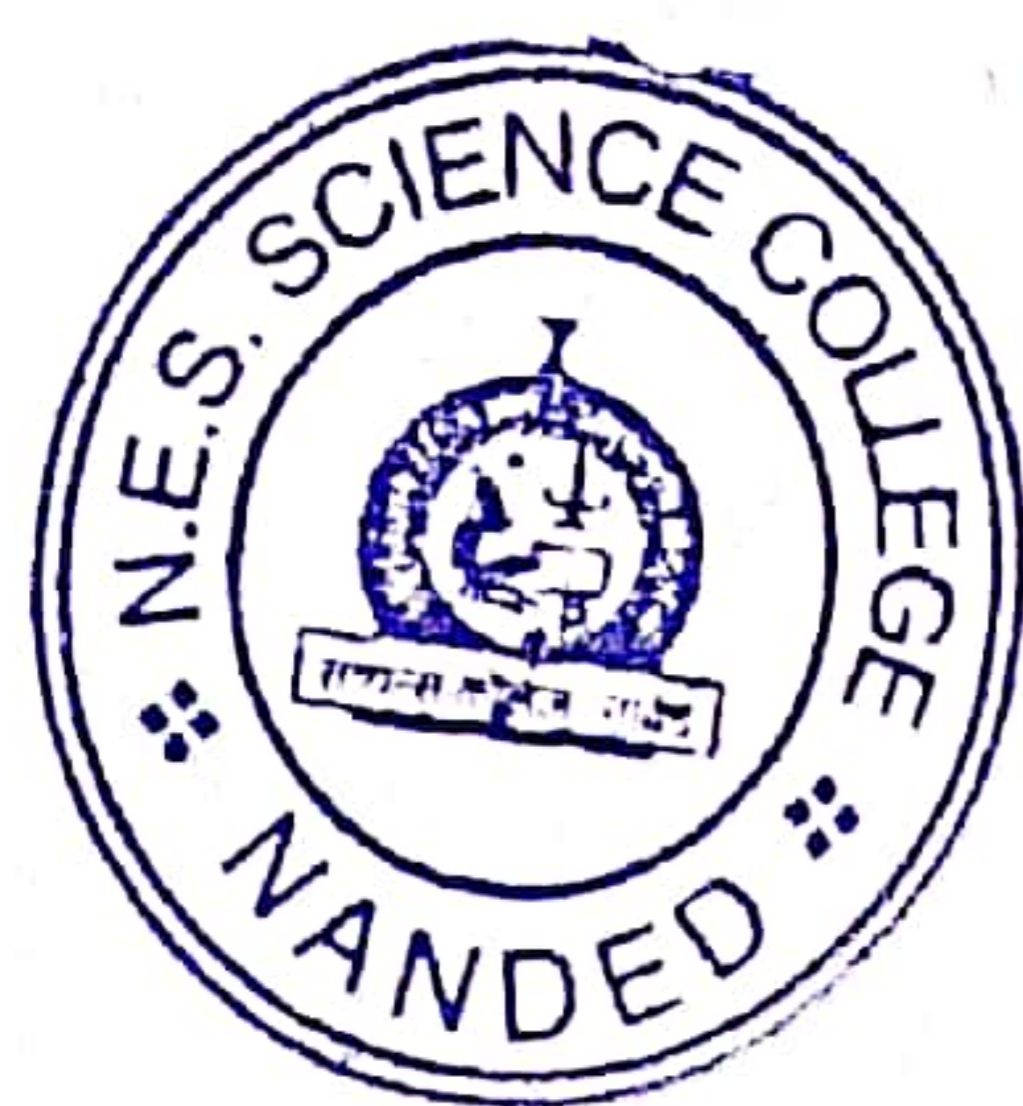

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41	Dr. Mrs. V.V. Kulkarni	Published a chapter in a book entitled as Gurcharan Das's A Fine Family: A Study of Cultural Transition in India Cultural Marvels in Multi- disciplinary Probes Edited by S.S.Priya	--	--	--	National	2022	978-81-950482-2-9
42	Dr. Mrs. V.V. Kulkarni	Body Language: The Communication Mightier than Words,	--	--	--	National	2021	978-93-91119-52-2
43	Dr. Mrs. V.V. Kulkarni	"Familial Discourse in <i>Tamarind Mem</i> by Anita Rao Badami"	--	--	--	International	2023	979-888951270-7
44	Dr. Mrs. V.V. Kulkarni	"A Critical Analysis of Vocalized Native Sentiments and Human Values in M. K. Gandhi's Narrative <i>An Autobiography: Story of My Experiments with Truth</i> "	--	--	--	National	2022	978-93-92464-27-0
45	Dr. Mrs. V.V. Kulkarni	'The Theme of Charity and Christmas in Charles Dickens' <i>A Christmas Carol</i> '	Literatures in English: Theories and Practices	--	--	International	2019-2020	978-81-942381-6-4
46	Dr. P. R. Kulkarni	Dynamical Systems and Some Results (Research Trends in Mathematics and Statistics (Volume - 16))	--	--	--	National	2023	978-93-5570-133-6
47	Dr. P. R. Kulkarni	Chaotic Dynamical Systems (Recent Research Trends in Mathematics Vol 2)	--	--	--	National	2023	978-93-93502-08-7
48	Dr. P. R. Kulkarni	PROPERTIES OF TOPOLOGICALLY CONJUGATE MAPPINGS (Advances in Mathematical Sciences)	--	--	--	National	2023	978-93-90833-24-5
49	Dr. P. S. Borkar	Lipase: Its characterization, Production and Immobilization on Modified Organic Support	--	--	--	International	2022	7947-4979-5.



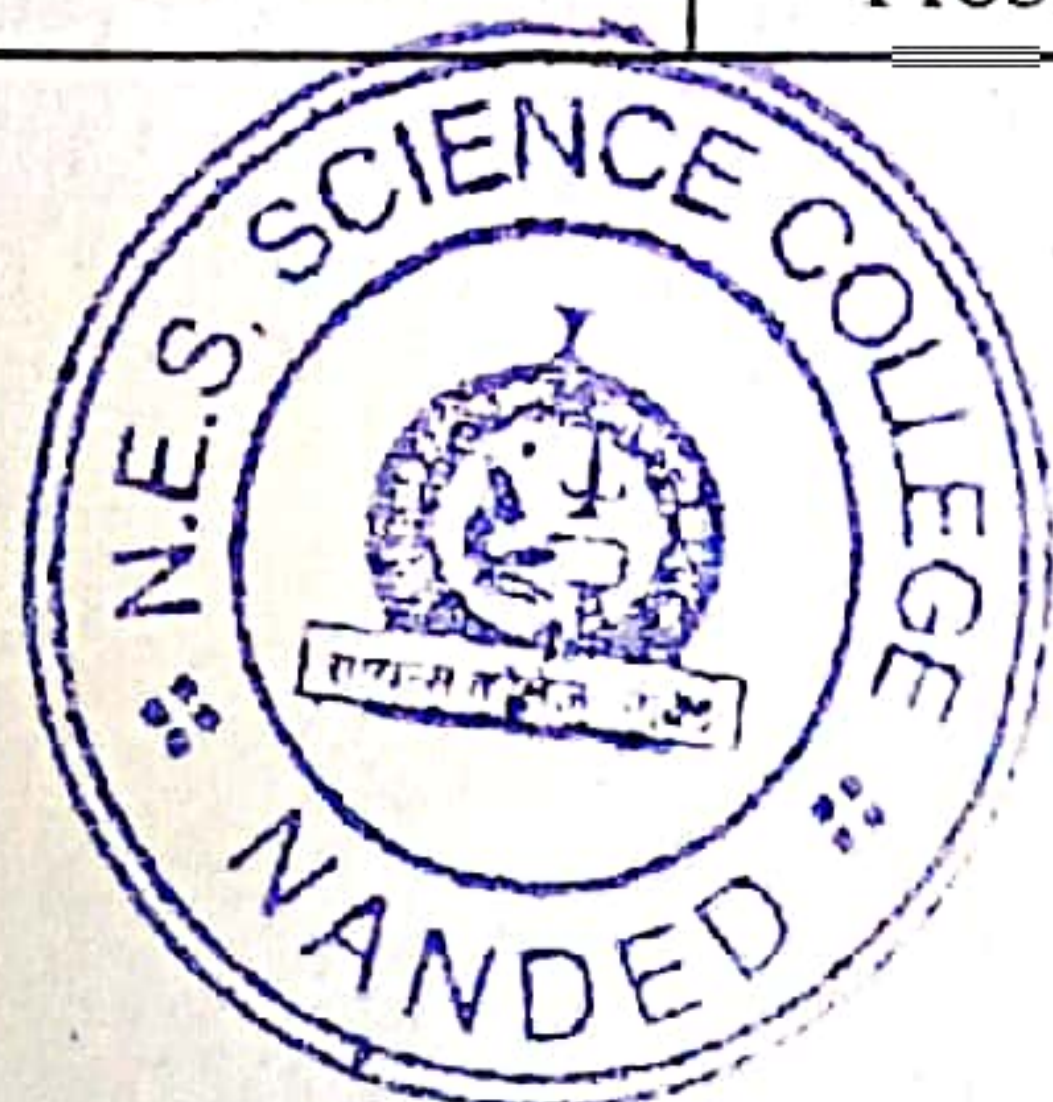

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50	Dr. P. S. Borkar	Multiple Choice Questions for Undergraduates in Agricultural Microbiology, Microbiology and Biotechnology	--	--	--	International	2022	978-1-6780-2263-1
51	Dr. P. S. Borkar	A laboratory Manual for Undergraduates in Agricultural Microbiology, Microbiology and Biotechnology	--	--	--	International	2022	978-93-91768-69-0
52	Dr. R. A. Muneshwar	Some Specila Methods to Solve Fractional Diffrential Equations with Applications	--	--	--	National	2023	978-93-92310-22-5
53	Dr. R. V. Sangvikar	Fungi Bio-Prospects in Sustainable Agriculture, Environment and Nano-technology Vol.3: Fungal Metabolites and Nanotechnology (Food Safety Concern Related to Aflatoxin and Control)	--	--	--	International	2022	978-0-12-821734-4
54	Dr. R. V. Sangvikar, Dr.B.D.Gachand e	Practical Manual- Cell, Molecular Biology, Genetics and Plant Breeding	--	--	--	National	2023	978-93-92310-13-3
55	Dr. S. L. Jadhav	Granthalaytalikikara ntatwik	--	--	--	National	2018	978-93-84267-35-3
56	Dr. S. L. Jadhav	Granthalaytalikikara ntatwik	--	--	--	National	2018	978-93-84267-35-3
57	Dr. S. L. Jadhav	Bird eye view on use of ICT in libraries	--	--	--	National		978-81-952217-7-6
58	Dr. S. L. Jadhav	Management of e-Resources in academic libraries	--	--	--		--	978-81-949113-8-8
59	Dr. S. L. Jadhav	Global trends in innovative librarianship : Reshaping the academic and public libraries.	N.E.S. Science College, Nanded Best Practice of our library. Topic in Gaurav Granth July 2019	--	--	International	2019-2020	--
60	Dr. Sangita Modi & Dr Sudhir B Jagtap	"Designing of ICT tool using web mining techniques"	--	--	--	International	2021-22	978-620-4-74677-7
61	Dr. Sangita Modi & Dr Sudhir B Jagtap	Web Development Using HTML CSS and JAVA Script	--	--	--	National	2021-22	978-93-91501-15-0



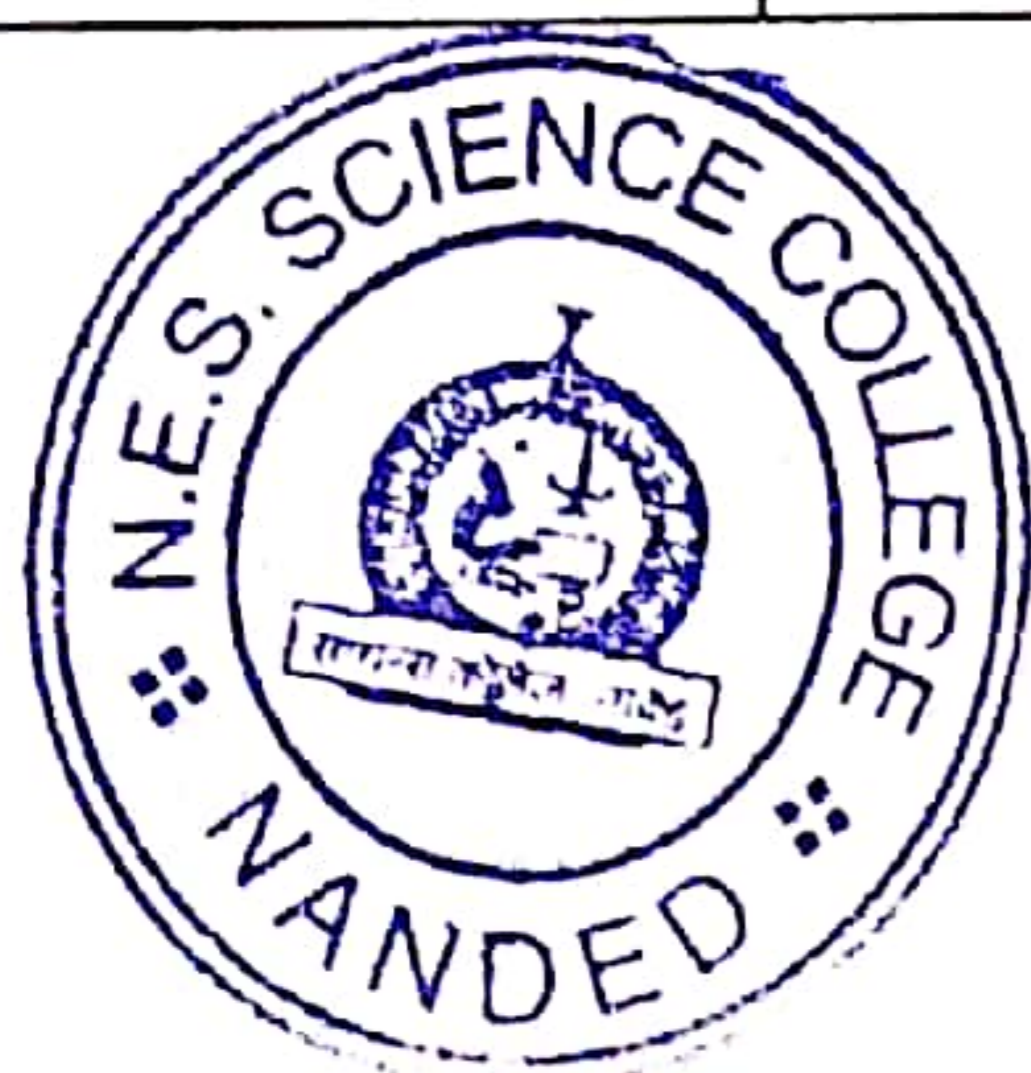

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62	Dr. U. S. Patki	"Text Document Clustering: A Hard and Soft Computing Approach	--	--	--	International	2021-2022	978-620-4-74538-1
63	Dr. U. S. Patki	--	Programming in C	--	--	--	--	--
64	Dr. U. S. Patki	--	Text Document Clustering: A Hard and Soft Computing Approach	--	--	--	--	--
65	Dr. Ulhas Patki Dr. A.B. Kurhe	Role of IoT in Covid-19 pandemic (Post Covid-19 New Challenges and Strategies)	--	--	--	National	2022-23	978-93-92313-62-2
66	Dr. Ulhas Patki Dr. A.B. Kurhe	The Key takeaways to Date and actions still need to be taken for Covid-19 (Post Covid-19 New Challenges and Strategies)	--	--	--	National	2022-23	978-93-92313-62-2
67	Dr. V. R. Marathe	Sunscreens	A Prospectus of microbial metabolites as ingredients in Commercial Sunscreens.	--	--	International	2018	978-1-53613-294-6
68	Dr. V. R. Marathe	A text book of Botany Bsc. Third semester	--	--	--	National	2018	978-93-87278-12-7
69	Dr. V. R. Marathe	Interdisciplinary research in Life Sciences	Eleusine coracana (L) Gaertn (Finger Millet) an important sustainable food supplement	--	--	National	2023	978-93-95369-85-5
70	Dr. V. R. Marathe	isolation and screening of neringianase producing microbe:an industrial inputs for agrowaste base enzyme industry	--	--	--		2022	978-1-0716-1723-6 978-1-0716-1724-3 (eBook)
71	Dr. V. R. Marathe	Isolation of Selenium Biotransforming Microbes as New Age Bioinputs.	--	--	--		2022	978-1-0716-1723-6 978-1-0716-1724-3 (eBook)
72	Dr. V. R. Marathe and Dr. D. M. Jadhav	Fundamentals of Ecology	--	--	--	National	2021	978-81-950373-0-8
73	Dr. V.A. Jadhav	Application of genetic Algorithm	--	--	--	National	2018	978-1-387-23919-2
74	Dr. V.A. Jadhav	Fractional Transportation Problem Using	--	--	--	National	2018	978-1-387-44602-6



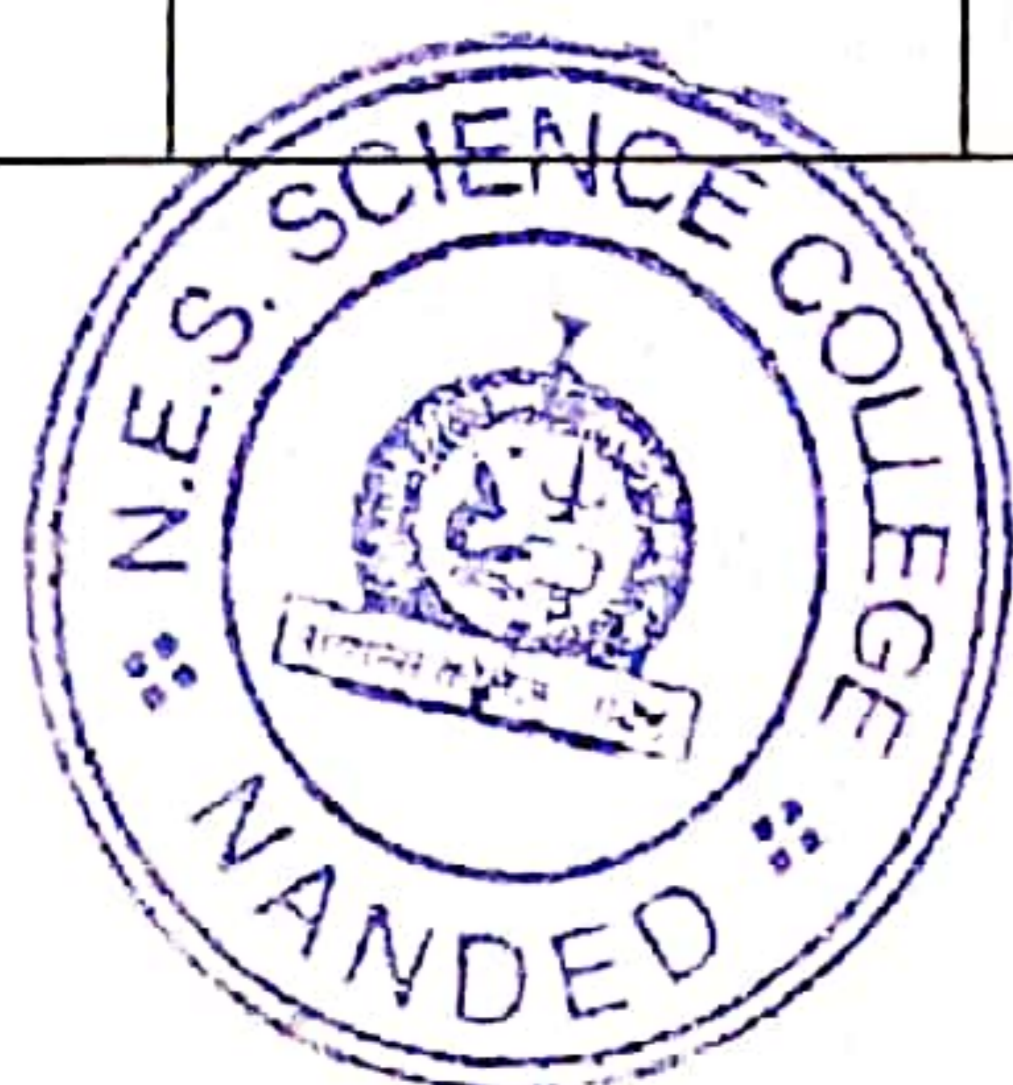

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		FuZZy Programming Problem						
75	Dr. N. P. Pawar	Lab Experiments in Physics Vol-II B.Sc. II year	--	--	--	National	2018	978-81-933652-3-6
76	Dr.N. P. Pawar	Lab Experiments in Physics Vol-IV B.Sc. III year	--	--	--	National	2018	978-81-933652-5-0
77	Dr.N. P. Pawar	Lab Experiments in Physics Vol-I B.Sc. I year	--	--	--	National	2018	978-81-933652-4-3
78	Dr.S. L. Jadhav	Status of E-Resources & E-Services in Academic Libraries	--	--	--	National	2021	978-81-952217-7-6
79	Mr. Ajay Hware	--	Biology of GobiusStriatus	--	--		2020	978-93-90052-32-5
80	Mrs. Varsha D. Borgaonkar	Lecture Notes in Functional Analysis	--	--	--	National	2023	978-81-19678-81-5
81	Mrs. Varsha D. Borgaonkar	--	studies on fixed point theorems for the families of selfmaps on rings	--	--	National	2024	978-935547-509-1
82	Mrs. Varsha D. Borgaonkar	--	Some contractive type mapping in b-metric space	--	--	National	2024	978-81-971-164-0-7
83	Dr. S. S. Modi	--	--	Proceedings of the International Conference on Communication and Electronics Systems (ICCES 2018)		International	2018	978-1-5386-4765-3
84	Dr. D. U. Gawai	Diseases of Crop Plants				National	2019	978-93-87160-45-3
85	Dr. D. U. Gawai	Physiological and Molecular Plant Pathology				National	2018	978-93-87160-44-6
86	Dr. P. G. Paul	--	--	SYNTHESIS OF HYDROXYCHALCONES AND THEIR IN-VITRO ANTIOXIDANT AND	Plants, Environment and Sustainable Agriculture' 'Plants, Environment and	National	2024	278-5639



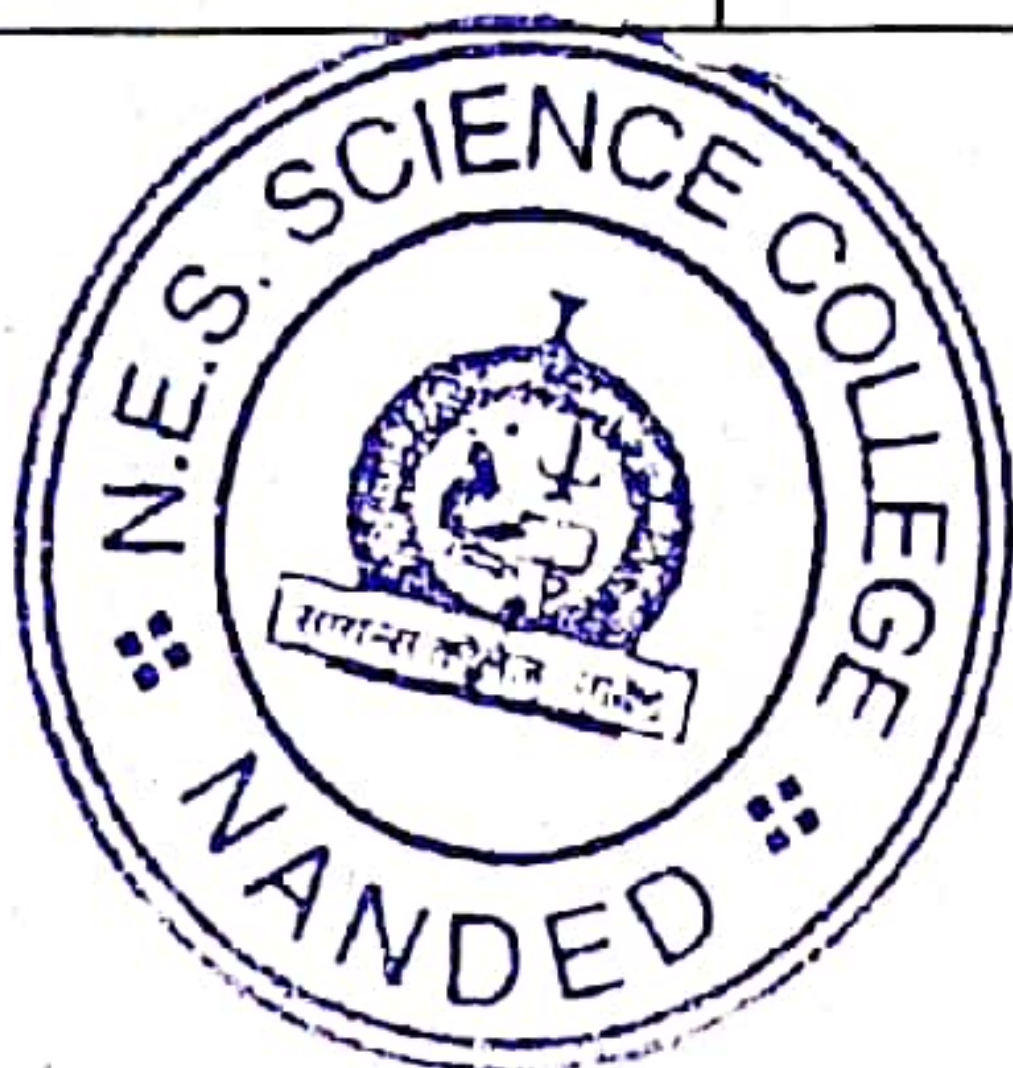

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				CYTOTOXIC ACTIVITY	Sustainable Agriculture'			
87	Dr. A. T. Shinde	--	--	SYNTHESIS OF HYDROXYCHALCONES AND THEIR IN-VITRO ANTIOXIDANT AND CYTOTOXIC ACTIVITY	Plants, Environment and Sustainable Agriculture' 'Plants, Environment and Sustainable Agriculture'	National	2024	278-5639
88	Mr. K.K. Jadhav	--	--	ANALYSIS OF SOIL SAMPLES FOR THEIR PHYSICO-CHEMICAL PARAMETERS FROM NANDED DISTRICT, MAHARASHTRA	Plants, Environment and Sustainable Agriculture' 'Plants, Environment and Sustainable Agriculture'	National	2024	278-5639
89	Mr. S. M. Kadam	--	--	ANALYSIS OF SOIL SAMPLES FOR THEIR PHYSICO-CHEMICAL PARAMETERS FROM NANDED	Plants, Environment and Sustainable Agriculture' 'Plants, Environment and Sustainable Agriculture'	National	2024	278-5639



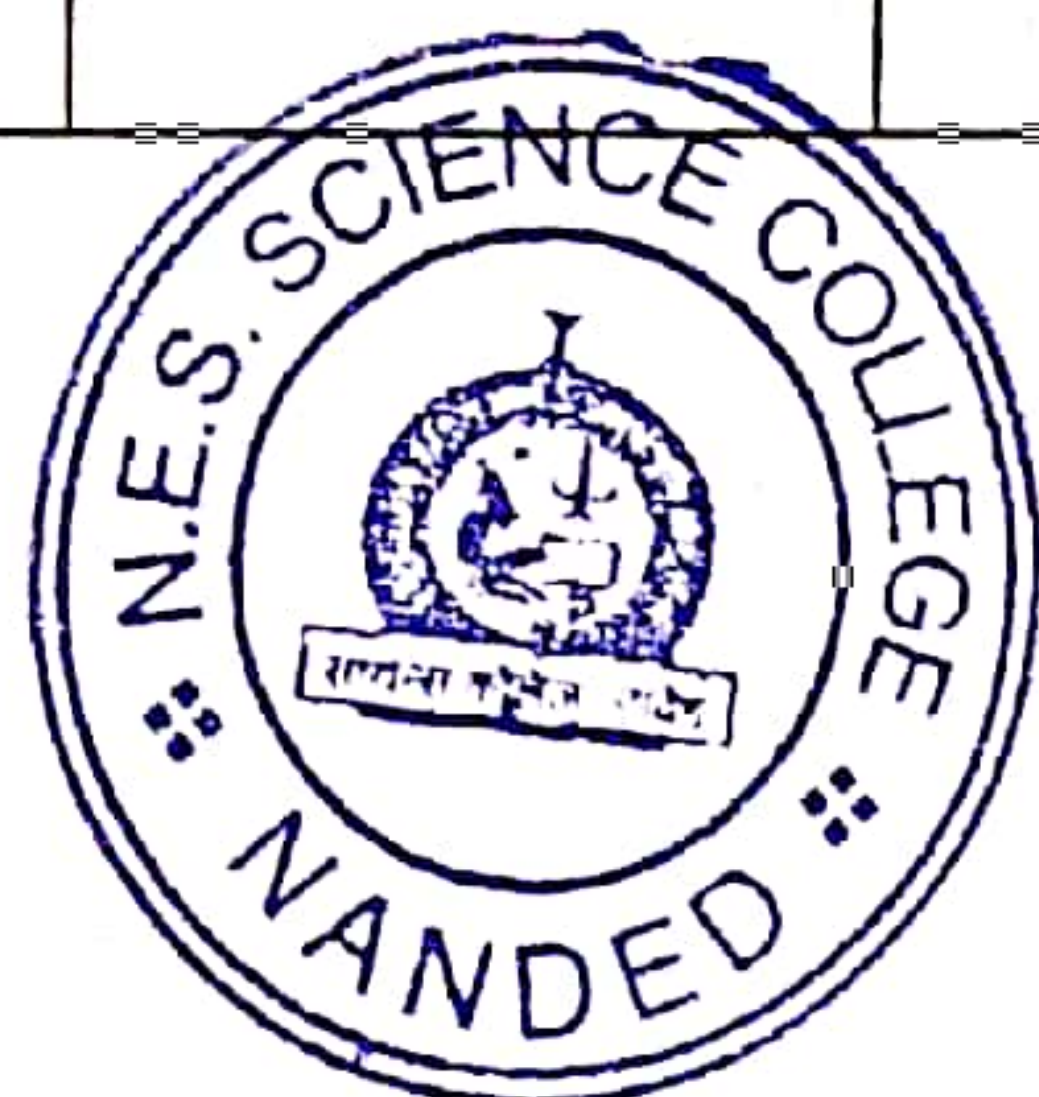

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				DISTRIC T, MAHAR ASHTR A	Agricul ture'			
90	Mr. R. M. Achegawe	--	--	ANALY SIS OF SOIL SAMPLE S FOR THEIR PHYSIC OCHEMI CAL PARAM ETERS FROM NANDE D DISTRIC T, MAHAR ASHTR A	Plants, Environ ment and Sustain able Agricul ture' 'Plants, Environ ment and Sustain able Agricul ture'	National	2024	278-5639
91	Mr. Y. R. Ramsane	--	--	ANALY SIS OF SOIL SAMPLE S FOR THEIR PHYSIC OCHEMI CAL PARAM ETERS FROM NANDE D DISTRIC T, MAHAR ASHTR A	Plants, Environ ment and Sustain able Agricul ture' 'Plants, Environ ment and Sustain able Agricul ture'	National	2024	278-5639
92	Dr. N. J. Deshmukh	--	--	ANALY SIS OF PHYSIC AL AND CHEMIC AL PROPER TIES OF SELECT ED SOILS	Plants, Environ ment and Sustain able Agricul ture' 'Plants, Environ ment	National	2024	278-5639



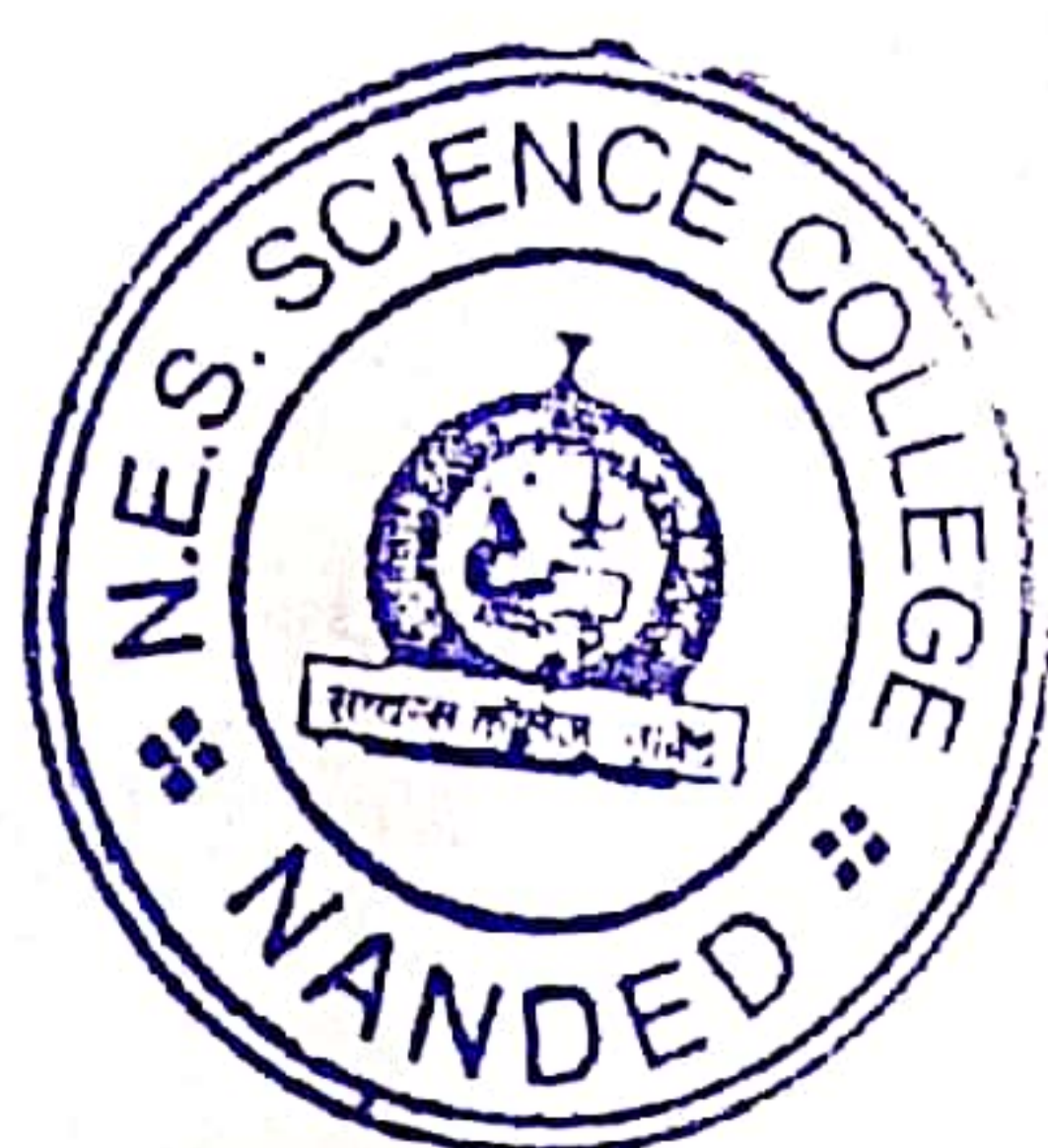

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				SAMPLES OF AGRICULTURAL AREA OF NANDED	and Sustainable Agriculture'			
93	Dr. A. T. Shinde	--	--	ANALYSIS OF PHYSICAL AND CHEMICAL PROPERTIES OF SELECTED SOILS SAMPLES OF AGRICULTURAL AREA OF NANDED	Plants, Environment and Sustainable Agriculture' 'Plants, Environment and Sustainable Agriculture'	National	2024	278-5639
94	Dr. P. G. Paul	--	--	ANALYSIS OF PHYSICAL AND CHEMICAL PROPERTIES OF SELECTED SOILS SAMPLES OF AGRICULTURAL AREA OF NANDED	Plants, Environment and Sustainable Agriculture' 'Plants, Environment and Sustainable Agriculture'	National	2024	278-5639
95	Dr. B. D. Gachande	--	--	BIOLOGICAL APPLICATIONS OF ZINC OXIDE NANOPARTICLES (ZNONPS)	Plants, Environment and Sustainable Agriculture' 'Plants, Environment and Sustainable Agriculture'	National	2024	278-5639




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				SYNTHESIZED FROM MOMORDICA DIOICAROXB.E X WILD LEAF EXTRACT.	and Sustainable Agriculture'			
96	Dr. B. D. Gachande	--	--	GREEN SYNTHESIS OF COPPER OXIDE NANOPARTICLES USING MOMORDICA DIOICAFRUIT EXTRACT AND THEIR BIOLOGICAL APPLICATIONS	Plants, Environment and Sustainable Agriculture' 'Plants, Environment and Sustainable Agriculture'	National	2024	278-5639
97	Dr. R. V. Sangvikar	--	--	BIOLOGICAL APPLICATIONS OF ZINC OXIDE NANOPARTICLES (ZNONPS) SYNTHESIZED FROM MOMORDICA DIOICAROXB.E X WILD LEAF EXTRACT.	Plants, Environment and Sustainable Agriculture' 'Plants, Environment and Sustainable Agriculture'	National	2024	278-5639




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98	Dr. R. V. Sangvikar	--	--	GREEN SYNTHESIS OF COPPER OXIDE NANOPARTICLES USING MOMORDICA FRUIT EXTRACT AND THEIR BIOLOGICAL APPLICATIONS	Plants, Environment and Sustainable Agriculture' 'Plants, Environment and Sustainable Agriculture'	National	2024	278-5639
99	Dr. A. S. Bansode	Instrumental methods of chemical analysis	-	-	-	International	2019	978-81-931506-9-6
100	Dr. L. P. Shinde	Instrumental methods of chemical analysis	-	-	-	International	2019	978-81-931506-9-6
101	Dr. L. P. Shinde	--	--	Development of environment friendly clean agents for replacement of halons in Indian combat vehicles - tanks, T-	International science community association	International	2023	ISCA-ISC-2023-4CS-05-Oral



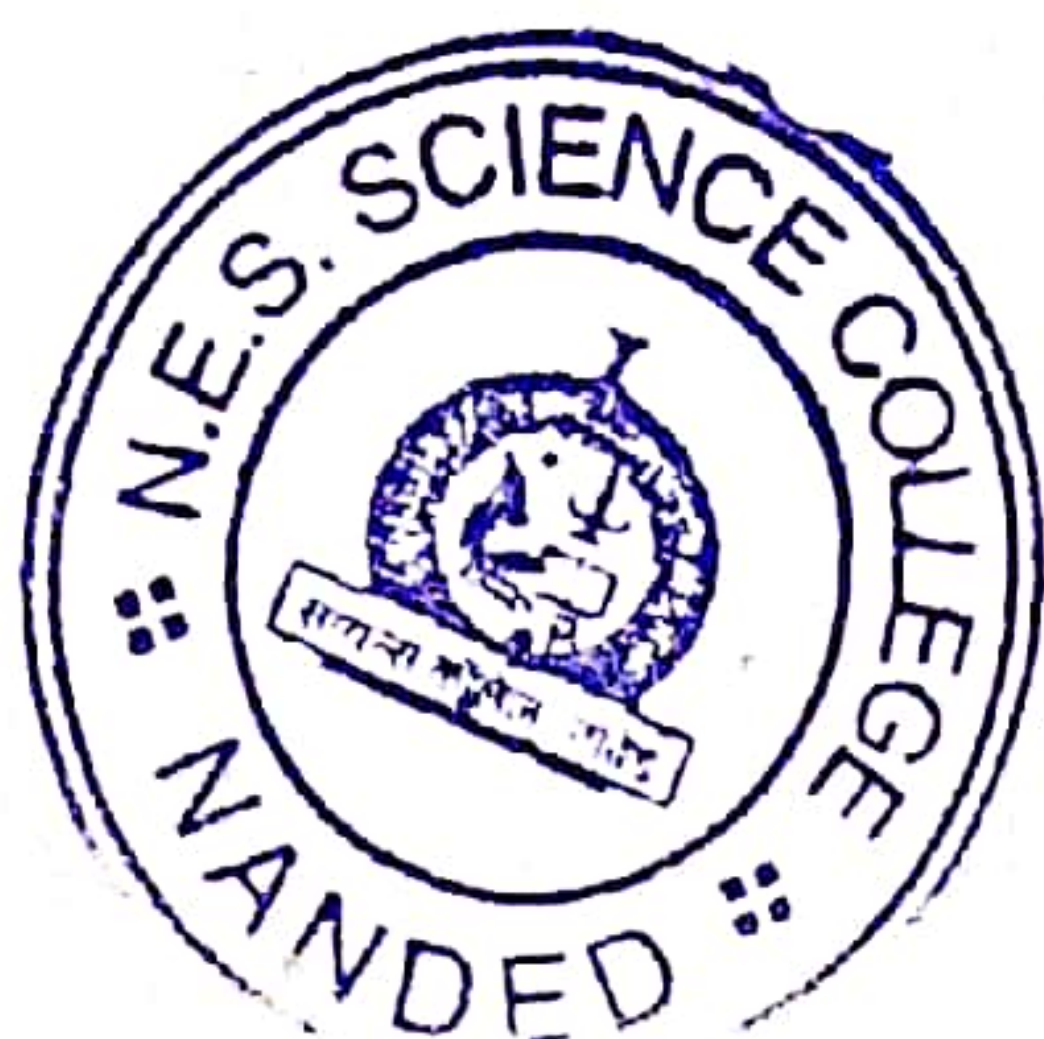

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				72 and T-90				
102	Dr. P.D. Satav	--	--	Development of environment friendly clean agents for replacement of halons in Indian combat vehicles - tanks, T-72 and T-90	International science community association	International	2023	ISCA-ISC-2023-4CS-05-Oral
103	Dr. A. P. Borikar	--	--	Physical Fitness Level Indian Game Kabaddi and Foreign Game Basketball Players	Intrlink Research Analysis	International	2022	ISSN 0976-0377
104	Dr. A. P. Borikar	--	--	Investigation of Before Competition State Anxiety Of Basketball Player	Social Growth	International	2020	ISSN 2229-6190




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105	Dr. A. P. Borikar	--	--	Well Balanced Diet Plan to Boost your Immunity	Univers al Researc h Analysis	Internati onal	2022	ISSN 2229- 4406
106	Dr. A. P. Borikar	--	--	Effect Of Weight Training On Strat Skill Among Competit ive Swimmw ers	Vesion Researc h Review	Internati onal	2023	ISSN 2250- 169X
107	Dr. V. A. Jadhav	Business statistics and mathematics	-	-	-	National	2019	978-81- 944191-6-7
108	Dr. V. A. Jadhav	Introduction to probability theory	-	-	-	National	2019	978-1-312- 74223-9
109	Dr. V. A. Jadhav	Introduction to exact sampling distribution	-	-	-	National	2018	978-1-312- 88356-7




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110	Dr. V. A. Jadhav	Multi- objective transportation problem	-	-	-	National	2019	978-3-639-76863-3
111	Dr. V. A. Jadhav	Quantitative techniques	--	--	--	National	2019	978-93-83887-85-9




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डॉ. सतीश यादव

जन्म - अक्टूबर 1973 में श्री गिरी रोड, श्री. 1985 में दिल्ली विश्वविद्यालय, दिल्ली विश्वविद्यालय में शिक्षा विभाग में 1997 में डॉ. सतीश यादव का प्रवेश हुआ। 1997-98 में डॉ. सतीश यादव का प्रवेश हुआ। 1997-98 में डॉ. सतीश यादव का प्रवेश हुआ।

पुस्तकें - हिंदी - 'प्रेम' का अर्थ क्या है?, 'अनुभव' का अर्थ क्या है?, 'अनुभव' का अर्थ क्या है?, 'अनुभव' का अर्थ क्या है?

पुस्तकें - हिंदी - 'प्रेम' का अर्थ क्या है?, 'अनुभव' का अर्थ क्या है?, 'अनुभव' का अर्थ क्या है?, 'अनुभव' का अर्थ क्या है?

संपादन - डॉ. सतीश यादव

इकाई - डॉ. सतीश यादव

पुस्तकें - 'प्रेम' का अर्थ क्या है?, 'अनुभव' का अर्थ क्या है?, 'अनुभव' का अर्थ क्या है?, 'अनुभव' का अर्थ क्या है?

संपादन - डॉ. सतीश यादव



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36. स्वतन्त्रबोलर हिंदी कहानी और रेणु डॉ. वचन रंभाश्रीराव घोडके	204	49. 'पंचसदृश' कहानी में स्वाधीन भारत की सामंजस का चित्रण डॉ. संजय पाईनबाबू	286
37. कर्णोत्तर नाथ रेणु की कहानियों में औपनिवेशिकता डॉ. सी. अरुण सनेद सुक्ल	209	50. प्राचीन शक्ति कालखण्ड की संवेदकशील अभिव्यक्ति - 'देम' डॉ. पीरल जनाकर कने	292
38. कर्णोत्तरनाथ रेणु की कहानियों में लोकजीवन डॉ. कंजय शिरसागर	218	51. तीसरी कसम का विंगमन डॉ. कुचर बबसोरे	309
39. कर्णोत्तरनाथ रेणु की कहानियों में व्यक्त सामाजिक जीवन परिप्रेक्ष्य डॉ. राजकुमार खंडेनराव जाधव	224	52. रेणु की कहानी 'तीसरी कसम' का फिल्मोन्नत : बोल्ले-बाबे शिरामन के अपकृत प्रेम की कालखंडी गाथा डॉ. किरीटकुमार विश्वामयन सधयकर 'वेदम'	304
40. कर्णोत्तरनाथ रेणु की कहानियों में प्राचीन संवेदना डॉ. मोहुल मारदेव भल्ल	229	53. 'रसप्रिया' और 'देम' कहानी में व्यक्त कलाकार का मार्ग डॉ. सुकुंद कश्ये	319
41. कर्णोत्तरनाथ रेणु की कहानियों में व्यक्त समाज जीवन की प्रामाणिकता डॉ. इमरो मोहन मुंजाभाऊ	234	54. कर्णोत्तरनाथ रेणु की श्रेष्ठ औपनिवेशिक कहानी रसप्रिया डॉ. खनई एम. आर.	316
42. कर्णोत्तरनाथ रेणु की कहानियों में ग्राम सघार्थ डॉ. हानेकर अंबुजराव देवकुष	242	55. कर्णोत्तरनाथ रेणु की कहानियों में व्यक्त सामाजिक कलाकार (विशेष संदर्भ : रसप्रिया और देम कहानी) डॉ. सविता चोमलेषा किले	320
43. सामाजिक के परिप्रेक्ष्य में रेणु की कहानियाँ डॉ. निराली मारोका भदरने	247	56. कर्णोत्तरनाथ रेणु की कहानी 'रसप्रिया' में संगठन तथा लोक संगीत डॉ. डॉ. मलवीर उरलीकर	323
44. 'तीसरी कसम' कहानी के चित्रण और होराघार्थ : चरित्र स्वोत्त डॉ. मोरख मोराल	252	57. तीसरी कसम का विंगमन डॉ. रंजना पारित	331
45. प्रेम की खरो पोछ की अभिव्यक्ति- 'तीसरी कसम' उर्क मारे गए गुनफरम' डॉ. डॉ. रणजीत जाधव	259	58. 'तीसरी कसम' उर्क मारे गए गुनफरम' का चित्रण प्रेमी गाड़ीवान चित्रण डॉ. डॉ. संजीवकुमार नरयारे	335
46. एक श्रमीत गाड़ीवान की 'तीसरी कसम' डॉ. प्रियदर्शिनी	264	59. कर्णोत्तरनाथ रेणु के साहित्य में औपनिवेशिकता डॉ. शारदने विजय भास्कर	341
47. औपनिवेशिक परिप्रेक्ष्य की सीधी मरुत : तीसरी कसम डॉ. टी आर भुने	275	60. कर्णोत्तरनाथ रेणु की कहानियों में विंगित आपत्तिक जीवन ('पंचसदृश' कहानी के विशेष संदर्भ में) डॉ. नवकर पारुषर	345
48. 'तीसरी' कसम कहानी का चित्रण और होराघार्थ डॉ. अर्जुन कश्ये	280		



फणीश्वरनाथ रेणु की कहानियों में आंचलिकता

डॉ. सौ. अरुणा राजेंद्र शुक्ल

नई कहानी में आंचलिकता का प्रयोग करने वाले कहानीकारों में रेणु प्रमुख रूढ़नीकार हैं। इनकी कहानियों में अंचल उभरता है। रेणु की कहानियों के मूल में मनुष्य है, उनकी समस्याएं हैं, और उसका यथार्थ है। नई कहानी के साथ-साथ उसकी एक सशक्त प्रवृत्ति के रूप में प्रायः आंचलिकता पर विचार विमर्श होता है। पहले पहल तो नगर कहानी बनाम ग्राम कहानी के रूप में चर्चा चली और इस बात को लेकर मतभेद भी था कि किस संदर्भ को लेकर लिखी जाने वाली कहानी को नई कहानी माना जाय। आंचलिक शब्द वाद में चालू हो गया। हिंदी में प्रचलित कहानी के इस प्रवृत्ति विशेष के विभिन्न पक्षों पर विचार करने के पहले यह देखा जा सकता है कि अन्य भारतीय भाषाओं में इस प्रवृत्ति का चनात्मक परिप्रेक्ष्य क्या है।

स्वातंत्र्योत्तर भारतीय साहित्य में लोक चेतना से युक्त एक दृष्टि का विकास हुआ है। सभी भाषाओं में यह प्राप्त है। साहित्य के पहले यह प्रवृत्ति कला के क्षेत्र में विकसित हुई, विशेष रूप से चित्रकला और वास्तुकला के क्षेत्र में। इसके पीछे भारतीय अस्मिता की खोज वर्तमान हैं। लोक चेतना का स्फुरण साहित्यिक विधाओं में विभिन्न प्रकार से दिखाई देता है। कथा साहित्य में यह दृष्टि ग्रामीण जीवन के वैविध्य के चित्रण करते हुए विकसित हुई। भारत की सभी भाषाओं में यह प्रवृत्ति नजर आती है। यह मात्र स्थानीय रंग के मोह से उद्भूत दृष्टि नहीं है। कतः आंचलिक कहानी लोक चेतना का अभिव्यक्ति पक्ष है। भले ही यह प्रवृत्ति क्षेत्र रूप में पहले भी रही हो। फिर भी स्वातंत्र्योत्तर युग में ही यह बलवती हो गई है। हिंदी में यह प्रवृत्ति स्वातंत्र्योत्तर युग की देन है। हिंदी के कई आलोचकों ने इस मत का समर्थन किया है। आंचलिकता की शुरुआत के बारे में राजेंद्र अवस्थी



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स्वातंत्रता आंदोलन भारतीय इतिहास का वह युग है, जो गीड़ा, गडगवाहट, डंग, अरुण सम्मान, गर्व, गौरव तथा सत्य के अधिक शहीदों के लहू को रमेटे है। स्वतंत्रता के इस महायज्ञ में समाज के प्रत्येक वर्ग ने अपने-अपने तरीके से बलिदान दिए। इस स्वतंत्रता के युग में साहित्यकारों और लेखकों ने भी अपना बहुत योगदान दिया। हमारे देश में अंग्रेजों ने अपना अधिपत्य जमा रखा था उनके भगाने में कल्पन चारों ने अपनी भूमिका बड़ी बखूबी से निभाई। क्रांतिकारियों ने लेकर देश के आम लोगों तक के अंदर लेखकों ने अपने शब्दों में जोश भरा। विविध साहित्यकारों में जैसे उपन्यासकार, नाटककार, निबंधकार, पत्रकार, देश के वकिल्प इन सभी का योगदान रहा है। इन सभी के लेखन ने आम जन में राष्ट्रप्रेम की भावना जगाने में सारगर्भ सिद्ध हुई है। इन विविध साहित्यकारों में से कवियों ने अपनी कविता से लोगों में देश प्रेम की ऐसी अलख जगाई कि लोग अपने घरों से बाहर निकल आए और क्रांतिकारी स्वातंत्रता आंदोलन में हिस्सा लिया। भारत में स्वाधीनता संग्राम का इतिहास उतना ही पुराना है जितना कि हमारी परतंत्रता का इतिहास। यह देश हजारों वर्षों से भी अधिक समय तक सुप्तान रहा, परंतु इसका सांस्कृतिक स्वरूप अधुन्य बना रहा। भारत की राष्ट्रियता का आधार राजनीतिक एकता न होकर सांस्कृतिक एकता रही है।

भारतेंदु हरिश्चंद्र ने जिस आधुनिक युग का प्रारंभ किया, उनकी जड़े स्वाधीनता आंदोलन में ही थीं। भारतेंदु और भारतेंदु मंडल के साहित्यकारों ने युग चेतना को पच और गढ दोनों में अभिव्यक्ति दी। इसके साथ ही इन साहित्यकारों ने स्वाधीनता संग्राम और सेनानियों की भूर-भूरी प्रशंसा करते हुए भारत के स्वर्णिम अतीत में लोगों की आत्मा जगाने का प्रयास किया। यहीं दूसरी ओर उन्होंने अंग्रेजों की शोषणकारी नीतियों का मुखकर विरोध किया। भारतेंदु हरिश्चंद्र ने महत्वपूर्ण भूमिका स्वातंत्रता आंदोलन में निभाई। अंग्रेजों द्वारा निधि है भारतीय जनता पर जुन्मों शितम व लूट का लूट का उन्होंने बड़-बड़कर विरोध किया है। उन्हें इस बात का क्षोभ था कि अंग्रेज यहाँ से सारी संपत्ति लूट कर विदेश ले जा रहे थे। इस लूटपाट और भारत की बदहामी पर उन्होंने काफी कुछ लिखा। 'अंधेर नगरी' नामक अंग्रेजों के माध्यम से भारतेंदु ने तत्कालीन राजाओं की निरंकुशता, अंधेर नगरी और उनकी भूर्जिता का सटीक वर्णन किया है। अपनी भावना को व्यक्त करते हुए उन्होंने लिखा है-

"भीतर भीतर सब रात सुनी, हवीं हवीं के तन मन धन सुनी।

जाहिर जातिन में प्रति तेज, क्यों सधि सज्जन, न सखि अंधरेज।" 1

'राष्ट्रीय बन्धुधारा को विकसित करने वाली सुभद्रा कुमारी चौहान का 'विधारा' और 'मुहुल की राखी', 'शंसी की राखी', 'बीरों का कैसा हो बसंत' आदि कविताओं में तीखे भावों की पूर्ण भावना मुखरित है। उन्होंने असहयोग आंदोलन में सक्रिय भूमिका निभाई। आंदोलन के दौरान उन्हें कई बार जेल जाना पड़ा। जातिवांचाना बाण में 'बसंत' कविता में इस गूढ्य हावाकांड पर कवयित्री के कथन ब्रंडन से उसके मुक्त वेदना मूर्तिमान हो उठी है-

"शांति प्रिय अतुराज, किंतु धीरे से आना

शोक स्थान, यहाँ मत शोर मचाना।



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Integrated Management of Crop Diseases



Editors

H.K. Chourasia
S.K. Choudhary



Contents

1. **INTEGRATED DISEASE MANAGEMENT IN CHICKPEA THROUGH CONVENTIONAL AND BIOTECHNOLOGICAL APPROACHES**
Sadia Perween, Anand Kumar, S.P. Singh, Manoj Kumar, Anil Kumar, Satyendra, Ravi Ranjan Kumar, Mankesh Kumar and Sanjay Kumar 1-42
2. **PRODUCTION CONSTRAINTS AND GENETIC IMPROVEMENT OF PULSE CROPS IN BIHAR**
Anil Kumar, Anand Kumar, Chandan Kishore, Manoj Kumar, Ravi Ranjan Kumar, Vinod Kumar, Kumari Rajani and Abhijeet Ghatak 43-78
3. **DEVELOPMENT OF A UNIQUE RHIZOSPHERIC SOLID ORGANIC SUPPLEMENT FOR BETTER CROP PRODUCTIVITY AND BIO-CONTROL OF PATHOGENS**
Noyonika Mukherjee, Anjali Yadav, Anindita Bhattacharya, Arup Kumar Mitra and Fr. S Xavier S.J. 79-93
- ✓ 4. **FUNGAL DIVERSITY IN RHIZOSPHERE SOIL OF DIFFERENT VARIETIES OF PIGEONPEA [*Cajanus cajan* (L.) Millsp.]**
B.D. Gachande and V. Jalander 95-112
5. **A SILENT BATTLE**
Anik Sarkar and Krishnendu Acharya 113-123
6. **SURVEY IN PLANT PATHOLOGY: NEED, PLANNING, PREPARATION, PERIOD, PROCUREMENTS, PRECAUTIONS, SAMPLING AND EFFICIENCY**
P.K. Shukla 125-135

7. **INTEGRATED MANAGEMENT OF TEMPERATE PERENNIAL FODDER GRASS DISEASES - A BIOTECHNOLOGICAL APPROACH**
Dilip Kumar Verma, Suheel Ahmad, Nazim Hamid Mir, Siraj and Ahmad Bhat 137-161
8. **MYCORRHIZA HELPER BACTERIA (MHB) AND THEIR INTERACTIONS WITH MYCORRHIZAL FUNGI AND HOST PLANT**
Sikha Dutta, Avishek Sarkar, Abhinanda Ghosh and Sunanda Dutta 163-187
9. **EFFECT OF SELECTED CHEMICAL AND BIOLOGICAL FUNGICIDES ON *IN VITRO* POLLEN GERMINATION AND POLLEN TUBE DEVELOPMENT OF TWO CUCURBITACEOUS CROPS.**
Manoranjan Paramanik, Subrata Raha and Sanjeev Pandey 189-197
10. **INTEGRATED PLANT DISEASE MANAGEMENT IN DEVELOPING COUNTRIES**
H.K. Chourasia and Akanksha Raman 199-214
11. **SCAR MARKERS: A VERSATILE MOLECULAR TOOL FOR DETECTION OF PLANT GENOME**
Kumari Rekha, Ravi S. Singh, , Sima Sinha, Ankita Sinha, Shikha Kumari, Prabhash K. Singh, Ujjwal Jha and Dharamsheela Thakur 215-223
12. **DEVELOPING INSECT RESISTANT RICE THROUGH MOLECULAR BREEDING**
Mankesh Kumar, Satyendra, Manoj Kumar, Anand Kumar, S. P. Singh, Kumar Vaibhav and P.K. Singh 225-236
13. **MACROPHOMINA ROOT ROT OF GROUNDNUT (*Arachis hypogaea* L.)**
Manoj Kumar, Neha Rani, Anand Kumar, Anil Kumar, Satyendra, Mankesh Kumar, S.P. Singh and Sunita Kumari 237-255

14. **INCIDENCE OF FUNGAL DISEASES ON MAKHANA IN PREHARVEST AQUATIC CONDITIONS AND THEIR POSSIBLE CONTROL**
Meenu Sodi and Sanjib Kumar 257-271
15. **INTEGRATED PESTS AND DISEASE MANAGEMENT BY ORGANIC FARMING AND NATURAL INSECTICIDES**
Mir Syeda Yuhannatul Humaria and M.R. Sinha 273-291
16. **IDENTIFYING THE IMPACTS OF PEST ATTACK ON SAL TREE (*Shorea robusta*) IN THE DINDORI DISTRICT OF MADHYA PRADESH USING REMOTE SENSING AND GIS APPROACH**
Obaidullah Ehrar, Shubham Kumar, Rabindar Kumar and Ajay Kumar Srivastava 293-301
17. **IMPACT OF ABIOTIC AND BIOTIC STRESSES ON STEVIOL GLYCOSIDE PRODUCTION BY *Stevia rebaudiana* Bert. – CURRENT SCENARIO**
Abhijit Bandyopadhyay 303-311
18. **INTEGRATED PLANT DISEASE MANAGEMENT (IDM) – CONCEPT, ADVANTAGES AND IMPORTANCE**
Raj Kamal Sahu, P.K. Sah and Abha Anand 313-321
19. **UTILIZING THE EFFECTIVENESS OF MICROBIAL CONSORTIA AS BIOPESTICIDE**
Riddhi Basu, Atmeeya Sarkar, Bedaprana Roy, Poushali Mondal, Amrita Maity, Sulagna Banerjee and Arup Kumar Mitra 323-333
20. **INTEGRATED DISEASE MANAGEMENT FOR SUCCESSFUL STRAWBERRY CULTIVATION IN SEMIARID SUBTROPICS OF GANGATIC PLAINS OF BIHAR**
Ruby Rani, Pawan Kumar and Chanda Kushwaha 335-351

29. **GENOMIC DATABASES, GENOMIC RESOURCES AND AGROINFORMATICS ASA BIOTECHNOLOGICAL PERSPECTIVE**
Dilip Kumar Verma, H. K. Chourasia, Somya Verma and Heena Verma 443-471
30. **ROLE OF ALLELOPATHIC CHEMICAL LIKE GA₃ ON NUCLEIC ACID AND PROTEIN CONTENTS OF AFLATOXIN B₁ TREATED MAIZE SEEDS (*Zea mays L.*)**
Gajendra Prasad, Kumari Nitu and Kumari Ragni 473-481
31. ***Momordica charantia* - PHYTOCHEMICALS, PESTS AND DISEASE MANAGEMENT**
Satya Shubhangi and V.N. Singh 483-497
32. **BIOTECHNOLOGICAL APPLICATIONS OF DETECTION, ESTIMATION, ELECTROPHORESIS, ISOZYME ANALYSIS, MOLECULAR CHARACTERIZATION, TRANSMISSION, ELISA AND BUFFERS FOR PLANT DISEASE MANAGEMENT**
Dilip Kumar Verma, H. K. Chourasia and Somya Verma 499-546
- ✓ 33. **IN VITRO ANTI-MYCOTIC EFFICACY OF PLANT LATEX AGAINST SEED-BORNE STORAGE FUNGI OF SUNFLOWER AND SAFFLOWER**
B.D. Gachande, V. B. Manoorkar and N.F. Shaikh 547-554

FUNGAL DIVERSITY IN RHIZOSPHERE SOIL OF DIFFERENT VARIETIES OF PIGEONPEA [*Cajanus cajan* (L.) Millsp.]

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ABSTRACT

The rhizosphere is the zone of soil surrounding a plant root where the biology and chemistry of the soil are influenced by the root. It is an area of intense biological and chemical activity influenced by compounds exuded by the root, and by microorganisms feeding on the compounds. Total 58 fungal species were isolated from the non-rhizosphere and rhizosphere of ten different varieties of pigeonpea [*Cajanus cajan* (L.) Millsp.] i.e. PUSA-992, BDN-2, BDN-708, BSMR-853, BSMR-736, BSMR-175, ICP- 8863, ICPL-8S7119, ICP-2376 and AKT-9913 at three different stages of plant growth viz. vegetative, flowering and fruiting stages. Fungal population was higher at flowering stage than at vegetative (non-flowering) and at fruiting stage. Altogether, 29 fungal species belonging to 14 genera was recorded throughout the study from non-rhizosphere and 58 fungal species belongs to 23 genera was from rhizosphere. Comparatively higher fungal population was recorded in rhizosphere than non-rhizosphere. Maximum number of fungal species was recorded from variety PUSA-992 and BDN-708. The population of ascomycetous fungi was higher than that of Deuteromycetous and Phycomycetous fungi. The dominance of Ascomycetous fungi varies according to different stages of plant growth. *Aspergillus flavus*, *A. niger* and *A. nidulans* these three fungal species were dominant in all the stages of




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IN VITRO ANTIMYCOTIC EFFICACY OF PLANT LATEX AGAINST SEED-BORNE STORAGE FUNGI OF SUNFLOWER AND SAFFLOWER

B. D. Gachande, V. B. Manoorkar and N.F. Shaikh

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ABSTRACT

Seed-borne fungi were isolated from sunflower and safflower seeds. Ten dominant fungal species were subjected to solvent and aqueous latex extracts of *Jatropha curcas* and *Thevetia peruviana* for their antimycotic efficacy by agar well diffusion method. Development of clear zone around the well indicated the efficacy of latex extract. *Jatropha curcas* latex showed inhibitory effect against all test fungi except *A. parasiticus* and *F. moniliforme* while the latex extract of *Thevetia peruviana* inhibitory to *A. parasiticus*.

Key words: Seed-borne fungi, oil seeds, sunflower, safflower, plant latex.

INTRODUCTION

Seed is the plant part associated with either propagation of plant for its continuous existence or serves as food for human beings and it act as a catalyst in agricultural production. Seed plays a vital role for the production of healthy crop and about 90 % of all the world's food crops are grown from seeds (Schwinn, 1994). Seeds are generally associated with certain saprophytic or parasitic microbes which perpetuate in the seed lots on the advent of favorable conditions.




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Over the last few years, scientists have researched extensively on integrated pest management (IPM) as the viable alternative of pesticides for reduction of damage due to insect pests, pathogens and weeds in crop plants. This disease management strategy is bio-safe, environmental friendly, ecologically compatible and economically sound. Excellent biotechnological developments have taken place and a number of technologies are currently crossed the pilot tests for commercialization. More recently emphasis is given on the development of resistant varieties but sometimes the failure of resistant gene in a variety has been observed and hence the scientists are busy to manage the diseases by developing transgenic varieties in addition to regular hybridization. This proceedings volume of the International Conference will be of great help to solve the problems of crop disease management.

The volume consists of 33 review articles / research papers on biotechnological approaches by well-known researchers throughout India on different crops.

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Plant Systematics & Biotechnology : Challenges & Opportunities



Editors

H. K. Chourasia

D. P. Mishra



CONTENTS

1. **STATISTICAL TECHNIQUES IN BIOLOGICAL STUDIES**
P. K. Sahu 1-22
2. **CURRENT STATUS OF THE FAMILY CUCURBITACEAE IN BIHAR WITH REFERENCE TO ITS USES**
Gopal Krishna and Anand Kumar 23-41
3. **DIVERSITY OF ALGAE, FUNGI, LICHENS AND NON-FLOWERING AND FLOWERING PLANTS OF INDIA: AN OVERVIEW**
P. Lakshminarasimhan and W. Arisdason 43-61
4. **APPLICATION OF A PCR-BASED DNA MARKER IN THE ASSESSMENT OF ARSENIC GENOTOXICITY**
Parimal Kumar Khan 63-73
5. **NEMATODE DISEASES OF MAJOR MEDICINAL AND AROMATIC CROPS AND ITS BIOMANAGEMENT**
Rakesh Pandey, Rupali Gupta and Akanksha Singh 75-87
6. **CONSERVATION OF WILD NUTMEGS IN WESTERN GHATS**
Sujana K. A., R. Saravanan and S. Nagaraju 89-113
7. **DARK SEPTATE ENDOPHYTIC FUNGI- A UNIQUE ROOT ENDOSYMBIONT**
Sikha Dutta, Avishek Sarkar and Rebeca Ghanta 115-131
8. **TRICHODERMA SPP : NATURE'S GIFT TO MANKIND**
Ratul Moni Ram and H.B. Singh 133-141

9. **PHOTOPROTECTIVE PROPERTY OF THREE PLANT DERIVED EXTRACTS**
Swastika Banerjee, Moumita Das, Sumita Mondal and Abhijit Bandyopadhyay 143-154
10. **ROLE OF TREES IN POLLUTION ABATEMENT**
Veena Chandra 155-170
11. **MICROPROPAGATION AND *IN VITRO* CONSERVATION OF VARIABILITY IN RICE LANDRACE JHINGASAIL OF EASTERN INDIA**
Ashim Chakravorty 171-175
12. **APPLICATION OF PLANT TISSUE CULTURE IN CONSERVATION OF RARE, ENDANGERED AND ENDEMIC SPECIES**
Ashiho A. Mao 177-183
13. **EXPLORATION OF MACRO- MORPHOLOGICAL AND MICRO- MORPHOLOGICAL STRUCTURES OF CYPSELAE IN TEN SPECIES OF THE TRIBE ANTHEMIDEAE (ASTERACEAE)**
Abhijit Shil and Sobhan K. Mukherjee 185-201
14. **MICROSCOPIC ANALYSIS OF CYPSELAR FEATURES IN FIVE SPECIES OF THE TRIBE ASTEREAEE (ASTERACEAE)**
Madhushri Das Datta and Sobhan Kr Mukherjee 203-218
15. **A CHECKLIST OF THE FLORA OF SARANDA FOREST DIVISION**
Hari Shankar Lal, Kartik Pramanik, Sharmistha Ganguly and Vinay Ranjan 219-234
16. **DEVELOPMENT OF SIMPLE METHODOLOGY FOR ASSESSMENT OF CLONAL STABILITY OF TISSUE CULTURE RAISED DATE PALM PLANT USING INTER SIMPLE SEQUENCE REPEAT (ISSR) MARKER**
Nitish Kumar, Arpan Modi, Bhavesh Gajera and

17. FLORISTIC ASSESSMENT OF UDHWA LAKE,
BIRD WILDLIFE SANCTUARY, SAHIBGANJ,
JHARKHAND
Onkar Nath Maurya 245-254
18. CYPSELAR MORPHOLOGY OF TWENTY
THREE SPECIES OF THE FAMILY
COMPOSITAE
*Dipanwita Das, Bidyut Kumar Jana and
Sobhan Kr. Mukherjee* 255-274
19. THE DYNAMIC CONFLUENCE OF PLANT
SYSTEMATICS AND BIOTECHNOLOGY:
A REASSESSMENT
D K Verma, S A Dand and H K Chourasia 275-303
20. TRANSGENIC PLANTS: METHODS AND
CURRENT INNOVATIONS
*Bishun Deo Prasad, Diksha Kumari, Sangita Sahni
and Tushar Ranjan* 305-326
21. EMERGING TECHNOLOGIES FOR CROP
IMPROVEMENT
*R. S. Singh, Kumari Rekha, A. K. Pal,
P. K. Singh, Ujjwal Kumar and D.Thakur* 327-341
22. BIOLOGICAL CONTROL OF WILT DISEASE
OF *D.SISSOO* THROUGH SOIL AMENDMENT
WITH *TRICHODERMA* AND ORGANIC
NUTRIENTS
R. S. Mishra, H. K. Chourasia and A. K. Roy 343-356
23. BIOPHYSICS : A TOOL FOR METABOLIC
PROFILING IN PLANT SYSTEMATICS
Sanjay K Choudhary 357-370
24. A COMPARATIVE STUDY OF PETAL
VENATION OF *SIDA RHOMBIFOLIA* L.
AND *SIDA CORDIFOLIA* L.
Satarupa Nathand and Sobhan Kumar Mukherjee 371-384

- ✓ 25. **IN VITRO ANTIMYCOTIC EFFECT OF DATURA LEAF EXTRACTS AGAINST FUSARIUM CAUSING WILTS IN SOME CROP PLANTS**
V. Jalander and B.D. Gachande 385-391
26. **PGPR IN PLANT DEVELOPMENT : A BIOTECHNOLOGICAL APPROACH**
Tamanna Sultana and Arup Kumar Mitra 393-407
27. **SCANNING TUNNELLING MICROSCOPE AS A MODERN TOOL FOR STUDY OF SURFACE MORPHOLOGY OF SOLIDS**
S. N. Choudhary 409-414
28. **PROBLEMS AND PROSPECTS OF MAKHANA CULTIVATION IN KATIHAR DISTRICT OF BIHAR**
Meenu Sodi and Sanjib Kumar 415-424
29. **INTELLECTUAL PROPERTY RIGHTS (IPR) FOR PLANT GENETIC RESOURCE AND CROP VARIETIES IN INDIA**
Ashish Ranjan, Pawan Kumar and Alok Kumar 425-444
30. **STATISTICAL COMPUTING IN BIostatISTICS WITH SPSS**
Nesar Ahmad 445-459
31. **SYSTEMATIC BOTANY : CHALLENGES AND OPPORTUNITIES**
Alok Kumar, Pawan Kumar and Ashish Ranjan 461-471
32. **SYSTEMATIC ACCOUNT OF FAMILY MUSACEAE IN THE ANDAMAN AND NICOBAR ISLANDS**
Lal Ji Singh, Sanjay Mishra, Vivek, C. P. and Gautam Anuj Ekka 473-483
33. **BENEFITS, ADVANTAGES AND APPLICATIONS OF BIOTECHNOLOGY IN AGRICULTURE- AN OVERVIEW**

34. **PLANT BIOTECHNOLOGY AND ITS APPLICATION IN FRUIT CROPS**
Pawan Kumar, Alok Kumar, Ashish Ranjan and Shashi Kant 501-510
35. **BIODIVERSITY AND THEIR CONSERVATION ON SUSTAINABLE BASIS**
Veena Singh and R. N. Yadava 511-521
36. **INNOVATIVE METHODS OF TEACHING TO UPDATE QUALITY EDUCATION IN INDIA**
Abha Anand 523-533
37. **A REVIEW OF *JATROPHA CURCAS* : AN ALTERNATIVE TO FOSSIL FUEL**
Arvind Kumar 535-549
38. **BIOCHEMICAL REAGENT BASED SCREENING OF PHYTOCONSTITUENTS OF SOME EDIBLE MUSHROOMS**
Puja Kumari, V. B. Lal and S. K. Choudhary 551-559
39. **BIOTECHNOLOGY IN CONSERVATION OF GERMPLASM OF BIODIVERSITY**
Raj Kishore Mahto and B. K. Choudhary 561-565
40. **ORIGIN AND TAXONOMY OF GARLIC (*ALLIUM SATIVUM* L.): A REVIEW**
Sangeeta Shree and B. C. Saha 567-575
41. **REMOVAL OF ARSENIC AND CHROMIUM FROM GROUNDWATER BY PLANT BIOACCUMULATION : AN OVERVIEW**
Ujjwal Kumar, A. K. Jha, R. S. Singh and H. K. Chourasia 577-592
42. **BIOTECHNOLOGICAL STAND POINTS REGARDING MOLECULAR TECHNIQUES USED FOR PLANT DIVERSITY STUDIES AND RESEARCH**
Sudha Jala Kohli 593-601

IN VITRO ANTIMYCOTIC EFFECT OF *DATURA* LEAF EXTRACTS AGAINST *FUSARIUM* CAUSING WILTS IN SOME CROP PLANTS

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ABSTRACT

Aqueous, methanolic and ethanolic leaf extracts prepared from four species of *Datura* viz. *D. stramonium* L., *D. innoxia* Mill. Gard, *D. metel* L. and *D. ferox* L. Amoer and were screened for their antimycotic effect against pathogenic *Fusarium* sp. such as *Fusarium oxysporum* f. sp. *vasinfectum*, *Fusarium oxysporum* f. sp. *ciceri* and *Fusarium oxysporum* f. sp. *cubense* causing wilt diseases in Cotton, Gram and Banana respectively. The leaf extract of *Datura* sp. at 5, 10, 15 and 20% concentrations were incorporated in glucose nitrate medium. The ethanolic leaf extracts at highest concentrations (20%) were excellently inhibited the growth of pathogenic fungi; next to this the methanolic extracts were also showed good inhibitory activity against wilt pathogens. The ethanolic extracts prepared from *D. stramonium* at 20% concentration were more effective than other against *Fusarium* sp. causing wilts.

Key Words: *Datura* sp., antimycotic effect, *Fusarium* sp.

INTRODUCTION

Green plants represent a reservoir of effective chemotherapeutants and can provide valuable sources of natural pesticides (Hostettmann and Wolfender, 1997). Plant metabolites and plant based pesticides have minimal environmental impact and danger to consumers in contrast to



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ABOUT THE BOOK

The knowledge of plant systematics is useful in understanding flora at fundamental taxonomic, structural, functional and metabolic level since it gives a comprehensive and complete information based on biological classification of plants. Each plant is assigned a proper position in the hierarchy of flora, with checkpoints and filters to store useful information and keep some in storage.

Plant improvisation in terms of modifications or introduction of altogether new features can be done using modern biotechnological techniques based on tissue culture, molecular biology, enzymology, fermentation, plant breeding and genetics, microbiology etc. for improved plant growth, better adaptation and survival, crop yield in terms of improved disease and climate change resistance etc., converting plant bioresources into dynamic bioreactors which can become sources of useful metabolites, compounds, drugs, enzymes, vaccines etc. In addition new hybrid varieties with improved features can be developed after focusing upon plant species amenable to genetic manipulation. Large information thus generated can be interpreted through predictive-modeling studies and bio-informatic tools can be utilized for analyzing data generated spatially and temporally over the years.

The UGC and BCST sponsored National Conference held during November 28-30, 2017 at P. G. Department of Biotechnology, T. M. Bhagalpur University, Bhagalpur has focused on urgent issues related to historical prospective, challenges and opportunities, methods in restoring the validity, recent advances and future prospects of research in plant systematics and biotechnology have been compiled in the present form of the Proceedings. Each paper has been written in lucid scientific manner, following guidelines of standard research journals with adequate number of tables, figures, graphs and latest references. Development of transgenic plants, emerging technologies for crop improvement and statistical computing in bio-statistics with SPSS have been discussed in detail.

The present book will prove useful to the research scholars and scientists of the various disciplines in their ongoing research activities.

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Experimental Methods in
Plant Pathology

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CONTENTS

1. FUNGAL SPORE GERMINATION	13
1.1.1	Preparation of standard spore suspension
1.1.2	Fungi from the laboratory cultures
1.1.3	Fungi from infected host parts
1.1.4	Methods for fungal spore germination
1.1.5	Observations
1.1.6	Self inhibitors
1.1.7	Stimulatory effect of plant extracts on spore germination
2. ENZYMES OF PATHOGENS	18
2.1	Cellulases
2.1.1	Classification of cellulases
2.1.2	Methods to test cellulose activity
2.1.2.1	Loss of coherence in test tissue
2.1.2.1.1	Filter paper disc method
2.1.2.1.2	Cotton fiber method
2.1.2.2	Viscosity method
2.1.2.3	Estimation of reducing sugars
2.1.2.3.1	Somog's method
2.1.2.3.2	Cup plate method
2.1.2.4	Detection of in vivo cellulose production
2.1.2.4.1	Cellulase activity
2.1.2.4.2	Measurement of cellulose activity of plant pathogens by viscometric method
2.2	Pectinases
2.2.1	Classification of pectinases
2.2.2	Assay methods
2.2.2.1	Macerating enzyme (ME)
2.2.2.1.1	Maceration action of culture filtrate of <i>Rhizopus stolonifer</i> on sweet potato tissue
2.2.2.2	Pectin esterase (PME or PE)
2.2.2.3	Polygalacturonase (PG)
2.2.2.4	Trans eliminase (TE)
2.2.2.4.1	On UV spectrophotometer
2.2.2.5	In-vivo detection of enzyme
2.2.3	Study of the properties of pectinases
2.2.4	Pectic enzyme production by <i>Fusarium oxysporum f. udum</i>
2.3	Lipases
2.3.1	Production of lipases
2.3.1.1	Assay method (cup plate)
2.4	Proteases
2.4.1	Production of protease
2.4.1.1	Assay of protease
2.4.1.2	Methods to detect protease activity
2.4.1.2.1	Cup plate method

- 2.4.1.2.2 Colorimetric method
- 2.5 Amylases
- 2.5.1 Amylase production
- 2.5.2 Amylase assay
- 2.5.2.1 Cup plate method
- 2.5.2.2 Spectrophotometric detection
- 2.6 Chitinases
- 2.6.1 Chitinase production
- 2.7 Laccases
- 2.7.1 Laccase production
- 2.7.2 Laccase plate assay

3. TOXINS OF PLANT PATHOGENS

- 3.1 Assay methods 31
- 3.1.1 Inhibition of seed germination
- 3.1.2 Wilting of shoot cuttings
- 3.1.3 Leaf necrosis or lesions
- 3.1.4 Cell membrane damage
- 3.1.4.1 Loss of plasmolysis
- 3.1.5 Damage of free protoplast
- 3.2 Isolation and purification of toxic principle
- 3.2.1 Isolation of toxic proteins
- 3.2.2 Isolation of toxic polysaccharides
- 3.2.3 Isolation of toxic acids
- 3.2.4 Isolation of toxic phenols

4. AFLATOXINS

- 4.1 Screening of aflatoxins 35
- 4.1.2 A rapid technique for detection of toxigenic and non-toxigenic strains of *Aspergillus flavus*
- 4.2 Evaluation of toxigenic potential of *Aspergillus flavus*
- 4.2.1 Ammonia vapor test
- 4.2.2 HPLC technique
- 4.3 Extraction of aflatoxins from food sample
- 4.4 Chromatographic separation of aflatoxin (B) by TLC technique

5. GROWTH REGULATORS OF PLANT PATHOGENS

- 5.1 Auxins 38
- 5.1.1 Extraction of auxins
- 5.1.1.1 Extraction of auxins from culture filtrate
- 5.1.1.2 Extraction of auxins from diseased plant
- 5.1.2 Detection of auxins
- 5.1.2.1 Chromatographic analysis
- 5.1.2.2 Colorimetric estimation
- 5.1.2.3 Biological assay
- 5.1.2.3.1 Avena straight growth test

- 5.1.2.3.2 Pea curvature test
- 5.2 Gibberellins
 - 5.2.1 Extraction of gibberellins
 - 5.2.1.1 Extraction of gibberellins from culture filtrate
 - 5.2.1.2 Extraction of gibberellins from diseased plant
 - 5.2.2 Detection of gibberellins
 - 5.2.2.1 Thin layer chromatography
 - 5.2.3 Bioassay of gibberellins
 - 5.2.3.1 Oat endosperm test
 - 5.2.3.2 Colorimetric estimation of reducing sugars
- 5.3 Cytokinins
 - 5.3.1 Extraction of cytokinins
 - 5.3.2 Assay of cytokinins
 - 5.3.2.1 Cotyledon test
 - 5.3.2.2 Chlorophyll reaction test
- 5.4 Ethylene
 - 5.4.1 Detection and bioassay
 - 5.4.1.1 Epinatic response of tomato petiole
 - 5.4.1.2 Triple response of etiolated legume seedlings
 - 5.4.2 Production of ethylene by fungus in culture

6. SEED PATHOLOGY

..... 44

- 6.1 Objective of seed health test
- 6.2 Materials required
- 6.3 Methods for detection of pathogens from seed samples
 - 6.3.1 Examination of seeds without incubation
 - 6.3.1.1 Examination of ungerminated seeds
 - 6.3.1.1.1 Inspection of dry seeds
 - 6.3.1.1.2 Examination of seeds after softening
 - 6.3.1.1.3 Examination of spore suspensions obtained from seed wash
 - 6.3.1.1.4 Whole embryo count method
 - 6.3.2 Incubation methods
 - 6.3.2.1 Standard moist blotter test
 - 6.3.2.2 Agar plate method
 - 6.3.2.3 Freezing method
 - 6.3.2.4 Water agar plate method for detection of bacteria
 - 6.3.3 Seedling symptom test
 - 6.3.3.1 Hiltner's brick stone method
 - 6.3.3.2 Sand method
 - 6.3.3.3 Standard soil method
 - 6.3.3.4 Test tube agar method

7. SOIL-BORNE FUNGAL PATHOGENS

..... 50

- 7.1 Observation of soil microorganisms under microscope
 - 7.1.1 Direct observation of soil particles
 - 7.1.2 Direct examination of soil profile

- 7.1.3 Soil sectioning
- 7.1.4 Flurred slide technique
- 7.1.5 Impression technique
- 7.1.6 Fahrenus slide technique
- 7.1.7 Root observation boxes
- 7.2 Isolation or culturing of microorganisms
- 7.2.1 Soil dilution plate method
- 7.2.2 Soil plate method
- 7.2.2.1 Thermophilic and thermotolerant fungi
- 7.2.3 Direct inoculation and soil desiccation method
- 7.2.4 Immersion tube method
- 7.2.5 Washing method
- 7.2.6 Selective methods
- 7.2.7 Selective media
- 7.3 New method for studying tolerance of pesticides by microorganisms

8. ISOLATION OF PHYLLOSHERE MYCOFLORA 58

- 8.1 Direct observation method
- 8.1.1 Direct observation of stained leaf discs
- 8.1.2 Serially washed discs
- 8.1.3 Damp chamber incubation of leaves
- 8.1.4 Leaf clearing
- 8.1.5 Scanning of leaf surface by electron microscopy
- 8.1.6 Impression films
- 8.2 Isolation or cultural method
- 8.2.1 Dilution plate method (leaf washing)
- 8.2.2 Leaf print method
- 8.2.3 Maceration of leaves
- 8.2.4 Surface sterilization
- 8.2.5 Spore fall method

9. ISOLATION OF RHIZOSPHERE FUNGI 62

- 9.1 Isolation methods
- 9.1.1 Soil dilution plate method (Waksman, 1922)
- 9.1.2 Soil plate method (Warcup, 1950)

10. ESTIMATION OF R: S RATIO AND ASSESMENT OF RHIZOSPHERE EFFECT 64

11. AQUATIC FUNGI 65

- 11.1 Isolation of aquatic fungi by baiting in the laboratory
- 11.2 Isolation of aquatic fungi by baiting in the fields

12. ISOLATION OF ACTINOMYCETES FROM SOIL	66
12.1 Identification of actinomycetes	
12.2 Staining of actinomycetes	
13. ANTAGONISM OF FUNGI	68
13.1 Dual culture method (Dickson and Skidmore, 1976, Porter, 2000)	
14. ISOLATION AND IDENTIFICATION OF ARBUSCULA MICORRHIZAL FUNGI FROM SOIL	70
14.1 Isolation and identification	
14.1.1 Estimation of arbuscular micorrhizal fungi	
15. AEROBIOLOGY	72
15.1 Air sampling methods	
15.1.1 Air samplers	
15.1.2 Culture plate count	
15.1.3 Instrumental methods	
15.1.3.1 Sedimentation samplers	
15.1.3.1.1 Durham's sampler	
15.1.3.1.2 Tauber trap sampler	
15.1.3.2 Impaction samplers	
15.1.3.2.1 Burkard version of Hirst trap	
15.1.3.2.2 Anderson sampler	
15.1.3.2.3 Rotorod sampler	
15.1.3.2.4 Tilak's continuous air sampler	
16. EVALUATION OF ANTIFUNGAL ACTIVITY OF MEDICINAL PLANTS	80
16.1 Plant material	
16.1.1 Preparation of aqueous plant extract	
16.1.2 Preparation of solvent plant extract	
16.1.3 Test fungi	
16.2 Antifungal assay	
16.2.1 Disc diffusion method	
16.2.2 Agar well diffusion method	
16.2.3 Poisoned food technique	
16.2.4 Dry mycelial weight method	
16.2.5 Spore germination by cavity slide method	
16.2.6 Spore germination assay	
17. ISOLATION OF PHYTOALEXINS	85
17.1 Production of phytoalexins	
17.1.1 Production of phytoalexins in groundnut leaves by drop diffusate method	
17.1.2 Production of phytoalexins in Sesamum fruits by drop diffusate method	
17.2 Extraction of phytoalexins	
17.3 Isolation of phytoalexins	

18. ESTIMATION OF TOTAL PHENOLS FROM INFECTED PLANT	88
19. ESTIMATION OF AMINO ACIDS FROM INFECTED PLANT TISSUE (NINHYDRIN METHOD)	90
20. ESTIMATION OF CARBOHYDRATES (ANTHRONE METHOD)	92
21. SCREENING OF ANTIBACTERIAL ACTIVITY OF MEDICINAL PLANTS	93
21.1 Plant materials	
21.2 Preparation of extracts	
21.2.1 Aqueous extraction	
21.2.2 Detection method	
21.2.3 Solvent extraction	
21.2.4 Collection & maintenance of bacterial cultures	
21.3 Determination of antibacterial activity	
21.3.1 Agar well diffusion method	
21.3.2 Determination of relative percentage inhibition	
21.4 Disc diffusion method	
22. ESTIMATION OF PROTEINS (Lowery's method)	96
22.1 Extraction of protein from plant tissues	
23. EXTRACTION & ESTIMATION OF CHLOROPHYLLS IN INFECTED PLANT TISSUES	98
23.1 Extraction of chlorophyll (Arnon method)	
24. ESTIMATION OF CHLOROPHYLL BY DMSO METHOD	100
25. MYCOLOGICAL STAINS, MOUNTING MEDIA, CHEMICAL REAGENTS, SEALANTS & CULTURE MEDIA	101
25.1 Stains	
25.1.1 Phloxine dye	
25.1.3 Haematoxylin	
25.1.3 Congo red	
25.1.4 Acetocarmine	
25.1.5 Gentian violet	
25.1.6 Dorner's nigrosin solution	
25.2 Other stains	
25.3 Chemical reagents and reactions	
25.3.1 Amyloid reaction	

- 25.3.2 Cyanophilic reaction
- 25.3.3 Xanthochromic reaction
- 25.3.4 Dextrinoid reaction
- 25.3.5 Greening reaction
- 25.3.6 Inonomidic Reaction
- 25.3.7 Shepher's reaction
- 25.3.8 Iodine solution (Gram's or Lugol's iodine solutions)
- 25.3.9 Chloro-iodide of Zinc
- 25.3.10 Lugol's iodine solution
- 25.3.11 Aniline hydrochloride
- 25.4 Mounting media
- 25.5 Mounting technique
- 25.6 Sealants/sealing slides
- 25.7 Clearing agents
- 25.8 Preparation of slides for microscopic examination
- 25.9 Growth retardants
- 25.10 Slide culture technique
- 25.11 Culture media
 - 25.11.1 Common culture media
 - 25.11.2 Medium for preservation of green colour in plant specimen
 - 25.11.3 Cleaning solution for glassware's
 - 25.11.4 Disinfectants

26. PRESERVATION AND MAINTENANCE OF MICROBIAL CULTURES

..... 120

- 26.1 Mineral oil
- 26.2 Water storage
- 26.3 Freeze-drying
- 26.4 Soil storage
- 26.5 Silica jel storage
- 26.6 Filter paper storage
- 26.7 Cryopreservation
- 26.8 Liquid nitrogen



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Introduction to Research Methodology

- Dr. Ramesh B. Bhise
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Contents

Chapter	Topic	Page numbers
Chap - I	Introduction to Research 1.1 Meaning of Research 1.2 Characteristics of Research 1.3 Criteria of Good Research 1.4 Qualities of a good research 1.5 Objectives of Research 1.6 Steps involved in Research Process 1.7 Types of Research 1.8 Scientific Inquiry 1.9 Philosophical and Sociological foundations of research 1.10 Interdisciplinary approach and its implications in various research area Exercise	1.1 to 1.8
Chap - II	Methods of Research 2.1 Research and Scientific Method 2.2 Research Methods versus Methodology, 2.3 Qualitative and Quantitative methods of research with characteristics and their implications in research area. 1. Historical research, 2. Ethnography research, 3. Documentary research, 4. Content analysis research, 5. Survey field, 6. Case study, 7. Ex-post facto research, and 8. Laboratory experimental studies. Exercise	2.1 to 2.9
Chap - III	Development of Research Proposal 3.1 Research proposal and its elements 3.2 Formulation of research problem	3.1 to 3.8

	3.3 Development and characteristics of objectives, 3.4 Development hypotheses and applications. Exercise	
Chap - IV	Methods of Data Collection 4.1 Concept of sampling, 4.2 Types of sampling and their characteristics, 4.3 Types of Data and Tools of data collections, 4.4 Redesigning research tools like questionnaire, opinnaere, observation, interviews, scales and tests, etc. Exercise	4.1 to 4.9
Chap - V	Methods of Data Analysis 5.1 Types of data analysis 5.2 Analysis of qualitative data based on various tools. 5.3 Analysis of quantitative data and its presentation: with tables, graphs, etc. 5.4 Statistical tools and techniques of data analysis: measures of central tendency, dispersion, etc. 5.5 Sampling error and Sampling distribution 5.6 Decision making with hypothesis testing: through parametric and non parametric tests. 5.7 Validity and delimitations of research findings. 5.8 Problems Encountered by Researchers in India. 5.9 Need of reviewing the Literature: Exercise	5.1 to 5.26
Chap - VI	Report Writing and Evaluations 6.1 Principles of report writing, 6.2 Preparation of the report or thesis, 6.3 Precautions in writing research report, 6.4 Writing and presentation of report , 6.5 Evaluation of research report. Exercise	6.1 to 6.7
	Previous Question Papers	7.1 to 7.8



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Introduction to Computer Applications

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June 2016

Index

Unit	Topic	Page No.
Unit 1	Introduction to Computer 1.1 Characteristics of Computer 1.2 Basic Computer Organization 1.3 Software 1.4 Introduction to Search Engine 1.5 Introduction to Web Browser 1.6 Use of ICT in Research Exercise	1.1 to 1.7
Unit 2	<u>Microsoft Word (MS Word)</u> 2.1 Microsoft Word 2.2 Components of Word Windows 2.3 Save and Save As in Word 2.4 Format Painter in Word 2.5 Copy and Paste in Word 2.6 Font menu in Word 2.7 Find and Replace in Word 2.8 Paragraph Formatting in Word 2.9 Insert menu in Word 2.10 Table in Word 2.11 Picture in Word 2.12 Mail Merge 2.13 Table of Contents in Word 2.14 Header and Footer in Word 2.15 Page Layout and Page setup in Word 2.16 Citation and Bibliography in Word 2.17 Review menu in Word 2.18 View menu in Word 2.19 Shortcut keys in Word 2.20 Case study 2.21 Convert PDF Exercise	2.1 to 2.35

Unit 3	<u>MS Excel (Graphics Tools)</u> 3.1 Microsoft Excel 3.2 Spreadsheets in Excel 3.3 Components of Excel 3.4 Workbook in Excel 3.5 Manipulating Data in Excel 3.6 Modifying a Worksheet in Excel 3.7 Performing Calculation in Excel 3.8 Macros in Excel 3.9 Sort and Filter in Excel 3.10 Graphics in Excel 3.11 Charts in Excel 3.12 Format Worksheet in Excel Exercise	3.1 to 3.42
Unit- 4	<u>MS Power Point</u> 4.1 Microsoft PowerPoint 4.2 Components of PowerPoint 4.3 Creating New presentation in PowerPoint 4.4 Inserting Animations in PowerPoint 4.5 Developing an Image in PowerPoint 4.6 Inserting ClipArts in PowerPoint 4.7 Inserting Sound in PowerPoint 4.8 Inserting Movies in PowerPoint 4.9 Inserting Table in PowerPoint 4.10 Inserting Footer in PowerPoint 4.11 Slide Master in PowerPoint 4.12 Inserting Charts in PowerPoint 4.13 Developing Text in PowerPoint 4.14 Slide shows 4.15 View option in PowerPoint 4.16 Shortcut key in PowerPoint Exercise	4.1 to 4.14
	Previous Question Papers	4.15 to 4.22

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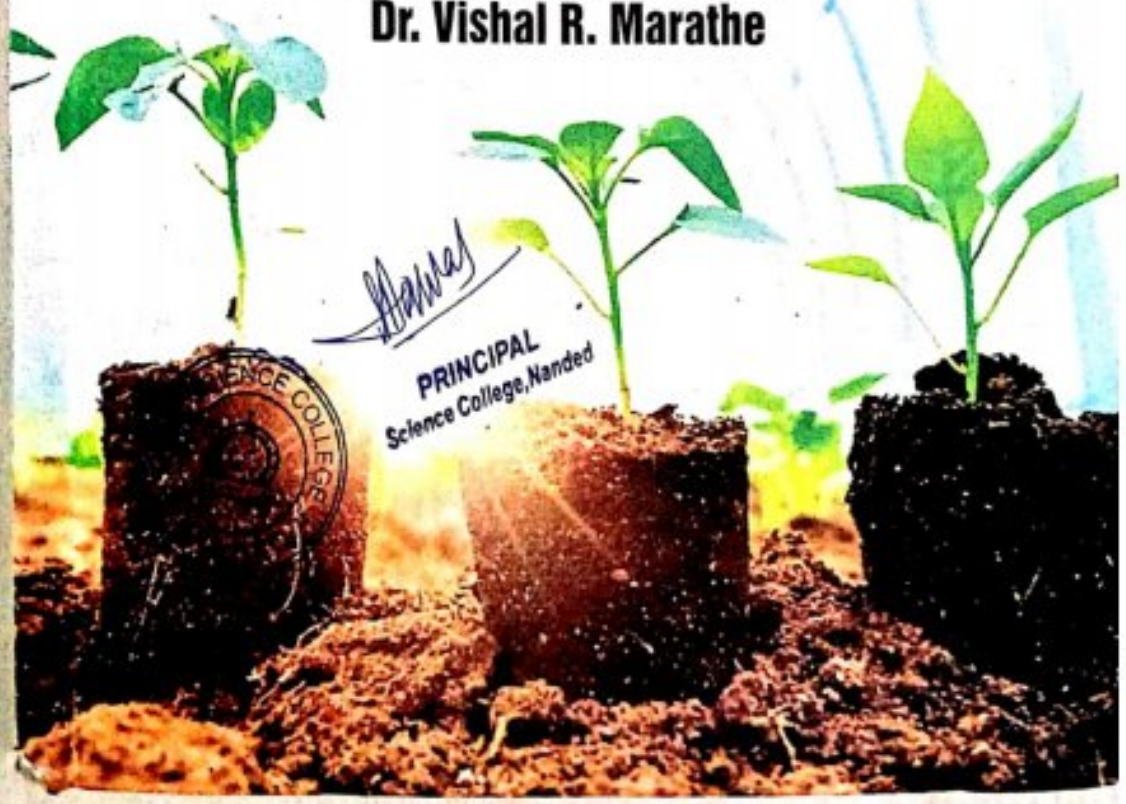
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22



DIVERSITY OF MICROBES AND MYCORRHIZA

Dr. Dayanand M. Jadhav
Dr. Vishal R. Marathe



Contents

1. Introduction	1
2. Bacteria	38
3. Lichen	63
4. Viruses	90
5. Niteogen Fixation	121
6. Mycorrhiza	136
7. Diatoms	167
8. Phylogenetics	180
9. Algal Blooming	186
10. Englenoids	193
11. Rhizosphere	209
12. Hereroknot	217
13. Diversity of Microbes	229

About The Author



Dr. Dayanand M. Jadhav born in 1981 maintained excellence throughout his academic career. Currently working in Department of Botany at NES Science College, Nanded (Maharashtra). He has obtained B.Sc. and M.Sc. degree with Late Prof. D. L. Reddy and Dr. K. S. Deshpande memorial Gold Medals respectively from Swami Rameshwar Teerth Marathwada University, Nanded. He has awarded with Ph.D. in 2013 and presently guiding Ph.D. students for their Doctoral degree in Botany. He is also recognized Post Graduate teacher by the University and has over sixteen years of teaching experience to UG and PG students of Botany in NES Science College Nanded. He is actively involved in research and published over 16

research papers in various peer reviewed journals of National and International repute. Organized and attended different conferences, seminars, workshops and Guest lectures in Botany. He is life member of Marathwada Botanical Society. He is invitee member of Board of Studies in Botany of this University. He has completed over Seven Research Projects in the capacity of Principal / Co-Investigator funded by different funding agencies.



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research papers in peer reviewed journals of National and International repute and is author of one book. He is working on two Research Projects in the capacity of Principal / Co-Investigator funded by different funding agencies. He is Associate Editor of International Journal of Life Sciences. He is actively engaged in organization of scientific events and participated in more than sixty National & International conferences, seminars and workshops. He is delivered more than 20 lectures as resource person. He is life member of various academic, Scientific and professional Bodies.

About The Book

Classification based on morphological characteristics, such as the size and shape of spores or fruiting structures, has traditionally dominated fungal taxonomy. Species may also be distinguished by their biochemical and physiological characteristics, such as their ability to metabolize certain biochemicals, or their reaction to chemical tests. The biological species concept discriminates species based on their ability to mate. The application of molecular tools, such as DNA sequencing and phylogenetic analysis, to study diversity has greatly enhanced the resolution and added robustness to estimates of genetic diversity within various taxonomic groups.

Contents

- Introduction
- Bacteria
- Lichen
- Viruses
- Nitrogen Fixation
- Mycorrhiza
- Diatoms
- Phylogenetics
- Algal Blooming
- Englenoids
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Chapter 16

Role of Fungi As Biocontrol Agents for the Control of Plant Diseases in Sustainable Agriculture



D. U. Gawai

Abstract Biological control is the process which decreases the inoculum density of the pathogenic microbes, present in dormant state by the other microbes. Generally, it involves either the naïve or genetically modified microbes which reduce the effect of pests, pathogen, and diseases. The plant disease is controlled by the pesticides, which are now extensively used. Due to excessive use of pesticides, socioeconomic and environmental pollution issues have been resulted, which demand the alternative method to reduce content of chemical pesticides. Biological control is an eco-friendly method employed to control the plant diseases, with the aim of developing a sustainable system in agriculture. Biological control mechanism involves the interaction among the antagonists and pathogens, which aid in selection and manipulation to develop an effective control system. Currently, this approach is employed when no other alternative is available. Emergent of fungal antagonistic has made it a promising biological control strategy to control the plant diseases. The major factors which hinder the efficiency of the biocontrol agents to control the plant diseases need to be considered during the formulation of biocontrol procedure, biocontrol agent, and its application time.

Keywords Biocontrol · Fungal antagonists · Sustainable agriculture · Disease control


16.1 Introduction

Biological control is the process which reduces the number of microbes or pathogens by other microorganisms, without the external intervention of humans (Cook and Baker 1983). In 1967, Beirner stated that biological control is the controlling of one microbe by the other. This can be stated either as a large community of pest (DeBach 1964) or as an inhibitor of severe pest damage irrespective of the pest inhabitants (Cook and Baker 1983). It largely depends on the understanding of

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283


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Chapter

VI

NON-HOMOGENEOUS TRANSIENT HEAT CONDUCTION PROBLEM AND ITS THERMAL STRESS OF A THIN SOLID CIRCULAR PLATE

Kishor R. Gaikwad*


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(* Corresponding author)*

During the second half of the twentieth century, non-isothermal problems of the theory of elasticity became increasingly important. This is due mainly to their many applications in widely diverse fields. First, the high velocities of modern aircraft give rise to aerodynamic heating, which produces intense thermal stresses, reducing the strength of the aircraft structure. Second, in the nuclear field, the extremely high temperatures and temperature gradients originating inside nuclear reactors influence their design and operations.

The solution of partial differential equations of heat conduction by the classical method of separation of variables is not always convenient. It is for this reason that we considered the integral transform technique for the solution of linear, homogeneous boundary value problem of heat conduction. The integral transform technique provides a systematic, efficient and straight forward approach for the solution of both homogeneous and non-homogeneous, steady-state and time-dependent boundary value problem of heat conduction.

Nowacki [1] has determined the steady-state thermal stresses in a circular plate subjected to an axi-symmetric temperature distribution on the upper surface with zero temperature on the lower surface and with the circular edge thermally insulated. Ootao et al. [2] have studied the theoretical analysis of a three




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CHAPTER - 1

Thermoelastic Stress Analysis of a Thin Circular Plate subject to Axi-symmetric Temperature Distribution

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(* Corresponding author)

1. Introduction

The solution of partial differential equations of heat conduction by the classical method of separation of variables is not always convenient. It is for this reason that we considered the integral transform technique for the solution of linear, homogeneous boundary value problem of heat conduction. The integral transform technique provides a systematic, efficient and straight forward approach for the solution of both homogeneous and non-homogeneous, steady-state and time-dependent boundary value problem of heat conduction. The inverse thermoelastic problem consists of determination of the temperature of the heating medium, the heat flux on the boundary of the surface of the solid when the conditions of displacement and stresses are known at some points of the solid under consideration. The inverse problem is very important in view of its relevance to various industrial machines subjected to heating, such as main shaft of lathe, turbine and roll of rolling mills, turbines subjected to heating and cooling mediums.

Nowacki [1] determined steady-state thermal stresses in a circular plate subjected to an axi-symmetric temperature distribution on the upper surface. The lower face is kept at zero temperature and the fixed circular edge is thermally insulated. The direct problem of normal deflection of an axi-symmetrically heated circular plate in the case of fixed and simply supported edges have been considered by Boley and Weiner [2]. Further, Roy Choudhury [3] discussed the normal thermal




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CHAPTER - 2

Thermal Deflection of a Thin Circular Plate Due to Internal Heat Generation

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1. Introduction:

The solution of partial differential equations of heat conduction by the classical method of separation of variables is not always convenient. It is for this reason that we considered the integral transform technique for the solution of linear, homogeneous boundary value problem of heat conduction. The integral transform technique provides a systematic, efficient and straight forward approach for the solution of both homogeneous and non-homogeneous, steady-state and time-dependent boundary value problem of heat conduction. The inverse thermoelastic problem consists of determination of the temperature of the heating medium, the heat flux on the boundary of the surface of the solid when the conditions of displacement and stresses are known at some points of the solid under consideration. The inverse problem is very important in view of its relevance to various industrial machines subjected to heating, such as main shaft of lathe, turbine, and roll of rolling mills, turbines subjected to heating and cooling mediums.

Nowacki (1957) determined steady-state thermal stresses in a circular plate subjected to an axi-symmetric temperature distribution on the upper surface. The lower face is kept at zero temperature and the fixed circular edge is thermally insulated. The direct problem of normal deflection of an axi-symmetrically heated circular plate in the case of fixed and simply supported edges have been considered by Boley and Weiner (1960). Further, Roy Choudhury (1972) discussed the normal thermal deflection of a thin clamped circular plate due to ramp type heating of concentric circular region of the upper face and lower face



Kishor R. Gaikwad
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Science College, Nanded

Chapter - 4

Biochemical Composition of Fishes

Dr. Kiran Shillewar and Dr. D.V. Tetwar

Abstract

Analysis of biochemical components of fresh water fishes such as moisture, protein, fat, glycogen from the muscles of male and female fish. Variations to seasonal changes have been carried out.

Keywords: Fresh water fish, biochemical composition

Introduction

Fish is known as an important source of food and also provide certain other useful products and hence has a great significance in the life of mankind. Balanced diet is very essential for satisfactory growth and health of human beings. Imbalanced diet causes many abnormalities and diseases. To face and in order to solve this problem satisfactorily and to fulfill the fundamental requirements of a balanced diet, the natural resources at common have to be explored. Fish is one of the good natural resource which can be easily explored from aquatic environment and plays an important role in this country would be overcome by increasing the supply and consumption of fish. Fish is normally consumed by all class of people, and comes up to the requirements as a first class protein food. Among the three important energy yielding constituents of food, mainly protein, carbohydrate and fat, the fat yield the highest amount of energy.

Knowing the importance of fish as a nutrient but it is essential to know its nutritive value and variations in there relation to the spawning and maturation, sex and growth of fish and feeding intensity. To find out biochemical compositions such as proteins, fat, glycogen and water from the body of a fish estimation method has to be carried out. All these biochemical constituents undergo fluctuations in relation to the seasons, the food, the sexes, and the stage of maturity and growth of fish.

In the present study on biochemical composition such as moisture, fat, protein, glycogen were estimated monthly in the muscles of fishes. Monthly estimations of body components from April 2020 to March 2021.

Page | 47



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Dipti V Totawar

Manual Of Fishery Science

Fishery Science


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CONTANTS

1.	Fishing Craft and Gears	7
2.	Identification of Scales	18
3.	Physico- Chemical Parameters of Water	27
4.	Digestive System of Labeo	47
5.	Reproductive System of Labeo	48
6.	Brauin of Labeo	49
7.	Air Bladder of Labeo	50
8.	Study of Fishing Crafts & Gears	51
9.	Fresh Water Fishes	57
10.	Aquarium Fishes	78

Fishery Science is one of the important subjects in the curriculum of both under and post graduate students of all Indian Universities. The teachers, scientists and students are also actively engaged in research in fishery science. For this purpose the proper methodology is necessary. Being a fishery science teachers we felt the information required particularly the methodology to study the Manual of Fishery Science in a consolidated manner. A effort has been made towards bringing out a manual to fulfill the requirement of students and researchers concerned with Fishery Science.
The present manual is prepared for students and teachers as well as researches.

Dr Kiran Shillewar is working as a Head Department Of Zoology & Fishery Science ,Science College, Nanded. Maharashtra. India. He is a Research Guide in Zoology & Fishery Science .



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Manual de ciencias de la pesca

Ciencias de la pesca (Guarani Edition)

Kiran Shillewar
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Contenido

PREFACIO	3
Embarcaciones y artes de pesca	7
Identificación de las escalas	19
Parámetros físico-químicos del agua	27
Sistema digestivo de Labeo.....	45
Sistema reproductor de Labeo.....	46
Brauin de Labeo	47
Vejiga de aire de Labeo	48
Nervios craneales del Labeo	48
Estudio de las artes de pesca y de los engranajes	49
EQUIPOS DE PESCA.....	53
Peces de agua dulce.....	56
Peces depredadores	66
Peces de acuario	73
Lista de referencias y libros	92

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Manual de ciencias de la pesca

La ciencia de la pesca es una de las asignaturas importantes en el currículum de los estudiantes de grado y postgrado de todas las universidades indias. Los profesores, científicos y estudiantes también se dedican activamente a la investigación en la ciencia de la pesca. Para ello es necesaria la metodología adecuada. Siendo profesores de ciencia fishery sentimos la información requerida particularmente la metodología para estudiar el Manual de Ciencia Pesquera de una manera consolidada. Se ha hecho un esfuerzo para sacar un manual que satisfaga las necesidades de los estudiantes e investigadores relacionados con la ciencia de la pesca.

El presente manual se ha preparado para estudiantes y profesores, así como para investigadores.

El Dr. Kiran Shillewar trabaja como jefe del Departamento de Zoología y Ciencias de la Pesca, Colegio de Ciencias, Nanded, Maharashtra, India. Es GIS de Investigación en Zoología y Ciencias de la Pesca.



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Manuale di scienza della pesca

Scienza della pesca (Italian Edition)

Kiran Shillewar
Dipti V Totawar

Contenuti

PREFAZIONE	3
Attrezzature e ingranaggi per la pesca	7
Identificazione delle scale	19
Parametri fisico-chimici dell'acqua	27
Sistema digestivo di Labeo	45
Sistema riproduttivo di Labeo	46
Brauin di Labeo	47
Vescica d'aria di Labeo	48
Nervi cranici di Labeo	48
Studio dei mestieri e degli ingranaggi della pesca	49
ATTREZZI DA PESCA	53
Pesci d'acqua dolce	56
Pesci predatori	67
Pesci d'acquario	74
Elenco dei riferimenti e dei libri	93

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Manuale di scienza della pesca

La scienza della pesca è una delle materie più importanti nel curriculum degli studenti universitari e postuniversitari di tutte le università indiane. Gli insegnanti, gli scienziati e gli studenti sono anche attivamente impegnati nella ricerca nel campo delle scienze della pesca. A questo scopo è necessaria una metodologia adeguata. Essendo insegnanti di scienze della pesca, abbiamo sentito il bisogno di informazioni, in particolare della metodologia per studiare il Manuale di Scienze della Pesca in modo consolidato. È stato fatto uno sforzo per realizzare un manuale che soddisfacesse le esigenze degli studenti e dei ricercatori che si occupano di Scienze della pesca. Il presente manuale è stato preparato per gli studenti, gli insegnanti e i ricercatori.

La dottoressa Kiran Shilwar lavora come capo del Dipartimento di Zoologia e Scienze della Pesca, Science College, Nanded, Maharashtra, India. È una guida alla ricerca in Zoologia e Scienze della pesca.



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Inhalt

VORWORT	3
Fischereifahrzeuge und Fanggeräte	7
Identifizierung von Skalen	19
Physikalisch-chemische Parameter des Wassers	27
● Verdauungssystem von Labeo	45
Fortpflanzungssystem von Labeo	46
Braun von Labeo	47
Luftblase von Labeo	48
Hirnnerven von Labeo	48
Studium des Fischereihandwerks und der Fanggeräte	49
FISCHEREIGERÄTE	54
● Süßwasserfische	57
Raubfische	65
Aquarienfische	72
Literaturliste und Bücher	92

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Handbuch der Fischereiwissenschaft

Fischereiwissenschaft ist eines der wichtigsten Fächer im Lehrplan von Studenten und Doktoranden aller Indischen Universitäten. Die Lehrer, Wissenschaftler und Studenten sind auch aktiv in der Forschung im Bereich der Fischereiwissenschaft tätig. Zu diesem Zweck ist eine angemessene Methodik erforderlich. Als Lehrer für Fischereiwissenschaft waren wir der Meinung, dass die erforderlichen Informationen, insbesondere die Methodik für das Studium des Handbuchs der Fischereiwissenschaft in einer konsolidierten Form erforderlich sind. Wir haben uns bemüht, ein Handbuch herauszubringen, das den Anforderungen von Studenten und Forschern, die sich mit Fischereiwissenschaft beschäftigen, gerecht wird. Das vorliegende Handbuch richtet sich an Studenten und Lehrer sowie an Forscher.

Dr. Kiran Shillewar arbeitet als Leiter der Abteilung für Zoologie und Fischereiwissenschaft am Science College in Nanded, Maharashtra, Indien. Er ist ein Forschungsleiter in Zoologie und Fischereiwissenschaft.



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Manuel de la science des pêches

Science des pêches (French Edition)

Kiran Shillewar
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Contenu

PRÉFACE.....	3
Embarcations et engins de pêche.....	7
Identification des échelles.....	19
Paramètres physico-chimiques de l'eau.....	27
Système digestif du Labo.....	45
Système reproductif du Labo.....	46
Brauin de Labeo.....	47
Vessie aérienne de Labeo.....	48
Nerfs crâniens du Labo.....	48
Étude des métiers de la pêche et des engrenages.....	49
ENGINS DE PÊCHE.....	54
Poissons d'eau douce.....	57
Poissons prédateurs.....	68
Poissons d'aquarium.....	75
Liste de références et de livres.....	94

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Manuel de la science des pêches

La science de la pêche est l'un des sujets importants du curriculum des étudiants de premier et de second cycle de toutes les universités indiennes. Les enseignants, les scientifiques et les étudiants sont également activement engagés dans la recherche en fishery science. A cette fin, la méthodologie appropriée est nécessaire. En tant qu'enseignants de la science des fisheries, nous avons ressenti les informations nécessaires, en particulier la méthodologie pour étudier le Manuel de la Science des Pêches d'une manière consolidée. Un effort a été fait dans le but de publier un manuel pour répondre aux besoins des étudiants et des chercheurs concernés par la science des pêches.

Le présent manuel est préparé pour les étudiants et les enseignants ainsi que pour les chercheurs.

Le **Dr Kiran Shillewar** travaille comme chef du département de zoologie et des sciences de la pêche, Science College, Nanded, Maharashtra, Inde. Il est guide de recherche en zoologie et en sciences halieutiques.



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Содержание

ПРЕДИСЛОВИЕ	3
Рыболовные снасти и приспособления	7
Идентификация шкал	19
Физико-химические параметры воды	28
Пищеварительная система лабео	47
Репродуктивная система лабео	48
Брауин из Лабео	49
Воздушный мочевой пузырь лабео	50
Черепные нервы Лабео	50
Изучение рыболовных ремесел и снастей	51
РЫБОЛОВНЫЕ СНАСТИ	56
Пресноводные рыбы	59
Хищные рыбы	70
Аквариумные рыбки	77
Список литературы и книг	97

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Руководство по рыбохозяйственной науке

Наука о рыболовстве является одним из важных предметов в программе обучения студентов и аспирантов всех индийских университетов. Преподаватели, ученые и студенты также активно занимаются исследованиями в области рыбохозяйственной науки. Для этого необходима соответствующая методология. Будучи преподавателями fishery science, мы почувствовали необходимость в информации, особенно в методологии для изучения Руководства по рыбохозяйственной науке в консолидированной форме. Была предпринята попытка выпустить учебник, чтобы удовлетворить потребности студентов и исследователей, занимающихся наукой о рыболовстве. Настоящее пособие подготовлено для студентов и преподавателей, а также для исследователей.

Д-р Киран Шиллевар работает заведующим кафедрой зоологии и рыболовства, Научный колледж, Нандед, Махараштра, Индия. Он является научным руководителем в области зоологии и рыболовства.



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Manual das Ciências da Pesca

Ciência da pesca (Portuguese Edition)

Kiran Shillewar
Dipti V Totawar



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Conteúdos

PREFÁCIO	3
Artes e Artes de Pesca.....	7
Identificação das escalas	19
Parâmetros físico-químicos da água	27
Sistema Digestivo de Labeo.....	44
Sistema Reprodutivo de Labeo	45
Brauin do Labeo.....	46
Bexiga de ar de Labeo.....	47
Nervos Cranianos de Labeo	47
Estudo de Artes e Artes de Pesca.....	48
ARTES DE PESCA	53
Peixes de Água Doce	56
Peixes Predatory Fishes	67
Peixes de aquário	74
Lista de Referências e Livros.....	93

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Manual das Ciências da Pesca

A Ciência da Pesca é uma das disciplinas importantes no currículo dos alunos de graduação e pós-graduação de todas as Universidades Indianas. Os professores, cientistas e estudantes estão também activamente empenhados na investigação em fishery science. Para este fim, é necessária uma metodologia adequada. Sendo um fishery professor de ciências, sentimos a informação necessária, particularmente a metodologia para estudar o Manual de Ciências da Pesca de uma forma consolidada. Foi feito um esforço no sentido de trazer um manual para fulfill a exigência dos estudantes e investigadores preocupados com a Ciência da Pesca.

O presente manual está preparado para estudantes e professores, assim como para investigadores.

O Dr. Kiran Shilawar está a trabalhar como Chefe do Departamento de Zoologia e Ciência da Pesca, Faculdade de Ciências, Nanded, Maharashtra, Índia. Ele é um Guia de Investigação em Zoologia e Ciência da Pesca.



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A Hand Book of FISHERY SCIENCE

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CONTENTS

Identification, Classification & Distinguishing character & Adaptive features

Trygon	2
Torpedo.....	5
Sphyrna.....	8
Pristis.....	10
Exocoetus	13
Echeneis.....	15
Hippocampus.....	18
Ostracion.....	21
Pterois	24
Syngnathus	27
Bombay Duck	30
Sole Fish	32
Mugil Corsula.....	35
Milk Fish	37

Identification of Fish Parasite

Argulus.....	39
Dactylogyrus.....	42

Identification, Classification & Diagnostic Characters of Marine water mollusc

Mytilus.....	44
Ostrea.....	47
Pinctada vulgaris.....	50

Sepia	53
Nautilus.....	56
Pila.....	59
Loligo	61
Chank.....	63

Identification, Classification & Diagnostic character of Marine water fishes

Oil sardine.....	65
Mackrel.....	67
Pomfreet	69
Hilsa ilisha.....	71
Trichiurus (ribbon fish)	73

Identification, Classification & Diagnostic character of Marine water crustaceans

Penaeus indicus.....	75
Peneaus monodom.....	78

Fresh Water Phytoplanktons

Spirogyra	80
Vorticella	83

Fresh Water Fishes

Catla Catla	85
Labeo rohita.....	88
Cirrhinus Mrigala	91
Grass Carp	94

Silver Carp.....	96
Common Carp.....	98

Predatory Fishes

Clarius batrachus.....	100
Heteropneusts fossilis.....	103
Mystus seenghala.....	105
Wallago attu.....	107
Cyclops.....	109
Daphnia.....	111
Brachionus.....	113
Zooplankton (Cyclopoda).....	115
Digestive System of labeo.....	116
Reproductive System of labeo.....	117
Brauin of labeo.....	118
Air bladder of labeo.....	119
Criial Nerves of labeo.....	120
Study of fishing crafts and gears.....	121

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Ciencia de la pesca (Spanish Edition)

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Índice de contenidos

CARACTERES GENERALES DE LOS PECES	4
Caracteres externos de los peces escamosos.....	5
<i>Peces escamosos</i>	5
<i>Pescado sin escamas (Rita rita)</i>	6
CARPA INDIA MAJAR : (IMC).....	9
<i>Catla catla</i>	12
BIOLOGÍA DE LAS CARPAS EXÓTICAS.....	17
BIOLOGÍA DE LA CARPA HERBÍVORA	17
BIOLOGÍA DE LA CARPA PLATEADA.....	19
CLASIFICACIÓN	19
BIOLOGÍA DE LA CARPA COMÚN.....	21
CLARIUS BATRACHUS: CLASIFICACIÓN	25
HETEROPNEUSTS FOSSILIS: CLASIFICACIÓN	27
IDENTIFICACIÓN DE MYSTUS SEENGHALA	28
WALLAGO ATTU:	30
CRÍA INDUCIDA: (HIPOFISURACIÓN).....	31
INFLUENCIA DE LOS FACTORES AMBIENTALES EN LA CRÍA DE PECES.....	34
CORACLE	36
CATAMARÁN	36
BARCO MASULA.....	37
RED DE ENMALLE Y RED DE DERIVA.....	41
CONTROL BIOLÓGICO	52
LISTA DE PECES DE ACUARIO CON HÁBITO DE CRÍA	58
CRÍA DE PECES DE ACUARIO.....	59
NUDOS DE ARRECIFE	69
SISTEMA DE RÉCIRCULACIÓN DE AGUA.....	76
DESARROLLO DE LA PESCA EN EMBALSES EN LA INDIA	103
CONSERVACIÓN Y GESTIÓN	104
LISTA DE REFERENCIAS Y LIBROS.....	125



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La ciencia de la pesca es una de las asignaturas importantes en el plan de estudios de los estudiantes de grado y postgrado de todas las universidades indias. El profesor, los científicos y los estudiantes también se dedican activamente a la investigación en ciencias de la pesca. Para ello es necesaria una metodología adecuada. Siendo un profesor de ciencias de la pesca, siempre la información requerida particularmente la metodología para estudiar la biología de los peces y el concepto básico en un consolidado.

El Dr. Kiran Shillewar trabaja como jefe del Departamento de Ciencias de la Pesca, en la Facultad de Ciencias, Nanded. Es un guía de investigación en Ciencias de la Pesca y Zooloía.



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Inhaltsverzeichnis

ALLGEMEINE MERKMALE VON FISCHEN:	5
Äußere Merkmale von Schuppenfischen:	7
Schuppenfisch.....	7
Schuppenloser lisch (Rita rita).....	8
INDISCHER MAIKARPFEN : (IMC).....	11
Catla catla.....	14
BIOLOGIE DER EXOTISCHEN KARPFFEN	18
BIOLOGIE DES GRASKARPFFEN	19
BIOLOGIE DES SILBERKARPFFEN	21
KLASSIFIZIERUNG	21
BIOLOGIE DES GEMEINEN KARPFFENS	23
CLARIUS BATRACHUS: KLASSIFIZIERUNG:	27
HETEROPNEUSTS FOSSILIS: KLASSIFIZIERUNG:	29
MYSTUS SEENGHALA IDENTIFIKATION.....	30
WALLAGO ATTU.....	32
INDUZIERT FORTPFLANZUNG: (HYPOPHYSIERUNG).....	33
EINFLUSS VON UMWELTFAKTOREN AUF DIE ZUCHT VON FISCHEN.....	36
CORACLE.....	38
CATAMARAN	38
MASULA BOAT.....	39
KIEMENNETZ UND TREIBNETZ.....	44
BIOLOGISCHE BEKÄMPFUNG.....	55
LISTE DER AQUARIENFISCHE MIT ZUCHTVERHALTEN	61
ZUCHT UND AUFZUCHT VON AQUARIENFISCHEN	62
RIFFKNOTEN.....	72
WASSERUMLAUFSYSTEM	79
ENTWICKLUNG DER STAUSEEFISCHEREI IN INDIEN.....	108
ERHALTUNG UND BEWIRTSCHAFTUNG.....	109
REFERENZLISTE UND BÜCHER.....	131

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Die Fischereiwissenschaft ist eines der wichtigsten Fächer im Lehrplan der Studenten und Doktoranden aller indischen Universitäten. Die Lehrer, Wissenschaftler und Studenten sind auch aktiv in der Forschung in der Fischereiwissenschaft tätig. Zu diesem Zweck ist die richtige Methodik notwendig. Als Leitfaden der Fischereiwissenschaft führen wir die erforderlichen Kenntnisse der Fischereiwissenschaft ein, nämlich die Fischbiologie und das Fischereiwissenschaftliche Management.

Dr. N. S. Murthy, B.Sc., M.A., M.Phil., Ph.D., ist Leiter der Abteilung für Fischereiwissenschaft, Science College, Nanded. Er ist ein Forschungsleiter in Fischereiwissenschaft und Zoologie.



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Le manuel de sciences halieutiques

Science des pêches (French Edition)

Kiran Shillewar
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Table des matières

CARACTÈRES GÉNÉRAUX DES POISSONS	5
Caractères externes du poisson écailléux.....	6
<i>Poisson écailléux</i>	7
<i>Poisson sans écailles (Rita rita)</i>	8
CARPE INDIENNE MAJAR : (IMC)	11
<i>Catla catla</i>	14
BIOLOGIE DES CARPES EXOTIQUES	19
LA BIOLOGIE DE L'AMOUR BLANC.....	19
LA BIOLOGIE DE LA CARPE ARGENTÉE	21
CLASSIFICATION.....	21
BIOLOGIE DE LA CARPE COMMUNE.....	23
CLARIUS BATRACHUS : CLASSIFICATION	27
HETEROPNEUSTS FOSSILIS : CLASSIFICATION.....	29
IDENTIFICATION MYSTUS SEENGHALA	30
WALLAGO ATTU.....	32
REPRODUCTION INDUITE : (HYPOPHYSATION).....	33
INFLUENCE DES FACTEURS ENVIRONNEMENTAUX SUR LA REPRODUCTION DES POISSONS.....	36
CORACLE.....	38
CATAMARAN	38
BATEAU MASULA	39
FILET MAILLANT ET FILET DÉRIVANT.....	44
CONTRÔLE BIOLOGIQUE.....	55
LISTE DES POISSONS D'AQUARIUM AVEC HABITUDES DE REPRODUCTION	61
REPRODUCTION ET ÉLEVAGE DE POISSONS D'AQUARIUM.....	62
NŒUD DE REEF	72
SYSTÈME DE RECIRCULATION DE L'EAU.....	79
DÉVELOPPEMENT DE LA PÊCHE DANS LES RÉSERVOIRS EN INDE	107
CONSERVATION ET GESTION	109
.....	Error! Bookmark not defined.

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La science de la pêche est l'un des sujets importants du programme d'études des étudiants de premier et de deuxième cycle de toutes les universités indiennes. Les enseignants, les scientifiques et les étudiants sont également activement engagés dans la recherche en sciences halieutiques. Pour ce faire, une méthodologie appropriée est nécessaire. En tant qu'enseignant en sciences de la pêche, nous avons recueilli les informations requises, en particulier la météorologie pour étudier la biologie des poissons et le concept de l'élevage. Un guide complet.

Dr. R. S. Sahu, professeur et directeur du département des sciences de la pêche, est un guide de recherche en sciences



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Оглавление

ОБЩИЕ ХАРАКТЕРИСТИКИ РЫБ:.....	5
Внешние признаки чешуйчатых рыб:.....	7
Чешуйчатая рыба.....	7
Рыба без чешуи (<i>Pito pita</i>).....	8
ИНДИЙСКИЙ КАРП МАДЖАР : (IMC).....	11
<i>Catla catla</i>	14
БИОЛОГИЯ ЭКЗОТИЧЕСКИХ КАРПОВ :.....	19
БИОЛОГИЯ ТРАВЯНОГО КАРПА:.....	19
БИОЛОГИЯ СЕРЕБРЯНОГО КАРАСЯ:.....	21
КЛАССИФИКАЦИЯ :.....	21
БИОЛОГИЯ ОБЫКНОВЕННОГО КАРПА :.....	23
<i>CLARIUS BATRACHIUS</i> : КЛАССИФИКАЦИЯ:.....	27
NETEROPNEUSTS FOSSILUS: КЛАССИФИКАЦИЯ:.....	29
ИДЕНТИФИКАЦИЯ МИСТУСА СЕВЕГАЛА:.....	30
АТТУ ВАЛЛАГО:.....	32
ИНДУЦИРОВАННОЕ РАЗМНОЖЕНИЕ: (ТИПОФИЗАРНЫЙ).....	33
ВЛИЯНИЕ ЭКОЛОГИЧЕСКИХ ФАКТОРОВ НА РАЗВЕДЕНИЕ РЫБ.....	36
COBACLE.....	38
КАТАМАРАН.....	38
ЛОДКА МАСУЛА.....	39
ЖАБЕРНЫЕ И ДРИФТЕРНЫЕ СЕТИ.....	44
БИОЛОГИЧЕСКИЙ КОНТРОЛЬ :.....	55
СПИСОК АКВАРИУМНЫХ РЫБ С ПРИВЫЧНОЙ РАЗМНОЖАТЬСЯ :.....	61
РАЗВЕДЕНИЕ И ВЫРАЩИВАНИЕ АКВАРИУМНЫХ РЫБ :.....	62
КОСЫНКА.....	73
СИСТЕМА РЕЦИРКУЛЯЦИИ ВОДЫ.....	79
РАЗВИТИЕ РЫБОЛОВСТВА В ВОДОКРАНИЛИЩАХ ИНДИИ.....	107
СОХРАНЕНИЕ И УПРАВЛЕНИЕ :.....	108
СПИСОК ЛИТЕРАТУРЫ И КНИГ.....	119

Учебник рыбохозяйственной науки

Рыбохозяйственная наука является одним из важных предметов в учебном плане студентов и аспирантов всех индийских университетов. Преподаватели, ученые и студенты также активно занимаются исследованиями в области рыбохозяйственной науки. Для этого необходима соответствующая методология. Будучи преподавателем рыбохозяйственных наук, мы почувствовали необходимость в информации, особенно в методологии изучения биологии рыб и основных понятий в консолидированном виде.

Д-р Киран Шиллевар работает заведующим кафедрой рыбохозяйственных наук в Научном колледже, Нандед. Он является научным руководителем в области рыболовства и зоологии.



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Um Livro de Texto de Ciências da Pesca

Ciência da Pesca (Portuguese Edition)

Kiran Shillewar
Dipti V Totawar

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Tabela de Conteúdos

CARACTERES GERAIS DOS PEIXES:	5
Caracteres externos de Peixe Escamoso:	6
Peixe Escamoso.....	7
Peixe sem escamas (<i>Rita rita</i>).....	8
CARPA MAJAR INDIANA : (IMC).....	11
<i>Catla catla</i>	14
BIOLOGIA DAS CARPAS EXÓTICAS :.....	19
BIOLOGIA DA CARPA HERBÍVORA:.....	19
BIOLOGIA DA CARPA PRATEADA:	21
CLASSIFICAÇÃO :.....	21
BIOLOGIA DA CARPA COMUM :.....	23
CLARIUS BATRACHUS: CLÁSSIFICAÇÃO:.....	27
HETEROPNEUSTS FOSSILIS: CLASSIFICAÇÃO:.....	29
MYSTUS SEENGHALA IDENTIFICAÇÃO:.....	30
ATTU WALLAGO:.....	32
REPRODUÇÃO INDUZIDA: (HIPOFISEAÇÃO).....	33
INFLUÊNCIA DE FACTORES AMBIENTAIS NA REPRODUÇÃO DE PEIXES.....	36
CORACLE.....	38
CATAMARAN	38
MASULA BOAT.....	39
REDE DE EMALHAR E REDE DE EMALHAR DE DERIVA	44
CONTROLO BIOLÓGICO :.....	55
LISTA DE PEIXES DE AQUÁRIO COM HÁBITOS DE REPRODUÇÃO :	61
REPRODUÇÃO E CRIAÇÃO DE PEIXES DE AQUÁRIO :.....	62
REEF KNOT.....	72
SISTEMA DE RECIRCULAÇÃO DE ÁGUA	79
DESENVOLVIMENTO	107
DA PESCA DE RESERVATÓRIO NA ÍNDIA	
CONSERVAÇÃO E GESTÃO :.....	108
LISTA DE REFERÊNCIAS E LIVROS.....	129

Um Livro de Texto de Ciências da Pesca

A Ciência da Pesca é uma das disciplinas importantes no currículo tanto de alunos de graduação como de pós-graduação de todas as Universidades Indianas. O professor, cientistas e estudantes também estão ativamente engajados na pesquisa em ciência da pesca. Para isso, a metodologia adequada é necessária. Sendo um professor de ciências pesqueiras sentimos a informação necessária particularmente a metodologia para estudar a biologia dos peixes e o conceito básico em uma consolidação.

O Dr. Kiran Shillewar está a trabalhar como Chefe do Departamento de Ciências da Pesca, Faculdade de Ciências, Nanded. Ele é um Guia de Pesquisa em Ciência da Pesca e Zoologia.



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Chapter - 2

Biology of Fish *Notopterus Notopterus*

Dr. Kiran S. Shillewar and Dr. D.V. Totawar

Abstract

Systematic position, Maturity & Spawning, Sex composition, Reproductive organs is the most important aspect in Biological studies of fish *Notopterus notopterus*. For this study 226 specimens of *Notopterus notopterus* were collected from River Godavari, out of them 190 male & 36 female we studied. The result show Maturity & Spawning, Systematic position, Sex composition, Reproductive organs of fish *Notopterus notopterus*.

Keyword: Systematic position, maturity & spawning, sex composition, reproductive organs, *notopterus notopterus*

Systematic Position

Introduction

Notopterus notopterus is a teleost fish Commonly Known as 'Chapati' or 'Chambari' in Marathwada region, Maharashtra. The fish belongs to the family Notopteriidae which includes a large number of fresh water fishes, distributed all over the world.

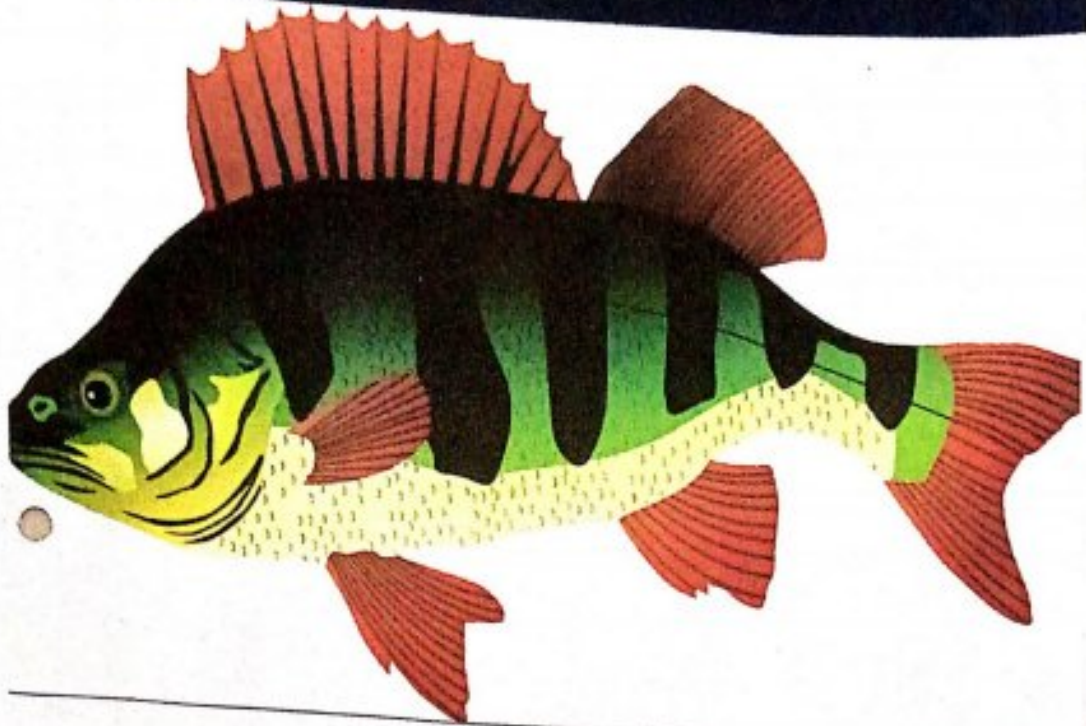
The fish under investigation belong to the subfamily Notopteridae, account of which have been given by pallas (1769) Day (1878), Gunther (1880) and Das (1936) and Misra (1976).

In the present work on the systematic position of *Notopterus notopterus*, the description of the family, genus and the species is based on the account given by pallas (1769), Day (1878), Gunther (1880), Das (1936) and Misra (1976) and the actual observation made during the course of study.

Order; Clupeiformes

Body compressed in most; pectoral fin low on body; pelvic fins abdominal; no dorsal adipose fin; no fin spines; scales cycloid; lateral line absent on body; abdomen often with keeled; no neeth on passap leonid; swim bladder diverticula connected with for in a manner unlike that





Kiran Shillewar
Dipti V. Totawar

A Text Book of Fish Seed Production



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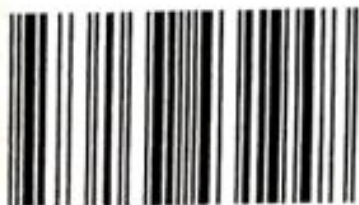
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CONTANTS

1. Introduction.....	4
2. Status of spawn prospecting.....	7
3. Fish seed resources.....	09
4. Methods of fish breeding.....	16
5. Factors concerned with induced breeding.....	24
6. Hypophysation.....	27
7. Induced breeding of carps.....	33
8. Breeding Habit.....	46
9. Induced breeding in IMC.....	52
10. Transport of Seed & Brooders.....	62

Fishery Science is one of the important subjects in the curriculum of both under and post graduate students of all Indian Universities. The teachers, scientists and students are also actively engaged in research in fishery science. For this purpose the proper methodology is necessary. The present manual is prepared for students and researches.

Dr. Kiran Shillewar is working as a Head of Dept. in Fishery Science, Science College, Nanded. He is a research Guide in Zoology. He has presented research papers in various National and International conferences held in India. His area of Research is Fisheries, Limnology.



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FABRICATION *of* AQUARIUM

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TABLE OF CONTENTS

Chapter 1: AQUARIUM	1
Chapter 2: BASIC NEEDS OF AQUARIUM	3
Chapter 3: SETTING OF AN AQUARIUM	9
Chapter 4: MAINTENANCES OF AQUARIUM	11
Chapter 5: PRINCIPLE OF AQUARIUM	17
Chapter 6: CHARACTERISTICS OF COMMON AQUARIUM FISHES	19
Chapter 7: BEEDING OF AQURIUM FISHES.....	23
Chapter 8: CULTURE OF ORNAMENTAL FISHES	31
Chapter 9: AQUARIUM ACCESSORIES AND THEIR USES	41
REFERENCE.....	75

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A Hand Book of AQUARIUM FISHES



Dr. Kiran Shillewar
Dr. Dipti V. Totawar

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CONTANTS

Identifcation, Classification & Distinguishing character & Adaptive features.

Guppy (Poecilia Reticulate)	1
Sword Tail (Xiphophorus Helleri)	3
Molly (Poecilia Sphenops)	5
Blue Dolphin Moorii (Cyrtocara Moorii)	7
Angelfish (Pterophyllum Scalare)	9
Discus Fish (Symphysodon)	11
Blood Parrot Cichlid	13
Clown Loach (Chromobotia Macracanthus)	15
Yoyo Loach (Botia Almorhae)	17
Cardinal Tetra (Paracheirodon Erodible)	19
Emperor Tetra (Nematobrycon Palmeri)	21
Silver Dollar Fish (Metynnis Argenteus)	23
Glowlight Tetra (Hemigrammus Erythrozonus)	25
Serpae Tetra (Hyphessobrycon Eques)	27
Ember Tetra (Hyphessobrycon Amandae)	29
X-Ray Fish (Pristella Maxillaris)	31
Betta Fish (Betta Splendens)	33
Dwarf Gourami (Trichogaster Lalius)	35
Giant Gourami (Osphronemus Goramy)	37
Pearl Gourami (Trichopodus Leeri)	39
Kissing Gourami (Helostoma Temminckii)	41
Glass Catfish (Kryptopterus Bicirrhis)	43

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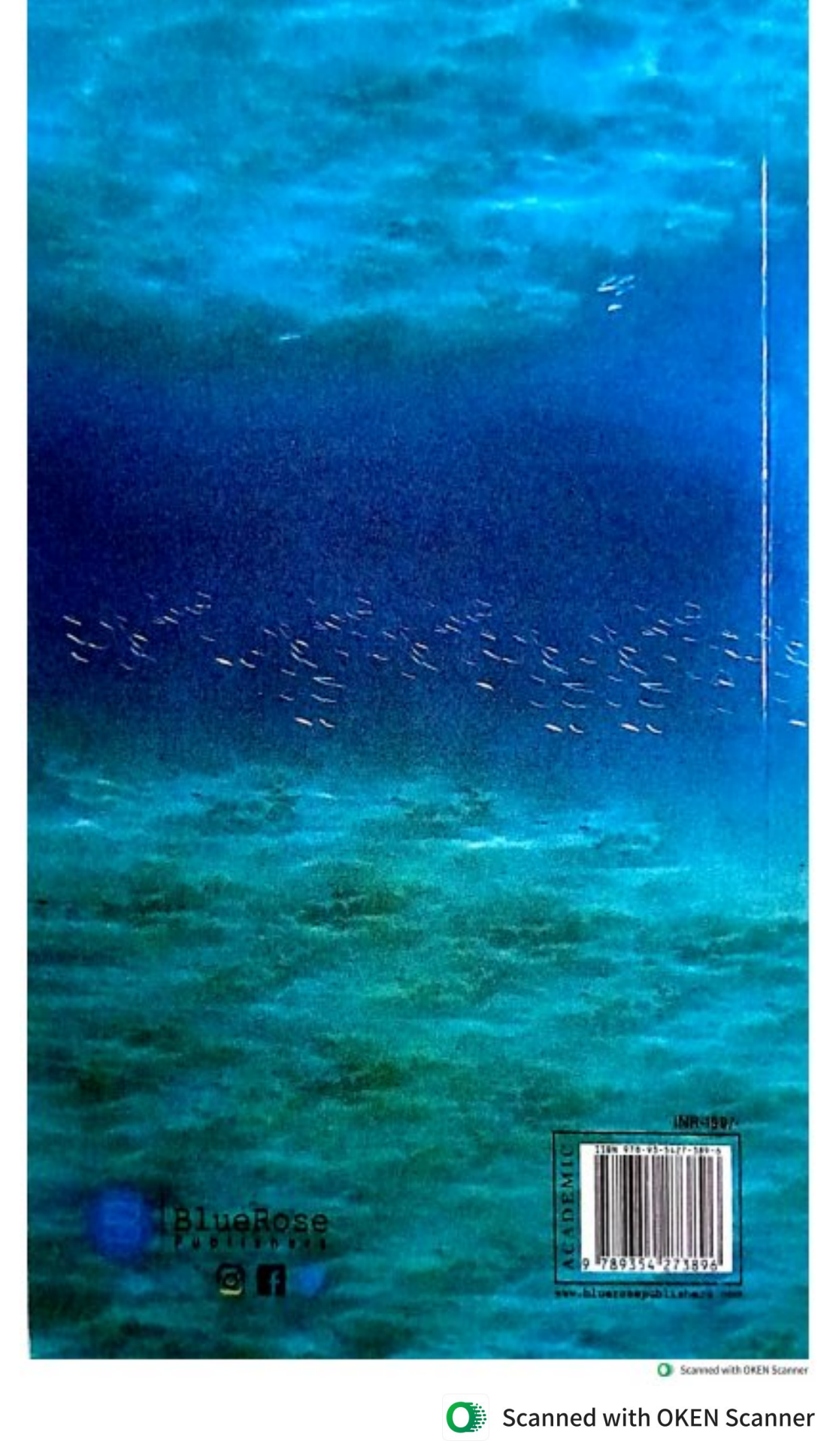
TABLE OF CONTENTS

IDENTIFICATION, CLASSIFICATION & DISTINGUISHING CHARACTER & ADPATIVE FEATURES.....	2
TRYGON	2
TORPEDO	5
SPHYRNA	8
PRISTIS	10
EXOCOETUS	12
ECHENEIS	14
HIPPOCAMPUS.....	16
OSTRACEON.....	19
PTEROIS.....	21
SYNGNATHUS.....	23
BOMBAY DUCK	25
SOLE FISH.....	27
MUGIL CORSULA	29
MILK FISH.....	31
IDENTIFICATION OF FISH PARASITE.....	33
ARGULUS.....	33
DACTYLOGYRUS	35
IDENTIFICATION, CLASSIFICATION & DIGNOSTIC CHARACTERS OF MARINE WATER	
MOLLUSC.....	37
MYTILUS	37
OYSTERA	40
PINCTADA VULGARIS	43



SEPIA.....	45
NAUTILUS.....	48
PILA.....	51
LOLIGO.....	53
CHANK.....	55
IDENTIFICATION, CLASSIFICATION & DIGNOSTIC CHARACTER OF MARINE WATER FISHES.....	57
OIL SARADINE.....	57
MACKREL.....	59
POMFREET.....	61
HILSA ILISHA.....	63
TRICHIURUS (RIBBON FISH).....	65
IDENTIFICATION, CLASSIFICATION & DIGNOSTIC CHARACTER OF MARINE WATER CRUSTANCEANS.....	67
PENAEUS INDICUS.....	67
PENEAS MONODOM.....	69
FRESH WATER PHYTOPLANKTONS.....	71
SPIROGYRA.....	71
VORTICELLA.....	73
FRESH WATER FISHES.....	75
CATLA CATLA.....	75
LABEO ROHITA.....	77
CIRRHINUS MRIGALA.....	79
GRASS CARP.....	81
SILVER CARP.....	83

COMMON CARP	85
PREDATORY FISHES	87
CLARIUS BATRACHUS	87
HETEROPNEUSTS FOSSILIS	89
MYSTUS SEENGHALA	91
WALLAGO ATTU.....	93
STUDY OF ZOOPLANKTONS	94
CYCLOPS	95
DAPHNIA.....	97
BRACHIONUS	99
ZOOPLANKTON (CYCLOPODA).....	101
DIGESTIVE SYSTEM OF LABEO.....	102
REPRODUCTIVE SYSTEM OF LABEO	103
BRAIN OF LABEO	104
AIR BLADDER OF LABEO.....	105
CRANIAL NERVES OF LABEO	106
STUDY OF FISHING CRAFTS AND GEARS	107
FISHING GEARS	113
MUSEUM STUDY	116
BARBUS TICTO	117
HETEROPNEUSTS FOSSILIS.....	119
MASTACEMBALLUS ARMATUS	121
ANABUS SCANDENS	123
NANDUS	125
PROTOPTERUS.....	129



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Un libro di testo di scienza della pesca

Scienza della pesca (Italian Edition)

Kiran Shillewar
Dipti V Totawar

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Tabella dei contenuti

CARATTERI GENERALI DEI PESCI:	4
Caratteri esterni del pesce squamoso:	5
Pesce squamoso	5
Pesce senza squame (<i>Rita rita</i>)	6
CARPA INDIANA MAJAR : (IMC)	9
<i>Carla carla</i>	12
BIOLOGIA DELLE CARPE ESOTICHE	17
BIOLOGIA DELLA CARPA ERBIVORA:	17
BIOLOGIA DELLA CARPA ARGENTATA	19
CLASSIFICAZIONE	19
BIOLOGIA DELLA CARPA COMUNE	21
CLARIUS BATRACHIUS: CLASSIFICAZIONE:	25
HETEROPNEUSTS FOSSILIS: CLASSIFICAZIONE:	27
IDENTIFICAZIONE MYSTUS SEENGHALA	28
WALLAGO ATTU	30
RIPRODUZIONE INDOTTA: (IPOFISAZIONE)	31
INFLUENZA DEI FATTORI AMBIENTALI SULLA RIPRODUZIONE DEI PESCI	34
CORACLE	36
CATAMARANO	36
BARCA MASULA	37
RETE DA IMBROCCO E RETE DA POSTA DERIVANTE	41
CONTROLLO BIOLOGICO	52
ELENCO DEI PESCI D'ACQUARIO CON ABITUDINE DI RIPRODUZIONE	57
RIPRODUZIONE E ALLEVAMENTO DI PESCI D'ACQUARIO	58
NODO DI SCOGLIERA	68
SISTEMA DI RICIRCOLO DELL'ACQUA	75
SVILUPPO DELLA PESCA NEI BACINI IN INDIA	102
CONSERVAZIONE E GESTIONE	103
ELENCO DI RIFERIMENTI E LIBRI	124

Un libro di testo di scienza della pesca

La scienza della pesca è una delle materie importanti nel curriculum degli studenti sia under che post graduate di tutte le università indiane. L'insegnante, gli scienziati e gli studenti sono anche attivamente impegnati nella ricerca nella scienza della pesca. A questo scopo è necessaria una metodologia adeguata. Essendo un insegnante di scienze della pesca abbiamo sentito le informazioni richieste in particolare la metodologia per studiare la biologia dei pesci e il concetto di base in un consolidato.

Il dottor Kiran Shillewar lavora come capo del dipartimento di Scienze della pesca, Science College, Nanded. È una guida alla ricerca in Scienza della pesca e Zoologia



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Un manuel de sciences halieutiques

Science des pêches (French Edition)

Kiran Shillewar
Dipti V Totawar

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Table des matières

CARACTÈRES GÉNÉRAUX DES POISSONS	5
Caractères externes du poisson écailleux.....	6
<i>Poisson écailleux</i>	7
<i>Poisson sans écailles (Rita rita)</i>	8
CARPE INDIENNE MAJAR : (IMC)	11
<i>Catla catla</i>	14
BIOLOGIE DES CARPES EXOTIQUES	19
LA BIOLOGIE DE L'AMOUR BLANC.....	19
LA BIOLOGIE DE LA CARPE ARGENTÉE	21
CLASSIFICATION.....	21
BIOLOGIE DE LA CARPE COMMUNE.....	23
CLARIUS BATRACHUS : CLASSIFICATION	27
HETEROPNEUSTS FOSSILIS : CLASSIFICATION.....	29
IDENTIFICATION MYSTUS SEENGHALA	30
WALLAGO ATTU.....	32
REPRODUCTION INDUITE : (HYPOPHYSATION).....	33
INFLUENCE DES FACTEURS ENVIRONNEMENTAUX SUR LA REPRODUCTION DES POISSONS. 36	
CORACLE.....	38
CATAMARAN	38
BATEAU MASULA	39
FILET MAILLANT ET FILET DÉRIVANT	44
CONTRÔLE BIOLOGIQUE.....	55
LISTE DES POISSONS D'AQUARIUM AVEC HABITUDES DE REPRODUCTION	61
REPRODUCTION ET ÉLEVAGE DE POISSONS D'AQUARIUM.....	62
NŒUD DE REEF.....	72
SYSTÈME DE RECIRCULATION DE L'EAU.....	79
DÉVELOPPEMENT DE LA PÊCHE DANS LES RÉSERVOIRS EN INDE	107
CONSERVATION ET GESTION	109
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Un manuel de sciences halieutiques

La science de la pêche est l'un des sujets importants du programme d'études des étudiants de premier et de deuxième cycle de toutes les universités indiennes. Les enseignants, les scientifiques et les étudiants sont également activement engagés dans la recherche en sciences halieutiques. Pour ce faire, une méthodologie appropriée est nécessaire. En tant qu'enseignant en sciences de la pêche, nous avons ressenti les informations requises, en particulier la méthodologie pour étudier la biologie des poissons et le concept de base dans un cadre consolidé.

Le Dr Kiran Shillewar travaille comme chef du département des sciences de la pêche, Science College, Nanded. Il est guide de recherche en sciences halieutiques et en zoologie.



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Libro de texto de ciencias de la pesca

Ciencia de la pesca (Spanish Edition)

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Índice de contenidos

CARACTERES GENERALES DE LOS PECES	4
Caracteres externos de los peces escamosos.....	5
Peces escamosos	5
Pescado sin escamas (Rita rita).....	6
CARPA INDIA MAJAR : (IMC).....	9
Catla catla	12
BIOLOGÍA DE LAS CARPAS EXÓTICAS.....	17
BIOLOGÍA DE LA CARPA HERBÍVORA	17
BIOLOGÍA DE LA CARPA PLATEADA.....	19
CLASIFICACIÓN	19
BIOLOGÍA DE LA CARPA COMÚN.....	21
CLARIUS BATRACHUS: CLASIFICACIÓN	25
HETEROPNEUSTS FOSSILIS: CLASIFICACIÓN.....	27
IDENTIFICACIÓN DE MYSTUS SEENGHALA	28
WALLAGO ATTU:	30
CRÍA INDUCIDA: (HIPOFISURACIÓN).....	31
INFLUENCIA DE LOS FACTORES AMBIENTALES EN LA CRÍA DE PECES.....	34
CORACLE	36
CATAMARÁN	36
BARCO MASULA	37
RED DE ENMALLE Y RED DE DERIVA.....	41
CONTROL BIOLÓGICO	52
LISTA DE PECES DE ACUARIO CON HÁBITO DE CRÍA	58
CRÍA DE PECES DE ACUARIO.....	59
NUDOS DE ARRECIFE	69
SISTEMA DE RECIRCULACIÓN DE AGUA.....	76
DESARROLLO DE LA PESCA EN EMBALSES EN LA INDIA	103
CONSERVACIÓN Y GESTIÓN	104
LISTA DE REFERENCIAS Y LIBROS.....	125

Libro de texto de ciencias de la pesca

La ciencia de la pesca es una de las asignaturas importantes en el plan de estudios de los estudiantes de grado y posgrado de todas las universidades indias. El profesor, los científicos y los estudiantes también se dedican activamente a la investigación en ciencias de la pesca. Para dicho propósito una metodología adecuada, siendo un profesor de ciencias de la pesca, necesitamos una información requerida, particularmente la metodología para estudiar la biología de los peces y el concepto básico en un consolidado.

El Dr. Kiron Sankar traba al como jefe del Departamento de Ciencias de la Pesca, en la Facultad de Ciencias, Nanded. Es un guía de investigación en Ciencias de la Pesca y Zología.



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Kiran Shillewar
Dipti V Totawar

Ein Lehrbuch der Fischereiwissenschaft

Fischereiwissenschaft (German Edition)



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Inhaltsverzeichnis

ALLGEMEINE MERKMALE VON FISCHEN:	5
Äußere Merkmale von Schuppenfischen:	7
Schuppenfisch.....	7
Schuppenloser Fisch (Rita rita).....	8
INDISCHER MAIKARPFEN : (IMC).....	11
Catla catla.....	14
BIOLOGIE DER EXOTISCHEN KARPFFEN.....	19
BIOLOGIE DES GRASKARPFEN.....	19
BIOLOGIE DES SILBERKARPFEN.....	21
KLASSIFIZIERUNG.....	21
BIOLOGIE DES GEMEINEN KARPFFENS.....	23
CLARIUS BATRACHUS: KLASSIFIZIERUNG:.....	27
HETEROPNEUSTS FOSSILIS: KLASSIFIZIERUNG:.....	29
MYSTUS SEENGHALA IDENTIFIKATION.....	30
WALLAGO ATTU.....	32
INDUZIERT FORTPFLANZUNG: (HYPOPHYSIERUNG).....	33
EINFLUSS VON UMWELTFAKTOREN AUF DIE ZUCHT VON FISCHEN.....	36
CORACLE.....	38
CATAMARAN.....	38
MASULA BOAT.....	39
KIEMENNETZ UND TREIBNETZ.....	44
BIOLOGISCHE BEKÄMPFUNG.....	55
LISTE DER AQUARIENFISCHE MIT ZUCHTVERHALTEN.....	61
ZUCHT UND AUFGUCHT VON AQUARIENFISCHEN.....	62
RIFFKNOTEN.....	72
WASSERUMLAUFSYSTEM.....	79
ENTWICKLUNG DER STAUSEEFISCHEREI IN INDIEN.....	108
ERHALTUNG UND BEWIRTSCHAFTUNG.....	109
REFERENZLISTE UND BÜCHER.....	131

Ein Lehrbuch der Fischereiwissenschaft

Die Fischereiwissenschaft ist eines der wichtigsten Fächer im Lehrplan der Studenten und Doktoranden aller indischen Universitäten. Die Lehrer, Wissenschaftler und Studenten sind auch aktiv in der Forschung in der Fischereiwissenschaft tätig. Zu diesem Zweck ist die richtige Methodik notwendig. Als Lehrer der Fischereiwissenschaft fühlen wir die erforderlichen Informationen, insbesondere die Methodik, um die Fischbiologie und das Grundkonzept in einem konsolidierten zu studieren.

Dr. Kiran Shillewar arbeitet als Leiter der Abteilung für Fischereiwissenschaft, Science College, Nanded. Er ist ein Forschungsleiter in Fischereiwissenschaft und Zoologie

Shillewar



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A Text Book Of Fishery Science

Fishery Science



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CONTANTS

1)	Introduction of Fishery Science	9
2)	External Characters of Scaly & Scales fish	11
3)	Morphometric Measurement of Fishes	13
4)	Biology of Indian major carp & Biology of Exotic carp	15
5)	Study of predatory fishes	31
6)	Induced Breeding	37
7)	Hybridization	39
8)	Crafts & Gears	42
9)	Study of Aquatic insects	48
10)	Aquatic weeds & their control	50
11)	Study of planktons	59
12)	Breeding of Aquarium fishes	62
13)	Study on Different types of knots	74
14)	Methods of Fish Cultivation	76
15)	Aquarium Fabrication	86
16)	Fresh Water Fisheries of India	96
17)	Management of fish farm	111

Fishery Science is one of the important subjects in the curriculum of both under and post graduate students of all Indian Universities. The teacher, scientists and students are also actively engaged in research in fishery science. For this purpose the proper methodology is necessary. Being a fishery science teacher we felt the information required particularly the methodology to study the fish biology and basic concept in a consolidated.

Dr Kiran Shillewar is working as a Head Department Of Fishery Science, Science College, Nanded. He is a Research Guide in Fishery Science and Zoology.



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Chapter - 5

Fishing Craft and Gears

Dr. Kiran Shillewar and Dr. Dipati Totawar

Abstract

Study of fishing techniques was carried out in the different place of India. Craft and gears were used in different place of India. The aim of this chapter is to record the fishery related technological knowledge specially fishing craft and gears used in different places of India.

Keywords: fishing, craft, gears.

Introduction

Fishery management requires a good knowledge of fishing gear. There is great divergence in the efficiency of different forms of fishing gear, in their adaptability to certain conditions, and in their desirability. Traditional fishing arts have been developed over the years to adapt to local body conditions, the species of fish desired and targeted size. The most successful fishing methods of an area or a region are those that have stood the test of time.

In India details about craft or gears used in fresh water fishery sector was documented by Manna *et al.* (2011), Bhattacharya *et al.* (2005), Sharma (2001), George (1971) they have detailed account of craft and gears. Nets or gear- these are instruments used for catching fish. Crafts or Boats. It provides platform for fishing operations, carrying the crew and fishing gears. There are various type of gears and crafts used in different parts depending upon the nature of water bodies, the age of fish and their species.

Fishing Crafts

Dingi

The crafts are plank built, made up locally using Shisham wood. The dugout canoes were very common in the lake (Suraha Lake, Uttar Pradesh) in earlier days but is rare now. The size of boat varies from 42-45 cm in length and 08-10 cm in width. The boat preservatives i.e. Painting with bitumen, act as water-resistant and protect crafts from decay and destruction.


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Page | 81

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Chapter - 1

An Essence of Bastar Folk Art and Culture: A Critical Study of the Significant Tribal Life

Dr. Vibhati Vasantrao Kulkarni
Assistant Professor, Department in English,
Science College, Nanded, Maharashtra

Abstract

Indian tribal culture is well-preserved in the traditional and historical Bastar district in Chhattisgarh. The present research paper will attempt to introduce the culture of tribes in Bastar, with critical analysis. It further shows how specific folk art and folk literature are the essence of happiness in life. Folk art in Bastar tribes is a natural reflection of the culture and tradition of the society. Now, these tribes are trying to

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adjust to the changes in their lives by creating their art to fit the shift in purpose. The intention of art creations in this primitive Bastar tribal culture was to please God but at present, these tribes are utilizing their art for their ultimate goal to survive in the present social and economic changes required in the modern and globalized Indian culture.

Key Words- folk art, culture, folk-literature, ancient, globalization

Introduction

Art and culture are the kernels of contentment in tribal life. The capacity of tribes in Bastar to maintain the balance between the originality in their culture and folk art and rapidly growing demands to transform for global purpose is appreciable. The original inhabitant tribes in Bastar, a district of Chhattisgarh are viz. Abujhmaria, Bhatra, Halba, Dorala and Dhurwa, Bison-Horn-Maria, Muria, Gonds, etc. Terracotta Art, Bamboo Craft, Kosa Silk, Bell- Metal (Dhokra Craft), Wood Craft, Home Décor, Wrought Iron Craft, etc. are art forms of Bastar art. Numerous researchers have traced the evidence of the existence of the Bastar art form during the medieval times of Mohenjodaro and Harappa. This art form is widely practiced in the regions of Tumnar, Balenga, Parchanpal, Kondagaon, Jagdalpur, Narayanpur, Chitrakote (wooden art), Tokapal (Bell Metal/Dhokra art), etc.

Some Prominent and Notable Arts in Bastar are:

***Terracotta Art:** Terracotta art is clay art preserved by Kumhara tribe. The artists in this tribe are skilled to produce handicrafts from terracotta. Terracotta is a clay of the Indravati river which is of the finest quality. The decorative items like elephants, tigers, peacock, square and triangle are used in this art form and manufactured with the clay. In Bastar culture elephant is a symbol of wealth, tiger is a symbol of power, peacock is a symbol of beauty, square and triangle are the symbols of shrine, etc. Artists create art forms depicting their

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A Critical Study of India's Technological Advancement in Gurcharan Das' *India Unbound*

(Dr. Vidya Vasanth Kulkarni,

Head, Department of English, L. S. Science College, Nanded, Maharashtra, India

Abstract: Gurcharan Das (3rd October, 1943) recounts technological history of India in his best seller *India Unbound* (2000). He opines that India has not yet achieved the status of developed nation because in the beginning immediately after India's freedom, Indian business policies did not favoured foreign capital and automatically it has rejected the benefits of technology. Gurcharan Das had written articles in *Times of India* and *Economic Times* on the harmful effects of the Foreign Exchange and Regulation Act of 1974 which denied foreign investments and technology. In *India Unbound*, Gurcharan Das enlists the millions of reforms after liberalization in 1991. He criticizes that technology in the liberal economy has helped to create jobs and new entrepreneurs but this development is not able to eradicate the poverty from India because of the corruption and lack of effective implementation of government policies. This paper has critical analysis of technological advancement of India narrated in *India Unbound*. The research study adopts qualitative research analysis method.

Index Terms - liberalization, technology, industries, entrepreneurship, advancement.

1. INTRODUCTION

Gurcharan Das talks about Indian business which has been growing due to the reforms in economy and technology. He divides India in to two types of major business groups. The newly emerging group is of vibrant world of knowledge-based, globally competitive companies in software, Internet, IT-based industries, generic pharmaceuticals, and entertainment. The second group is of the old family business houses which are sick and dying. It has joint ventures with foreigners. These businesses need protection. The time has come to learn from the foreign partners of Indian companies. Indian industrialist should adopt and adapt the developed foreign technology and managerial skills.

II. CRITICAL ANALYSIS OF TECHNOLOGICAL ADVANCEMENT OF INDIA IN *INDIA UNBOUND*

ACCORDING TO DAS, technology should be taught to a student at school level only. Das shares with readers his own experience when he was in American school he had a class called 'shop' where he availed an opportunity to work with lathes, tools, and machines and learn to handle the technology. Gurcharan Das gives examples of technological development in India like National Institute of Information Technology (NIIT) which is one of the world leaders in offering computer education worldwide. While narrating the technological development, Gurcharan comes to his personal life. He describes his visit to the ashram of guru Radhaswami in 1980. His parents were living near ashram. There the use of technology shocked Das. He found the ashram area as a clean spiritual heaven combined with technology.

2.1 SUCCESS STORIES OF INDUSTRIALISTS:

India has thousands of industrial success due to modern technology. In his narrative *India Unbound*, Gurcharan Das elaborates the success stories of industries in India from cities like Bangalore, Hyderabad, Chennai, Pune, Gurgaon which have software companies earning foreign currency in following lines he writes: A tiny two year old company in Bangalore called Armedia achieved a breakthrough in designing a chip for digital TV in 1999; America's Broadcom bought it for \$ 67 million and made its forty three employees rich beyond their wildest dreams. Ranbaxy, Dr Reddy's Laboratories, Cipla, and Wockhardt are building successful global business in generic drugs.... and McKinsey projects that this could grow to a million jobs earning \$50 billion in revenues by 2010. (xvii).

Various industrialists in India has significant role in bringing new technology in the nation. Das tries to motivate readers by describing the role of these business leaders of India.

2.1.1 Contribution of Business Leaders for Technological Advancement in India:

Gurcharan Das depicts the contribution of G. D. Birla as successful businessmen. G. D. Birla was the initiator who had started various industries in India like jute, sugar plants, soaps and chemical productions and paper making company called Orient Paper. India needs such entrepreneurs in bulk. Das comments that the reason of lack of progress in India is India's obtrusive bureaucracy to kill industrial revolution at birth so India has remained in the category of technologically undeveloped. History tells the story of Gujarat why even now Gujarat is at the first rank in industrial development and getting the more foreign currency and technology. Gujarat had developed from Seventeenth century in the business and industrial sector. Kusturbhai Lalbhai is another legendary man from Gujarat who had established textile mills during 1895 to 1905. He tried successfully for dye and synthetic colour factory. He brought the foreign technology for that. Das criticizes the policy of Nehru government of intellectual blueprint of state directed industrialization, based on publically owned industry and insulated from international competition which was basically not favourable for development. Gurcharan Das points out that the manual skills and the Indian artisan could be no substitute for technological progress in India. Before Independence British tried deindustrialization in India as it was the rule for their colony.

How technology can change life. The story of Aditya Birla is significant. He has flourished his business. Gurcharan Das narrates that how Aditya Birla used the technology to expand his business all over the world and how his business skills were suppressed by MRTP Act and Inspector Raj. Aditya Birla's global industrial world is described by Gurcharan Das in an essay "Marchants of Marwar" in *India Unbound* in following words:

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- She is presently working as Head, English Department, Science College Nanded, Maharashtra.
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- She has seventeen years teaching experience.
- She is recognized Ph. D. Research Guide of S.R.T.M. University, Nanded.
- She is also performing her duties as IQAC Officer and College Development Committee Member at Science College Nanded, Maharashtra.
- She has organized various State, National and International Seminars, Conferences, Workshops and Competitions.
- She has in her credit twenty-two national and international research articles published in the reputed journals.
- She has contributed in developing E-content for various text books prescribed by S.R.T.M. University, Nanded.
- She has been invited by various renowned organizations as a trainer, chief guest and resource person.

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3. Familial Discourse in

Tamarind Mem by Anita Rau

Badami

Vibhati Kulkarni

Abstract

Tamarind Mem is the first novel written by Anita Rau Badami. It is originally published in 1997. *Tamarind Mem* earned Anita Rau Badami the fame as the newest writer in the vibrant field of Indian diasporic literature. The novel describes the lives in Canada and India with these nations' cultural, social, political, and economic realities. It reflects themes of diasporic literature like nostalgia, rootlessness, alienation and displacement. The novel reveals the anxiety, anguish and insecurity in the lives of major women characters. Through analysis of these characters, Badami brings out how mother and daughter struggle to maintain their relationship amidst the problems of misunderstanding, loneliness, lack of love, and adjustment. The novel also presents the male-dominated family structure and familial discourse. It picturizes societal organization, and religious influence shaping human relations and interactions. The present book chapter will discuss the major diasporic themes in the Anita Rau Badami's novel *Tamarind Mem*. It will also critically describe the bold women and dominating male characters and their familial discourse in the select novel.

Keywords: diaspora, familial discourse, family, societal organization, interpersonal relationships, etc.

**A Critical Analysis of Vocalized Native Sentiments and Human Values
in M. K. Gandhi's Narrative**
An Autobiography: Story of My Experiments with Truth

Dr. Kulkarni Vibhati Vasantrao
Assit. Prof. in English
Science College, Nanded (MH)

Abstract: The Indian freedom struggle had succeeded with a revolutionary brand of writing that vocalised native sentiments against the British Empire. Several political leaders like Bal Gangadhar Tilak, Lala Lajpatrai, Kasturi Ranga Iyengar and Mahatma Gandhi, etc. from different parts of the country emerged as literary figures. M. K. Gandhi edited and wrote for papers like *Young India* (1919-32) and *Harijan* (1933-48). He also penned his autobiography, *My Experiments with Truth* (1925-28). This autobiography is known for its literary style. This research study will focus on the native sentiments strongly appearing in M. K. Gandhi's Narrative, *An Autobiography: Story of My Experiments with Truth*. It will also try to analyse the human values presented by M. K. Gandhi in his autobiography.

Key Words: Narrative, native sentiments, human values, experiments, truth, non-violence, etc.

Introduction:

Meenakshi Mukherjee in her book *The Twice Born Fiction* comments, "Indo-Anglian fiction, which has served for so long as a file of documents of sociology or anthropology or educational theory, must now be regarded as literature, evaluated as such." (169) The growth of Indian English literature has a history going back to nearly a hundred and fifty years. In world literature, Indo-Anglian literature has served as a mirror in presenting day-to-day events of the contemporary society. Noticeable examples of Indian English literature during British India are infrequent and periodic works, such as *A Passage to India* (1924) by E.M. Forster, *The Wonder that was India* (1954) by A.L. Basham, *Autobiography of an Unknown Indian* (1951) by Nirad C. Chaudhari, R. K. Narayan's first novel *Swami and Friends* (1935) and M. K. Gandhi's *My Experiments with Truth* (1925-28).

A narrative is usually thought of author in terms of 'story' and 'discourse'. These two are the core elements in narratives. The story materials that usually comprise events, characters, actions, speech, space, place and time, etc. are given meaning and mobility in course of a narration. M.H. Abrams defines narrative in his *A Glossary of Literary Terms* (2000):

A narrative is a story, whether told in prose or verse, involving events, characters, and what the characters say and do. Some literary forms such as novel and short story in prose, and the epic and romance in verse, are explicit narratives that are told by a narrator. In drama, the narrative is not told, but evolves by means of direct presentation on stage of actions and speeches of the characters. It should be noted that there is an implicit narrative element in many lyric

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The Theme of Charity and Christmas in Charles Dickens' *A Christmas Carol*

Dr. Vibhati Vasantao Kulkarni
Head, Department of English,
N.E.S. Science College, Nanded

Abstract: Charles Dickens (1812-1870) is a British writer and social critic. *A Christmas Carol* (1843), written by Charles Dickens, is one of the most recognizable novellas in English literature. *A Christmas Carol* has been adopted for numerous literary, stage, television, radio, and cinematic presentations. It has become a famous holiday classic. *A Christmas Carol* gained immediate critical and commercial attention. It retained the stimulating awareness of the people in charitable activities. It also highlighted the possible dangers of economic success due to which man is going away from religion, God, humanity and goodness. It has presented the festive traditions of the Christmas season. It is the most popular and enduring work in Dickens' series of Christmas stories collectively known as the *Christmas Books*. This research paper will focus on the theme of the charity and Christmas reflected in Charles Dickens' *A Christmas Carol*.
Key Words: Christmas, charity, transformation, economic success, etc.

Introduction: *A Christmas Carol* is the most remarkable example of the Victorian "Christmas book," a type of short, charmingly designed to be given as a Christmas gift and usually representing the themes of charity and joy associated with the season. Christmas tree, Christmas gifts and Christmas carol, etc. are the religious traditions. The carol means a religious song. There are five staves in *A Christmas Carol* where the theme of Christmas is celebrated. Dickens presents several memorable characters through his fictions. The central character Ebenezer Scrooge in *A Christmas Carol* has become a cultural icon. Dickens takes delight in his satirical portrait of Scrooge as a greedy businessman. A comically grotesque and tight fisted



159
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Chapter - 8

Dynamical Systems and Some Results

Dr. Kulkarni Prasad Ramakant

Abstract

In this chapter, a general dynamical system is defined and on the basis of the time interval, we have classified it as a discrete and a continuous dynamical system. Mathematical modeling of some of the phenomenon in terms of dynamical systems is explained by means of illustrative examples. Later, we have stated some of the important results stating the behavior of some simple and complex one dimensional and multidimensional dynamical systems. Important results stating the conditions under which the solution of multidimensional linear as well as non-linear systems are proved with the help of Lipschitz conditions. Existence and uniqueness theorem for non-linear systems is proved following some important consequences.

Keywords: Dynamical systems, discrete and continuous systems, linear and non-linear systems, existence theorems, Lipschitz function

1. Introduction

In this chapter, we will introduce the concept of a dynamical system^[1] and prove some results associated with a dynamical system. There are many physical systems that can be modeled in terms of a dynamical system. Roughly, a dynamical system consists of two parts: a state vector^[2] which is state of some physical or hypothetical system and a function which tells us what will be the state in the next instant of time depending upon the current state. Many authors including have defined the notion of a dynamical system, however, we give general definition of a dynamical system

1.1 Dynamical system^[3]

A dynamical system is specified by a state vector $X \in \mathbb{R}^n$, which is a list of numbers which may change as time progresses and a function $f: \mathbb{R}^n \rightarrow \mathbb{R}^n$ which describes how the system evolves over time.


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Chapter - 3

Chaotic Dynamical Systems

Dr. Kulkarni Prasad Ramakant

Abstract

In this chapter, we study an important and strange characteristic of a dynamical system known as *chaos*. It is the phenomenon observed in most of the natural processes where the happening of a particular thing depends very sensitively upon a number of parameters that change during the process. Before defining chaos, we will take a review of some of the basic concepts required like orbit of a fixed and periodic point of a mapping, the orbit diagram, etc. We also present a detailed classification of fixed and periodic points of a mapping in reference to their stability by means of some theorems.

Keywords: Dynamical systems orbit and seed, Stability theorems, Logistic family of mappings, Bifurcation diagram, chaos

1. Introduction

In this chapter, we will study the chaotic behavior of the family of quadratic mappings $f_c(x) = x^2 - x + c$ through its dynamics. In first few sections, we will take a review of some basic definitions and examples including a dynamical system, orbit, fixed and periodic point, iterations of a function etc. Later, we will prove some results that analyze the nature and the stability of the fixed and periodic points of a dynamical system. Using these results, we will study the dynamics of the family of mappings

$f_c(x) = x^2 - x + c$ for various values of the real constant c .

Recall that a dynamical system ^[1] is a function $f: R^n \rightarrow R^n$, where the set R^n is called as the set of states or the state space. Given a state vector $x \in R^n$, the function f describes the rule by means of which the state vector x changes with time. In this chapter, we will consider only one dimensional discrete dynamical system ^[2] $f_c(x) = x^2 - x + c$.

Page | 45


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Chapter - 4

Properties of Topologically Conjugate Mappings

Dr. Kulkarni Pramod Ramakant

P. G. Department of Mathematics, N. E. S. Science College, Nanded, M. S., India

Abstract:

In this chapter, we have defined a dynamical system by means of the concepts sensitive dependence on initial conditions, topological transitivity and existence of dense orbit. We have defined topological conjugacy using the concept of homomorphism and proved that the mapping $f_c(x) = x^2 - x + c$ is chaotic.

Keywords: chaos, dense orbits, dynamical systems, topological conjugacy, shift mapping, topological transitivity,

1. Introduction

The word conjugacy as referred to dynamical systems ^[1] means the similarity between the dynamical behavior of two mappings. We know that the concept of isomorphism between two rings indicates the similarity of the algebraic properties of the two rings. Also, the homeomorphism between two topological spaces refers to the similarity of topological properties of the two spaces. Likewise, whenever we say that there is a conjugacy between two dynamical systems, then it implies that their dynamical properties related to the number and nature of the periodic and fixed points, dependency on the initial conditions and the overall long term behavior is exactly the same. In this chapter, the topological conjugacy of the family of mappings $f_c(x) = x^2 - x + c$ with the shift mapping σ has been established and thereby, the chaotic nature of $f_c(x) = x^2 - x + c$ in the sense of Devaney R. L. ^[2] has been proved.

2. Homomorphism

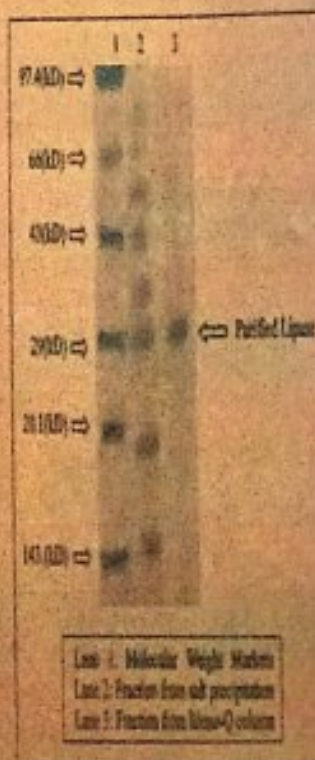
A function $f: I \rightarrow I$, where I is an interval in R , is defined as homomorphism ^[3] if f and f^{-1} are both one-one, onto and continuous.

In the definition of chaos ^[4], there are three concepts involved viz. sensitive dependence on initial conditions, topological transitivity ^[5] and


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LIPASE: ITS CHARACTERIZATION, PRODUCTION AND IMMOBILIZATION ON MODIFIED ORGANIC SUPPORT



SDS-PAGE of *Pseudomonas aeruginosa* SRT 9
Lipase purification steps



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Dr. Prita Shamrao Borkar

CONTENTS

CHAPTER I INTRODUCTION TO THE ENZYME LIPASES	1-10
CHAPTER II MICROBIAL LIPASES: SCREENING, PRODUCTION, IMMOBILIZATION AND APPLICATIONS OF LIPASES	11-58
CHAPTER III PRODUCTION OF <i>PSEUDOMONAS AERUGINOSA</i> SRT 9 LIPASE	59-70
CHAPTER IV PURIFICATION AND BIOCHEMICAL CHARACTERIZATION OF <i>PSEUDOMONAS</i> <i>AERUGINOSA</i> SRT9	71-92
CHAPTER V IMMOBILIZATION OF <i>PSEUDOMONAS AERUGINOSA</i> SRT9 LIPASE ON ORGANIC SUPPORTS	93-110
CHAPTER VI IMMOBILIZATION OF <i>PSEUDOMONAS AERUGINOSA</i> SRT9 LIPASE ON NOVEL ORGANIC SUPPORTS FOR ENHANCED OPERATIONAL STABILITY AND REUSE	111-126
REFERENCES	127-163

About the Book

Enzymes are the important tools of Molecular Biology. Enzyme technology is an ever evolving branch of "Science and Technology" and with the intervention and Influence of Molecular Biology, Biotechnology and Bioinformatics, continuously novel or improved applications of enzymes are emerging. Therefore, the need for enzymes with improved properties are also emerging simultaneously. The pace of Lipase research has been accelerating with increasing knowledge in individual enzymes being studied over decades. The enzyme Lipases have increasing demand and applications in many industries like pharmaceutical, food and dairy, textile, leather, detergent, paper, pesticide and in cosmetics. Researchers are not only involved in production and purification methodologies but are also developing new techniques and methods of immobilizing enzymes on different support matrices for enzyme operational stability and reusability and to effectively harness their catalytic prowess.

This book is solely devoted to lipases from *Pseudomonas aeruginosa* SRT 9, its purification, characterization and kinetic studies. The recent explosion of interest in Lipases led me to synthesize a novel organic support matrix tri (4-formyl phenoxy) cyanurate for immobilization of lipase and study its kinetics as well for operational stability and reusability. This book is a reference book for post graduate students and young researchers who want to pursue their interest in 'enzymology'.

About the Author



Dr. Prita Shamrao Borkar (Chaware) is Associate Professor in Agricultural Microbiology, Department of Botany, Microbiology and Biotechnology, Science College, Nanded, affiliated to Swami Ramanand Teerth Marathwada University, Nanded. She has 18 years of Teaching and Research experience and has published 21 research articles in the Journals of national and international repute.

Her Google Scholar citation is 287 with H-index 6 and i10-6 index. She is a recognized research guide in the subjects Microbiology and Biotechnology in Swami Ramanand Teerth Marathwada University, Nanded. She is the principal investigator of a minor research project funded by Rajiv Gandhi Science and Technology Commission (RGSTC) and is presently working on bioremediation of pesticides in soil. Her field of interest is Microbial diversity, Molecular Biology, Medical Microbiology, Microbial pesticides, Industrial Microbiology.

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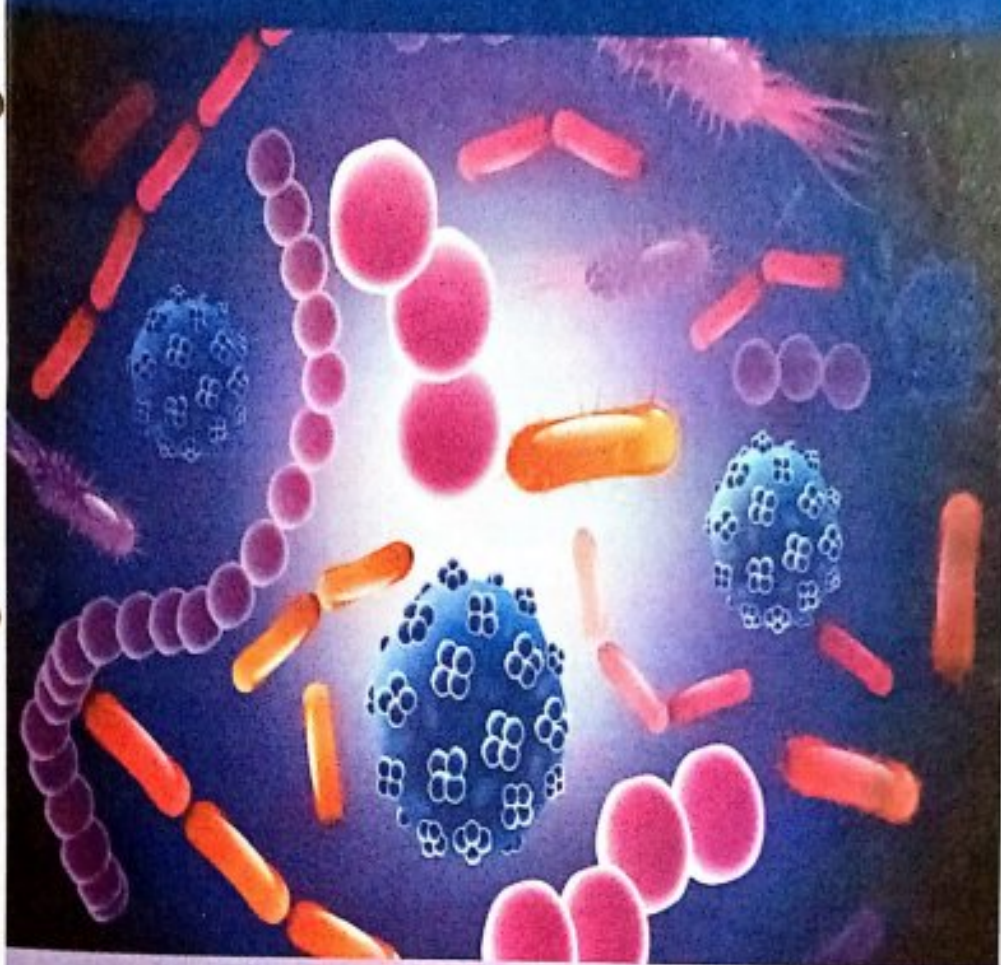
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CONTENTS

Chapter 1 Introductory Microbiology and Agricultural Microbiology	1-7
Chapter 2 Introductory Basic Microbiology	8-15
Chapter 3 Bioinstrumentation and Microbial Techniques	16-23
Chapter 4 Basic Microbiology and Biochemistry	24-31
Chapter 5 Applied Microbiology -I	32-38
Chapter 6 Applied Microbiology -II	39-45
Chapter 7 Microbial Physiology and Metabolism	46-53
Chapter 8 Microbial Genetics	54-61
Chapter 9 Genetic Engineering	62-69
Chapter 10 Gene Regulation	70-77
Chapter 11 Recombinant DNA Technology - I	78-85
Chapter 12 Recombinant DNA Technology - II	86-93

Chapter 13 Microbes in Agriculture	94-101
Chapter 14 Food Microbiology and Soil Ecology	102-109
Chapter 15 Management of Crop Plant Diseases	110-118
Chapter 16 Agricultural Biotechnology - I	117-124
Chapter 17 Agricultural Biotechnology - II	125-132

About the Book

This book is primarily meant for students appearing for PG. In IAM, GATE, AIIMS and other Medical, Paramedical entrance examinations for admissions to PG Programme, in which Microbiology and Biotechnology are one of the important topics of the syllabus. The main objective of this book is to help students to review their knowledge of Microbiology and Biotechnology acquired through standard textbooks. A sound knowledge of Microbiology is essential for students of Medicine, Pharmacy, Agricultural Science and Industries for understanding the subject with logical reasoning. This book is specially designed to complement any standard Microbiology and Biotechnology Objective type question Bank and to provide the students with a feedback on their progress and an opportunity to improve. Thus, the book can serve as a self-assessment guide. With the explosion of knowledge in medical sciences, examinations in all faculties (Medicine, Pharmacy, Agricultural Science and other Industries) is completely becoming MCQ oriented because this system of assessment is more accurate, reliable and quicker. The key features of this book are: easy to understand, precise questions in simple and lucid language, self-explanatory and relevant objective questions in the field of Microbiology and Biotechnology.

About the Author



Dr. Prita Shamrao Borkar (Chaware) is Associate Professor in Agricultural Microbiology, Department of Botany, Microbiology and Biotechnology, Science College, Nanded, affiliated to Swami Ramanand Teerth Marathwada University, Nanded. She has 18 years of Teaching and Research experience and has published 19 research articles in the Journals of national and international repute.

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**A LABORATORY MANUAL FOR UNDERGRADUATES
IN
AGRICULTURAL MICROBIOLOGY,
MICROBIOLOGY
AND
BIOTECHNOLOGY**

Dr. Prita Shamrao Borkar


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First Edition: 2022

Some Special Methods to Solve Fractional Differential Equations with Applications

Arun Digambar Nagargoje
Dr. V. C. Borkar
Dr. R. A. Muneshwar

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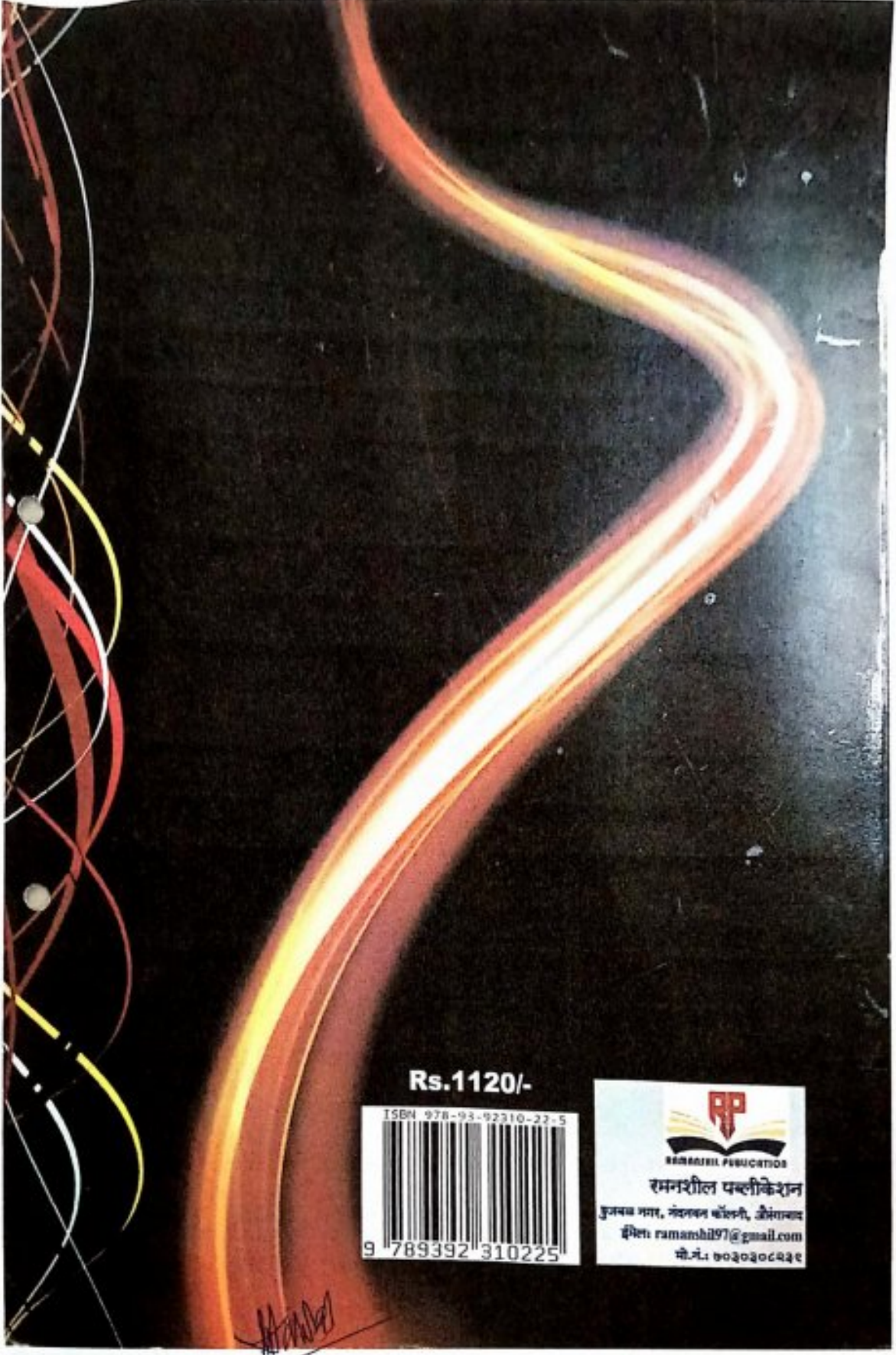
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Contents

1 Introduction	8
1.1 Introduction	8
1.2 Fractional Calculus	10
1.3 History of Fractional Calculus	10
1.4 Development	11
1.5 Most commonly used definitions of fractional derivatives	11
1.6 Riemann-Liouville Integrals	12
1.7 Difference between R-L and Caputo fractional derivative	13
1.8 Why R-L derivative and Caputo derivative are mostly used definitions for fractional differentiation?	14
1.9 Special functions and useful definitions:	14
1.10 Classical fixed point theorem	15
1.11 Application of fractional calculus	16
2 Fractional Differential Equations	17
2.1 Introduction	17
2.2 Non-linear Fractional Integrodifferential Equation with Non-local Condition	18
2.2.1 Preliminaries	18

2.2.2	Main Result	21
2.2.3	Boundedness of Solutions	32
2.2.4	Continuous Dependence	35
2.3	Application	37
2.4	Conclusions	38
3	Existence and Uniqueness of Solutions	39
3.1	Introduction	39
3.2	Fractional SDEs with discontinuous drift and finite activity jumps	41
3.2.1	Assumptions	41
3.2.2	Preliminary	42
3.2.3	Main result	44
3.3	Non linear fractional Fredholm-Volterra integral equation with modified argument via Geraghty contractions	47
3.3.1	Preliminaries	47
3.3.2	Main Result	48
3.4	Applications	51
3.5	Conclusion	52
4	Fractional Difference-Differential and Integrodifferential Equations	53
4.1	Introduction	53
4.2	Solution of Certain Fractional Difference-Differential Equations	57
4.3	Mild Solutions for Neutral Functional Mixed Fractional Integrodifferential Evolution Equations	67
4.3.1	Preliminaries	67
4.3.2	Existence of the Mild Solution	69
4.4	Application	74

4.5 Conclusion	75
5 Fractional Differential Equations with Fractional Brownian Motion	77
5.1 Introduction	77
5.2 Fuzzy Stochastic Fractional Differential Equations Driven by Fractional Brownian Motion	80
5.2.1 Preliminaries	80
5.2.2 Main Result	82
5.3 Stochastic set-valued fractional differential equations with fractional Brownian motions	86
5.3.1 Preliminaries	86
5.3.2 Uniqueness and existence of solutions to SSFDEs driven by an fBm	89
5.4 Applications	96
5.5 Solutions of Fractional Functional Differential Equations	97
5.6 Conclusions	100
Bibliography	102



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Food safety concern related to aflatoxins and control

Roopa Vishwanath Sangvikar*

Department of Botany, N.E.S. Science College, Nanded, India

*Corresponding author. Email: dr.roopasangvikar@gnail.com

Background

Aflatoxins were discovered in the early 1960s in England when a significant number of turkey poults died. The fluorescent compounds detected in thin-layer chromatography (TLC) exposed the cause of disease to be consumption of peanut feed of livestock contaminated with the toxin produced by a filamentous fungus *Aspergillus flavus*, later termed aflatoxins. They were identified as carcinogenic in rainbow trout. The cause of epizootic hepatitis in dogs and moldy corn poisoning in pigs in the United States was attributed to aflatoxins (Newberne and Butler, 1969). A major outbreak of hepatitis which lasted for 2 months in 1974 confined to tribal people situated at the western end of India who had maize as their dietary staple, resulted in an estimated 106 deaths, which was later confirmed to be due to aflatoxin (Krishnamachari et al., 1975a). In 1981 Kenya reported a major aflatoxin exposure outbreak (Ngindu et al., 1982). Most outbreaks were reported from the rural area of Kenya. One of the most severe outbreaks due to the ingestion of maize infected with molds was reported in 2004 in Kenya with a fatality rate of 39%. The preliminary analysis confirmed it to be *A. flavus* fungus (Krishnamachari et al., 1975a; Bhatt and Krishnamachari, 1978). Nationwide adulteration of milk with aflatoxins was reported in Southeast Europe.

The word aflatoxin is derived from the first letter "A" for the genus *Aspergillus*, "FLA" for the species *flavus*, and "TOXIN" meaning poison (Rustom, 1997).

Introduction

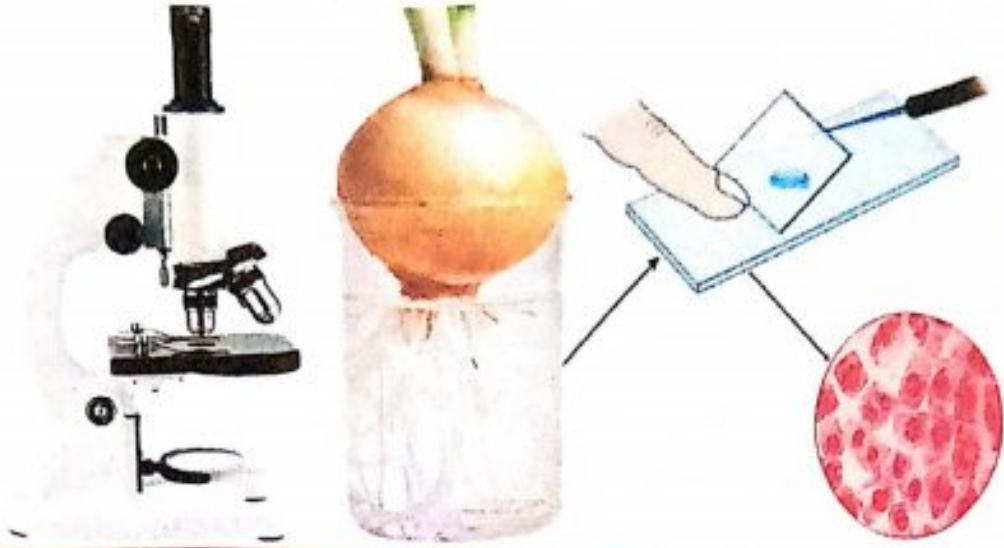
Aflatoxins (AFs) are mycotoxins produced by naturally occurring fungi of *Aspergillus* species. They are low-molecular-weight toxic by-products of

Fungal Bio-prospects in Sustainable Agriculture, Environment and Nano-technology.
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Practical Manual :

Cell, Molecular Biology, Genetics and Plant Breeding

Mr. S. S. Shinde
Dr. S. D. Raut
Dr. R. V. Sangvikar



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CONTENT

Experiment No.	Name of Experiment	Page No.
1	Study of Ultra-Structure of Cell Organelles Withthe Help of Photocopies/Slides.	1
2	Study of Giant Chromosome with the Help of Photocopies/Slides	11
3	Study of Salivary Gland Chromosome from Chironomous Larvae	13
4	Cell Divison-Study of Mitosis (Onion/Garlic Root Tips Or Any Other Available Material) and Mitotic Index	17
5	Study of Karyotype and Idiogramfrom Photocopies of Onion/ Aloe Plant Material	25
6	Cell Division-Study of Meiosis from Onion/Maize Floral Buds OrAny Other Available Material	29
7	Problems Based On Monohybrid / Dihybrid Ratio; 9:7/9:3:4/12:3:1/15:1 Ratios and Collaborator Gene	36
8	Problems Based On Sex-Linked Inheritance	48

9	Study of Syndromes in Man by Using Photocopies	50
10	Perform Hybridization Techniques- Emasculation, Pollination And Bagging	56
11	Study of Floral Structure of Self-Pollinated (Wheat) and Cross Pollinated (Maize) Crops	58
12	Pollen Viability Tests- Acetocarmine Method and Sugar Solution Method	61
13	Preparation of Wool Models of Mitosis and Meiosis is Expected	65
	References	69

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- प्रकरण १ - ग्रंथालय तालिका / ९
- प्रकरण २ - तालिकेचे बाह्य स्वरूप / २०
- प्रकरण ३ - तालिकेचे आंतरप्रकार / ३०
- प्रकरण ४ - तालिका संहिता : एक दृष्टिक्षेप / ३७
- प्रकरण ५ - तालिकापत्रावरील नोंदी व त्याचे प्रकार / ४३
- प्रकरण ६ - वर्गीकृत तालिका संहितेनुसार तालिकीकरण / ५२
- प्रकरण ७ - अँग्लो अमेरिकन तालिका संहितानुसार
तालिकीकरण (ए.ए.सी.आर-२) / ८१
- प्रकरण ८ - तालिका पत्राची रचना / ९७
- प्रकरण ९ - सहकारी तालिकीकरण / १०२
- प्रकरण १० - वर्गीकरण व तालिकीकरण संबंध / १०८
- प्रकरण ११ - संगणकीकृत तालिका / ११३
- प्रकरण १२ - तालिकीकरण प्रक्रिया अडचणी व उपाय / ११७
- संदर्भसूची / १२२
- ग्रंथालय तालिकाकरण तात्त्विक आधारीत काही प्रश्न / १२३
- ग्रंथालय तालिकीकरण तात्त्विक / ४



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BIRD EYE VIEW ON USE OF ICT IN LIBRARIES

(An Information Consolidation Package)

Dr. S. L. Jadhav



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Contents

11. Open Access E-Resources available for users	145
12. National Digital Library of India	158
13. Search Engines	165
14. Dspace the Best Open Source Software for development of Institutional Repository	169
15. Information Storage Devices	178
• Selected Bibliography	182



Dr. S. L. Jadhav has obtained his Master Degree in Library and Information Science from Dr. BAMU, Aurangabad and Ph.D. from SRTMU, Nanded. He has been a practicing librarian of long experience 28 years and also teaches to LTC run by Directorate of Public Libraries Govt of Maharashtra and B. Lib. Sci. of YCMOU, Nashik since last 14 years. So far he has published more than 25 research papers and a book in Marathi 'Granthalayin Talikikaran'.

He had organized a national seminar on 'Building of e-Resources and e-Services in Academic libraries. He has also started a monthly magazine 'Akshata Digital Library in PPT form.

About the Book :

Our generation is the witness of ICT development and how it is growing continuously. Academicians, technocrats, also children's, young ones, old people all have become follower and fond of this technology. Increasing advancement, its applications, facility and then unexpected entry COVID - 19 has made us to realize role and ultimate final and that too the only solution to share ideas, learn new things, complete assignment, teaching plan, video, , editing make wise and scientific use ICT and after this save it in most appropriate device drive or in clouds.

Contents :

- Introduction : An overview of ICT
- Library Automation
- IT based Stock Verification
- WWW Web Developments
- Google Tools the Most useful application for library professionals
- E-Resources needs careful consideration
- Maintenance of computer system : Antivirus software's
- Cloud storage and libraries : Opportunities and challenges
- DELNET – Developing Library Network
- National Library & Information Services Infrastructure for Scholarly Content (NLIST)
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E-Resources & E-Services in Academic Libraries



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Dr. S. L. Jadhav

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CONTENTS

I. Motivating Words	
II. Forward	
III. Preface	
IV. Contents	
1. E-Resources and E-Resources in Academic Libraries : An Overview	1
2. Reviewing Information and Demystify of Data	
3. Research Methodology	15
4. Demystify of Data (Analysis and Interpretation)	22
5. Recapitulation and Recommendations	27
6. Difficulties Faced While Gathering Data	54
7. Library Computerization : Some Tips for Library Staff	69
• Selected Bibliography	88
• Appendix : Questionnaire	91

About the Author



Dr. S. L. Jadhav has obtained his Master Degree in Library and Information Science from Dr. B.A.M.U., Amravati and Ph.D. from SRTMU, Nanded. He has been a practicing librarian of long experience 28 years and also teaches to L.I.C. run by Directorate of Public Libraries Govt of Maharashtra and B.Lit. Sec. of YCMOU, Nashik since last 14 years. So far he has published more than 25 research papers and a book in Marathi 'Grazhalya in Talikaran'. He had organized a national seminar on 'Building of e-Resources and e-Services in Academic libraries. He has also started a monthly magazine 'Akhata Digital Library' in PPT form.

Contents

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- Research Methodology
- Demystify of Data (Analysis and Interpretation)
- Recapitulation and Recommendations
- Difficulties Faced While Gathering Data
- Library Computerization : Some Tips for Library Staff
- Selected Bibliography

About the Book

This book deals about status of computerization and use ICT in academic libraries affiliated to SRTM University Nanded. The content of the book is based on the data collected through a survey from the librarians of various college of this university. So the content has a research base and scientific view. The author has also included a separate chapter 'Library Computerization : Some Tips for Library Staff'. Hence this has become one of the feature of the book. After going through the book in detail I feel this is an important document useful for the library staff working in academic libraries and also gives an idea of current status regarding computerization, e-resources, e-services etc. Lastly, I would like to recommend all library staff and professionals of the region to go through this book which will help one to understand the position of library and take future steps accordingly.

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The online content screening tool is one of the most significant tools for restricting user access to both hostile and undesired websites. To use them, however, the user must first subscribe. All of the technologies work by extracting and processing web content, which is a time-consuming and challenging operation. The tools employ three different filtering approaches. 1) Use a browser-based filter, 2) Client-side application-based filtering 3) A filter that uses a search engine as a basis.



Sangita Modi
Sudhir Jagtap



Dr. (Mrs.) Sangita S. Modi is currently working as lecturer in Computer Science at N.E.S. science college Nanded since 2007. She has more than 15 years experience in teaching field. She completed her M.Sc. (Computer Science) from BAMU University Aurangabad, MPhil from YCMO University Nashik and PhD from SRTMU University Nanded.

Designing of ICT tool using web mining techniques



Sudhir Jagtap
PRINCIPAL
Science College, Nanded



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Table of Content

1. INTRODUCTION.....	1 -
1.1 GENERAL.....	1 -
1.1.1 THE WEB.....	2 -
1.1.2 INTERNET.....	3 -
1.2 WHAT IS DATA MINING?.....	3 -
1.3 WEB DATA MINING.....	5 -
1.4 WEB FILTERING.....	7 -
1.4.1 TYPES OF FILTERING.....	8 -
1.5 Need of the Filter tool.....	11 -
1.6 SIGNIFICANCE FILTER TOOL.....	12 -
2 EWR EXTENSION TOOL.....	13 -
2.1 INTRODUCTION.....	13 -
2.2 BROWSER.....	13 -
2.3 BROWSER EXTENSION WORKING.....	15 -
2.4 NATURAL LANGUAGE PROCESSING.....	16 -
2.5 Existing Web Filters.....	17 -
2.6 KEY FEATURES OF EXISTING BLOCKING TOOLS.....	18 -
2.7 THE DISADVANTAGES OF THE EXISTING TOOL.....	18 -
2.8 Designing of Filter Tool.....	18 -
2.9 IMPLEMENTATION OF EWR TOOL MODEL.....	19 -
2.10 WORKING OF THE EWR MODEL.....	22 -
2.11 PERFORMANCE OF THE TOOL.....	25 -
2.12 SUMMARY.....	27 -
3 ENTITY EXTRACTION AND ANALYSIS FOR WEBSITES CLASSIFICATION.....	28 -
3.1 INTRODUCTION.....	28 -
2.1.1 WHY PYTHON?.....	28 -
2.1.2 NATURAL LANGUAGE PROCESSING.....	29 -
2.1.3 TOKENIZATION.....	30 -
2.1.4 WORD SENSE DISAMBIGUATION (WSD).....	30 -

3.2	RELATED WORK	- 30 -
3.3	RESEARCH METHODOLOGY	- 31 -
3.4	IMPLEMENTATION AND DESIGN	- 35 -
3.5	TESTING OF TOOL	- 37 -
3.6	SUMMARY	- 42 -
4 SEARCH ENGINE AND RECOMMENDATION SYSTEM.....		- 44 -
4.1	INTRODUCTION	- 44 -
4.2	SEARCH ENGINE.....	- 44 -
4.3	WORKING OF SEARCH ENGINE.....	- 45 -
4.3.1	CRAWLING.....	- 45 -
4.3.2	INDEXING.....	- 45 -
4.3.3	PAGE RANK	- 45 -
4.4	RECOMMENDATION ENGINE	- 46 -
4.4.1	CONTENT BASED RECOMMENDATION	- 46 -
4.4.2	COLLABORATIVE RECOMMENDATION.....	- 46 -
4.5	PROBLEM IN THE EXISTING MODELS	- 46 -
4.6	THE WORKING OF TOOL.....	- 46 -
4.7	TESTING OF TOOL	- 50 -
4.8	SUMMARY	- 55 -
5 THE SUMMARY OF THREE ICT TOOL		- 56 -



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Dr. Sangita S. Modi is currently working as lecturer in Computer Science at N.E.S. science college Nanded since 2007, she has more than 15 years experience in teaching field. She completed her M.Sc. (computer science) from Dr. Babasaheb Ambedkar University Aurangabad, M.Phil from Yashwantrao Chavan Open University Nashik and Ph.D. from Swami Ramanand Teerth Marathwada University Nanded, she has published total 7 paper in National and International conferences and journals and presented her research paper.

About the Book :

Web development is a broad term for the work involved in developing a web site for the Internet (World Wide Web) or an intranet (a private network). Web development can range from developing the simplest static single page of plain text to the most complex web-based internet applications, electronic businesses, and social network services. A more comprehensive list of tasks to which web development commonly refers, may include web design, web content development, client liaison, client-side/server-side scripting, web server and network security configuration, and e-commerce development. Among web professionals, "web development" usually refers to the main non-design aspects of building web sites, writing markup and coding.

Contents :

- Web Designing and Development
- Process of Web Development
- Practical Web Development and HTML
- Web Graphics Designing
- WWW (World Wide Web) and Multimedia
- HTML and Web Page
- DHTML
- CSS and Web Page Layout
- Java Script and It's Uses
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**WEB DEVELOPMENT
USING HTML CSS AND JAVA SCRIPT**

**Dr. SUDHIR JAGTAP
Dr. SANGITA S. MODI**

WEB DEVELOPMENT

USING HTML CSS AND JAVA SCRIPT



**Dr. SUDHIR JAGTAP
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Contents

• <i>Preface</i>	<i>iv</i>
1. Web Designing and Development	1
2. Process of Web Development	12
3. Practical Web Development and HTML	19
4. Web Graphics Designing	47
5. WWW(World Wide Web) and Multimedia	57
6. HTML and Web Page	94
7. DHTML	132
8. CSS and Web Page Layout	141
9. Java Script and It's Uses	160
10. Fundamentals of Java Applet	187
• <i>Bibliography</i>	199

This book provides a thorough overview of the document clustering techniques used in text mining. It focuses on the different phases of document clustering: Pre-processing, Feature extraction, Feature selection and Clustering. It narrates the different methodologies applied in clustering process. The book acquaints the research students with the different soft and hard computing approaches that are most commonly used while carrying out their researches in various areas. The text book also contains the data flow diagrams for document clustering, recall precision rates and Inter-relationship between Research Papers. It also includes Matlab code for document clustering process. This book clears the ideas about the fuzzy clustering technique and its applicability in the document clustering process.



U.S. Patki has obtained his Masters degree in Computer Science from Dr. B.A.M.U. Aurangabad (MS) India. He received M.Phil Degree from YCMOU Nashik (MS) India. He has sound knowledge in document clustering with soft skills and he is awarded with Doctorate by Gondwana University Gadchiroli (MS) India.



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Ushankumar Patki
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Text Document Clustering

A Hard and Soft Computing Approach


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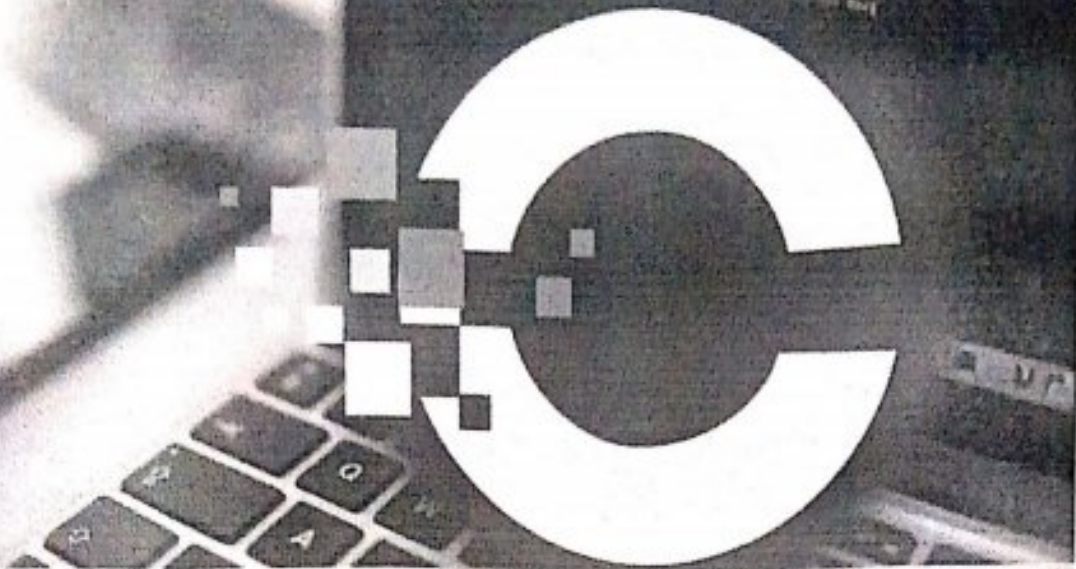
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Table of Contents

Chapter 1	INTRODUCTION	1
1.1	Introduction	1
1.2	History and Background	7
1.3	What is Text Mining?	9
1.4	Role of Clustering in Text Mining.....	14
1.5	Applications of Text Mining & Clustering	15
	Summary	22
	Review Questions.....	22
Chapter 2	STEPS APPLIED IN DOCUMENT CLUSTERING	23
2.1	Structure of Document	23
2.2	Steps for Document Clustering.....	24
2.2.1	Database Selection	25
2.2.2	Pre-processing of text	25
2.2.3	Feature Generation	26
2.2.4	Feature Selection	27
2.2.5	Clustering	27
2.4	Document Clustering Techniques	28
2.4.1	Hierarchical Document Clustering (HDC):	28
2.4.2	K-Means Document Clustering:	31
2.4.3	Fuzzy C-Means (FCM) Clustering:	34
2.4.4	Possibilistic C-Means Clustering:	36
2.4.5	Fuzzy Possibilistic C-Means Clustering:	37
2.4.6	Possibilistic Fuzzy C-Means Clustering:	37
	Summary	38
	Review Questions	38
Chapter 3	SOFT COMPUTING TECHNIQUES	39
3.1	Computing and Soft Computing.....	39
3.2	Techniques for Soft Computing.....	39
3.2.1	Fuzzy Logic	39
3.2.2	Neural Network.....	41

3.2.3	Genetic Algorithms	43
3.2.4	Support Vector Machines (SVM).....	46
3.2.5	Probabilistic Logic	46
3.2.6	Expert System.....	47
3.2.7	Metaheuristics	47
3.2.8	Swarm Intelligence.....	47
3.2.9	Bayesian networks.....	48
3.2.10	Ant colony optimization.....	48
3.3	Soft Computing V/s Hard Computing.....	48
3.4	Application areas of Soft Computing techniques.....	50
	Summary	51
	Review Questions:.....	51
Chapter 4 RECALL AND PRECISION RATES, SIMILARITY MEASURES AND CLUSTERING ALGORITHMS		
	52	
4.1	Recall and precision rates.....	52
4.2	Similarity measure for two documents.....	54
4.3	Clustering algorithms.....	56
4.3.1	Fuzzy C-Means Algorithm.....	56
4.3.2	PCM and PFCM algorithm	60
	Summary	62
	Review Questions.....	62
Chapter 5 METHODS USED FOR DOCUMENT CLUSTERING		
	63	
5.1	Importance of Soft Computing	63
5.2	Document Clustering using FCM.....	63
5.3	Retrieval of Similar Document using Recall & Precision Rates	68
5.4	Discovering similarities between two interdisciplinary research papers	68
5.5	Flow Diagrams	69
	Summary	72
	Review Questions.....	72
MatLab Source Code for selecting frequent features from document and clustering using FCM Function, 73		

PROGRAMMING IN



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CONTENTS

1. Programming Skills

1.1 Programming and Problem Analysis	1
1.2 Conceptual development of solution for a given problem	2
1.3 Development Tools	3
1.4 Algorithm	4
1.5 Process	5
1.6 Flowchart	6
1.6.1 Types of Flowcharts	7
1.6.2 Advantages of Flowcharts	7
1.6.3 Disadvantages of Flowcharts	8
1.7 Translators	16
● REVIEW QUESTIONS	18

2. Basic Structure of C Program

2.1 Basic Form of C Program	19
2.2 Documentation Using COMMENTS	21
◆ Explore in LAB	21

3. ABC of 'C'

3.1 History of 'C'	22
3.2 Applications of C	22
3.3 'C' language as Middle Level and Free-form Language	22
3.4 C Character Set	22
3.5 C Tokens	23
3.5.1 Keywords or Reserve Words	25
3.5.2 Data Types	25
3.5.2.1 Basic Data Type	26
3.5.2.2 Data Type Qualifier or Modifier	26
3.5.2.3 Hierarchy of data type	27
3.5.2.4 Derived Data Types	27
3.5.3 Identifiers	28
3.5.4 Constant	28
3.5.5 C-Statements	28
3.6 Variables	29
3.7 Operators and Expression	31
3.7.1 Assignment Operators	32
3.7.2 Arithmetic Operators	34
3.7.3 Hierarchy of Arithmetic Operators	34
3.7.4 Conversion	36
3.7.4.1 Implicit Conversion / Automatic Casting	36
3.7.4.2 Explicit Conversion or Type Casting	38
3.7.5 Increment and Decrement Operators	39
3.7.5.1 Difference between Pre-Increment and Post-Increment Operation	41
3.7.5.2 Incrementing float data type value	41
3.7.5.3 Incrementing character value	42
3.7.6 Updating Assignment Operator	43
	43
	43



3.7.7 Relational Operators	44
3.7.8 Logical Operators	45
3.7.9 Conditional Operator	45
3.7.10 Special Operators	46
3.7.11 sizeof operator	46
3.8 Type Modification or Renaming Data Type	47
● REVIEW QUESTIONS	47
	48
4. Input and Output Statements	49
<hr/>	
4.1 Input and Output Statements	49
4.1.1 Unformatted Functions	50
4.1.2 Formatted I/O Functions	52
4.2 Backslash Characters	55
4.2.1 Trigraph Characters	56
4.3 Role of a Field Width in printf Statements	58
4.4 Mathematical Functions	62
◆ Explore Programming Skills	63
◆ EXPLORE IN LAB	68
● REVIEW QUESTIONS	68
	68
5. Decision Statements	69
<hr/>	
5.1 Control Statements	69
5.2 Conditional Statements	69
5.3 if Statement (Uni-directional Statement)	70
5.4 if-else Statement (Bi-directional statement)	72
5.5 Nested If's	74
5.6 else-if ladder	75
5.7 EMPTY Statement	76
5.8 switch Statement (Multy-way Statement)	76
5.9 Difference between if-else and Switch Statement	79
◆ EXPLORE PROGRAMMING SKILLS	81
◆ EXPLORE IN LAB	85
● REVIEW QUESTIONS	85
	85
6. Looping Statements	86
<hr/>	
6.1 Need for Looping/Iteration Statements	86
6.2 for statement	86
6.3 Comma Operator	88
6.4 while statement	90
6.5 do-while statement	92
6.6 VALIDATING INPUT using DO-WHILE	93
6.7 Difference between while Loop and do while Loop	94
6.8 Infinite Loop	94
6.9 Synonym of for loop	95
6.10 Jump Constructs	95
6.10.1 break Statement	96
6.10.2 continue Statement	97
6.10.3 Difference between break & Continue Statement	98
6.10.4 goto statement	99
6.10.5 Difference between goto & break statement	99
6.10.5 exit() statement	100
6.11 Nested Loops	101
◆ EXPLORE PROGRAMMING SKILLS	



	120
◆ EXPLORE IN LAB	120
● REVIEW QUESTIONS	121
7. Arrays	121
7.1 Need of Array	123
7.2 Definition of Array	123
7.3 One-Dimensional Array	124
7.4 Subscripted Variable	125
7.5 Initialization of Array	125
7.6 Writing / Accepting the Elements into an Array	125
7.7 Reading an Element from an Array	126
7.8 With Array	128
7.9 Transforming values/contents of one array to another	129
7.10 Bound Checking	129
7.11 Searching	134
7.12 Sorting	141
7.13 Multidimensional Array	142
7.14 Initializing Two-dimensional Arrays	147
◆ EXPLORE PROGRAMMING SKILLS	161
◆ EXPLORE IN LAB	162
● REVIEW QUESTIONS	162
8. Character & Strings Handling	164
8.1 String	164
8.2 String Handling Functions	165
8.3 Character Handling Functions	171
8.4 Ragged Arrays	172
◆ EXPLORE IN LAB	173
● REVIEW QUESTIONS	173
9. Structures and Union	174
9.1 Need of Structure	174
9.2 Structure	176
9.2.1 Structure Declaration	176
9.3 Period Operator	177
9.4 Structure Initialization	178
9.5 Giving Values to Member	179
9.6 Comparison of Structure Variable	179
9.7 Arrays of Structure	180
9.8 Nested Structure	181
9.9 Union	182
9.10 Characteristics of Union	183
9.11 Difference between STRUCTURE and UNION	183
9.12 Enumeration	184
◆ EXPLORE PROGRAMMING SKILLS	185
◆ EXPLORE IN LAB	190
● REVIEW QUESTIONS	190

10.1 Functions	191
10.2 Library Functions	191
10.3 Need for User-defined Functions	192
10.4 Advantages of Functions	192
10.5 Outline/Structure of Function	193
10.6 The Form of 'C' Function	193
10.7 Types/Category of Function	195
10.8 Nesting of Function	198
10.9 Self Called Function/Recursion	198
10.10 Difference between Iteration and Recursion	199
10.11 Function with Arrays	200
10.12 Structures and Function	201
10.13 Storage Class	202
10.14 Difference between GLOBAL and LOCAL variable	204
10.15 Used-defined header file	205
◆ EXPLORE PROGRAMMING SKILLS	206
◆ EXPLORE IN LAB	213
● REVIEW QUESTIONS	214

11. Preprocessor

11.1 Preprocessor features	215
11.2 #include Directive (Header File)	215
11.3 Macro Directive (#define)	216
11.4 Pre-defined Macros	217
11.5 Macro with Arguments	217
11.6 Macro Versus Function	218
◆ EXPLORE PROGRAMMING SKILLS	219
◆ EXPLORE IN LAB	220
● REVIEW QUESTIONS	220

12. Pointers

12.1 Introduction	221
12.2 Declaring Pointer Variable	222
12.3 Initializing Pointer Variable	222
12.4 Pointer Operator	222
12.4.2 Difference between Address Operator and Dereferencing	224
12.5 Pointer Expression (Arithmetic operation on pointer variable)	224
12.6 Pointer Increments	225
12.7 Pointer and Function	226
12.7.1 Returning more than one value back to function	228
12.7.2 Difference between Ccall by Value and Call by Reference	229
12.8 Function Returning the Address	229
12.9 Dynamic Storage Allocation	230
12.10 Pointer and Arrays	233
12.11 Transforming values/contents of one array to another	235
12.12 Pointer, Array and Function	236

	237
	238
	240
12.13 Array of Pointer to Functions	240
12.14 Pointer and String	241
12.15 Ragged Array (Array of String)	242
12.16 Array of Pointer to String	243
12.17 Structure Pointer	244
12.18 Arrow Operator (→)	245
12.19 Passing Structure address to Function	245
12.20 Self Referential Structure	248
12.21 Pointer to Pointer	248
❖ EXPLORE PROGRAMMING SKILLS	248
❖ EXPLORE IN LAB	
● REVIEW QUESTIONS	

250

13. File Handling

	250
13.1 Introduction	250
13.2 Operation on File	251
13.3 Outline of General file Program Handling	251
13.3.1 Declare File	252
13.3.2 Defining & Opening a File	253
13.3.3 Relationship between a stream pointer and a buffer area	253
13.3.4 Closing a File	254
13.4 Input-Output File handling functions	255
13.5 Error Handling During I/O Operations	256
13.6 Random Access to Files	257
13.7 Difference between Binary Mode and Text Mode	258
13.8 Command Line Arguments	259
❖ EXPLORE PROGRAMMING SKILLS	277
❖ EXPLORE IN LAB	278
● REVIEW QUESTIONS	

279

14. Bitwise Operators

14. Bitwise operators	279
● REVIEW QUESTIONS	283
● Appendix :	
❖ A - Integrated Development Environment	284
❖ B - Common Errors	287
❖ C - Common Warnings	292
❖ D - Turbo C on Windows	294
❖ E - 'C' Code Contest	297
❖ F - Online 'C' Compiler	298
● Index	299

CHAPTER - 6

Role of IoT in COVID-19 Pandemic

Dr. U.S. Patki*Asst. Professor**Dept of Computer Science and IT**NES Science College Nanded***Dr. Ajay B. Kurhe***Asst. Professor**Dept of Computer Science**SGBS College Purna (Jn)***Abstract:**

The Internet of Things (IoT) has been utilized in various ways to aid in the response to the COVID-19 pandemic. These include: contact tracing through the use of IoT devices such as smartphones and smartwatches; remote monitoring of individuals through wearable devices; supply chain management through the use of IoT sensors; public health messaging through the use of digital signage and public address systems; and facilitating remote work through videoconferencing software and remote access tools.

Keywords: Contact tracing, Remote monitoring, Supply chain management, Public health messaging, Remote work.

Introduction:

The Internet of Things (IoT) has been used in a variety of ways to help respond to the COVID-19 pandemic. Here are a few examples:

1. Contact tracing: IoT devices, such as smartphones and smartwatches, can be used to track and trace the movement and interactions of individuals, which can help authorities identify and contain outbreaks.
2. Remote monitoring: IoT devices can be used to remotely monitor the health of individuals who are self-isolating or who have been diagnosed with COVID-19. For example, wearable devices can track vital signs such as heart rate and respiratory rate, and alert healthcare providers if there are any concerning changes.
3. Supply chain management: IoT sensors can be used to track the movement of goods and materials through the supply chain, helping to ensure that essential products and equipment reach their destination efficiently and on time.
4. Public health messaging: IoT devices, such as digital signage and public address systems, can be used to deliver public health messages and updates to a wide audience in a timely and efficient manner.



— 39 —
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CHAPTER - 5

THE KEY TAKEAWAYS TO DATE AND ACTIONS STILL NEED TO BE TAKEN FOR COVID-19

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NES Science College Nanded

Abstract:

The pandemic has had a significant impact on society and the global economy, with many countries implementing lockdowns and travel restrictions to slow the spread of the virus, leading to widespread job losses and economic downturns. Healthcare systems around the world have also been strained as they try to provide adequate testing, treatment, and support for those affected by the virus.

Introduction:

COVID-19, also known as the novel corona virus, is a highly infectious disease caused by a newly discovered virus. It first emerged in Wuhan, China in late 2019 and has since become a global pandemic.

The virus is primarily spread through respiratory droplets when an infected person talks, coughs, or sneezes, but it can also be transmitted by touching contaminated surfaces and then touching one's mouth, nose, or eyes. The most common symptoms of COVID-19 include fever, cough, and difficulty breathing, but some people may be asymptomatic or have mild symptoms.

There is currently no specific treatment or vaccine for COVID-19, so the best way to prevent infection is through proper hygiene and social distancing measures. This includes washing hands frequently with soap and water, wearing a mask in public, and avoiding close contact with sick individuals.

The COVID-19 pandemic has had a significant impact on society and the global economy. Many countries have implemented lockdowns and travel restrictions to slow the spread of the virus, leading to widespread job losses and economic downturn. Governments and healthcare systems around the world have also been strained as they try to provide adequate testing, treatment, and support for those affected by the virus.



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Chapter 9

A PROSPECTUS OF MICROBIAL METABOLITES AS INGREDIENTS IN COMMERCIAL SUNSCREENS

*Rahul K. Suryawanshi¹, Sunil H. Koli¹,
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ABSTRACT

Ultraviolet (UV) radiation is responsible for different skin diseases and allergic reactions. Synthetic sunscreens are widely used to protect the skin in the intense UV environments. Different synthetic molecules are being used as active ingredients in the commercial sunscreens, however, few of them are reported to cause toxicity to humans and ecosystems. Regulatory bodies like USFDA and European Commission have issued a guideline for the safe use of active chemical ingredients in the commercial sunscreens. Therefore, there is an increasing interest in the screening of safe and efficacious natural

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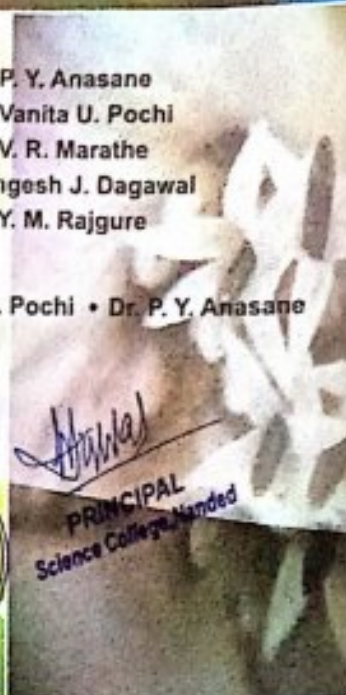
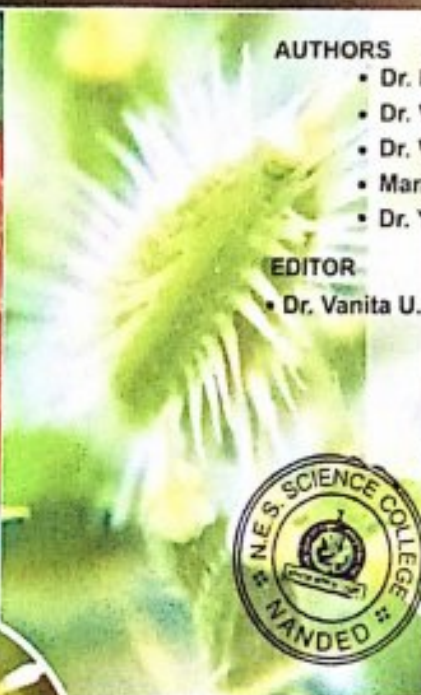

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ANGIOSPERM SYSTEMATICS, ANATOMY & EMBRYOLOGY



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CONTENTS

	Page No.
CHAPTER 1	
Angiosperm Systematic and Biodiversity	
1.1 Angiosperms : Origin and Evolution	1
1.2 Botanical Nomenclature	4
1.3 Herbarium Concept	9
1.4 Concept of Biodiversity	15
1.5 Importance of Biodiversity	18
• Exercise	19
CHAPTER 2	
Angiosperm Systematics	
2.1 Systems of Classification	23
2.2 Systematic studies & economic importance of following families	33
• Exercise	49
CHAPTER 3	
Angiosperm Systematic	
3.1 Systematic studies & economic importance of following families	55
3.2 Dicotyledons (Monoclamydeae)	73
3.3 Monocotyledons	75
• Exercise	82
CHAPTER 4	
Anatomy	
4.1 Types of Tissues	87
4.2 Characteristics of growth rings	95
4.3 Anatomy of root	97
• Exercise	102

CHAPTER 5

Anatomy

- 5.1 Anatomy of stem 105
- 5.2 Anamolies in primary structure in Boerhhaviastem 112
- 5.3 Leaf Anatomy 119
- Exercise 123

CHAPTER 6

Embryology

- 6.1 Microsporangium, microsporogenesis 127
- 6.2 Megasporangium 131
- 6.3 Double fertilization and triple fusion 139
- 6.4 Embryo 142
- 6.5 Endosperm types & significance 144
- Exercise 150



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CHAPTER 9

Eleusine coracana (L.) Gaertn (Finger Millet): An Important Sustainable Food Supplement

Amrutwad B. B^a and V. R. Marathe^{b*}

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Abstract

One of the oldest millets grown in India since 2300 BC is *Eleusine coracana* (L.) Gaertn referred to as finger millet. This review focuses on the applications, nutritive makeup, processing, and health benefits of this ancient grain. Of the various millets and grains, finger millet possesses the highest amount of calcium. In comparison with wheat, rice, which is currently India's main staple grain, it includes more nutritional fiber, minerals, and amino acids that contain sulfur. Even though finger millet has a high nutritional profile, recent studies reveal that urban Indians eat less millets overall. The purpose of this study is to increase awareness of finger millet, its health benefits, and how it may continue to be a sustainable food supply in the context of population growth and declining water supplies.

Keywords: Finger millet, health benefits, sustainable food supplement

Introduction

Among the underused varieties of cereal grains are millets. Even with their high nutritional value and nutraceutical content, they are still regarded as poor people's diet. Finger millet is oldest millets grown in India since 2300 BC and is a gluten-free cereal grain belonging to the Poaceae family (Gebre, 2019). In terms of ranking behind other millet varieties worldwide, finger millet is placed fourth. The nutritional qualities of food have an impact on the elements that support human health. The scientific community has expertise in the word "nutraceutical" and after being developed by Stephen DeFelice in 1989 (Stephen, 2000), the term "nutritional and pharmaceutical food" was only briefly available to the general people. A material that is categorized as food or a component that provides extra health advantages is called a nutraceutical, such as boosting wellness and preventing conditions including diabetes, cancer, heart disease, and hypertension, in addition to possessing an average dietary value (Rajasekaran et. al., 2008).

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Chapter 44

Isolation and Screening of Naringinase Producing Microbes: As Industrial Inputs for Agro Waste Base Enzyme Industry

Satish V. Patil, Jitendra D. Salunkhe, and Vishal Marathe

Abstract

Naringinase is an industrially important enzyme having wide applications in pharma and food industry. The enzyme is having a wide range of substrate, i.e., all natural glycosides containing α -L-rhamnose and β -D-glucose including quercetin, rutin, naringin, hesperidin diosmin, etc. The enzyme majorly used for hydrolysis of glycosides. They are majorly used for biotransformation of steroid and antibiotics. Peels of all citrus fruits such as lime, lemon, grape fruit, and oranges are the major source of substrates of naringinase. This makes naringinase more attractive for cheap and ecofriendly production. The enzyme produced by various microorganisms like, fungi, bacteria, yeast, and actinomycetes.

The screening of potent enzyme producer with various qualities like alkaliphilic, acidophilic, and thermophilic is the need of current food industry. The proposed method of isolation and screening is based on selective medium for naringinase producer and detection by exposure to iodine vapor. The potent producer is screened by zone of clearance on purple brown background.

Key words Naringinase, Rhamnosidase, Glycosidase, Bitterness, Citrus peels

1 Introduction

Citrus fruits industry is one of the huge and important fruit industries. Besides the use of citric acid in food industry as acidulant, beverages and food preservative, its content are widely applicable in medicinal purposes such as kidney stone, gall action and anti-genotoxic effects [1].

Out of global production of citrus fruit, 34% was used for juice industry leading to production of about 44% peel waste [2]. Hence large amount of waste is produced. This citrus peel waste is the significant source of, pectin, limonene and remaining as cattle field [3]. These peels also contain well-known flavanone glycoside "Naringin," which is a major component contributing for bitterness in citrus juice. The debittering of citrus juice is managed by one of

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331




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Chapter 31

Isolation of Selenium Biotransforming Microbes as New Age Bioinputs

Pradnya B. Nikam, Narendra Salunkhe, Vishal Marathe,
Bhavana V. Mohite, Satish V. Patil, and Vikas S. Patil

Abstract

Selenium (Se) has a very narrow gap between its toxicity and benefits to the different forms of life which makes it as an essential micronutrient for living creatures including its importance in plant growth. It is highly soluble having toxic form in the environment such as the oxyanions; selenate and selenite needed to be transformed to the less toxic elemental selenium which has wide number of benefits to the ecosystem, if provided in appropriate required amount. Till now most of the microorganisms have been studied for biotransformation of selenite by using them as electron acceptor in the respiratory mechanism and ultimately reduced to elemental selenium in the form of nanoparticles. Despite of this, many of the microbes are unexplored and the Se-nanoparticles still less studied for their applications. This chapter explains a simple method for isolating the selenium biotransforming microorganisms from nearby soil sample into the red elemental Se in its nano form.

Key words Selenium, Selenite, Thioredoxin reductase, Selenobacter, Antioxidant

1 Introduction

Selenium (Se) has been proven as an essential micronutrient for almost all living organisms, which is also found important for plants in various aspects. Its presence in the environment ranges from inorganic oxyanions to organic selenium containing amino acids. In human beings, various enzymes such as glutathione peroxidase, thioredoxin reductase, iodothyronine deiodinase, and formate dehydrogenase have selenium as their important component and thus function as an antioxidant, preventing tumors, metabolism, other therapeutic uses and even in reproduction [1, 2]. In the environment, Se exists as highly soluble oxyanions such as Selenate (SeO_4^{-2}) and Selenite (SeO_3^{-2}) which are toxic for humans, hence

Satish V. Patil and Vikas S. Patil contributed equally to this work.

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Contents

1. Introduction	1
2. Behaviour Ecology	45
3. Biodiversity and Ecology	68
4. Environmental Ecology	97
5. Habitat Conservation	111
6. Niche Construction	135
7. Ecosystem Management and Ecology	152
8. Population Ecology	177
9. Evolutionarily stable strategy (ESS)	187
10. Coevolution	211
11. Biogeography	219
<i>Bibliography</i>	229

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Dr. Dayanand M. Jadhav born in 1981 maintained excellence throughout his academic career. Currently working in Department of Botany at NES Science College, Nanded (Maharashtra). He has obtained B.Sc. and M.Sc. degree with Late Prof. D. L. Reddy and Dr. K. S. Deshpande memorial Gold Medals respectively from Swami RamanandTeerthMarathwada University, Nanded. He has awarded with Ph.D. in 2013 and presently guiding Ph.D. students for their Doctoral degree in Botany. He is also recognized Post Graduate teacher by the University and has over Sixteen years of teaching experience to UG and PG students of Botany in N.E.S. Science College Nanded. He is actively involved in research and published over 16 research papers in various peer reviewed journals of National and International repute. Organized and attended different conferences, seminars, workshops and Guest lectures in Botany. He is life member of Marathwada Botanical Society. He is invitee member of Board of Studies in Botany of this University. He has completed over Seven Research Projects in the capacity of Principal / Co-Investigator funded by different funding agencies.



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Contents

- Introduction
- Behaviour Ecology
- Biodiversity and Ecology
- Environmental Ecology
- Habitat Conservation
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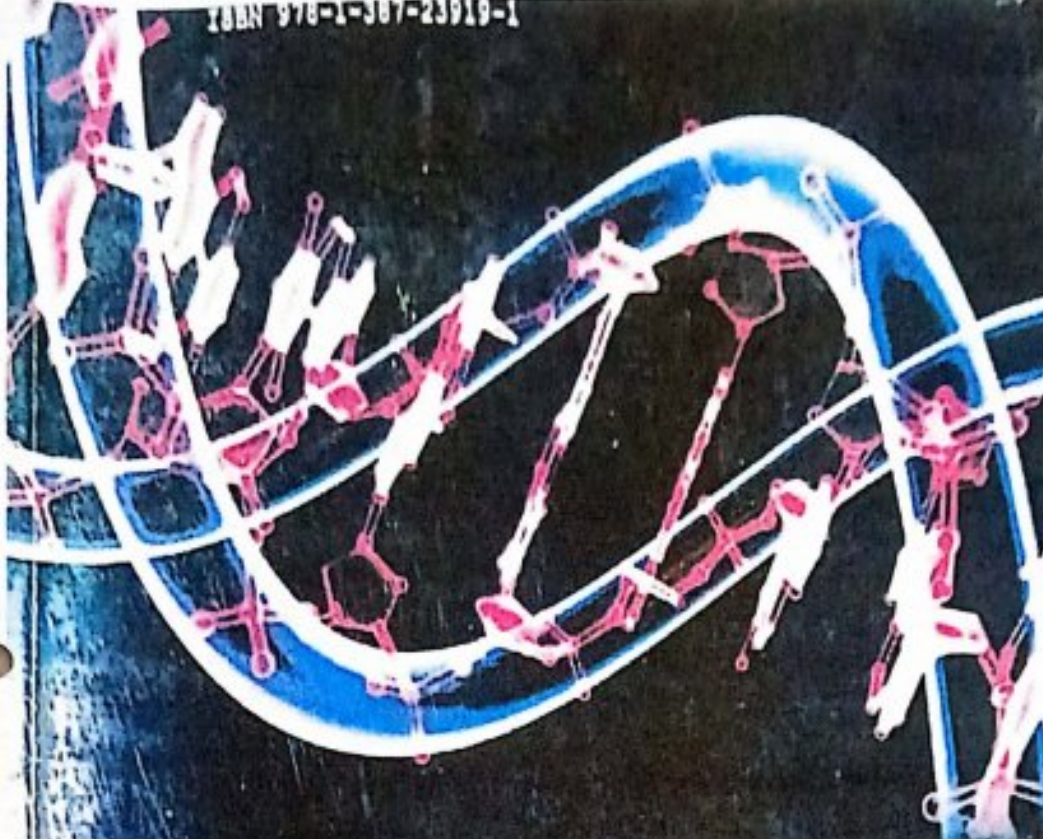
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Content

Chapter 1: Genetic Algorithm	01- 25
Chapter 2: Introduction to Optimization	26- 83
Chapter 3: Binary Genetic Algorithm	84 - 127
<i>References</i>	128 - 139



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Content

Chapter 1: Introduction	01 – 17
Chapter 2: Review of the Literature and Development in the Subject	18 – 25
Chapter 3: Fuzzy Preliminaries	26 – 33
Chapter 4: Multi-Objective Linear Transportation Problem	34 – 78
Chapter 5: Fuzzy Approach to Solve Multi Objective Linear Fractional Programming Problem	79 – 123
Chapter 6: Fuzzy approach to Solve Multiobjective Linear	124 – 171
Chapter 7: Linear Fractional Transportation With Fuzzy Cost Coefficients	172 – 203
Chapter 8: Mofltp with Goal Programming Approach	204 – 233
Chapter 9: Fuzzy Preliminaries	234 – 260
<i>References</i>	261 - 276



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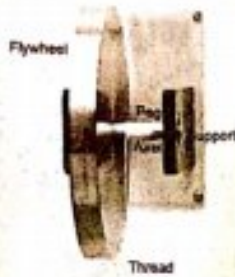
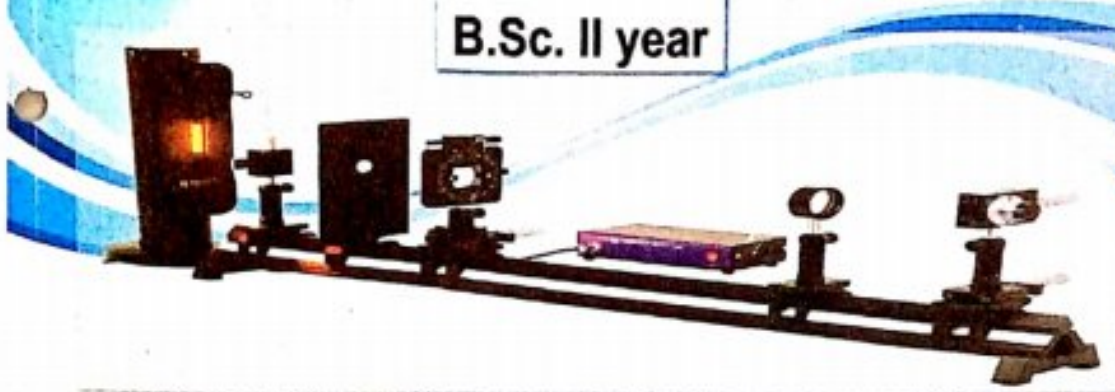
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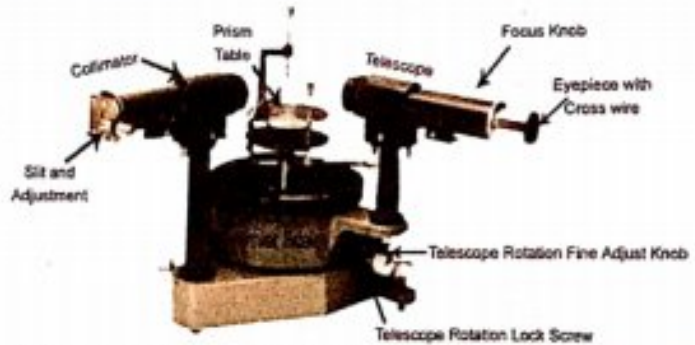
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CONTENTS

1. Introduction.	1
2. Units, Errors and graph.	4
3. Vernier calliper.	9
4. Screw gauge.	12
5. Spherometer.	15
6. Travelling Microscope.	18
7. Y-by Cantilever (Oscillation Method).	20
8. Y- η by Searle's Method.	25
9. Kater's Pendulum.	30
10. Determination of rigidity modulus –Torsionalpendulum	35
11. Surface Tension (Ferguson's Method).	39
12. Moment of Inertia of a Fly wheel.	43
13. Frequency of AC mains using a Sonometer	48
14. Stefan's Constant (σ)	51
15. Thermal Conductivity of good conductor by Searle's Method.	56
16. Spectrometer.	60
17. Calibration of Spectrometer.	63
18. μ – by Spectrometer	67
19. Spectrometer - $i - \delta$ curve	73
20. λ – by Grating (Normal incidence method).	77
21. R.P. of Grating.	81
22. R.P. of Telescope.	85
23. Newton's Ring.	89
24. λ – by Biprism	95
25. Lloyd's single mirror determination of wave length.	100
26. Specific rotation of cane sugar solution using polarimeter.	104
27. Appendix.	108



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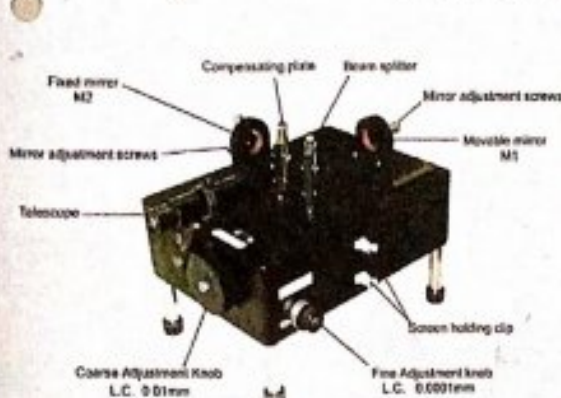
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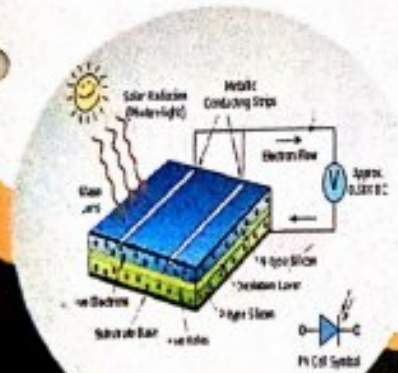
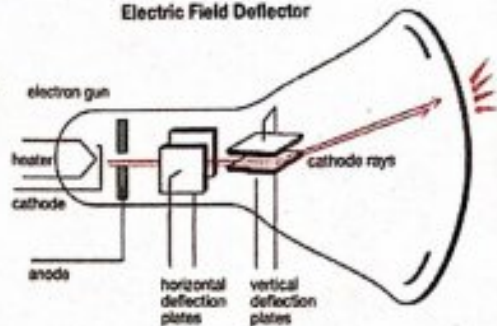
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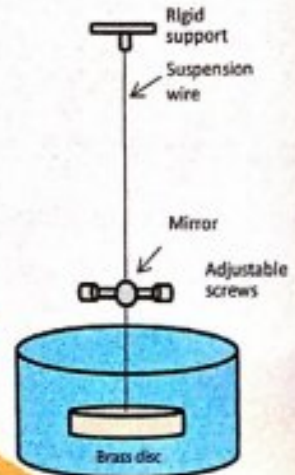


Electric Field Deflector



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CONTENTS

A: Basic Measuring Instruments

i. Introduction.	1
ii. Units, Errors and graph.	4
iii. Vernier calliper.	9
iv. Screw gauge.	12
v. Spherometer.	15
vi. Travelling Microscope.	18
vii. Spectrometer.	20

B: List of Experiment's

1. Dispersive Power of Prism.	23
2. Resolving Power of Prism.	29
3. Cauchy's constant by Spectrometer	34
4. Feby Parot Etalon	38
5. λ -of monochromatic light by diffraction at cylindrical object	41
6. λ -of monochromatic light by diffraction at straight edge	45
7. Coefficient of viscosity by oscillating disc method	49
8. Rydberg's Constant	53
9. Hartman's dispersion formula	56
10. Temperature of Flame	58
11. e/m by Thomson's Method	61
12. Maximum velocity of electron by photo cell	64
13. Plank's constant 'h' by photo cell	68
14. λ -by Michelson's Interferometer (using Na Light)	71
15. λ -by Michelson's Interferometer (using He-Ne LESER)	74
16. Specific heat 'S' of glycerine by method of cooling	79
17. Characteristics of photo-voltaic cell (Solar cell)	82
18. Velocity of ultrasonic waves through different liquid	85
19. Young's modulus Y of a glass by Carnu's method	88
20. Measurement of electrical conductivity (σ) of graphite at room temperature.	91
21. Appendix.	93



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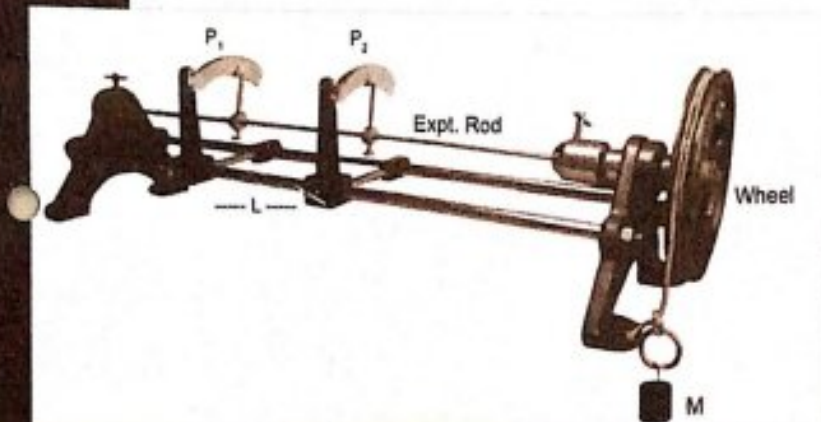
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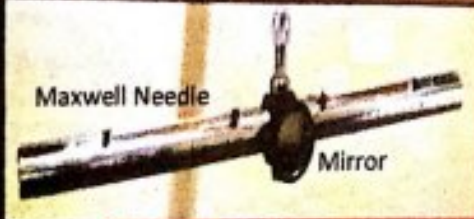
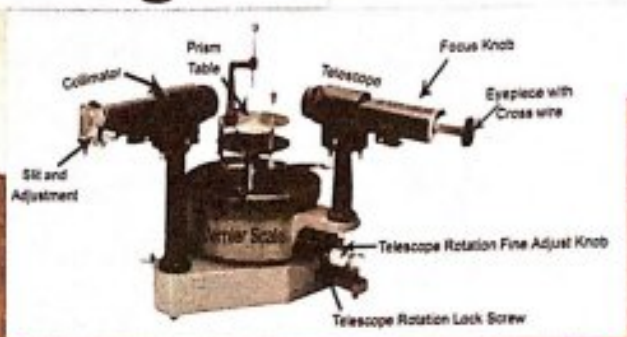
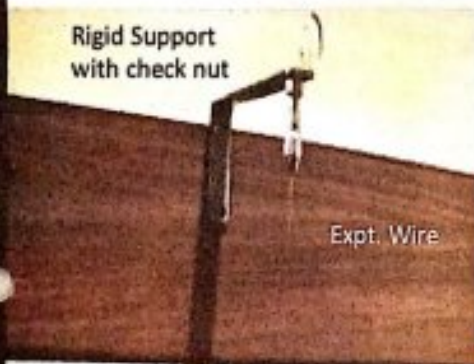
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CONTENTS

1. Introduction.	1
2. Units, Errors and graph.	4
3. Vernier calliper.	9
4. Screw gauge.	12
5. Spherometer.	15
6. Travelling Microscope.	18
7. 'Y' by flat spiral spring	20
8. ' η ' by flat spiral spring	24
9. 'Y' by Koenig's Method	27
10. ' η ' by Static Torsion Method	31
11. ' η ' by Maxwell's Needle	35
12. 'Y' by Bending	38
13. Coefficient of viscosity by Poiseuille's Method	42
14. Coefficient of viscosity by Searl's Method	45
15. Thermal conductivity 'K' by Forbe's Method	48
16. M.I. of Bar by Bifilar suspension	53
17. Small resistance by Carry Fosters Bridge	56
18. Field along the axis of Circular coil	60
19. Ballistic galvanometer (figure of merit)	66
20. Comparison of capacity by Method of mixture	69
21. Comparison of capacity by Desouty Method	73
22. Comparison of capacity by Proportional kick Method	77
23. Calibration of bore of Capillary Tube	81
24. Helmholtz Resonator	83
25. Thermal conductivity 'K' of bad conductor by Lee's Disc	86
26. Determination of Wavelength of the given LASER	89
27. Study of Emf developed across the thermocouple junction	91
28. Surface Tension of liquid Jaeger's Method	94
29. Appendix.	97



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CONTENTS

I. Motivating Words	
II. Forward	
III. Preface	
IV. Contents	
1. E-Resources and E-Resources in Academic Libraries : An Overview	1
2. Reviewing Information and Demystify of Data	
3. Research Methodology	15
4. Demystify of Data (Analysis and Interpretation)	22
5. Recapitulation and Recommendations	27
6. Difficulties Faced While Gathering Data	54
7. Library Computerization : Some Tips for Library Staff	69
• Selected Bibliography	88
• Appendix : Questionnaire	91

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- Retrieving Information and Demystify of Data
- Research Methodology
- Diversity of Data (Analysis and Interpretation)
- Reputation and Recommendations
- Difficulties Faced While Gathering Data
- Library Computerization - Some Tips for Library Staff
- Selected Bibliography

About the Book

This book deals about status of computerization and use ICT in academic libraries affiliated to SRM University Nanded. The content of the book is based on the data collected through a survey from the librarians of various college of this university. So the content has a research base and scientific view. The author has also included a separate chapter Library Computerization : Some Tips for Library Staff. Hence this has become one of the feature of the book. After going through the book in detail I feel this is an important document useful for the library staff working in academic libraries and also gives an idea of current status regarding computerization, e-resources, e-services etc. Lastly, I would like to recommend all library staff and professionals of the region to go through this book which will help one to understand the position of library and take future steps accordingly.



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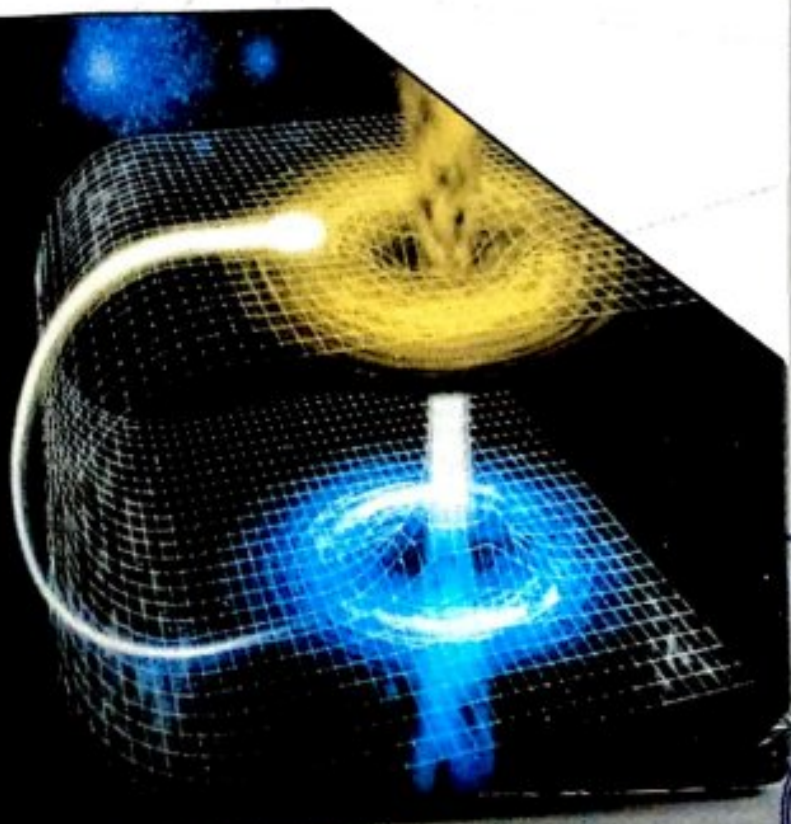
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Contents

1.	SYNOPSIS	17
2.	SYSTEMATIC POSITION	20
3.	MATURITY AND SPAWNING	24
4.	FECUNDITY	47
5.	PONDERAL INDEX	59
6.	LENGTH FREQUENCY STUDIES	67
7.	LENGTH WEIGHT RELATIONSHIP	80
8.	STATISTICAL RELATIONSHIP BETWEEN BODY MEASUREMENTS	87
9.	FOOD AND FEEDING HABITS	98
10.	BIOCHEMICAL COMPOSITION	112
	SUMMARY AND CONCLUSION	137
	BIBLIOGRAPHY	141

LECTURE NOTES IN FUNCTIONAL ANALYSIS

Mrs. Varsha D. Borgaonkar
Dr. Satish G. Khavale



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Contents

1. **BANACH SPACES** 01-82
 - 1.1 The definition and some examples
 - 1.2 Continuous linear transformations
 - 1.3 The Hanh-Banach theorem
 - 1.4 The natural imbedding of N in N^{**}
 - 1.5 The open mapping theorem
 - 1.6 The conjugate of an operator
2. **HILBERT SPACES** 83-117
 - 2.1 The definition and some properties
 - 2.2 Orthogonal complements
 - 2.3 Orthonormal sets
 - 2.4 The conjugate space H^*
3. **ADJOINT OF AN OPERATOR** 118-163
 - 3.1 Self-adjoint operators
 - 3.2 Normal and unitary operators
 - 3.3 Projection
4. **FINITE DIMENSIONAL SPETRAL THEORY** 164-174
 - 4.1 The spectral theorem

Lecture Notes in Functional Analysis

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Studies on Fixed Point Theorems for the Families of Selfmaps on Rings

D. Borgaonkar Varsha *

DOI: 10.9734/tpi/nrames/v5/16096D

Abstract

The families of self-maps $\{f_i : R \rightarrow R : i \in N\}$ on a Ring $(R, +, \cdot)$, for each x in R are under consideration. We will prove fixed point theorems for these mappings in this work. We'll show that the collection of fixed points for these mappings forms a ring, an Ideal, and a variety of Algebraic structures.

Keywords: Fixed point; ring; field; integral domain; nilpotent element; ideal; nil ideal.

1 Introduction

Herstein L. N. in [1] and J. A. Gallian in [2] developed the theory of groups. J. Achari and Neeraj A. Pande in [3] has defined the self-map $f_i : R \rightarrow R$ on the group (G, \cdot) as, $f_i(x) = x^i, \forall i \in I$ and by finding the fixed points of each f_i he obtained some interesting results of group theory in terms of fixed points of selfmaps.

In this chapter we consider families of self-maps $\{f_i : R \rightarrow R : i \in N\}$ on ring. Also, we will generalize the results for the self-maps f_i defined on ring R . Let F_{f_i} denotes the set of fixed points of f_i in this chapter, the certain conditions under which the sets F_{f_i} forms different algebraic structures are discussed. Here, we discuss some basic definitions. Some updates in this area are available elsewhere and may find attention of the readers [4-8].

2 Some Basic Definitions

Definition 2.1: A non-empty set G together with a binary operation \cdot is said to be a group if the following conditions are satisfied:

1. **Associativity:** $\forall a, b \in G$ we have $(a \cdot b) \cdot c = a \cdot (b \cdot c)$
2. **Existence of an identity element:** there exists an element $e \in G$ such that $a \cdot e = e \cdot a = a, \forall a \in G$
3. **Existence of inverse element:** for each $a \in G$, there exists an element $a^{-1} \in G$ such that, $a \cdot a^{-1} = a^{-1} \cdot a = e, \forall a \in G$

We usually denote the group G as (G, \cdot) .

Definition 2.2: A group G is said to be an abelian group if $a \cdot b = b \cdot a \forall a, b \in G$

Definition 2.3: Let A be any set and $f : A \rightarrow A$ be a self-map defined on A , then an element a in A is said to be fixed point of A if $f(a) = a$.

Definition 2.4: Let $(R, +, \cdot)$ be a commutative ring with unity then an element x in R is said to be unit in R if there exist an element y in R such that, $x \cdot y = y \cdot x = 1$. In short, units in the ring R are the invertible elements of R .

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Some Contractive Type Mappings in b-metric Space

Varsha D. Borgaonkar ^{a*}, K. L. Bondar ^b and S. M. Jogdand ^c

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Abstract

In this paper we prove that, the unique fixed point exists for a mapping satisfying the generalized contractive type conditions in b-metric space. Here the b-metric under consideration need not be continuous function whereas the metric is a continuous function. An example is also given for the verification of the result.

Keywords: b-metric space; completeness in b-metric space; Cauchy sequence; fixed point.

1 Introduction

The Banach contraction Principle is very useful theorem in Mathematics. It is very popular tool in solving existence problems in many branches of Mathematical Analysis [1-3]. Banach fixed point theorem has many applications inside and outside Mathematics [4-9]. In 1989, an interesting concept of generalized b-metric space was introduced by Bakhtin [10]. In 1993 Czerwik [11] extended the results of b-metric spaces. Many researchers generalize the Banach fixed point theorem in b-metric space. Czerwik [12] in 1998 presented the generalization of Banach fixed point theorem in b-metric spaces. The existence and uniqueness theorems in b-metric space was presented by Agrawal [13]. Suzuki [14] obtained some basic inequalities in a b-metric space and its applications. Boriceanu [15], Mehinat Kir [16] extended the fixed point theorem in b-metric space. Borkar [17] obtained the common fixed point theorem for non-expansive type mapping.

Chopade [18] given common fixed point theorems for contractive type mapping in metric space. Roshan [19] obtained common fixed point of four mappings in b-metric space.

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Chapter 16: The Concepts of Machine Learning Algorithms

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Introduction:

Machine Learning (ML) has emerged as a transformative technology in the field of artificial intelligence, enabling computers to learn from data and improve their performance on specific tasks without being explicitly programmed. This chapter explores the fundamental concepts of machine learning, delves into various algorithms with accompanying diagrams and equations, and showcases real-world applications with hyperlinks to relevant diagrams.

Fundamental Concepts of Machine Learning:

Types of Machine Learning:

Machine Learning can be broadly categorized into three types:

- a. **Supervised Learning:** In supervised learning, the algorithm is trained on labeled data, where input-output pairs are provided for training. It learns to map inputs to the correct outputs, enabling it to make predictions on unseen data. One of the fundamental algorithms used in supervised learning is Linear Regression.
- b. **Unsupervised Learning:** Unsupervised learning algorithms are trained on unlabeled data, aiming to identify patterns and structures within the data without explicit guidance. Common tasks include clustering and dimensionality reduction. A popular unsupervised learning algorithm is K-Means Clustering.
- c. **Reinforcement Learning:** Reinforcement learning involves an agent learning to interact with an environment to achieve specific goals. It receives feedback in the form of rewards or penalties, optimizing its actions to maximize rewards over time. Reinforcement learning algorithms have seen significant applications in robotics and gaming.

Feature Engineering:

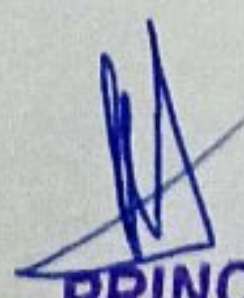
Feature engineering is a crucial step in ML, where relevant features are selected or engineered from raw data to improve model performance. It involves transforming and selecting the most informative features to represent the data effectively. Techniques like Principal Component

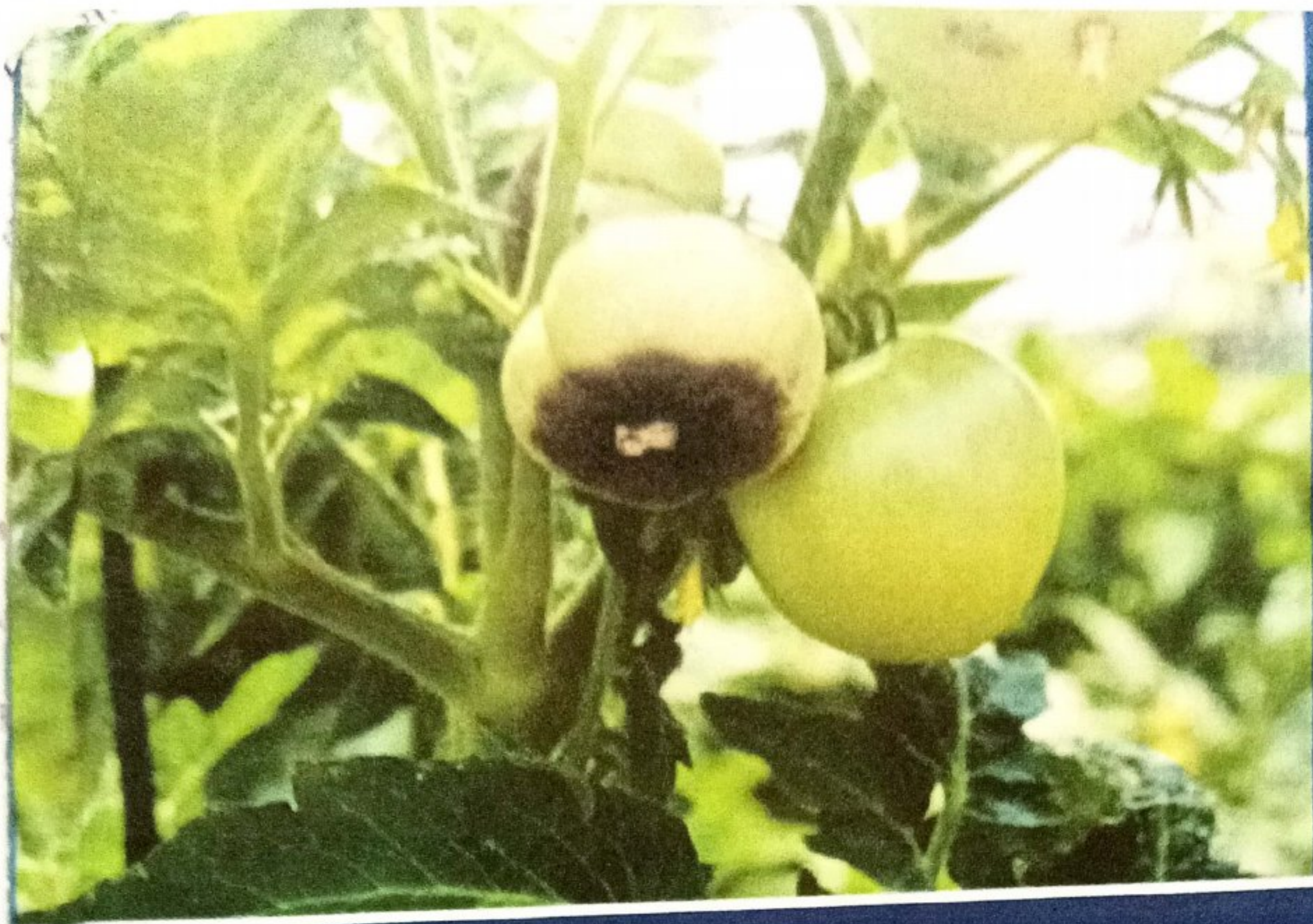
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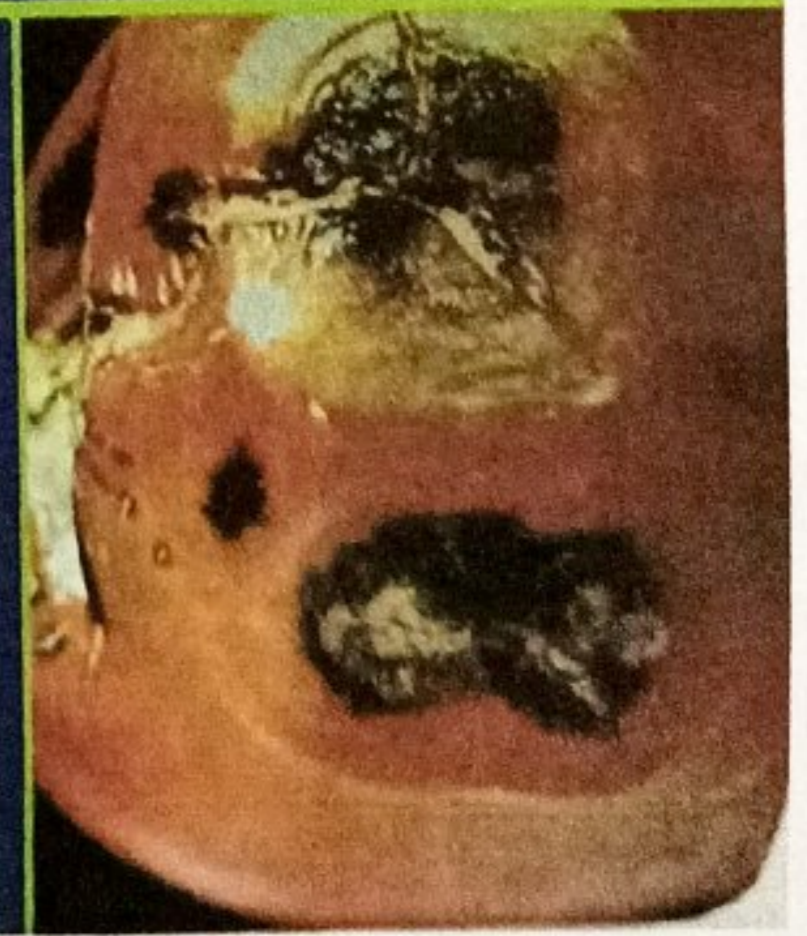
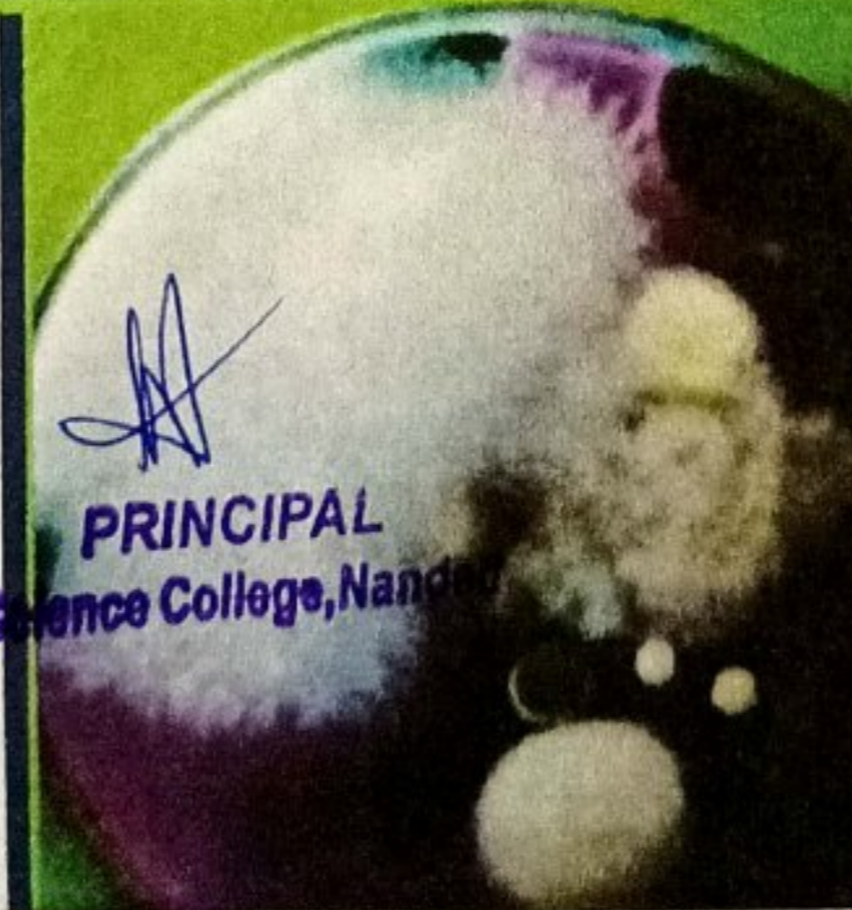
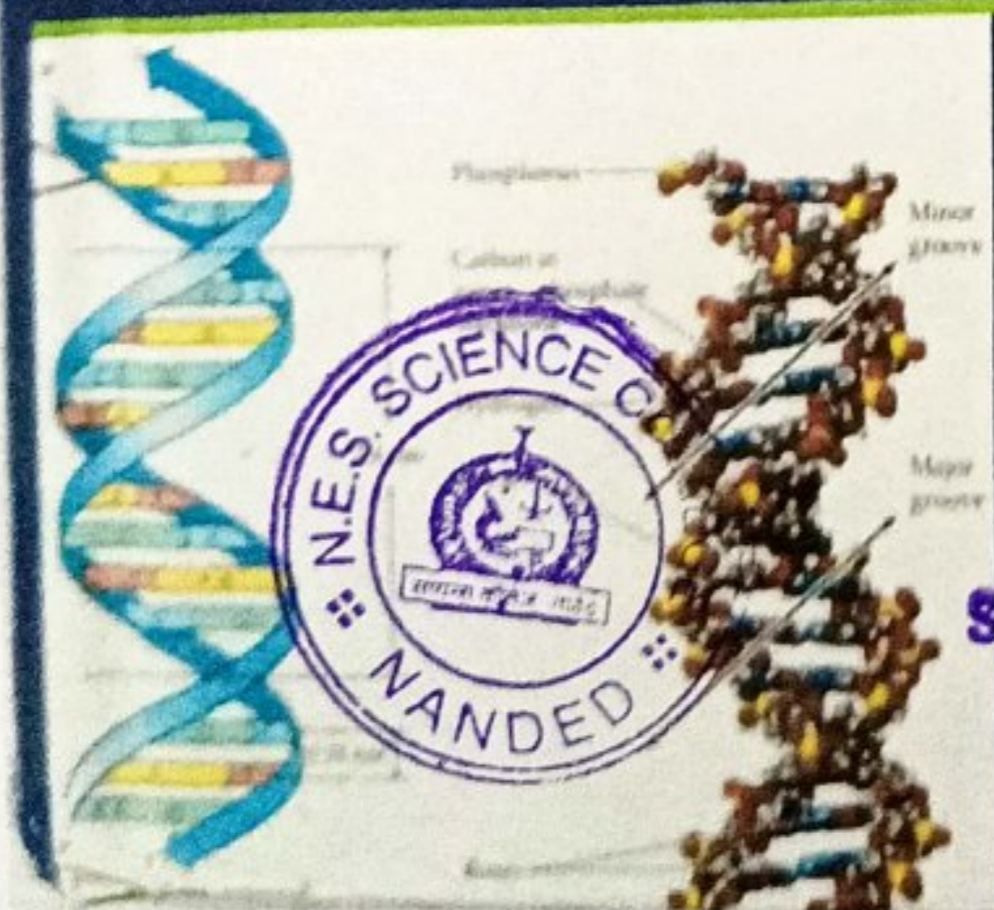



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PHYSIOLOGICAL AND MOLECULAR PLANT PATHOLOGY

Dr D.U. Gawai



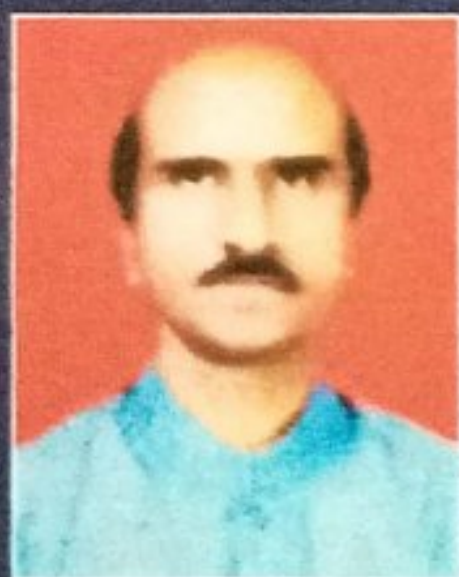
Contents

<i>Preface</i>	<i>vii</i>
1. History of Physiological and Molecular Plant Pathology	1
2. Physiological and Molecular Changes in Diseased Plants	18
3. Host-pathogen Interactions	55
4. Defence Mechanism in Plants	88
5. Genetics of Pathogenesis	126
6. Biotechnological Approaches in Plant Pathology	195
7. Molecular Plant Pathology	229
8. Physiological and Molecular Basis of Plant Disease Control	244
<i>Bibliography</i>	269
<i>Index</i>	271

PHYSIOLOGICAL AND MOLECULAR PLANT PATHOLOGY

Plant pathology embraces all aspects of biological and scientific activity which are concerned with understanding the complex phenomena of diseases in plants. Physiological plant pathology represents those specialities within plant pathology which focus on the physiological and biochemical activities of pathogens and on the response of host plant tissues. Today there is an increasing recognition on the part of the scientific agricultural community that only through a deeper and more fundamental understanding of all the interacting components of the agricultural biota can we expect to improve our capabilities of feeding an expanding world population. It is in this context that physiological plant pathology has assumed new significance within the broader field of plant pathology. No longer are studies on the biochemistry and physiology of pathogens and pathogenesis merely isolated academic exercises; rather, a substantial coherent body of knowledge is accumulating upon which our understanding of the process of disease development and host resistance is being founded. It is from these foundations of knowledge that ultimately new insights into the control of plant diseases may be expected to grow. It seems appropriate, therefore, that at regular intervals those involved in the various subspecialities encompassing the broadest aspects of physiological plant pathology reassess the contributions within the particular specialities in the light of new knowledge and technologies for the purpose of articulating new and productive directions for the future.

Contents: History of Physiological and Molecular Plant Pathology • Physiological and Molecular Changes in Diseased Plants • Host-pathogen Interactions • Defence Mechanism in Plants • Genetics of Pathogenesis • Biotechnological Approaches in Plant Pathology • Molecular Plant Pathology • Physiological and Molecular Basis of Plant Disease Control



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DISEASES OF CROP PLANTS

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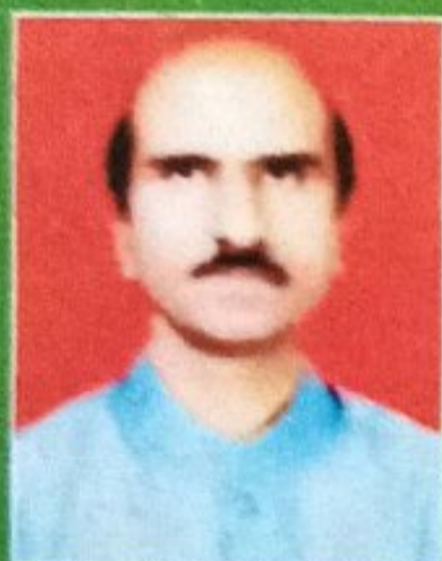
Contents

<i>Preface</i>	vii
1. Development of Plant Pathology	1
2. Symptoms of Plant Diseases	33
3. Classification of Plant Diseases	69
4. Crop Plant Diseases	104
<i>Bibliography</i>	245
<i>Index</i>	247

DISEASES OF CROP PLANTS

Plants are a big and essential part of our life for so many reasons. One of the reasons are plants produce Oxygen which is needed for respiration. Another reason is plants have an unique quality of producing food through photosynthesis, for which we, humans and animals are dependant on plants for consumption. Besides our economy is also dependant on plants as various chemicals and products such as paper, fibres, rubbers etc are produced from plants. Plants also provide us with shelter and medicine. Plants play a vital role in maintaining our environment too. They prevent soil erosion, reduce heat by pulling Carbon dioxide off from atmosphere and regulate water cycle. So essentiality of plants for our survival cannot be denied. A disease may affect whole or parts of the plant body. The visible effects of disease such as discoloration, change in shape, reduced yield etc are called Symptoms. Different diseases show different symptoms depending on which a disease can be identified. This new comprehensive book will introduce the students to the basic and applied aspects of plant pathology and to the major diseases of crops and fruit trees.

Contents: Development of Plant Pathology • Symptoms of Plant Diseases
• Classification of Plant Diseases • Crop Plant Diseases



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INDEX

Sr. No.	Author Name	Title	Page No.
1	Barve M. B A. B. Khodke	SEASONAL DYNAMICS AND DIVERSITY OF PHYTOPLANKTON WITH CORRELATION OF WATER QUALITY PARAMETERS OF LOWER DUDHANA DAM, DIST-PARBHANI (M.S) INDIA	01
2	A. D. Arsule	VOLUMETRIC AND ACOUSTIC APPROACH OF LEUCINE IN AQUEOUS SUCROSE SOLUTIONS AT DIFFERENT TEMPERATURES	02
3	Gaikwad R. B., Bhandare R. Y.	STUDY ON PREVALENCE OF THE CESTODE PARASITES OF FRESHWATER FISH, <i>MASTACEMBELUS ARMATUS</i> FROM NASIK DISTRICT, (M.S.), INDIA	03
4	Dhole N. A.	ANTIBACTERIAL PROPERTIES OF DIFFERENT SOLVENT EXTRACTS OF <i>GLIRICIDIASEPIUM</i> (JACQ.) FLOWERS	04
5	Dhondiram P. Gadgile	EFFECT OF TEMPERATURE AND RELATIVE HUMIDITY ON THE DEVELOPMENT OF ANTHRACNOSE OF PAPAYA	05
6	Dnyaneshwar P. Ghorband	ETHNOMEDICINAL PLANTS USED BY TRIBALS OF KINWAT RANG FOREST OF NANDED DISTRICT, MAHARASHTRA	06
7	Dakhure V. K R.V. Sangvikar B. D. Gachande	GREEN SYNTHESIS OF COPPER OXIDE NANOPARTICLES USING <i>MOMORDICA DIOICA</i> FRUIT EXTRACT AND THEIR BIOLOGICAL APPLICATIONS	07
8	G. M. Deshmukh	BIOACCUMULATION OF HEAVY METALS IN THREE BIVALVE SPECIES FROM PENTAKLI DAM (M. S.), INDIA	08
9	Gajanan Kottapalle Pravin Poul Avinash Shinde	SYNTHESIS OF HYDROXYCHALCONES AND THEIR <i>IN-VITRO</i> ANTIOXIDANT AND CYTOTOXIC ACTIVITY	09
10	Kyadare G. N.	ROLE OF GREEN CHEMISTRY AND ITS IMPORTANCE IN ENVIRONMENTAL STUDY	10



11	G. T. Jinklor, V. S. Pabboj, H. N. Lakhmawad, Y. S. Joshi, D. N. Rander, K. S. Kanse, A. C. Kumbharkhane	A TIME DOMAIN SPECTROSCOPIC STUDY OF POLY SO RBATES AND THEIR AQUEOUS BINARY MIXTURES	11
12	Govind R. Bahire	STUDY OF CHEMISTRY AND BIOLOGICAL ACTIVITY OF SOME PLANT ORIGIN HETEROCYCLIC DRUGS	12
13	Hanumant R. Aglave, D. R. More	ENHANCING SOYBEAN PRODUCTIVITY: EFFECTS OF TILLAGE, IRRIGATION, AND NITROGEN RATES	1314
14	Parshuram V. Pawar, D. R. More	ENHANCING GUAVA FRUIT CHARACTERISTICS USING NUTRIENT SPRAYS	14
15	M. M. V. Baig	ADVANCING SUSTAINABLE AGRICULTURE: HARNESSING PLANT GROWTH-PROMOTING RHIZOBACTERIA FOR ENHANCED CROP PRODUCTIVITY AND ENVIRONMENTAL RESILIENCE	15
16	Ashwini Laxmanrao Jakkawad, Pawde Shubhangi Subhashrao	NANOMATERIALS: PIONEERING SOLUTION FOR AIR POLLUTION	16
17	Miss. Kaletwad Kajal Karmveer, Dr. R. B. Patil	STUDIES OF MACRONUTRIENTS AND MICRONUTRIENTS ON GROWTH OF TURMERIC (<i>Curcuma longa</i> L.) CV. SALEM.	17
18	N. M. Maske	ENHANCEMENT OF TOMATO FRUIT LYCOPENE BY INDUCTION OF MUTATION	18
19	Miss. Mauli Poshattiavadhutwar, Dr. R. B. Patil	STUDIES ON MAJOR DISEASES OF TURMERIC (<i>Curcuma longa</i> L.) cv. SALEM CROP PLANT AND THEIR MANAGEMENT	20
20	Nilesh P. Bhosle, Dr. M. V. Bankar	CHARACTERIZATION OF PESTICIDES DEGRADING BACTERIA	21
21	Pangarkar M.H.	ENVIRONMENTAL CRISES & SUSTAINABLE DEVELOPMENT	22
22	Pawde Shubhangi Subhashrao, Jakkawad Ashwini Laxmanrao	RENEWABLE ENERGY-NEED OF THE FUTURE GENERATIONS	23



23	Prakash R. Kanthale	PHARMACOGNOSTIC AND PHYTOCHEMICAL STUDIES OF AREVA LANATAN Juss.	24
24	Prashant N. Ubale, Sambhaji P. Vartale	STUDY OF CHEMISTRY OF SOME MEDICINAL PLANTS CONTAINING HETEROCYCLIC COMPOUNDS	25
25	Ravinder Konda	FUNCTIONALIZED BORAZINE FOR HYDROGEN STORAGE: A DENSITY FUNCTIONAL THEORY APPROACH	26
26	Dakhure V. K., R.V. Sangvikar, B. D. Gachande	BIOLOGICAL APPLICATIONS OF ZINC OXIDE NANOPARTICLES (ZNONPS) SYNTHESIZED FROM <i>MOMORDICA DIOICA</i> ROXB. EX WILD LEAF EXTRACT.	27
27	S. M. Yeole	ROLE OF ZOOPLANKTON IN AQUATIC FOOD WEB	28
28	Sagar D. Palwe	PERFORMANCE AND HAZARDS OF THERMOTHERAPY IN CANCER TREATMENT	29
29	Tarte Shilpa Hanmantrao	IMPACT OF <i>PIRIFORMOSPORA INDICA</i> ON OIL QUALITY ATTRIBUTES OF GROUNDNUT	30
30	Varsha Dabhade	DETECTION OF LEACHING COMPONENTS FROM PLASTIC IN BIOTA VIA ENVIRONMENT	31
31	V. R. Bagul, G. R. Bhagure	ZnO NANOSTRUCTURE AS POLLUTANT GAS SENSORS: SYNTHESIS CHARACTERIZATION AND SENSING PERFORMANCE	32
35	Vishwamber A. Tidke	THE IMPACT OF AGRICHEMICAL USE ON HUMAN MENTAL HEALTH	33
33	Dr. S. B. Wadekar	CONSERVATION OF INDIGENOUS BREEDS OF LIVESTOCK	34
34	Zafar S. Khan	OPTIMIZATION OF AMYLASE ISOLATED FROM <i>ASPERGILLUS NIGER</i> USING DIFFERENT SUBSTRATES	35
35	B. G. Urekar	STUDY OF MATHEMATICAL MODELING AND ANALYSIS OF ENVIRONMENTAL PROBLEMS	36
36	Datta S. Kawale and, Sambhaji P. Vartale	SYNTHESIS OF FUSED BENZOTHIAZOLO-PYRIMIDO [1,3] THIAZINE-4,5 DIIMINEDERIVATIVES AND THEIR ANTIMICROBIAL ACTIVITY	37
37	Dr. Pradip Shivaji Anantwar	IMPORTANCE OF ENVIRONMENTAL MANAGEMENT IN BUSINESS	38



38	Sachin V. Tawade	EFFECT OF FUNGICIDES, CHEMICALS AND PLANT EXTRACTS TREATMENTS ON FRUIT ROT INTENSITY OF TOMATO INCITED BY <i>ALTERNARIA SOLANI</i>	39
39	Dr.Vilas Balajirao Ganipurkar	BIOPESTICIDES AND THEIR IMPORTANCE IN PLANT PROTECTION FOR AGRICULTURE	40
40	Khandare Y. L. , Ramod S. A.	ETHANOPHARMACOLOGICAL STUDY ON RARE AND WILD MEDICINAL PLANTS IN DHARMABAD REGION OF NANDED DIST. (M.S) INDIA	41
41	Datta R. Chamle	EFFICACY OF WEED VERMICOMPOSTS ON MAIZE CROP	42
42	Dhole J. A.	ANTIMICROBIAL ACTIVITY OF VARIOUS FRACTIONS OF <i>RYOPHYLLUMPINNATUM</i> (IAM.) oKEN. LEAVES	43
43	K. K. Jadhav, S. M. Kadam, R. M. Achegawe, Y. R. Ramasane	ANALYSIS OF SOIL SAMPLES FOR THEIR PHYSICO-CHEMICAL PARAMETERS FROM NANDED DISTRICT, MAHARASHTRA	44
44	N. J. Deshmukh, A.T. Shinde, P. G. Paul.	ANALYSIS OF PHYSICAL AND CHEMICAL PROPERTIES OF SELECTED SOILS SAMPLES OF AGRICULTURAL AREA OF NANDED	45
45	Rahul Zade	ANTICATARACT POTENTIAL OF ENICOSTEMMA: A REVIEW	46
46	S. M. Devraye	DETOXIFICATION OF POLLUTED SOIL BY PHYTOREMEDIATION- CONCEPT	47
47	Shaikh Saiyada Nikhat, Zafar S. Khan	ANTIOXIDANT ACTIVITY OF EUPHORBIACEAE PLANTS	48
48	Dr S.V Poul	USE OF LEECH SPECIES IN HUMAN TREATMENT	49
49	Dr. Tanaji Kashid	HISTOLOGICAL CHANGES IN GILL TISSUE OF FISH <i>PUNTIUS SOPHORE</i> EXPOSED TO METHOMYL	50
50	V.R. Bagul' G.R. Bhagure	ZnO NANOSTRUCTURE AS POLLUTANT GAS SENSORS: SYNTHESIS CHARACTERIZATION AND SENSING PERFORMANCE	51
51	Vinod Kale, Sainath Zangad, Gangadhar Bhopalkar	DESIGN, SYNTHESIS AND EVALUATION OF BIOLOGICAL PROPERTIES OF PYRIMIDINE-BASED SCHIFF BASES	52

**SYNTHESIS OF HYDROXYCHALCONES AND THEIR *IN-VITRO*
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New hydroxyl chalcones (3a-3e) have been synthesized by Claisen Schmidt condensation of aromatic hydroxy ketone and substituted aromatic aldehyde. The structures of synthesized compounds were established by spectroscopic techniques. All the synthesized compounds were screened for in-vitro antioxidant and cytotoxic activity. Most of the compounds show good to moderate activity.

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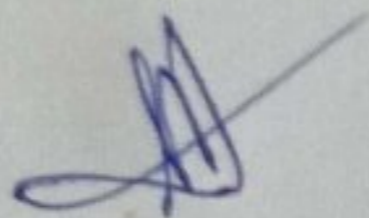
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All fundamental needs of human beings and other living organisms are fulfilled by soil. Soil fertility determines crop growth, productivity and consequently affects quality and sustainability. Soil testing and nutrient analysis is used as a diagnostic tool for determining available nutrients in soil and assessing fertilizer needs of crops. A physicochemical study of soil is based on various parameters like soil pH, electrical conductivity (EC), organic carbon (OC), available nitrogen (N), phosphorus (P_2O_5), potassium (K_2O) and micronutrients (Fe, Mn, B, S, Cu and Zn). Five representative soil samples were collected at a depth of 0-20 cm and analyzed in the soil testing laboratory using standard procedures. The value of soil pH was found to be 7.35 to 7.82, electrical conductivity was ranging from 0.36 to 0.43 dSm^{-1} , organic carbon was found to be 0.28 to 0.53%. Among the macro nutrients, available nitrogen was found to be 140 to 324 kg/ha, phosphorous was ranging from 12 to 47 kg/ha, potassium was ranging from 115 to 646 kg/ha. Micronutrients like Cu (0.1-4.4 mg/kg), Fe (1.2-3.7 mg/kg), Mn (0.4-2.7 mg/kg), Zn (0.8-3.8 mg/kg), S (12-64 mg/kg) and B (0.5-4.4 mg/kg) were also analyzed. This information will help the farmers to know amount of fertilizers to be added in soil to make effective crop production. Hence, it is suggested that soil samples must be enriched with nutrients by organic manure or chemical fertilizers to acquire optimum nutritional needs.

Keywords: Soil Sample, Physicochemical, pH, Electrical Conductivity, OC, Micronutrients

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P. G. Paul

Department of Microbiology Science College, Nanded

Abstract:

This study was conducted to evaluate the physical and chemical properties of some selected soils of agricultural area of Nanded city. Hence, representative soil samples were obtained from three locations viz: Pawdewadi village, Kakandi, Taroda at 0-15cm and 15 -30cm depths. These were analyzed for their physical and chemical properties. The soils studied were mainly clay and loamy sand, with clay texture predominating. The soils had a pH range of 6.55 to 7.15 at the surface and furthermore; the analysis revealed soil moisture (0.996%), total nitrogen, exchangeable Ca, Mg, Zinc, Fe, Cu and Mn contents were found to be adequate based on established critical levels for the various nutrients. Potassium levels were found to be deficient in the soils.

Keywords: Physical properties, Chemical properties, Selected soils, pH.



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Keywords: Physical properties, Chemical properties, Selected soils, pH.



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**ANALYSIS OF PHYSICAL AND CHEMICAL PROPERTIES OF
SELECTED SOILS SAMPLES OF AGRICULTURAL AREA OF NANDED**

N. J. Deshmukh

Department of Chemistry Science College, Nanded

A.T. Shinde

Department of Chemistry Science College, Nanded

P. G. Paul

Department of Microbiology Science College, Nanded

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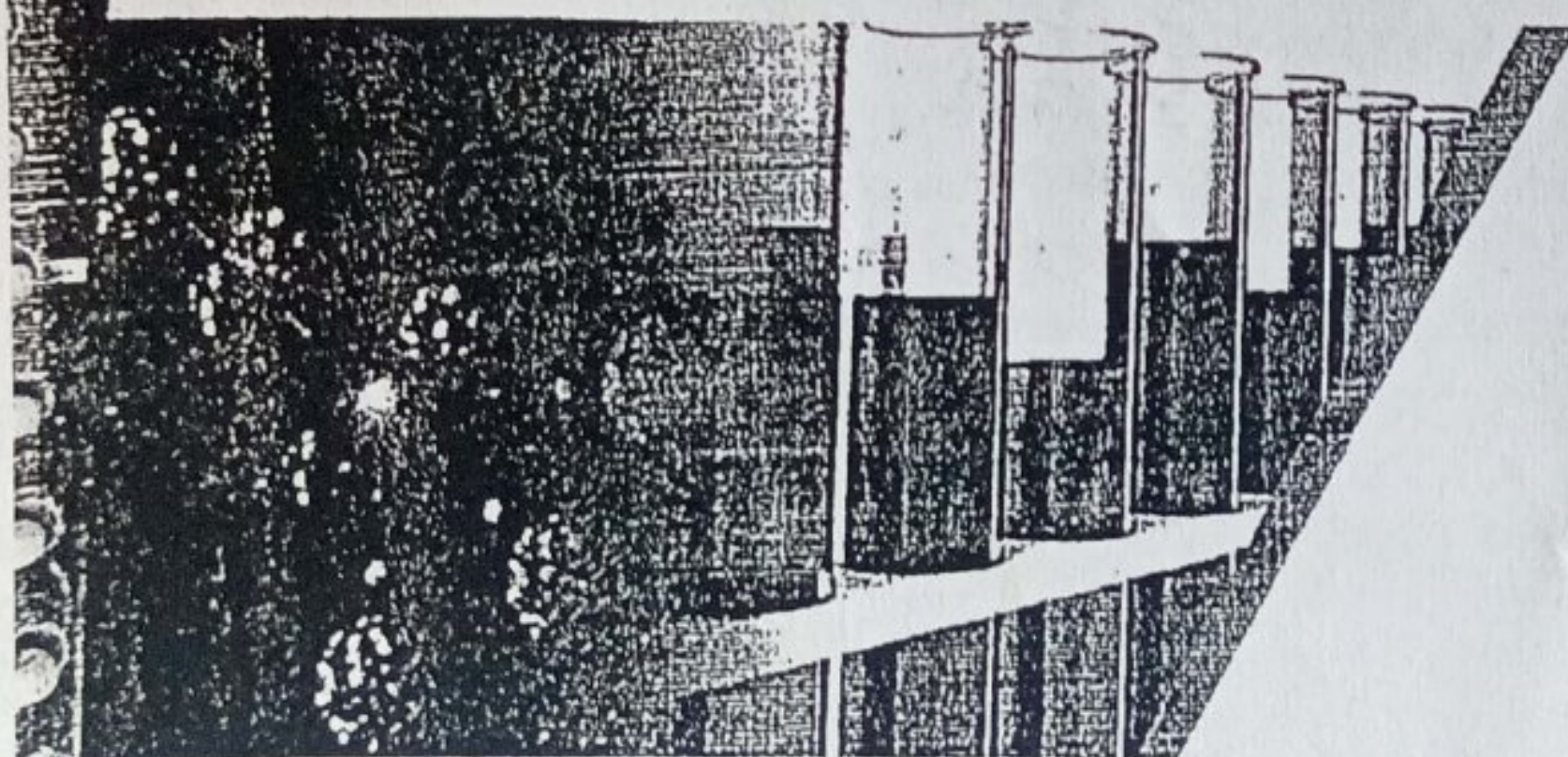
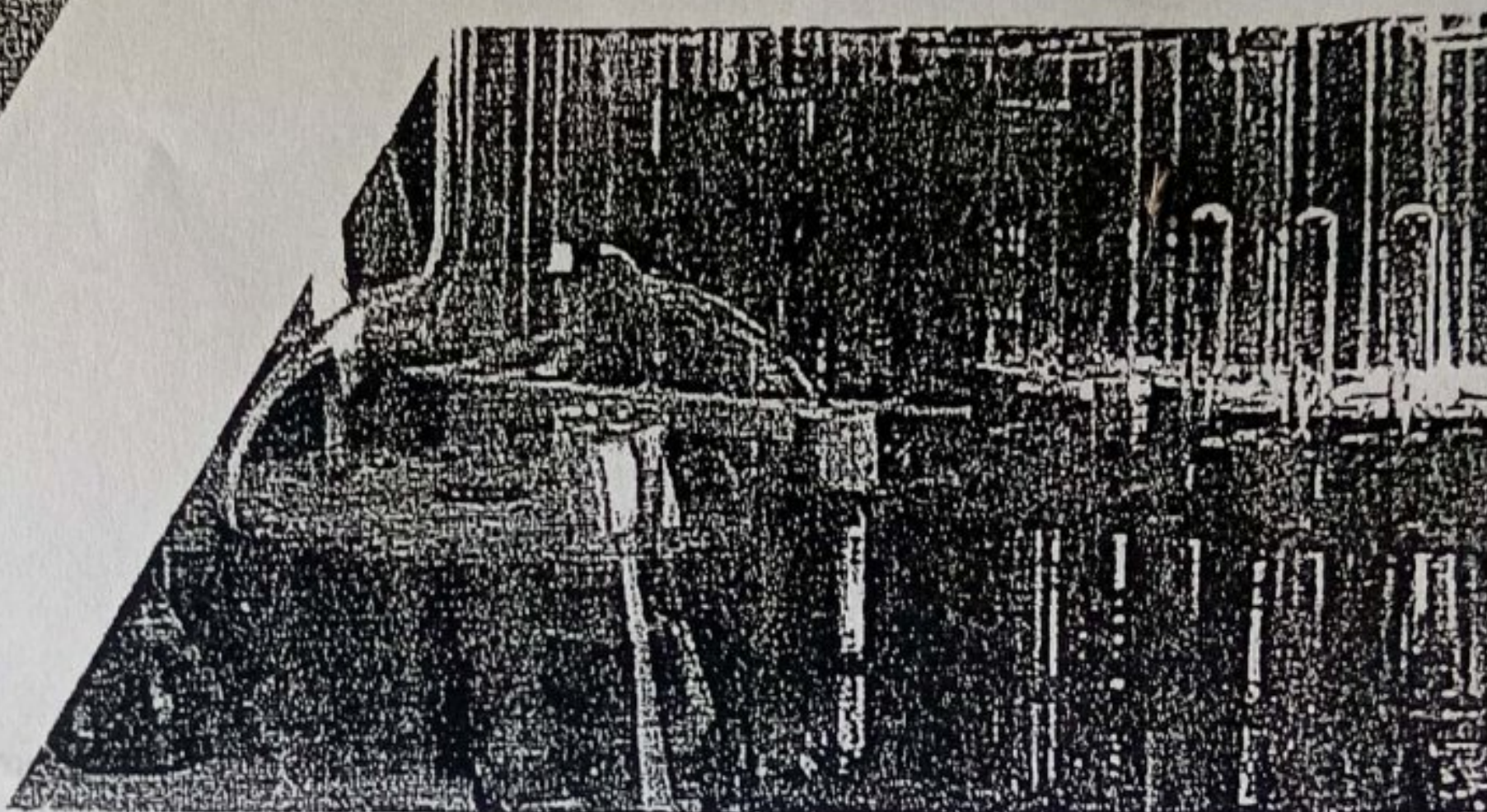
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INSTRUMENTAL METHODS OF CHEMICAL ANALYSIS



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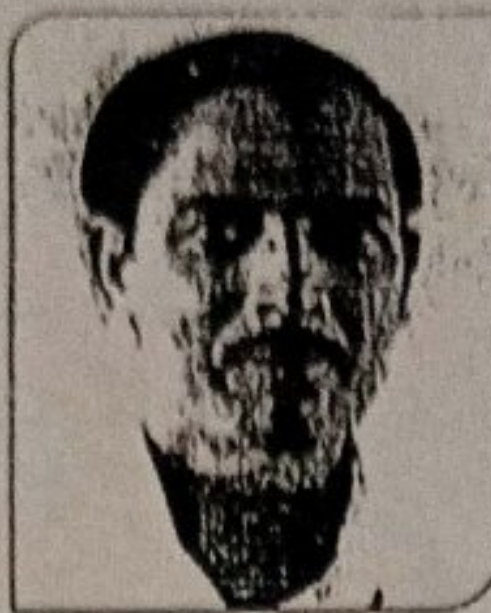
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Dr. A.S. Bansode awarded Ph.D. degree on 2004 by S.R.T.M.U., Nanded and has 27 years of teaching experience. He has passed SET examination in Chemistry 1995 and is recognized P.G. teacher. He is currently Associate Professor and has long experience of research work. He published research papers in National and International Journals. He was Staff Secretary about 10 years and organised different programs in N.E.S. Science College, Nanded. He also actively participated in different curricular and co-curricular activities in the college and now he is working as IQAC Co-ordinator.



Dr. L.P. Shinde awarded Ph.D. on 2002 by S.R.T.M.U., Nanded and has 23 years of UG and PG teaching experience. He achieved M.B.A. degree, B.A. (MCJ) and L.L.B. degree. He has published more than 35 research papers in Chemistry and presented numbers of papers in national and international conferences. Presently he is Associate Professor in the Dept. of Chemistry, NES Science College, Nanded. He actively participated in number of social organisation as well as in college committees. He actively participated in curricular and extra co-curricular activities. He delivered number of popular lectures on different platforms of different organisations. Under his able guidance three students got Ph.D. degree and six got M.Phil. degree.

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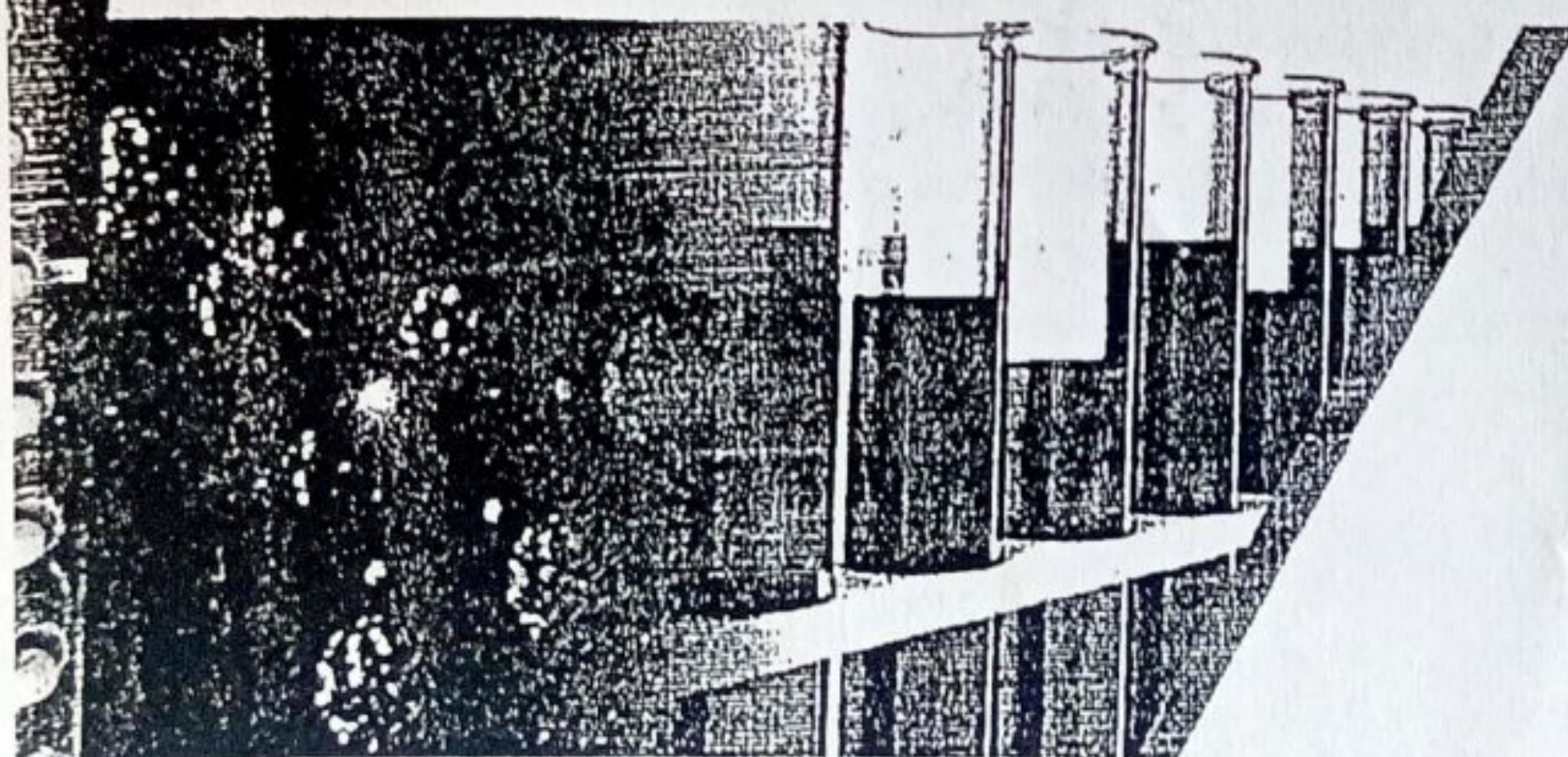
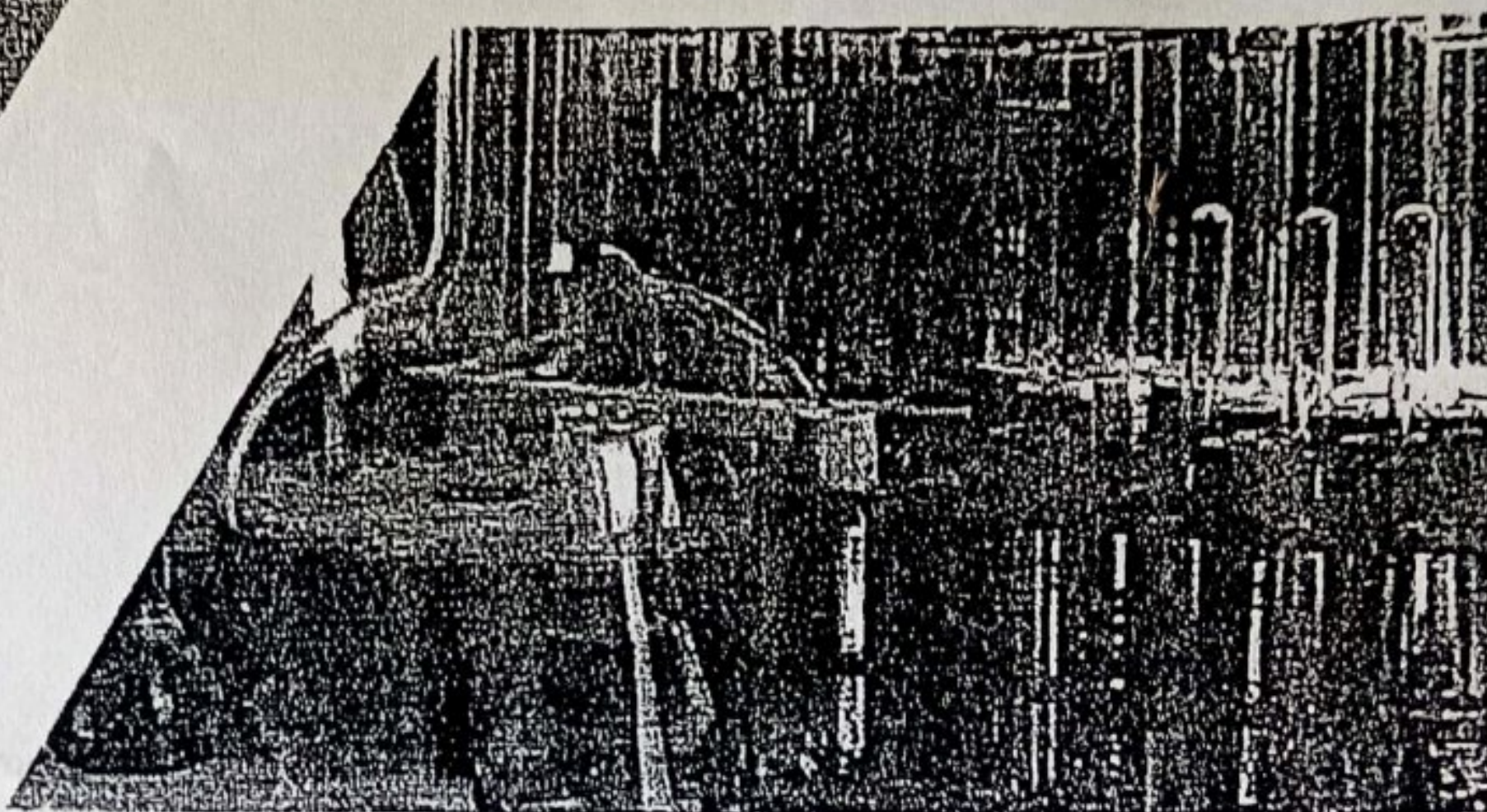
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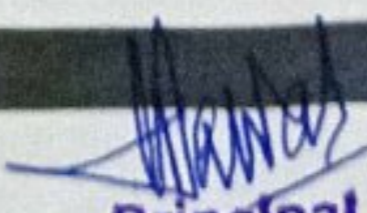
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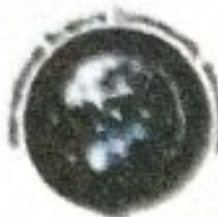
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ISCA-ISC-2023-4CS-04-Oral

Utilizing the potential of Metal Oxide Nanoparticles for Enhanced Wastewater Treatment in Chhattisgarh's Polluted Rivers: A greener Approach

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Abstract: Chhattisgarh, abundant in natural resources, faces a critical challenge in the form of water pollution, primarily affecting its prominent rivers, Hasdeo and Kharun. Deteriorating water quality in them has raised concerns for environment and public health. This paper explores the pivotal role of metal oxide nanoparticles in revolutionizing wastewater treatment processes for these water bodies. With urbanization on the rise, demand for clean water has grown. The rivers, once lifelines of Chhattisgarh, now bear brunt of anthropogenic activities, necessitating efficient, sustainable solutions. This paper discusses importance of advanced wastewater treatment techniques in Chhattisgarh, emphasizing urgency to protect the ecosystems, safeguarding health of the populace. Metal oxide nanoparticles have unique physicochemical properties for wastewater treatment. This research considers their applications, mechanisms, and effectiveness in removing a spectrum of contaminants, including heavy metals, organic pollutants, from polluted waters of these rivers. Moreover, it investigates the potential environmental impacts, challenges associated with deploying nanoparticles. In conclusion, this study highlights critical importance of employing innovative solutions, such as metal oxide nanoparticles, to effectively combat water pollution in Chhattisgarh's most polluted rivers, ensuring cleaner, healthier future for the region, contributing significantly to field of environmental science while emphasizing need for proactive measures against water pollution.

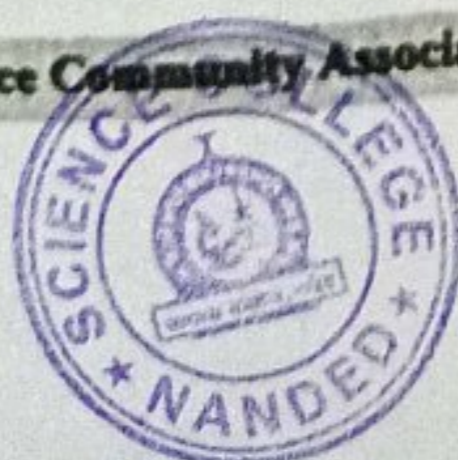
Keywords: Nanoparticles, Wastewater, Wastewater treatment, contaminants, remediation.

ISCA-ISC-2023-4CS-05-Oral

Development of Environment Friendly Clean Agents for Replacement of Halons in Indian Combat Vehicles – Tanks, T-72 and T-90

Chandrashekhar P Rathore*, L. P. Shinde and P. D. Satav
NES Science College, Nanded, MS, India
csp.rathore@gmail.com

Abstract: The research program is to identify alternatives of Halons 1301 in fire extinguishing systems (FES) of Army land based Combat Vehicles- Tanks and trucks. Halons are used in crew compartment, engine compartment and hand held application in Tanks. Halons have very high ozone depleting potentials and their production was stopped in 1994 in most of the countries. As per Montreal protocol use of Halons have been banned world over. However India being developing nation was allowed to use Halons up to 2010 only for its mission critical defence applications which has been further extended temporarily. This paper focuses on replacement of Halons from combat vehicle specifically Tanks used by Armed forces. Based on the Armed forces requirements, it is decided to study and optimize individual agent/products having near





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Keywords: Fire extinguishing system, Combat Vehicles, Halons, Heptafluorocarbon, Aqueous Film Farming Foam.
ISCA-ISC-2023-4CS-06-Oral

Remediation Techniques for Water Contaminated with Heavy Metals and VOCs in Shahdol District, MP, India

Ajay Kumar Jaiswal

Department of Chemistry, Pandit S. N. Shukla University, Shahdol, MP, India
ajaykumarj818@gmail.com

Abstract: Water contamination from heavy metals and volatile organic compounds (VOCs) poses health and environmental risks. This paper evaluates potential remediation techniques to treat water contaminated by arsenic, mercury, lead, and VOCs in Shahdol district, India. The techniques assessed include precipitation, adsorption, ion exchange, membrane filtration, air stripping, carbon adsorption, and advanced oxidation processes. Key criteria used for evaluation are technical effectiveness, costs, waste generation, and applicability to local conditions. The results indicate that adsorption using low-cost adsorbents, ion exchange, membrane filtration, and air stripping are most suitable for Shahdol. Adsorption is recommended for arsenic removal, while air stripping is most effective for VOCs. Challenges include waste disposal, plant operation costs, and technical training needs. This study provides guidance on selecting appropriate water remediation methods for local conditions in Shahdol district. Further research should evaluate suitable adsorbent materials and optimal process configurations.

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ISCA-ISC-2023-4CS-07-Oral

Waste-Water Treatment by Photobleaching of Some Dyes Using Polyoxometalates

Daksha Sharma¹ and Rakshit Ameta²

¹Department of Chemistry, Vidya Bhawan Rural Institute, Udaipur (Raj.), India

²Department of Chemistry, Pacific Academy of Basic and Applied Sciences, Udaipur (Raj.), India
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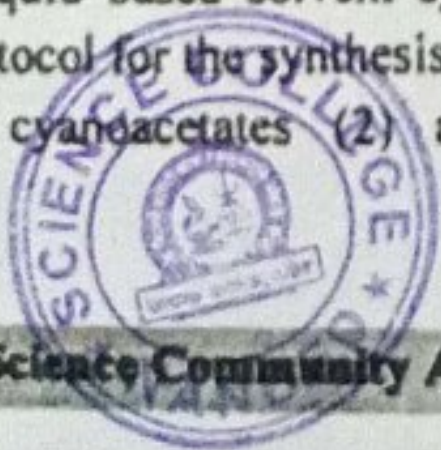
ISCA-ISC-2023-4CS-08-Oral

Synthesis of substituted Spiro-2-aminopyrimidinone by using ionic liquid as a green solvent

Seema Kothari^{*}, Upendra S. Sissodia and Suresh C. Ameta

Department of Chemistry, PAHER University, Udaipur-313003, (Raj.), India
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Rajat Bhattacharya* and Shilpi Shrivastava

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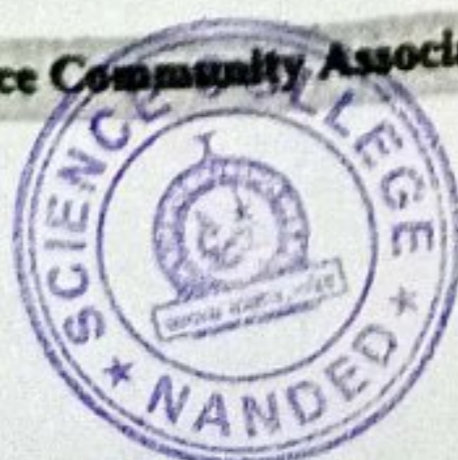
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ISCA-ISC-2023-4CS-08-Oral

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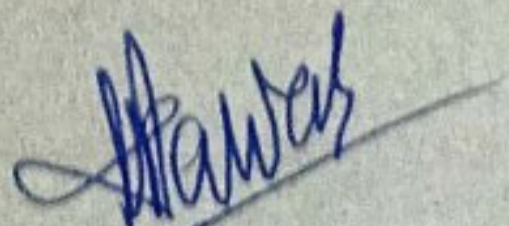
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RESEARCH ANALYSIS



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INDEX

Sr. No	Title for Research Paper	Page No
1	Study of some Volatile Organic Compounds Ravindra Rachappa Jojan	1
2	Globalization of Human Resource Management Shriyanka Deelip Bajaj	6
3	Modern and Urban Families in Shobha De's Spouse Sanjaykumar B. Deshmukh	15
4	Socio-Political Aspect in Manohar Malgonkar's 'The Garland Keepers' Bhimrao S. Jambharunkar	20
5	John Masters - Coromandell A Journey Through the Female world seeming a Journey from West-East Dr. M. S. Mane	28
6	Well-Balanced Diet Plan to Boost your Immunity Dr. Ashwin P. Borikar	37
7	Climate Change and Agricultural Problems in India Vishal Kadam	41
8	ममता कालिया की कहानियों में स्त्री विमर्श डॉ. तुकाराम वैजनाथ चाटे	47
9	गुजारा तो करनेई है, रात और प्रभात कहानी में नारी का चित्रण विश्वनाथ आर. जंगीटवार	51
10	भाषांतर युग अनुप प्रदिप वानखडे	56




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Nanded

6

Well-Balanced Diet Plan to Boost your Immunity

Dr. Ashwin P. Borikar

Sport Director,
Science College, Nanded

Research Paper - Phy. Education

Introduction :-

Currently Covid-19 pandemic is a leading challenge across the globe. It is mandatory to attain and maintain good nutritional status to fight against virus. Nutritional status of individual is affected by several factors such as age, sex, health status, life style and medications. Nutritional status of individuals has been used as resilience towards destabilization during this COVID-19 pandemic. Optimal nutrition and dietary nutrient intake impact the immune system, therefore the only sustainable way to survive in current context is to strengthen the immune system. There is no evidence found that supplement can cure the immune system except Vitamin C, which is one of the best way to improve immune system. A proper diet can ensure that the body is in proper state to defeat the virus. However along with the dietary management guidelines the food safety management and good food practices is compulsory. This article explores the importance of nutrition to boost immunity and gives some professional and authentic dietary guidelines about nutrition and food safety to withstand COVID-19. The novel corona virus affects the lungs and causes flu-like symptoms and pneumonia. Proper nutrition and hydration are vital with a well-balanced diet. A healthy balanced diet is a key for maintaining good health and immunity as highlighted recently by the World Health Organization, a healthy lifestyle makes all bodily functions work better, including immunity. Having a healthy diet, including lots of fruits and vegetables, is a key component of a healthy lifestyle and plays a vital role in supporting a well-functioning and



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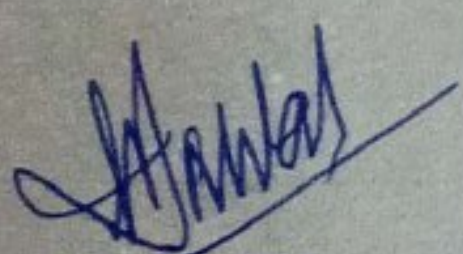
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INDEX

Sr. No	Title for Research Paper	Page No.
1	Role of Small Scale Industries in Economic Development Dr. D. V. Shinde	1
2	Poverty, Unemployment and Inflation and Major Challenges before India's Vision of Sustainable Development Dr. Balaji G. Kamble	7
3	Library Consortia in India K. K. Kadam	15
4	Investigation of Before-Competition State Anxiety of Baseball Players Dr. Ashwin P. Borikar	23
5	रायगड जिल्हयातील प्राथमिक आरोग्य उपकेंद्रांच्या वितरणाचा भौगोलिक अभ्यास अनिल निवृत्ती शिंदे	27
6	नांदेड जिल्हयातील सेवा केंद्राची केंद्रीयता : भौगोलिक विश्लेषण श्रीहरी रामराव गायकवाड	33
7	लातूर जिल्हयातील यात्रास्थळांचे स्थलकालपरत्वे भौगोलिक विश्लेषण संगमेश्वर ज्ञानोबा भांगे	40
8	महात्मा गांधी यांचे कार्य चरण रामराव राठोड	46
9	परराष्ट्र धोरण निर्धारित करणाऱ्या घटकांचे विश्लेषण डॉ. श्याम पुंडलिकराव पाटील	53
10	२१ व्या शतकातील भारताचे परराष्ट्र धोरण डॉ. बी. व्ही. पुल्लागोर	59



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Investigation of Before-Competition State Anxiety of Baseball Players

Dr. Ashwin P. Borikar
Sport Director,
Science College
Nanded, Dist. Nanded

Research Paper - Physical Education

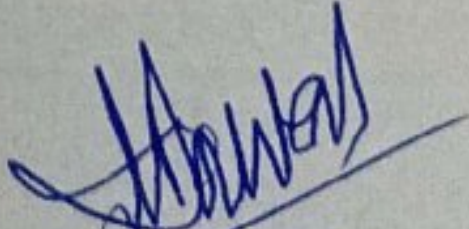
Introduction :

Anxiety plays a paramount role in sports. It is the challenge in sports participation, which produces anxiety. How an athlete handles the anxiety determines how successful he would be? Anxiety may be a positive motivating force or it may interfere with successful performances in sports events. Anxiety is likely to be greater in higher competitive sports than in relatively noncompetitive sports, because in the competitive sports, participants are expected to win and greater demands are made upon them to succeed. The purpose of the study was to investigate the Before-competition state anxiety of inter collegiate players. It was hypothesized that there will be no significant difference between pre - competitive anxiety of winner and loser - baseball player in both male and female categories.

METHODOLOGY

Forty-five Baseball players who participated in Inter collegiate baseball Tournament held at Delhi University were randomly selected to serve as subjects for this study. Out of the 27 men baseball players, 18 players were those whose teams qualified to participate in the Semi Final matches and 27 players were those who participated from their teams in their pre Quarter finals. Out of the 18 women baseball players, 09 players were those whose teams qualified to participate in the Semi Final matches and 27 players were those who participated from their teams in their pre Quarter finals. The men and women baseball players who participated in any of their matches from their teams from pre Quarter final, were randomly selected for the study.




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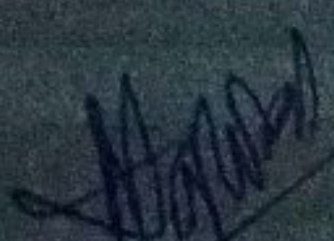


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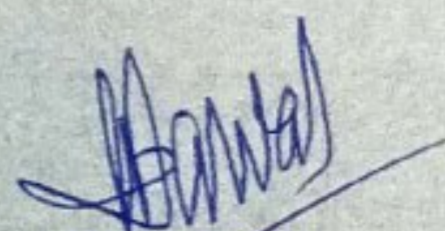
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INTERLINK RESEARCH ANALYSIS

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INDEX

Sr. No	Title for Research Paper	Page No
1	Effect of Tinospora Cordifolia Miers on Foot rot Disease of Grape-vine Vitis-venifera L Caused by Rhizoctonia solani in Marathwada J. A. Kadam	1
2	Role Of Corporates With Csr For Improving Educational System In India Shriyanka Deelip Bajaj	6
3	The Disaster Managemen: A Geographical Perspective Madan Vitthal Narwade	12
4	Spatio Temporal Changes in Use of Chemical Fertilizers in Maharashtra State G. R. Munde	22
5	Comparative study of Physical Fitness Level Between Indian Game Kabaddi and Foreign Game Basketball Players Dr. Ashwin P. Borikar	28
6	स्वतंत्रता संग्राम के आन्दोलन में हिन्दी भाषा का योगदान विश्वनाथ आर. जंगीटवार	32
7	स्त्री आत्मकथाओं में स्त्री विमर्श डॉ. तुकाराम वैजनाथ चाटे	38
8	स्त्री दुःखाचा उत्कट आविष्कार : गुलमकाई अनुप प्रदिप वानखडे	50
9	जागतिकीकरणार्चे भारताच्या परराष्ट्र धोरणावर झालेले परिणाम डॉ. आनंद शिंदे	54




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Physical Fitness Level Indian Game Kabaddi and Foreign Game Basketball Players

Dr. Ashwin P. Borikar
Dept. of Physical Education,
Science College, Nanded.

Research Paper - Physical Education

5

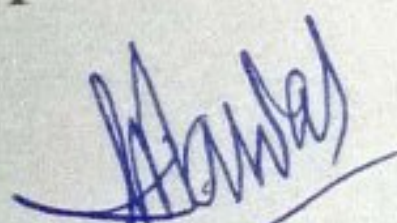
ABSTRACT

The motivation behind present investigation is to analyze of physical wellness level between outside game ball and Indian game Kabaddi players. To satisfy the target of the examination, (40 kabaddi and 40 Basketball) players. Just those male players were chosen who have partaken at least bury university level. Just speed, hazardous intensity of arms and dexterity were utilized to gauge the physical wellness parts.

Introduction

Physical wellness is a condition of wellbeing and prosperity and, all the more explicitly, the capacity to perform parts of sports, occupations and day by day exercises. Physical wellness is commonly accomplished through appropriate sustenance, moderate-energetic physical exercise, and adequate rest. Physical wellness is the most significant factor for the advancement in the field of sports and general life. Be that as it may, it is hard to characterize precisely the idea of physical wellness. Basically physical instruction and sports hold it's interesting in the field of training in any nation. Along these lines a nation must need to focus on improvement and advancement of physical instruction and sports. From one perspective games progressively loved in media while then again its being constantly overlooked in the instruction framework. Qualification for any games comprises of number of interrelated characteristics or factors, for example, speed, quality, continuance, adaptability and coordination. Such a large number of players and competitors live at a degree of wellness far underneath their capacities and abilities making drudgery of the games movement in which they take part. They show




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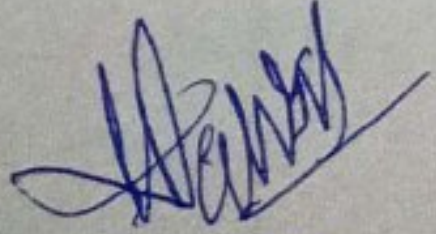

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INDEX

Sr. No	Title for Research Paper	Page No.
1	Digital ICT Based Teaching, Learning Environment Dr. P. A. Kadam	1
2	Banking Reforms Since 1991 Dr. D. K. Rathod	8
3	Recent Initiatives in Agriculture Sector Dr. Balaji G. Kamble	13
4	Effects of Weight training on start skill among competitive swimmers Dr. Ashwin P. Borikar	20
5	Studies on Fish Diversity of Kunsawali Tank, Osmanabad (M.S.) India P. L. Sawant, M.G. Babare	26
6	माधवी नाटक में चित्रित नारी चेतना अनिल कांबळे	28
7	आदिवासी समाज आणि पर्यावरण यातील संबंध व आधुनिक स्थिती संजयादेवी ग. पवार	34
8	यमुना पर्यटन या कादंबरीतील श्रद्धेचा अभ्यास अनिता सोनकांबळे	40
9	भारतीय परराष्ट्र धोरणाची मूलतत्वे शंकर लोभाजी चव्हाण	44
10	स्थानिक स्वराज्य संस्था जयश्री सिनगर	50




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Effects of Weight training on start skill among competitive swimmers

Dr. Ashwin P. Borikar
Sport Director,
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Nanded, Dist. Nanded

Research Paper - Physical Education

Introduction

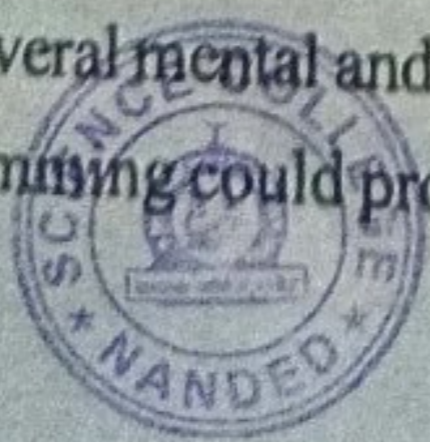
Principle of specificity shows that the development of muscular fitness is specific to the muscles trained. This means that if you were doing weight training for a sport, then weight training will be most beneficial if the exercise resembles the action of the sport.

For a beginner, entering a gym full of hard bodies for the first time can be somewhat daunting. There are so many different muscles to learn about and so many different exercises to accommodate these muscles and also the sophisticated machines there out there. The idea is to get to know your body, get to know your strengths and limitations, and get comfortable with the feel of actually moving the weights correctly. Individuals do weight training for many reasons. Here are some good reasons why weight training should be incorporated into your exercise regimes. Increase strength, Improve appearance, Helps to control your weight, Strengthen bones, Boost your energy, fitness, endurance levels.

Increase strength –

although not all individuals do weight training to win an Olympic medal, doing weight training can help you with many things you do every day. This is advantageous to have for both men and women.

Swimming is a healthy workout that can be done for a lifetime. It is a low-impact activity that has several mental and bodily health benefits. That is a recreational motion for everyone. Swimming could provide you with a low-impact workout and it's also a



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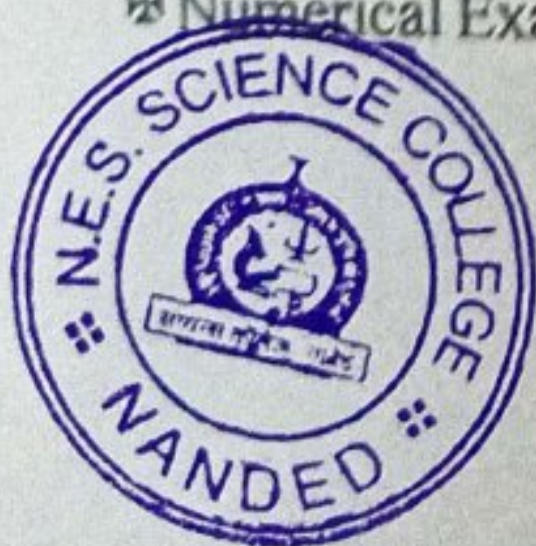
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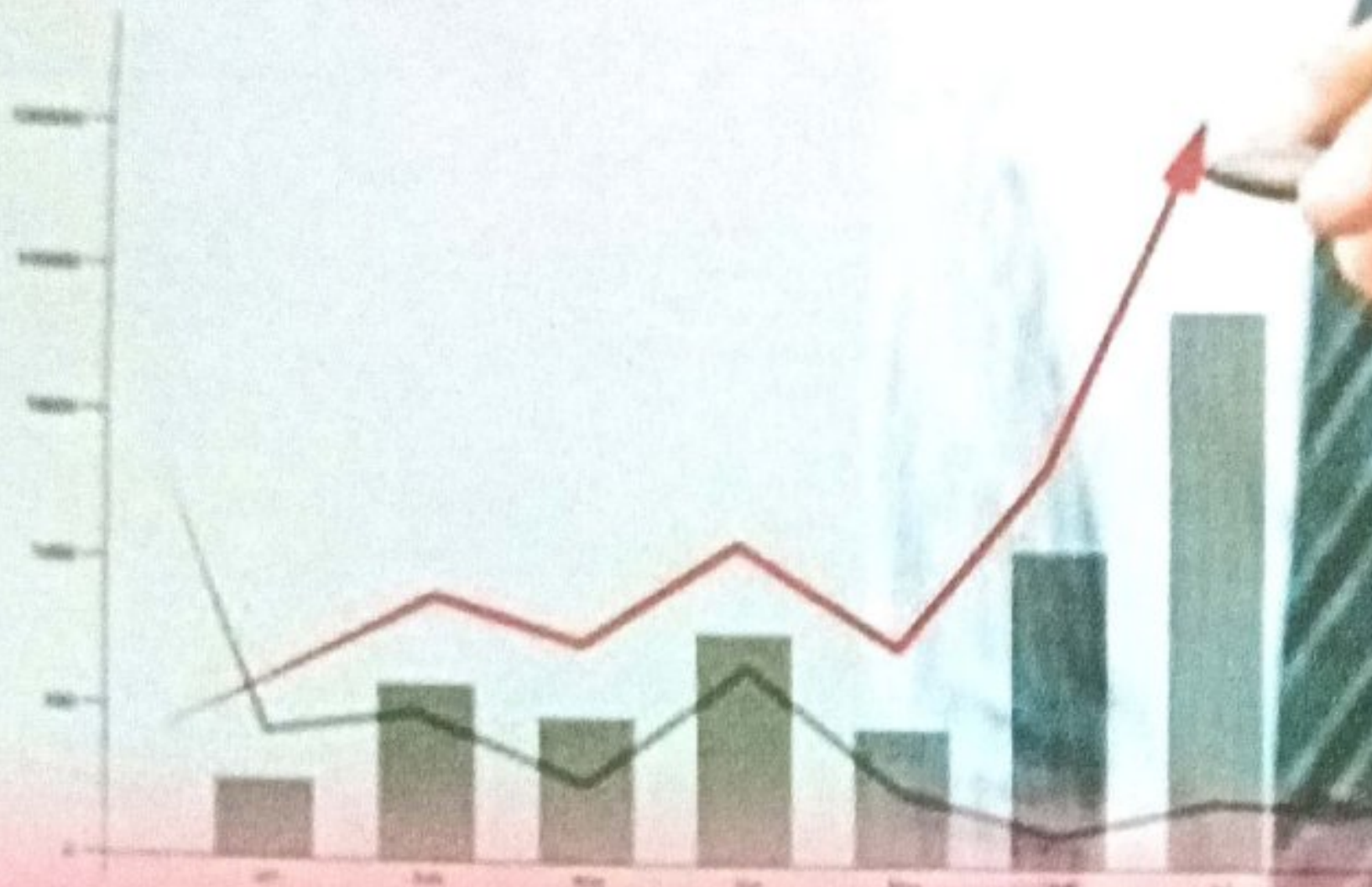
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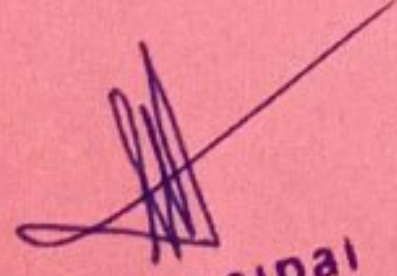
CONTENTS

Unit 1 : Arithmetical Operations	01
✧ Ratios, Variations and Proportions	
✧ Simple and Compound interest	
✧ Commission, Brokerage, Discount	
✧ Numerical Problems	44
Unit 2 : Matrices	
✧ Meaning and Definition of Matrix	
✧ Types of Matrices	
✧ Addition & Subtraction of Matrices	
✧ Multiplication of Matrices	
✧ Numerical Problems.	77
Unit 3 : Permutations and Combinations	
✧ Meaning of Permutation	
✧ Permutations when all the objects are distinct	
✧ Permutations when all the objects are not distinct objects	
✧ Permutation of things not all different	
✧ Meaning of Combinations	
✧ Numerical Problems	100
Unit 4 : Probability	
✧ Meaning and Definition of Probability	
✧ Concepts – Events, Types of Events, Sample Space	
✧ Classical Definition of Probability	
✧ Addition and Multiplication Laws of Probability	
✧ Simple Problems on Addition and Multiplication of Probability	124
Unit 5 : Index Numbers	
✧ Meaning, Definition and Need of Index Numbers	
✧ Problems involved in construction of index numbers	
✧ Price & Quantity Index Numbers	
✧ Weighted Index Number	
✧ Laspeyre's, Paasche's and Fisher's Ideal Index Numbers	
✧ Numerical Examples.	



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Introduction to Probability Theory

Vinayak A. Jadhav



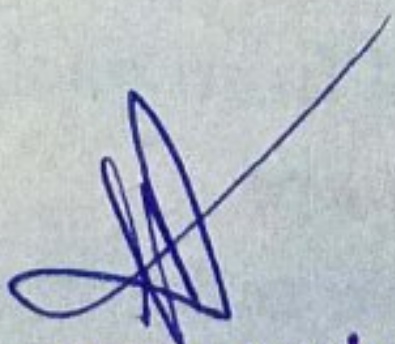
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Content

Chapter 1: Probability	01 - 50
Chapter 2: Random Variables	51 - 114
Chapter 3: Standard Discrete Probability Distribution	115 - 144
Chapter 4: Continuous Random Variables	145 - 179
Chapter 5: Standard Continuous Distribution	180 - 222
Chapter 6: Large Sample Theory	223 - 272
<i>References</i>	273 - 276




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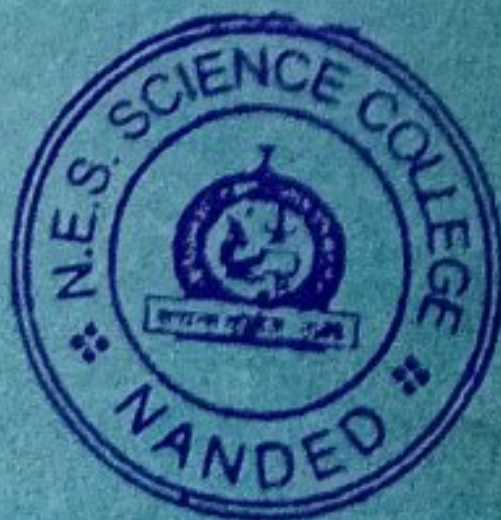
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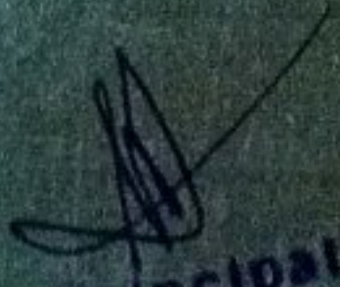
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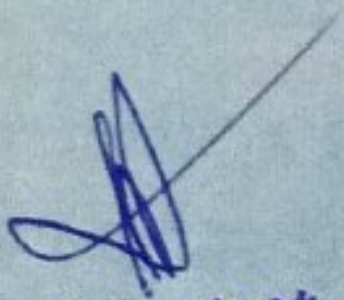
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Content

Chapter 1: χ^2 Distribution	01 - 15
Chapter 2: Applications of χ^2 Distribution	16 - 43
Chapter 3: t – Distribution	44 - 70
Chapter 4: F Distribution	71 - 78
Chapter 5: Fisher Z Distribution	79 - 83




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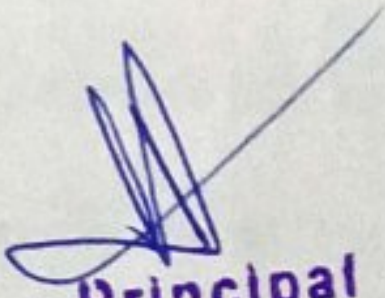



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CONTENTS

CHAPTER	TITLE	PAGE NO.
I	Introduction	1-6
II	Membership Function In Minimization Transportation Problem	7-17
III	Zero Suffix Method and Separation Method in Multi-Objective Fuzzy Transportation Problem	18-26
IV	Fuzzy Ranking Techniques in Multi-Objective Transportation Problem	27-34
V	Impurity Constraints in Multi-Objective Transportation Problem	35-43
VI	Sensitivity Analysis in Multi-Objective Transportation Cost Minimization	44-57
VII	Budgetary Constraints in Fuzzy Multi-Objective Transportation Problems	58-66
VIII	Bibliography	67-73




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Multi-Objective Transportation Problem

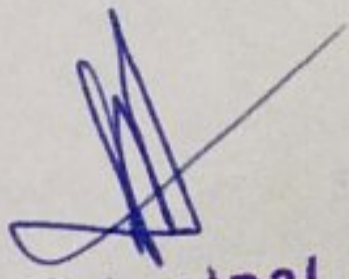
In this book some methods of Multi-objective Transportation Problem are discussed. This book contains seven chapters. Here, fuzzy approach is used to get the optimal solutions of Multi-objective Transportation problem. Also, the number of solved problems based on proposed algorithms has been discussed. The real life application is also used to check the feasibility of the proposed algorithms in this book.

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Contents

No.	Chapter	Pages
	UNIT - I	1-8
1.	Errors in Numerical Calculations	9-40
2.	Solutions of Algebraic and Transcendental Equations	41-67
3.	Interpolation	
	UNIT - II	68-99
4.	Solutions of Simultaneous Algebraic Equations	100-128
5.	Numerical Integration	129-163
6.	Numerical Solutions of Differential Equations	
	UNIT - III	164-217
7.	Random Variables	218-296
8.	Standard Probability Distributions	
	UNIT - IV	297-310
9.	Fitting of Curves	311-342
10.	Correlations and Regression	
	UNIT - V	343-383
11.	Large Sample Tests	
	UNIT - VI	384-418
12.	Exact Sampling Distributions (Chi-Square and Student <i>t</i> Distribution)	419-486
13.	Linear Programming	487-489
	Appendix	




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- (1) **Software Engineering**
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