



# SHIA POST GRADUATE COLLEGE

LUCKNOW

## Criterion - 3

..... Research, Innovation and Extension .....

### 3.3. - Research Publication and Awards

#### 3.3.3.

**Books and Chapters / Research Papers  
published in Conferences proceedings**

**Session : 2020-21**

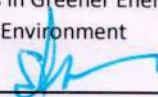



Khadra, Sitapur Road  
Lucknow - 226020

[www.shiacollege.org](http://www.shiacollege.org)

**3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years (10)**

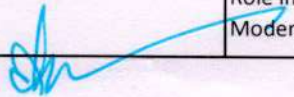
Name of the teacher	Title of the book	Title of the paper/chapters published	Title of the proceedings of the conference	Name of the conference	National / International	Year of publication	ISBN/ISSN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
<b>2020</b>									
Dr. M.M Abid Ali khan	Global progress in a Greener Energies for Sustainable Environment					2020	ISBN number-978-93-888-54-28-3		Discovery Publishing House PVT. Ltd. New Delhi, India 2016
Dr. Syed Rais Haider	Global progress in a Greener Energies for Sustainable Environment	An Overview on Green Bioplastic : An Approach towards Clean Environment				2020	ISBN number-978-93-888-54-28-3		Discovery Publishing House PVT. Ltd. New Delhi, India 2016
Dr. Syed Rais Haider	Environmental Change and impact on Biological Systems	Impact on Chemical Fertilizers on the Soil Fertility and Agricultural Farming				2020	ISBN number-978-81-942846-5-9		Lenin Media Private Limited, Delhi
Dr. Taiyab Shamshad Naqvi	Secondary Metabolites of Medicinal Herbs Biochemistry and Therapeutics					2020	ISBN 978-93-88854-49-8		Discovery Publishing House Pvt. Ltd., New Delhi
Dr. Afroz Zareen Athar	Ethnobotany and Biochemistry of Medicinal Plants	Occurrence of Secondary Metabolites in Bacopa Monnieri L. and Therapeutic Uses : An Ethnobotanical Plant				2020	ISBN : 978-93-88854-29-0		Discovery Publishing House Pvt. Ltd., New Delhi (India)
Dr. Afroz Zareen Athar	Global Progress in Greener Energies for Sustainable Environment	An Overview on Green Bioplastic : An Approach towards Clean Environment				2020	ISBN : 978-93-88854-28-3		Discovery Publishing House Pvt. Ltd., New Delhi (India)
Dr. Mirza Sibtain Beg	Pearls of Poesy					2020	978-03-87229-325		ABS Books, New Delhi


  
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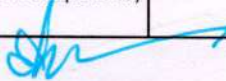
Name of the teacher	Title of the book	Title of the paper/chapters published	Title of the proceedings of the conference	Name of the conference	National / International	Year of publication	ISBN/ISSN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
Dr. Mirza Sibtain Beg	Five Poems	Setu Journal				2020	ISSN; 2475-1359		Setu, Pitsburgh U.S.A
Dr. Mahendra Kumar Shukla	A Text book of Coordinate Geometry				National	2020	ISBN: 978-93-81054-96-3		Prakashan Kendra, Lucknow
Dr. Jitendra Pal Singh	Bio-Gas (Waste to Wealth)	International				2020	ISBN No. 978-81-941881-8-6		SRS Publications
Dr. Jitendra Pal Singh	Chemical Practice – 1	International				2020	978-81-946037-3-3		Gyan Publishers
Dr. Jitendra Pal Singh	Chemical Practice – 2	International				2020	46037-3-3		Gyan Publishers
Dr. Jitendra Pal Singh	Chemical Practice – 3	International				2020	46037-3-3		Gyan Publishers
Dr. Mohd Abid Ali Khan	Biotechnology in Plant Protection and Crop Improvement	Strategies for control of viral diseases in crops through disease resistance: A review				2020	ISBN 978-93-88854-23-8	Un versity Of Lucknow	Discovery Pub. House, New Delhi
Dr. Syed Qaim Akbar Rizvi	A Text Book of Applied Statistics					2020	81-8283-645-X		Krishna Prakashan Media Ltd.
Dr. Syed Qaim Akbar Rizvi	A Text Book of Non - Parametric methods and regression analysis					2020	81-8283-909-2		Krishna Prakashan Media Ltd.
Dr Ambrish	Indian economy					2020	ISBN 978-81-948029-6-9		Thakur Publication
Dr. K. C. Dubey	Information Communication technology in education Published By				National	2020	978-81-931262-3-3.	Shia P G College Lucknow	Environment and Society, Government P.G College Saidabad, Prayagraj.
Dr S.S. Baqri	Environment and Society	Overview on Bioinformatics: It's Role in the Growth of Modern Biology			National	2020	978-81-931262-3-3	Shia P.G. College Lucknow	Department of Zoology, Government P.G.College, Saidabad, Prayagraj, U.P.


  
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Dr Kumar Gaurav Bajpai	Environment and Society	Overview on Bioinformatics: It's Role in the Growth of Modern Biology			National	2020	978-81-931262-3-3	Shia P.G. College Lucknow	Department of Zoology, Government P.G.College, Saidabad, Prayagraj, U.P.
Dr Kumar Gaurav Bajpai	Economic, Social, Psychological, Political Educational And Literary Impact Of Covid-19 And All Multidisciplinary Subjects For Research	Overview on Novel Coronavirus (COVID-19) Outbreak and its impact on Healthcare Professionals: A Review			National	2020	978-93-89840-55-1	Shia P.G. College Lucknow	Red' Shine Publication. Pvt. Ltd (India)
Dr. Arshad Hasan	Biotechnology in Plant Protection and Crop Improvement	Strategies to control of virus disease				2020	ISBN: 978-93-88854-23-8		Published by: Discovery Publishing House Pvt. Ltd., New Delhi (India), 2020
Dr. Mirza Mohd Abid Ali Khan	Ethnobotany and Biochemistry of Medicinal Plants					2020	ISBN: 978-93-88854-29-0.		Published by: Discovery Publishing House Pvt. Ltd., New Delhi (India)
Dr. Mirza Mohd Abid Ali Khan	Environmental pollution and climate change				National	2020	ISBN: 978-93-88854-30-6.		Published by: Discovery Publishing House Pvt. Ltd., New Delhi (India), 2020
Dr. Mirza Mohd Abid Ali Khan	Secondary Metabolites of Medicinal Herbs (Biochemistry and Therapeutics)					2020	ISBN 978-93-88854-49-7		Published by: Discovery Publishing House Pvt. Ltd., New Delhi (India),

  
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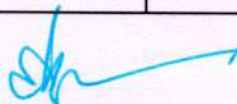
Name of the teacher	Title of the book	Title of the paper/chapters published	Title of the proceedings of the conference	Name of the conference	National / International	Year of publication	ISBN/ISSN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
Dr. Amber	Secondary Metabolites of Medicinal Herbs (Biochemistry and Therapeutics)	A Review on Ferula Asafoetida				2020	ISBN 978-93-88854-49-7		Published by: Discovery Publishing House Pvt. Ltd., New Delhi (India), 2020,
Dr. Sabiha Kazmi (Nee Hasnain)	Biotechnology in Plant Protection and Crop Improvement	strategies for Control of Viral Diseases in Crops through Disease Resistance: A Review				2020	ISBN: 978-93-88854-23-8		Discovery Publishing House Pvt. Ltd., New Delhi (India), Chapter 18, pp 308-316
Dr. Ravi Pratap Singh	Bharat Me JaatiVyavastha Evam Raajneeti	Bharat Me Jaati Ka Udbhav Aur Vikas			National	2020	ISBN number 978-93-904515-93-9		H. S. R. A Publications
Dr. Raza Shabbir	Currency, Banking & Exchange					2020	9789390460557		Thakur Publications
Dr. Shailesh kumar Srivastava	Fundamentals of Cell biology					2020	ISBN number-978-81-947346-0-4		Swati Enterprises
Mr. Mohd. Ali	Mindfulness Based Cognitive Therapy during Covid-19 Pandemic	Edited E-book	Covid-19 Biopsychosocial Perspective		National	2020	978-81-941592-4-7	Shia P.G. College, Lucknow	Progressive Publications
Dr. Sudhakar Prakash	Environment and Society		Impact of Climate Change on Natural Resources			2020	978-81-931262-3-3	Shia PG College	Govt. P.G. College Saidabad, Prayagraj

  
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Dr. Sudhakar Prakash	Biodiversity and Development: Challenges of 21 <sup>st</sup> Century		Biology of Complexes of Ruthenium (II) Mixedhalides			2020	978-93-8903-08-5	Shia PG College	Swaranjali Publication, Ghaziabad
Dr. Nazia Naqvi	Agriculture & Industry Important Pillars of Economic & Social Development	Entrepreneurship & Innovation				2020	978-93- 88873-11-6		Dr. Jyoti Mishra, Dr. Manish Kumar, Dr. Krishna Kumar Verma
Dr. Zahid Rizvi	Biotechnology in Plant Protection and Crop Improvement	Strategies for Control of Viral diseases				2020	ISBN-978-93-88854-23-8		Discovery Pub. House, New Delhi
Dr. Raza Shabbir	Currency, Banking & Exchange					2020	978-93-90460-55-7		Thakur Publications
Dr. Mirza Mohd Abid Ali Khan	Plant Secondary Metabolites for Human Health					2021	ISBN number-978-93-88854-57-8		Discovery Publishing House PVT. Ltd. New Delhi, India 2016
Dr. Mirza Mohd Abid Ali Khan	Climate change and future prospectives					2021	ISBN: 978-93-88854-70-2		Linen Medis
Dr. Amber Hasan	Climate change and future prospectives	A Strenuous Review.....Future perspectives				2021	ISBN: 978-93-88854-70-2		Linen Medis
Dr. Syed Rais Haider	Plant Secondary Metabolites for Human Health	Secondary Metabolites and Medicinal Evaluation of Trapa Species				2021	ISBN number-978-93-88854-57-3		Discovery Publishing House PVT. Ltd. New Delhi, India 2016

  
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Dr Nishat Fatima	NA	Evaluation of Wrightia tinctoria R. Br. for antiproliferative potential, chemical characterization of hexane fraction and identification of bioactive compounds Nishat Fatima1	Evaluation of Wrightia tinctoria R. Br. for antiproliferative potential, chemical characterization of hexane fraction and identification of bioactive compounds	International Conference on Advancements in Interdisciplinary Research (ICAIR-2021)	International	2021	ISBN: 978-93-91248-33-8	Shia PG College	MKSES publications
Dr Amrish	Privatization And Education: Challenges And Potential In India				National	2021	978-81-952361-3-8		Sunrise Publication
Dr Nafees Hashim Rizvi	Trade Policy in India: indo Japan Trade Relation					2021	ISBN 978-81-922425-7-6	Shilpa , shiv kanchiUdger	R.R. Grafics
Dr. Kirti Prakash Tiwari	A text book of Goods & Service Tax (Hindi Edition)				National	2021	ISBN No. :978-93-90899-34-0		Vani Publication
Dr. Kirti Prakash Tiwari	A text book of Financial Accounting				National	2021	ISBN No. :978-93-90899-30-1		Vani Publication
Dr. Kirti Prakash Tiwari	A text book of VittiyaLekhankan				National	2021	ISBN No. :978-93-90899-31-5		Vani Publications
Dr. Kirti Prakash Tiwari	Aaykar Vidhan Evam Lekhen				National	2021	ISBN No. :978-93-90899-33-2		Vani Publications

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Dr. Kirti Prakash Tiwari	Recent Research commerce and management	Gold verses Stock : A comparative study			National	2021	ISBN No. :978-93-91248-19-2		MKSS Publications
Dr. Bhuvan Bhasker Srivastava	Book Edited: Recent Research in Physical and Chemical Sciences				National	2021	ISBN: 978-93-91248-18-5	Shia P.G.College , Lucknow	MKSES
Dr. Bhuvan Bhasker Srivastava	Chapter 1, page:1-17 Name of the Book: Recent Research in Physical and Chemical Sciences-2021	Medicinal importance of oligosaccharides			National	2021	ISBN: 978-93-91248-18-5	Shia P.G.College , Lucknow	MKSES
Dr. Bhuvan Bhasker Srivastava	Name of the Book: Recent Research in Physical and Chemical Sciences Chapter 16, page:152-159	Quantum chemical calculations of [(IS, 4R)-4-{2 amino-6-(cyclopropylamino) purin-9-yl}]				2021	ISBN: 978-93-91248-18-5	Shia P.G.College , Lucknow	MKSES
Dr. Bhuvan Bhasker Srivastava		Optical and Electrical Properties of pure Polypyrrole and titanium dioxide-doped Polypyrrole nanocomposites	Proceedings of International Conference on Advancements in Interdisciplinary Research	International Conference on Advancements in Interdisciplinary Research	International	2021	ISBN: 978-93-91248-33-8	Shia P.G.College , Lucknow	MKSES

  
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Dr. Mirza Sibtain Beg	Ripples of Thoughts				National	2021	ISBN 978-93-91943-37-0		Adhyayan Publishers, New Delhi
Dr.Nazia Naqvi	Agriculture & Industry Important Pillars of Economic & Social Development		Entrepreneurship & Innovation		National	2021	978-93- 88873-11-6		Navyug Publications
Dr Yogendra Kumar Pandey	Youth Empowerment Issue, Challenges & Concerns (Editor: Ruchita Sujay Chaudhary)	LGBTQ Representations in films	NA	NA	National	2021	978-81-954742-0-2	Shia P.G. College, Lucknow	New Royal Book Company, Lucknow
Dr Yogendra Kumar Pandey	Credibility Crisis of the Media	If there is media, there will be questions, If there is media then there will be questions	NA	NA	National	2021	B09N2YVXC2	Shia P.G. College, Lucknow	Parth Publication
Dr. Chhatra Pal	Satat Vikas : Paryavaraniya Chunautiyaan aur Sambhavnayein	Paryavaraniya kanoon ke siddhanth				2021	978-81-9531-20-2-3		Shrankhala Publishing House
Dr. Kamal Jeet	Satat Vikas : Paryavaraniya Chunautiyaan aur Sambhavnayein	Vaishavikaran..... .....kanoon				2021	978-81-9531-20-2-3		Shrankhala Publishing House
Dr. Bhuvan Bhaskar Srivastava	Applied Research Development in Physical and chemical Sciences and Engineering	Book-Editor			National	2021	ISBN 978-93-91248-49-9		mkses publicatioin
Dr. Tanveer Hasan	Applied Research Development in Physical and chemical Sciences and Engineering	Molecular Docking study of glycozolidal			National	2021	ISBN 978-93-91248-49-9		mkses publicatioin

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Dr. Syed Hasan Mehdi	Applied Research Development in Physical and chemical Sciences and Engineering	Molecular Docking study of glycozolidal			National	2021	ISBN 978-93-91248-49-9		mkxes publicatioin
Dr. Bhuvan Bhaskar Srivastava				Proceedings of International conference on Advancements in Interdisciplinary research	National	2021	978-93-91248-33-8		MKSES Publisher
Dr. Bhuvan Bhaskar Srivastava	Recent Research in Physical and Chemical Science	Edited Book			National	2021	978-93-91248-18-5		MKSES Publisher
Dr. Bhuvan Bhaskar Srivastava	Applied Research development in Physical and Chemical Sciences and engineering	Edited Book			National	2021	978-93-91248-49-9		MKSES Publisher
Dr. Sudhakar Prakash		Studies on species..... UP (India)	International Conference on Advancements in Interdisciplinary Research (ICAIR-21)		National	2021	978-93-91248-33-8		MKSES Publisher
Dr. Noorul Hasan	Foreign Trade of India (Hindi)				National	2021	978-81-955768-5-2		Ambar Prakashan Kendra



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DR. TANVEER HASAN		Molecular docking study of Glycozolidal (2,7-dimethoxy-9H-carbazole-3-carbaldehyde), C <sub>15</sub> H <sub>13</sub> NO <sub>3</sub>	International Conference on Advancements in Interdisciplinary Research (ICAIR-21)26th-28th, 2021	International Conference on Advancements in Interdisciplinary Research (ICAIR-21)26 <sup>th</sup> - 28th, 2021	International	2021	978-93-91248-33-8	Shia P G College Lucknow	MKSES Lucknow
Mr. Mohd. Ali	A Text Book of Special Education	Text Book	-	-	National	2021	978-81-948467-5-8	Shia P.G. College, Lucknow	Progressive Publications
Mr. Mohd. Ali	Education 4.0: Opportunities & Challenges	Edited Book	Education 4.0: Opportunities & Challenges	EduCon 2020 International Conference	International	2021	978-81-941592-9-2	Shia P.G. College, Lucknow	Progressive Publications
Mr. Mohd. Ali	New Education Policy 2020 & Financing of Higher Education	New Education Policy 2020 & Financing of Higher Education	Education 4.0: Opportunities & Challenges	EduCon 2020 International Conference	International	2021	978-81-941592-9-2	Shia P.G. College, Lucknow	Progressive Publications
Dr. Alok Yadav	Kisan Kavitawali				National	2021	ISBN 978-81-928745-3-7		Deckmart Media Solutions
Dr. Kaneez Mehdi Zaidi	Challenges of online learning	Problems of secondary Education			National	2021	ISBN 978-93-87229-83-9		ABS books

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Dr. Noorul Hasan	Foreign Trade of India				National	2021	978-81-955768-9-0		Ambar Prakashan Kendra
Dr. Noorul Hasan	Concepts of valuation				National	2021	978-81-955768-8-3		Ambar Prakashan Kendra
Dr. Noorul Hasan	Human behaviour at work (Hind)				National	2021	978-81-955768-6-9		Ambar Prakashan Kendra
Dr. Noorul Hasan	Human behaviour at work				National	2021	978-81-955768-7-6		Ambar Prakashan Kendra
Dr. Noorul Hasan	Introduction to International Business (Hindi)				National	2021	978-81-955768-0-7		Ambar Prakashan Kendra
Dr. Noorul Hasan	Introduction to International Business				National	2021	978-81-955768-1-4		Ambar Prakashan Kendra
Dr. Shafi Haider Amil	Krishna kavya ke maha kavi soordas	Soordas ki bhakti ka vaishishtya			National	2021	978-81-922425-7-6		Madhu Publications
Dr. Mohammad Miyan	A Text Book of Calculus				National	2021	978-81-89599-89-8		Madhu Publications
Dr. Mohammad Miyan	Text book on metrics and differential equations				National	2021	978-93-81054-89-5		Alok Prakashan
Dr. Mohammad Miyan	Geometry and trigonometry				National	2021	978-81-89599-91-1		Alok Prakashan
Dr. Mohammad Miyan	Text book on mathematical methods				National	2021	978-81-922090-0-5		Alok Prakashan
Dr. Mohammad Miyan	Textbook of differential equations				National	2021	978-93-82-476-21-4		Prakashan Kendra, Lko
Dr. Mohammad Miyan	Textbook on Mechanics				National	2021	978-81-922090-1-2		Prakashan Kendra, Lko
Dr. Mohammad Miyan	A textbook on linear and abstract algebra				National	2021	978-93-82476-32-0		Prakashan Kendra, Lko
Dr. Mohammad Miyan	A textbook of numerical analysis				National	2021	978-93-82476-35-1		Prakashan Kendra, Lko
Dr. Mohammad Miyan	Differential geometry and tensor analysis				National	2021	978-93-82476-10-8		Prakashan Kendra, Lko
Dr. Mohammad Miyan	Advanced Mathematics: Theory and applications	Extended generalised.....lubrication			National	2021	978-93-87374-33-1		Prakashan Kendra, Lko

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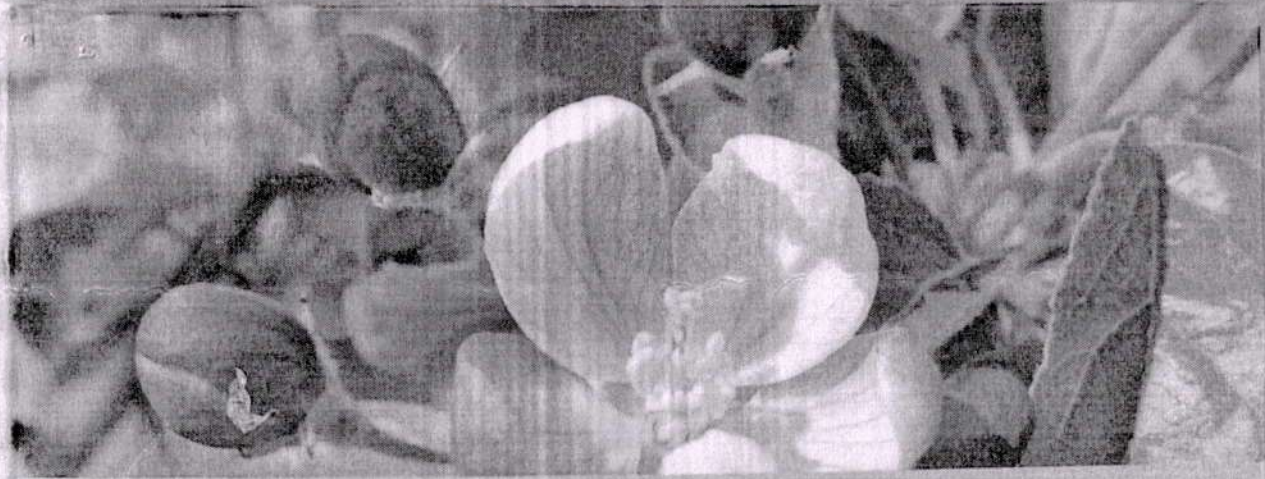
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Dr. Mohammad Miyan	Applied research development in statistical and computational sciences	Edited Book			National	2021	978-93-91248-43-7		MKSES Publisher
Dr. Bhuvan Bhaskar Srivastava	Recent Research in Physical and Chemical Science	Medicinal Importance of oligosaccharides				2021	978-93-91248-18-5		MKSES Publisher
Dr. Athar Hasan Rizvi	Applied research development in statistical and computational sciences	Difference-Regression type estimator of population variance				2021	978-93-91248-43-7		MKSES Publisher
Dr Athar Hasan Rizvi	Recent Advances in Applied Statistics	An alternative estimator of Finite population				2021	978-3-659-95755-0		Lambert Academic Publication
Dr. Ravi Pratrapsingh	Bhartiya Samaj ev. Jan jivan ke vividh ayaam	Samajik nyaya: Lokpriya Siddhanth				2021	978-93-90778-45-4		Sunrise Publisher
Dr. Shailesh kumar Srivasatava	fundamentals of cell biology	Edited Book			National	2021	978-81-947346-0-4		Swati Enterprises
Dr. Pradeep Sharma	Applied Research in Humanities and Social Science	Edited Book			National	2021	978-93-91248-50-5		MKSES Publication
Dr. Mirza Mohammad Abu Tayyab	Applied Research in Humanities and Social Science	Edited Book			National	2021	978-93-91248-50-5		MKSES Publication
Dr. Mirza Ejaz Abbas	Applied Research in Humanities and Social Science	Edited Book			National	2021	978-93-91248-50-5		MKSES Publication
Dr. Bhuvan Bhaskar Srivastava	Applied Research Development in Physical and chemical Sciences and Engineering	Zinc- Oxide thin film as H <sub>2</sub> s gas Sensor			National	2021	ISBN 978-93-91248-49-9		mkSES publicatioin
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# BIOTECHNOLOGY IN PLANT PROTECTION — AND — CROP IMPROVEMENT



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**Biotechnology in Plant Protection and Crop Improvement**

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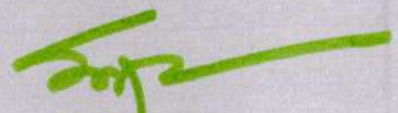


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This book is an attempt to analyze the problems and suitable measures for the effective management of the insect pests, plant diseases, and plant parasitic nematodes. This book is an effort to bring together available information on the various plant protection aspects. The experts of the relevant fields have given a critical appraisal of the various aspects of crop protection facing climate change.

This book is not only provides reference but also serves as a guide and inspiration for future research for development of modern agriculture and crop improvement. The Scientist, Professors, Scholars and Policy Makers dealing with crop protection and crop improvement will find this book very informative and useful.

## THE EDITORS



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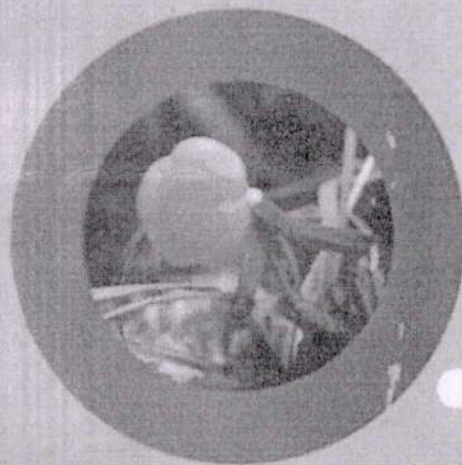
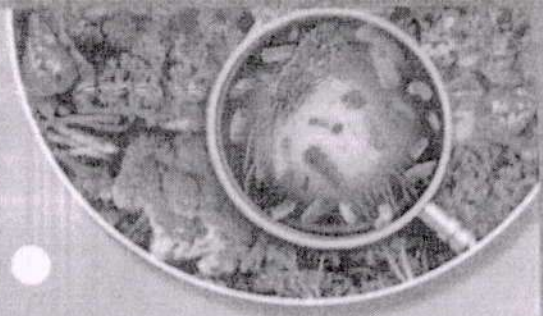


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# SECONDARY METABOLITES OF MEDICINAL HERBS

*BIOCHEMISTRY AND  
THERAPEUTICS*

Dr. M.M. Abid Ali Khan • Professor Abbas Ali Mahdi  
Murtaza Abid • Dr. T. S. Naqvi



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**Secondary Metabolites of Medicinal Herbs**

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# SECONDARY METABOLITES OF MEDICINAL HERBS

## BIOCHEMISTRY AND THERAPEUTICS

Plant secondary metabolites are organic compounds that are required for the plant to survive by fighting off herbivores, pests, and pathogens. These plant secondary metabolites have been used since early times in various medicines and food products for beneficial health purposes and are still relevant and popular today. This new book of Plant Secondary Metabolites provides an abundance of valuable information on secondary metabolites, their health properties and possibilities and their extraction and application methods.

This book offers comprehensive studies and covers the structurally diverse secondary metabolites of medicinal herbs including their biochemistry, ethnopharmacological properties and biological activity. Secondary metabolites of medicinal herbs are a treasure trove of novel compounds with potential therapeutic applications.

### THE EDITORS



Dr. M.M. Abid Ali Khan graduated in Botany, Zoology and Chemistry in 1978 and Post Graduated in Botany in 1980 and received his PhD in Botany from Lucknow University India in 1987. He received Junior Research Fellowship and Senior Research Fellowship, Research Associateship from Council of Scientific and Industrial Research (CSIR)-Government of India, New Delhi and worked at Central Institute of Medicinal and Aromatic Plants (CIMAP-CSIR) at Lucknow. Thereafter he was appointed as Pool Scientist of Council of Scientific and Industrial Research (CSIR)-Government of India, New Delhi and worked at the Department of Pharmacology and Therapeutics, King George's Medical College, Lucknow. Presently working as Senior Associate Professor of Botany, Shia P.G., College affiliated to Lucknow University, Dr. Khan is Honorary Fellow of several learned scientific societies and awarded many best research paper awards and also received Gold Medal. He is Chief Editor, Regional Editor and Editor of more than 10 National and International Scientific Journals and also Editorial Board member of many journals publishing from India and Foreign Countries. He has attended more than 30 National and International Scientific Conferences and presented many research papers he also organized many conferences and worked as Organizing Secretary. Dr. Khan has published over 200 research papers/review articles and book chapters in peer-reviewed International and National Journals of repute. Dr. Khan has 30 Books in his credit.



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Murtaza Abid has passed M.Sc. (Botany) in 2013 from Department of Botany, Lucknow University and also completed his M. Phil in Botany in 2015. He joined his research work at Department of Biochemistry, King George's Medical University, Lucknow, U.R. India, since 2013. He has published more than 75 research papers/review articles/book chapters in National and International refereed journals of repute. He has attended many conferences and seminars and presented research papers. Presently he has edited/authored 27 International/National Reference Books. He is also associated with several scientific societies and his many research papers obtained best research paper awards. He is also associated with Journal of Biological and Chemical Research and World Journal of Biology and Medical Research.



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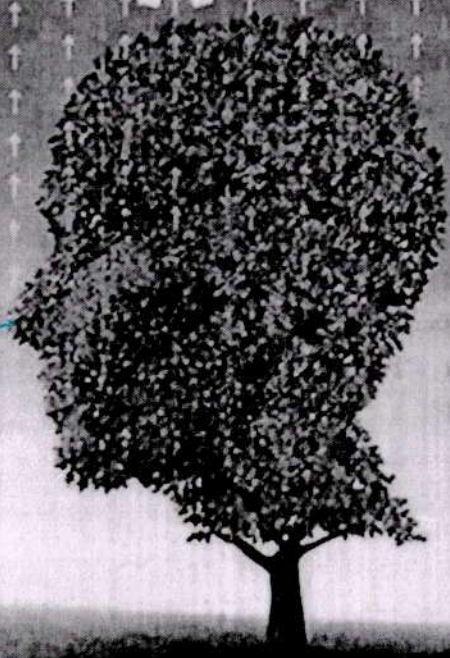
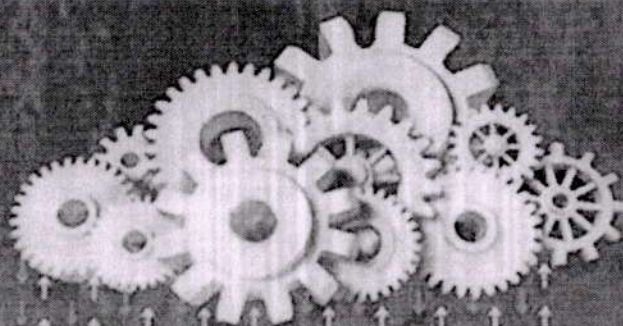



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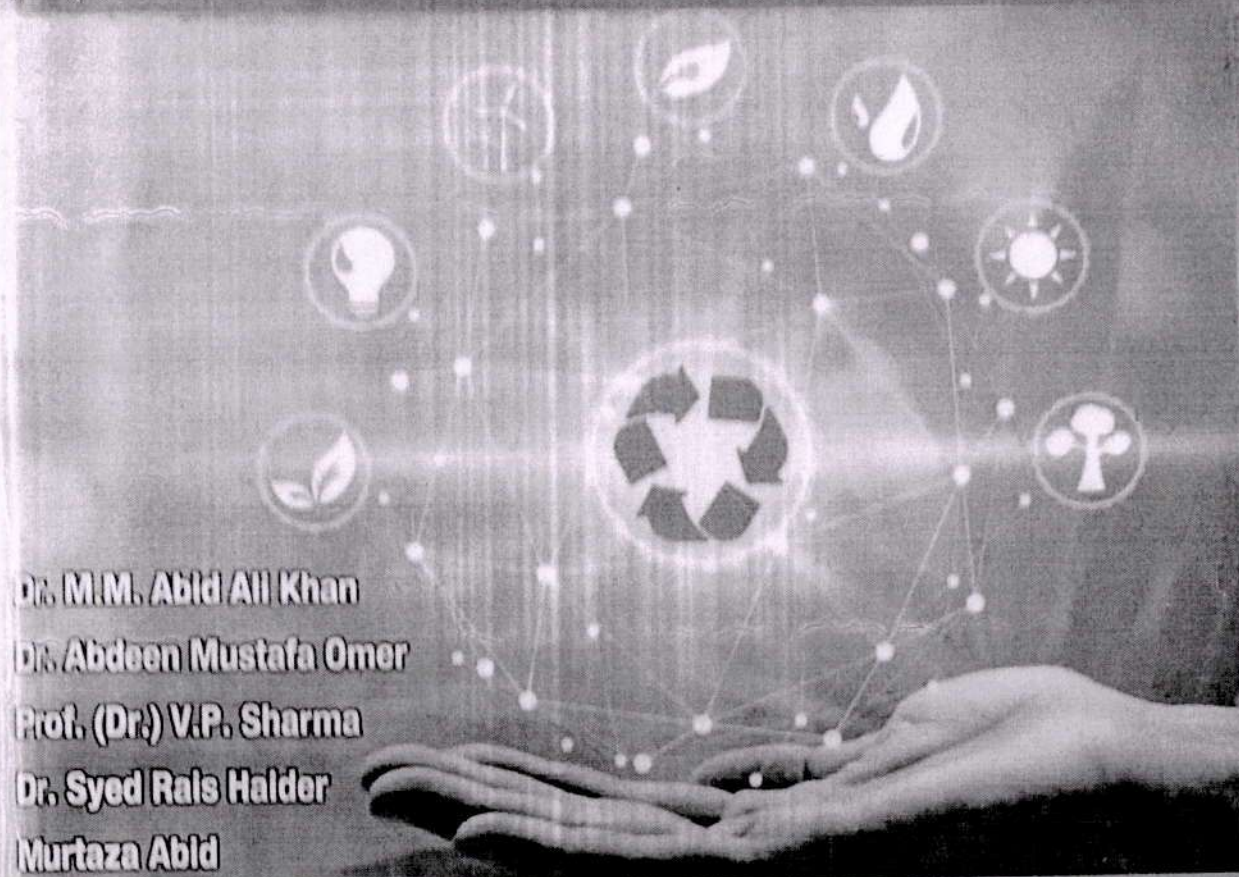
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**Global Progress in Greener Energies for Sustainable Environment**

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The aim of this study is to highlight the importance of indigenous knowledge for fostering economic growth and sustainable development. Recent literature on development studies considers knowledge as a key resource that can alleviate poverty, promote innovations, enhance competitiveness and create wealth. Development is a complex process of multidimensional factors involving both local and external forces. Knowledge for development must be appropriate in relation to a country's environmental, social, cultural, spiritual and economic landscape.

## THE EDITORS



**Dr. M.M. Abid Ali Khan** graduated in Botany, Zoology and Chemistry from Shia Post Graduate College affiliated to University of Lucknow, U.P., India in 1978 and Post Graduated in Botany from the Department of Botany, Lucknow University, India in 1980, he received his Ph.D. in Botany from the Lucknow University India in 1987. He received Junior Research Fellowship and Senior Research Fellowship at Department of Botany, Lucknow University from Council of Scientific and Industrial Research (CSIR)-Government of India, New Delhi, he also received Research Associate ship from Council of Scientific and Industrial Research (CSIR)-Government of India, New Delhi and worked at Central Institute of Medicinal and Aromatic Plants (CIMAP-CSIR) at Lucknow. Thereafter he was appointed as Pool Scientist of Council of Scientific and Industrial Research (CSIR)-Government of India, New Delhi and worked at the Department of Pharmacology and Therapeutics, King George's Medical College, Lucknow. He is working as Senior Associate Professor of Botany, Shia P.G., College affiliated to Lucknow University.



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# ENVIRONMENTAL POLLUTION AND CLIMATE CHANGE



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**Environmental Pollution and Climate Change**

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# ENVIRONMENTAL POLLUTION AND CLIMATE CHANGE

Erupting volcanoes, earthquakes, dust storms and meteorites smashing into the Earth's crust are natural phenomena that can cause climate change and air pollution: dinosaurs may have met their end after a giant meteorite kicked up so much dust that it blocked out the sun for decades, reducing photosynthesis and preventing the growth of plants.

Adding to these potential threats, we have also been contributing to air pollution and global warming through our resource-intensive lifestyles. We're producing and consuming more than ever before, and we're generating more greenhouse gases as a result, as well as air pollutants in the form of chemicals and particulate matter, including "Black Carbon".

Although they may seem to be two very different issues, climate change and air pollution are closely interlinked, so by reducing air pollution we also protect the climate. Air pollutants include more than just greenhouse gases—principally carbon dioxide but also methane, nitrous oxide and others—but there's a big overlap: the two often interact with each other.

## THE EDITORS



**Dr. M.M. Abid Ali Khan** graduated in Botany, Zoology and Chemistry from Shia Post Graduate College affiliated to University of Lucknow, U.P., India in 1978 and Post Graduated in Botany from the Department of Botany, Lucknow University, India in 1980, he received his PhD in Botany from the Lucknow University India in 1987. He received Junior Research Fellowship and Senior Research Fellowship at Department of Botany, Lucknow University from Council of Scientific and Industrial Research (CSIR)-Government of India, New Delhi, he also received Research Associateship from Council of Scientific and Industrial Research (CSIR)-Government of India, New Delhi and worked at Central Institute of Medicinal and Aromatic Plants (CIMAP-CSIR) at Lucknow.

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Water Equipment Manufacturing Co. Ltd., Sudan. He has been listed in the book WHO'S WHO in the World 2005, 2006, 2007 and 2010. He has published over 300 papers in peer-reviewed journals, 100 review articles, 14 books and 100 chapters in books.



**Prof. (Dr.) V.P. Sharma**, AcSIR and Head Quality Assurance, CSIR-Indian Institute of Toxicology Research, Lucknow has experience related to areas of great relevance in modern context viz water quality monitoring, safety evaluation of industrial chemicals, polymers, quality management, dissemination of scientific knowledge on environmental aspects etc since 1987. His area of expertise is Regulatory Toxicology and has significantly contributed in quality management system under GLP, NABL as per ISO 17025, 9000, 22000 etc. He is involved in RGNWM, BIS for framing of guidelines under PCD 12, PCD 21, ISO/TC 61, mass dissemination activities on environmental issues to students and common public through several projects of

National/International importance.



**Murtaza Abid** has passed M.Sc. (Botany) in 2013 from Department of Botany, Lucknow University and also completed his M.Phil in Botany in 2015. He joined his research work at Department of Biochemistry, King George's Medical University, Lucknow, U.P., India, since 2013. He has published more than 20 research papers/review articles/book chapters in National and International refereed journals. He has participated in many conferences and seminars and presented research papers. Presently he has published 23 International/National Reference Books. He is also associated with several scientific societies and his many research papers obtained best research paper awards. He is also associated with Journal of Biological and Chemical Research and World Journal of Biology and Medical Research.

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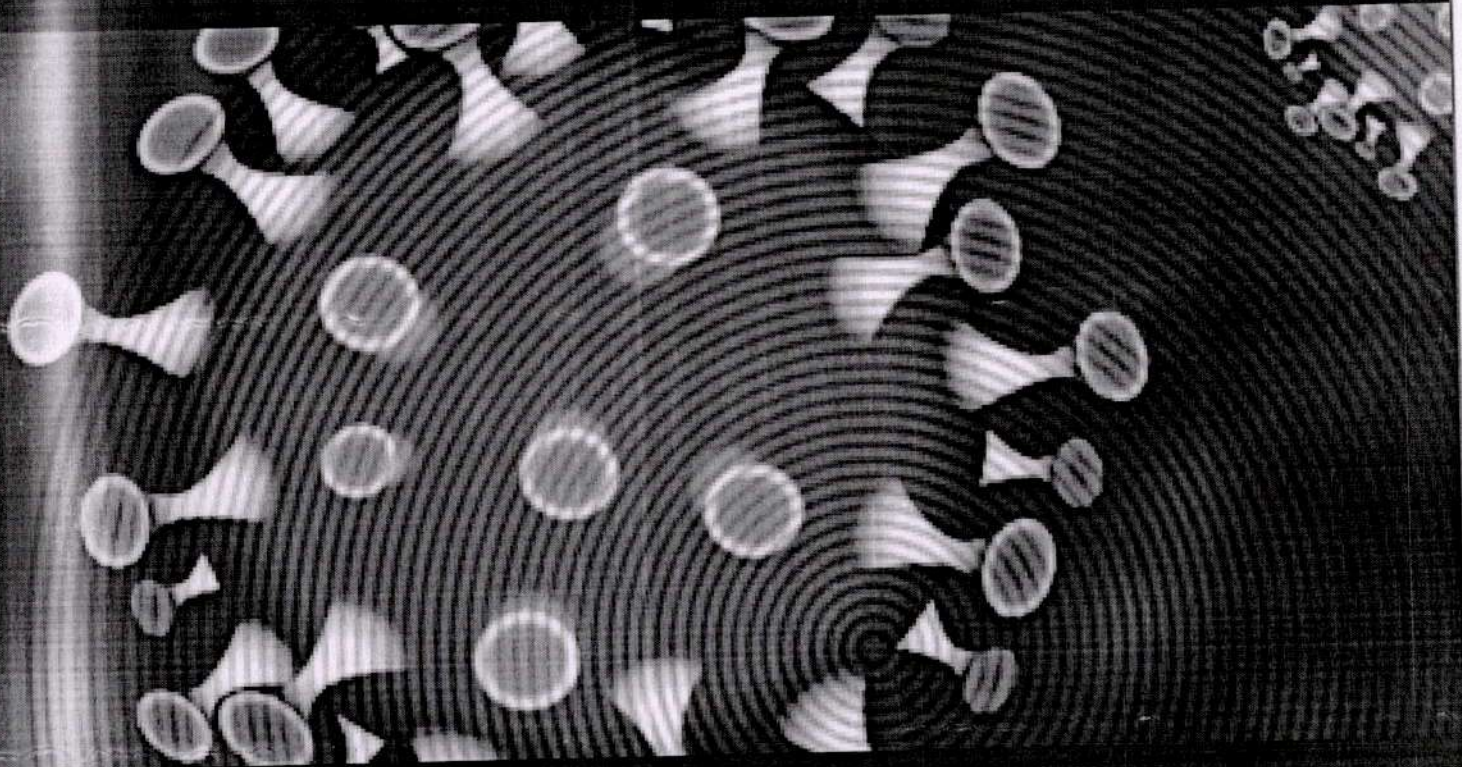


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# COVID-19

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## Chapter 34

**Mindfulness Based Cognitive Therapy during COVID-19 Pandemic**Syed Sajid Hussain Kazmi<sup>1\*</sup>, S.Z.H. Zaidi<sup>2</sup> & Mohd Ali<sup>2</sup>**COVID-19**

The word "pandemic" has originated from Greek word "pandemos" wherein "pan" means "all" and "demos" refers to the "people or population". Hence, a pandemic can also be referred to as an epidemic which has crossed the international borders and has affected nearly all the people in one way or another. The WHO has also simultaneously explained another term 'epidemic' ('epi' means "upon"), is the regional outbreak of an illness that spreads unexpectedly. It refers to sudden increase in the number of cases of a disease beyond what is normally expected in the population of a particular area. Examples of epidemics in India in the past include the outbreaks of zika virus, chikungunya and dengue fever.


Coronaviruses are a large group of viruses that are known to infect both humans and animals, and in humans cause respiratory illness that range from common colds to much more serious infections. The previous well-known case of a coronavirus epidemic was Severe Acute Respiratory Syndrome (SARS), which was first detected in southern China in 2002, and then spread to 26 countries resulting in more than 8,000 cases and 774 deaths.

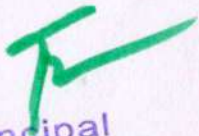
The Covid-19 disease was initially thought of as viral infection and the WHO's office located at China for the first time heard the reports of unknown virus (hence the name novel coronavirus) on 31 December, 2019. It was reported that this unknown virus was behind large number of Pneumonia cases, in Wuhan city of Eastern China. Apparently, the disease originated from a sea food market of Wuhan where wild animals, birds, marmots, rabbits, bats, snakes etc.

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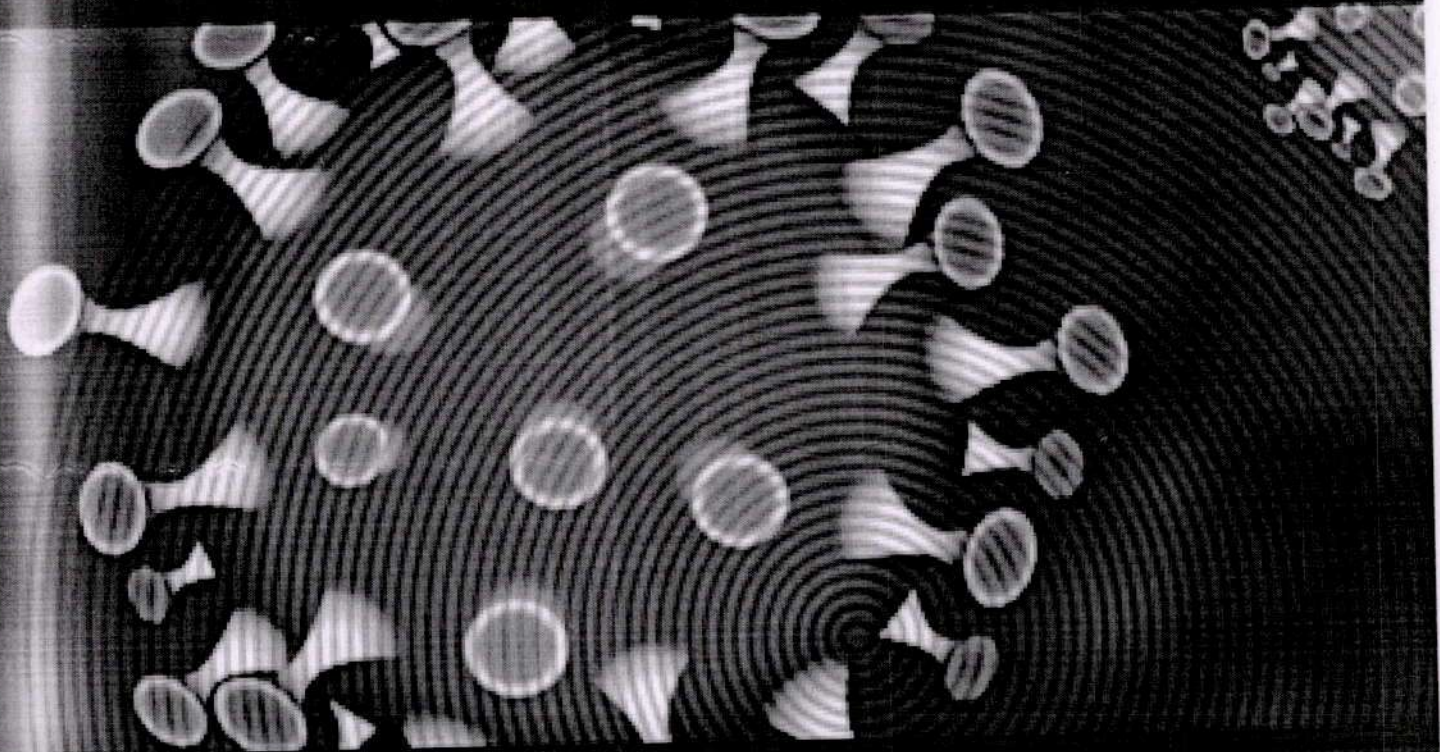
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## Entrepreneurship and Innovation

Dr. Nazia Naqvi

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### Introduction

It is important to understand that innovation doesn't happen overnight and requires time and endeavor to generate something actually innovative that will make a difference. Entrepreneurship can be viewed as a creative and innovative response to the environment and an ability to recognize, initiate and exploit an economic opportunity. An entrepreneur is an innovator who introduces something new in an economy. Entrepreneurship is doing things that are generally not done in the ordinary course of business. Innovation may be in: introducing a new manufacturing process that has not yet been tested and commercially exploited, introduction of a new product with which the customers are not familiar or introducing a new quality in an existing product, locating a new source of raw material or semi finished product that was not exploited earlier, opening a new market, hitherto unexploited, where the company products were not sold earlier, developing a new combination of means of production. Innovation involves problem solving and an entrepreneur is a problem solver. An entrepreneur does things in a new and a better way. A traditional businessman working in a routine manner is not entrepreneurial.

Innovation leads to the dynamics that governs the interaction between science, industry, and society. Innovative organization wants must have to prepare for renewing the offerings and its Delivery process to its stakeholders to survive in today's globalised world. In the present paper, concept of innovation and entrepreneurship has been studied by the authors. The paper will also include examples of innovative entrepreneurs and how the innovation in products/services helps the business in survival and growth in present globalised market place.

### Research Methodology Objectives of the Study

- (a) To study entrepreneurship and innovation
- (b) To study role of the innovative entrepreneur.
- (c) To study and present examples of innovative entrepreneurs.
- (d) Data has been collected from secondary sources.

Innovation is a facilitator of entrepreneurship and a way of empowering people to take charge of their lives and economic prosperity. At the same time, entrepreneurship is the answer to innovation both at individual business-level. It also stimulates general business sector growth of a nation. Flourish in entrepreneurship entails a focus on ingenuity, amalgamating innovation and strategic business practices. Innovation and creativity walk hand-in-hand when it comes to entrepreneurship.

### Innovation Only Tool to Solve Problems

The world is fraught with issues that are hard to solve, but at the same time will continue to demand a solution. And going by Albert Einstein, we cannot solve problems with the same thinking we used when we created them. Far-sighted, creative ideas and innovative solutions are required to solve them, but at the same time, such solutions will not emerge from simple send linear planning and problem solving processes.

However, what one needs to understand is that innovation quintessentially is about seeing, perceiving and solving problems in creative ways. A deep sense of passionate purpose and futurist thinking are required to deal with solving stubborn issues and come up with effective entrepreneurship based solutions.

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### IMPACT OF CLIMATE CHANGE ON NATURAL RESOURCES

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#### ABSTRACT

Biodiversity means the variety of living beings present on the planet. Biodiversity plays an essential role in maintaining the well being of the planet. Climate change is a prominent factor that has a huge impact on the ecosystems, biological diversity and ecological interactions. Changes in climate have severely impacted the terrestrial and marine ecosystems. With rising temperatures and sea levels and their adverse impacts on biodiversity including prominent ones like coral bleaching have made it crucial that impact of climate change on biodiversity should be thoroughly researched and effective steps be taken to mitigate the adverse effects of climate change on biodiversity. The impact of climate change is expected to increase in several region of the country and will affect the natural resources. Therefore, it is essential to improve assessment of the climate change effects and to adapt techniques using future scenarios.

**Keywords:** Biodiversity, Natural resources, Global warming, Threats.

#### INTRODUCTION


Biodiversity as defined by U.N. Convention of Biodiversity means "the variability among living organisms from all sources including terrestrial, marine and other ecosystems and the ecological complexes of which they are part; this includes diversity within specie , between species and of ecosystems.". The impact it has on life of humans is crucial. Livelihood of certain people especially those who are forest dwellers and tribal people whose main livelihood wholly depends on

biodiversity are dependent on it for their survival and day to day living. Other than providing various important things that sustains life like oxygen, water etc, ecosystem services provided by biodiversity are vital for the planet. Biodiversity also provides recreational facilities which are great like bird watching, sightseeing etc. The threat to biodiversity also will negatively impact the human wellbeing. So, it is essential to understand the impact of climate change on biodiversity. The Importance of

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# Biology of Complexes of Ruthenium(II) Mixedhalides

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## ABSTRACT

The ability of Ru to exist in many oxidation states is an important property of this element, which plays an important role in its applications. Ruthenium readily form coordinate complexes and these complexes have their applications in diverse fields. Day-to-day expanding in the chemistry of ruthenium and its complexes is due to their applications directly or indirectly in determination of calcitonin level in blood, in Eleecysfolate RBC assay to estimate folate deficiency in RBC, as immunosuppressant, as antimicrobial agents as antibiotic agents, as inhibitors to inhibit over production of nitric oxide in biological cell, as metallopharmaceuticals in treatment of various diseases including cancer, AIDS, radio sensltizers complexes with ruthenium are used in radiation therapy, as anti-metastasis drugs. Dragutan et al. in editorial special issue review wrote "Valorization of Ru complexes in photochemistry and agrochemicals will undoubtedly be forthcoming". A survey of literature shows that complexing of new ligands that can complexed with ruthenium in various oxidation states can lead to develop new materials. Now, complexity of approach of biology together with chemistry and photochemistry

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has shifted from, how to make a drug to what drug to make, in other words drug design. The emergence of computational chemistry together with physics and various software have given a quantitative nature to the relationship between drug and its property and thus its various applications. The aim of present study is "to study the electronic structure of ruthenium(II) mixedhalides", which more precisely can explain or help to explain the various properties of the molecule and thus help in the development of new ruthenium(II) complexes and or tuning the property of pre-existing ruthenium(II) complexes.

## 1. Introduction

Ruthenium readily form coordinate complexes and these complexes have their applications in diverse fields, as shown in scheme 1. Ru forms compounds in -2, 0, +2, +3, +4, +6 and +8 oxidation states. +3 and 0 oxidation states are unusual oxidation states, scheme 2. The ability of Ru to exist in many oxidation states is an important property of this element, which plays an important role in its applications [1].

Day-to-day expanding in the chemistry of ruthenium and its complexes is due to their applications directly or indirectly appropriate for many of today's problems related to anticancer drugs, polymers, materials science and nanoscience. This is due to its versatile electron-transfer pathways. Survey of literature shows that ruthenium and its compounds now used: in solar cells, as catalyst, in determination of calcitonin level in blood, in Eleecysfolate RBC assay to estimate folate deficiency in RBC, as immunosuppressant, antimicrobial agents, as antibiotic agents, as inhibitors to inhibit production of nitric oxide in biological cell, as metallopharmaceuticals in treatment of various diseases including cancer, radioisotopes complexes with ruthenium are used in radiation therapy, and anti-metastasis drugs [1-7]. Dragutan et al. in editorial special issue review wrote "Valorization of Ru complexes in photochemistry

OVERVIEW ON NOVEL CORONAVIRUS (COVID-19) OUTBREAK AND ITS IMPACT ON  
HEALTHCARE PROFESSIONALS: A REVIEW

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(2020)

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ABSTRACT

Coronaviruses are a group of related viruses. Primarily thought to occur among close contacts via respiratory droplets generated by sneezing and coughing and can cause pneumonia and bronchitis. A novel coronavirus outbreak is a global health concern today and raised the intense attention of whole world to take an immediate investigation to characterize and control the disease including isolation of suspected peoples and also the monitoring of contacts. The impact of this pandemic affected various sectors, industries like economy, social, education, medical. In order to effectively control and combat this pandemic the healthcare professional have significant role. This review article attempts to summarize the opportunities and challenges of healthcare professionals during the COVID-19 period.

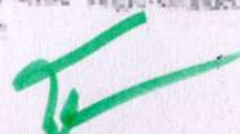

Keywords: Coronavirus, SARS-CoV-2, MERS-CoV, Respiratory diseases, Healthcare, Pandemic, Corporate Social Responsibility (CSR), Non-Governmental Organizations (NGO).

INTRODUCTION

Coronavirus disease 2019 (COVID-19) is an epidemic, highly contagious disease caused by a newly discovered virus, known as Severe acute respiratory syndrome-related coronavirus 2 (SARS-CoV-2). This disease was first identified in the city of Wuhan, (3) China, in December last year, and since then it has quickly spread across the globe to assume the contours of the one of the worst pandemics in the modern era. People infected with COVID-19 virus mostly will experience mild to moderate respiratory illness and recover without requiring special treatment. In the case of novel coronavirus older people and those with underlying medical conditions like cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop serious illness. It spreads primarily through droplets of saliva or discharge from the nose when an infected person coughs or sneezes, so practicing respiratory etiquette are important. The first case of the novel coronavirus pandemic in India was reported on 30 January 2020, originating from China. Many experts suggest the number of infections could be much higher as India's testing rates are among the lowest in the world. COVID-19 infection rate in India is reported to be 1.7, significantly lower than in the worst affected countries.

MORPHOLOGY OF THE VIRUS

When viewed under the microscope, coronaviruses appear to have a crown-like structure. And in Latin word 'corona' means 'crown'. This is why the virus is referred to as coronavirus. Coronaviruses having large microscopic spherical particles with bulbous surface projections. The diameter of the virus particles is around 100nm. The COVID-19 viral envelope in electron micrographs appears as a distinct pair of electrons dense shell and consists of a lipid bilayer where the membrane (M), envelope (E) and spike (S) structural proteins are attached. Nucleocapsid protein inside the envelope, which formed from multiple copies of the nucleocapsid (N) protein, binds to the positive-sense single-stranded RNA genome in a continuous beads on a string type conformation.

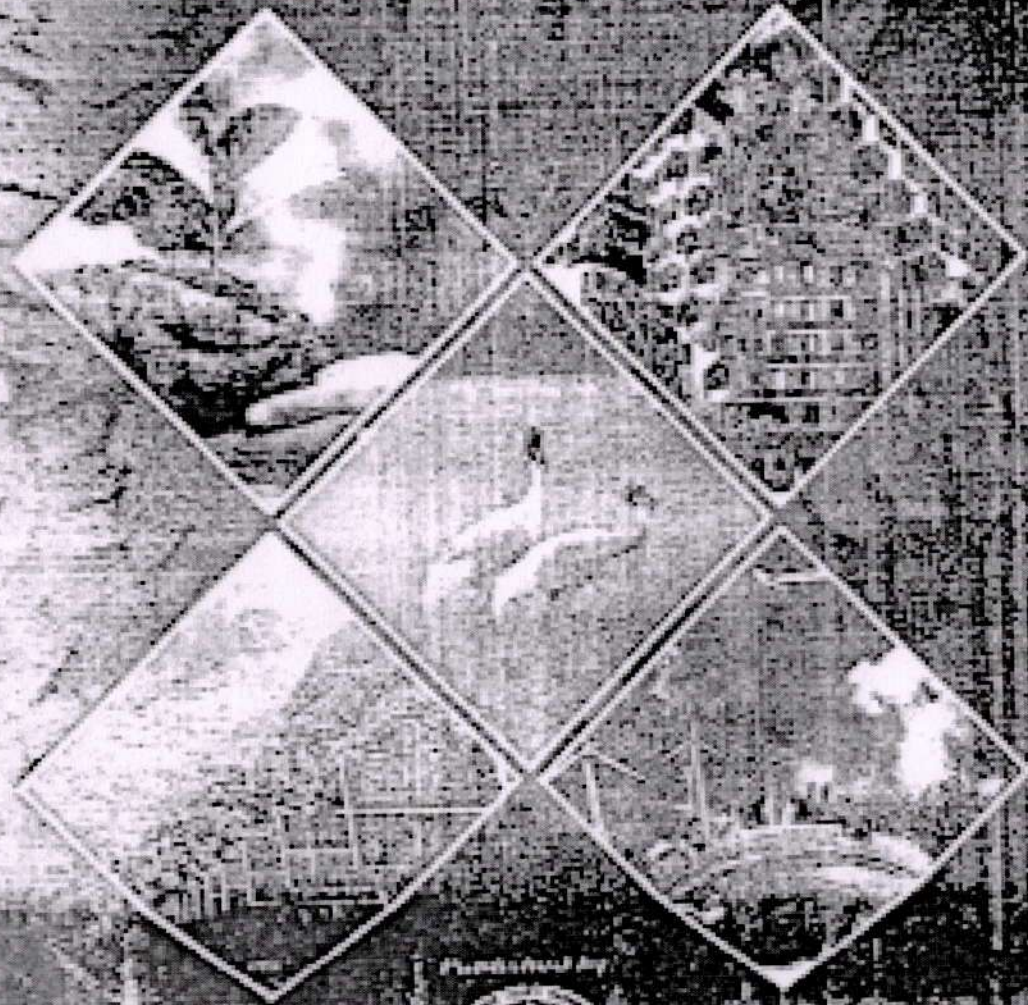
  
  
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## OVERVIEW OF BIOINFORMATICS: IT'S ROLE IN THE GROWTH OF MODERN BIOLOGY

R Kumar Gaurav Bajpai<sup>1</sup>, S.S.R. Baqri<sup>1</sup>, Vikas Gautam<sup>1</sup> and A. M. Saxena<sup>2</sup>

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### ABSTRACT

Information technology being the most happening field of academics today is making rapid strides in the modern world and its influence has changed the course of research in almost all disciplines. The interface of information technology with biology has led to the birth of bioinformatics and it has truly revolutionized the field of life sciences. Modern biology relies heavily on computers and the internet. Bioinformatics is indispensable for a biologist because of the existence of various databases which are a treasure trove of authentic information on nucleotides, proteins and other biomolecules. The most important driving force for the growth of bioinformatics was the temptation to store and analyze protein and nucleotide sequences and it has been the pivotal theme of bioinformatics since its early days. Bioinformatics and genomics have the power to alter all aspects of the society by introducing great advances in the fields of agriculture, medicine and environmental biology. Besides enormous potential in applied fields of biology bioinformatics can also answer some of our most basic theoretical debates about the origin and evolution of life on earth. Sequence homology studies are already giving us new insights into human phylogeny. This review paper attempts to summarize the impact of computers on biology.

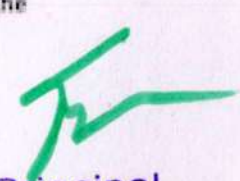
**Keywords:** Bioinformatics, Computational Biology, Genomes.

  
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### INTRODUCTION

Bioinformatics is the application of computers for storage, analysis and interpretation of biological data. Bioinformatics is essential for management of data in modern biology and medicine. The data that can be important for a biologist ranges from the structural data about biomolecules to the extremely long sequences

of proteins and DNA. Sequence homology holds the key to understanding evolutionary mechanisms and hence it has been a major driving force for the development of modern bioinformatics which relies heavily on powerful software required for fast sequence retrieval, alignment and analysis. It is because of extremely efficient sequence alignment

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# SECONDARY METABOLITES OF MEDICINAL HERBS

## BIOCHEMISTRY AND THERAPEUTICS

Dr. M. M. Abid Ali Khan • Professor Abbas Ali Mahdi  
Murtaza Abid • Dr. I. S. Naqvi



### SECONDARY METABOLITES OF MEDICINAL HERBS — BIOCHEMISTRY AND THERAPEUTICS —

Dr. M.M. Abid Ali Khan  
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#### SECONDARY METABOLITES OF MEDICINAL HERBS BIOCHEMISTRY AND THERAPEUTICS

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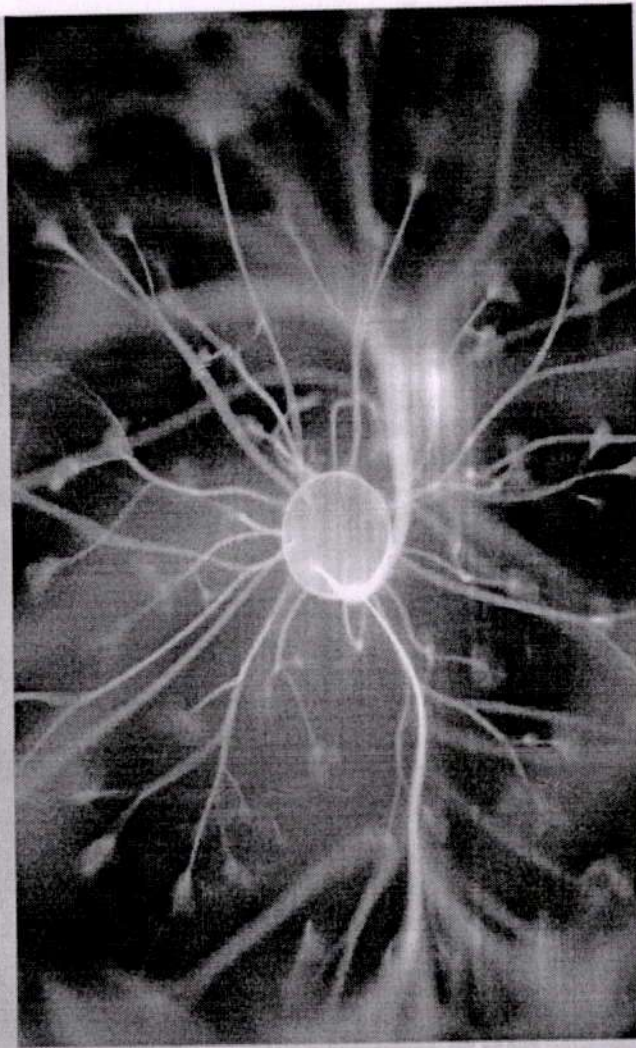
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# Fundamentals of Cell Biology



Fundamentals of Cell Biology

Shailesh Kumar Srivastava

## About Author



Dr. Shailesh Kumar Srivastava, M.Sc. Ph.D. (Zoology) having an excellent academic record, is presently serving as an Assistant Professor in the Department of Zoology, Shia P.G. College Lucknow, since 2009. He has been also worked as visiting faculty in Dept. of applied animal Sciences, B.B.A. Central University, Lucknow. As a teacher, he is quite popular among his students. Besides his teaching assignments, he is also involved in research on biochemical, histopathological and cell tissue culture aspects of animal parasites. He also has a good expertise of ethno-medicinal plants and their effects on animal system through an alternative way of treatment like homeopathy.

Dr. Srivastava has published enough number of research papers/articles in various scientific journals of national and international repute. He has participated in large number of seminars, conferences and webinars covering areas of his research field. Considering his expertise on alternative way of treatment, he has been recently invited to deliver lecture on ethno-medicinal plants and their effective uses in an international virtual conference jointly organized by Bhimrao Ambedkar University Agra, India and Harvard University Washington, USA. His lecture in this International virtual conference was greatly appreciated by the audience.

Dr. Srivastava is also associated with number of scientific bodies and having life time membership of Indian Society of Parasitology (LM-734) and Laboratory Animal Science Association of India. (LM.514)

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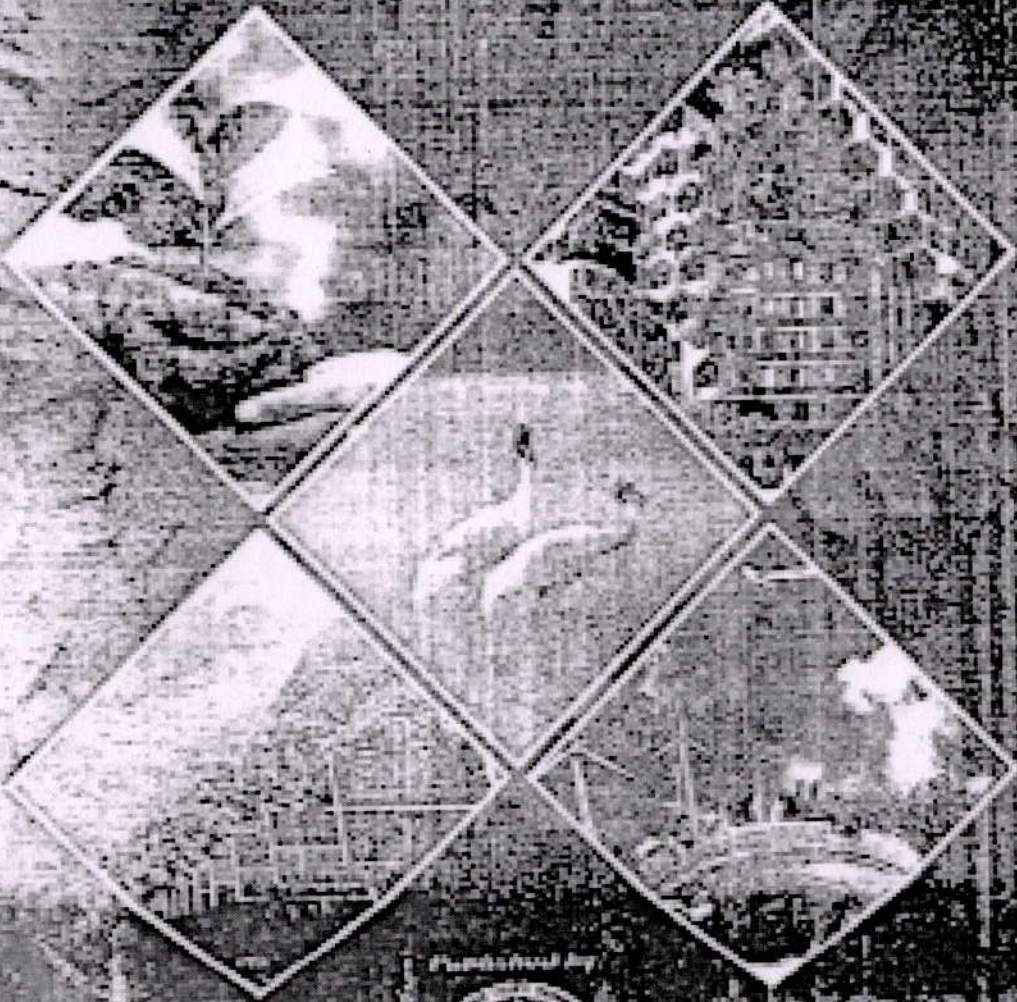
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Kumar Gaurav Bajpai<sup>1\*</sup>, S.S.R. Baqri<sup>1</sup>, Vikas Gautam<sup>1</sup> and A. M. Saxena<sup>2</sup>

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<sup>2</sup>Department of Zoology, University of Lucknow, Lucknow (U.P.)

\*Corresponding author: drkumargaurav\_08@yahoo.com

### ABSTRACT

Information technology being the most happening field of academics today is making rapid strides in the modern world and its influence has changed the course of research in almost all disciplines. The convergence of information technology with biology has led to the birth of bioinformatics and it has truly revolutionized the field of life sciences. Modern biology relies heavily on computers and the internet. Bioinformatics is indispensable for a biologist because of the existence of various databases which are a treasure trove of authentic information on nucleotides, proteins and other biomolecules. The most important driving force for the growth of bioinformatics was the temptation to store and analyze protein and nucleotide sequences and it has been the pivotal theme of bioinformatics since its early days. Bioinformatics and genomics have the power to alter all aspects of the society by introducing great advances in the fields of agriculture, medicine and environmental biology. Besides enormous potential in applied fields of biology bioinformatics can also answer some of our most basic theoretical debates about the origin and evolution of life on earth. Sequence homology studies are already giving us new insights into human phylogeny. This review paper attempts to summarize the impact of computers on biology.

**Keywords:** Bioinformatics, Computational Biology, Genomes.

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### INTRODUCTION

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Dr. Aldeen Mustafa Omer

Prof. (Dr.) V.P. Sharma

Dr. Syed Rais Haider

Murtaza Abid

# GLOBAL PROGRESS IN GREENER ENERGIES FOR SUSTAINABLE ENVIRONMENT

  
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# GLOBAL PROGRESS IN GREENER ENERGIES FOR SUSTAINABLE ENVIRONMENT

The aim of this study is to highlight the importance of indigenous knowledge for fostering economic growth and sustainable development. Current literature on development studies considers knowledge as a key resource that can alleviate poverty, promote innovations, enhance competitiveness and create wealth. Development is a complex process of multidimensional factors involving both local and external factors. Knowledge for development must be appropriate in relation to a country's environmental, social, cultural, spiritual and economic landscape.

## THE EDITORS



**Dr. M.M. Abid Ali Khan** graduated in Botany, Zoology and Chemistry from Shia Post Graduate College affiliated to University of Lucknow, U.P., India in 1978 and Post Graduated in Botany from the Department of Botany, Lucknow University, India in 1980, he received his Ph.D. in Botany from the Lucknow University India in 1987. He received Junior Research Fellowship and Senior Research Fellowship at Department of Botany, Lucknow University from Council of Scientific and Industrial Research (CSIR)-Government of India, New Delhi, he also received Research Associate ship from Council of Scientific and Industrial Research (CSIR)-Government of India, New Delhi and worked at Central Institute of Medicinal and Aromatic Plants (CIMAP-CSIR) at Lucknow. Thereafter he was appointed as Post Scientist of Council of Scientific and Industrial Research (CSIR)-Government of India, New Delhi and worked at the Department of Pharmacology and Therapeutics, King George's Medical College, Lucknow. He is working as Senior Associate Professor of Botany, Shia P.G., College affiliated to Lucknow University.



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**Prof. (Dr.) V.P. Sharma, ACSIR and Head Quality Assurance, CSIR-Indian Institute of Toxicology Research, Lucknow** has experience related to areas of great relevance in modern context viz water quality monitoring, safety evaluation of industrial chemicals, polymers, quality management, dissemination of scientific knowledge on environmental aspects etc since 1987. His area of expertise is Regulatory Toxicology and has significantly contributed in quality management system under GLP, NABL as per ISO 17025, 9000, 22000 etc. He is involved in RGMWM, BIS for framing of guidelines under FCO 12, FCO 21, ISO/IEC 61, mass dissemination activities on environmental issues to students and common public through several projects of National/International importance.



**Dr. Syed Raib Haider** has passed M.Sc. (Botany) in 1985, M. Phil in Botany in 1987 and completed his Ph.D. in Botany in 1989 from Department of Botany, Aligarh Muslim University. He has published 30 Research papers in National and International refereed Journals of repute. He also attended many international Conferences and presented his research papers. Presently Dr. Haider is working as Associate Professor of Botany, in Shia P.G., College affiliated to Lucknow University, Lucknow, U.P., India.



**Murtaza Akid** has passed M.Sc. (Botany) in 2013 from Department of Botany, Lucknow University and also completed his M.Phil in Botany in 2015. He joined his research work at Department of Biochemistry, King George's Medical University, Lucknow, U.P., India, since 2013. He has published more than 60 research papers/review articles/book chapters in National and International refereed journals of repute. He has attended many conferences and seminars and presented research papers. Presently he has edited / authored 23 International/National Reference Books. He is also associated with several scientific societies and his many research papers obtained best research paper awards. He is also associated with Journal of Biological and World Journal of Biology and Medical Research.

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Global Progress in Greener Energies for Sustainable Environment

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## An Overview on Green Bioplastic: An Approach towards Clean Environment

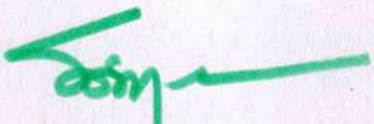
S. Rais Haider, Alfroz Zareen Athar and M.M. Abid Ali Khan

### ABSTRACT

The dramatic increase in production and lack of biodegradability of commercial polymers, particularly commodity plastics used in packaging (e.g. fast food), industry and agriculture, focused public attention on a potentially huge environmental accumulation and pollution problem that could persist for centuries. Several communities are now more sensitive to the impact of discarded plastic on the environment, including deleterious effects on wildlife and on the aesthetic qualities of cities and forests because improperly disposed plastic materials persist in our environment and harm life. On the other side, the burning of polymers and plastics produce persistent organic pollutants (POPs) known as furans and dioxins.

Green polymers are the products of green chemistry produced using green sustainable biochemical substances and fibers from plants. According to the International Union of Pure and Applied Chemistry (IUPAC) definition, green chemistry may be defined as the "design of bio-chemical products and processes that reduce or eliminate the use or generation of substances hazardous to humans, animals, plants, and the environment". Thus, green chemistry seeks to reduce and prevent pollution at its source. Natural polymers are usually green plant products. On the other hand bioplastics are plastics made up of biomass such as corn, sugarcane etc. Some substances have been increasingly highlighted as means to save fossil fuels, reducing CO<sub>2</sub> emission and plastic wastes. The plastic which is available in market is very dangerous as it is non-biodegradable. Biodegradability of Bioplastics has been found to be preferred in society. Due to this demand for packaging

  
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# ETHNOBOTANY AND BIOCHEMISTRY OF MEDICINAL PLANTS

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Dr. Shyam Narain Pandey | Dr. Satyendra Kumar Yadav

## ETHNOBOTANY AND BIOCHEMISTRY OF MEDICINAL PLANTS

This book focuses on presenting the current scientific evidence of bioactive effects of selected herbs in relation to clinical outcomes and therapy for promotion of human health. Whereas many herbal medicines are made by mixing different herbs, the focus in this book is on single herb. The herbs selected cover a wide range and include flowering herbs, leaves, and root extracts (Aloe vera, Ficus, neem and licorice). The use of herbs is related to cardiovascular disease, cancer, diabetes, skin disorders, and neurodegenerative disease. The



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## Occurrence of Secondary Metabolites in *Bacopa monnieri* L. and Therapeutic Uses: An Ethnobotanical Plant

M.M. Abid Ali Khan, \*Afroz Zareen Athar and \*\*Murtaza Abid

### ABSTRACT

For over several decades, interest has been intensified in the study of and use of traditional plants in different parts of the world. As a result positive components have been identified which are safely incorporated in their national health system

As medicinal herbs are sources of naturally active secondary metabolites used by peoples world wide. *Bacopa monnieri* is one such plant used to treat many diseases and disorders. It contains many important phytochemicals such as Bacosides, jujubogenin, Pseudajujuobogenin and bacopa saponins etc

Less common flavonoids, luteolin and opigenin have also been isolated. The therapeutic profile displayed various activities such as antimicrobial, anticancer, antihyperglycemic, hepatoprotective and memory enhancer

Keywords: Secondary Metabolites, Medicinal Herbs, *Bacopa monnieri*, and Memory Enhancer

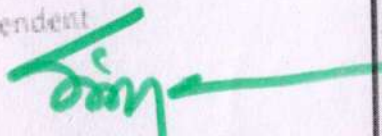
### INTRODUCTION

Medicinal plants are the most popular resources of primary health care for more than 80% population in developing countries those are dependent

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# भारत में

# जाति व्यवस्था एवं राजनीति: विविध आयाम

डॉ. कमलेश पाल डॉ. अखिलेश पाल

भारत में जाति व्यवस्था ने जीवन को काफी हद तक प्रभावित किया है। जाति एक वंशपरक संरूप होता है, जो अपने सामाजिक स्थिति को परिभाषित करता है। आकांक्षी के इतने सारों के बाद भी यहाँ जाति पर आधारित सीमांकन आज भी होता है। राजनीति संघर्ष के अनुसार यह सब बदल रहा है। स्वाधीनता प्राप्ति के पश्चात् भारतीय राजनीति का आधुनिक स्वरूप विकसित हुआ। यह समाजका व्यवस्था को जाने लगी कि देश में औद्योगिक व्यवस्था स्थापित होने पर भारत से जाति, जाति व्यवस्था अथवा जातिवाद समाप्त हो जायेगा लेकिन ऐसा नहीं हुआ। जाति न केवल समाज में बल्कि राजनीति में भी प्रवेश करके एक रूप धारण कर लिया है। भारत में जाति न केवल वर्गों की आर्थिक, सामाजिक, सांस्कृतिक, धार्मिक प्रवृत्तियों को ही प्रभावित किया है, बल्कि राजनीति को भी पूर्ण रूप से प्रभावित किया है। भारत की राजनीति में जाति ने महत्वपूर्ण भूमिका निभाई है। इसी पृष्ठभूमि में प्रस्तुत पुस्तक भारत में जाति व्यवस्था एवं राजनीति, विविध आयाम विषय पर लेखित है। अध्ययन से प्राप्त आपत जाति और राजनीति में रुचि रखने वाले लोगों, प्रशासकों, समाज वैज्ञानिकों एवं नीति निर्माताओं के लिए उपयोगी है, साथ ही विद्यार्थियों, सोमाथियों के लिए भी सहायक होगा तथा भविष्य में शोध में भी सहायक सिद्ध होगी।

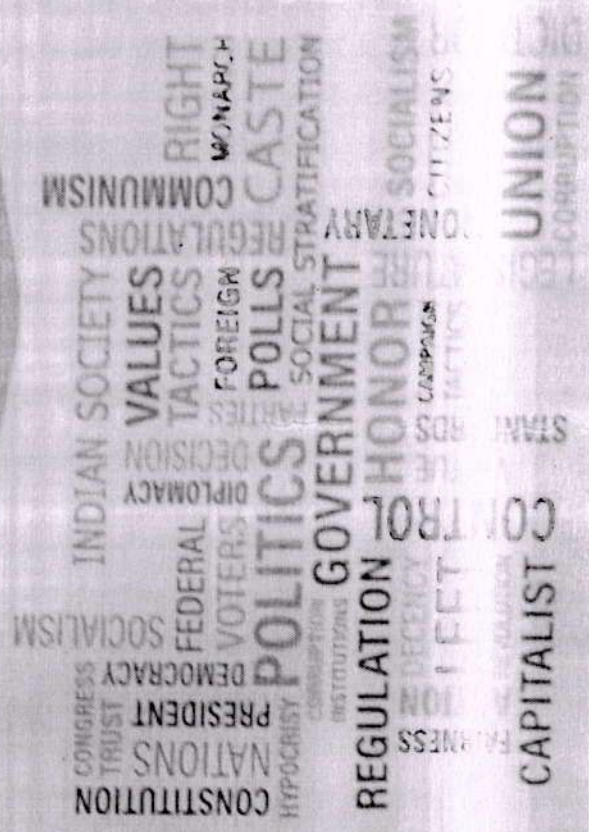
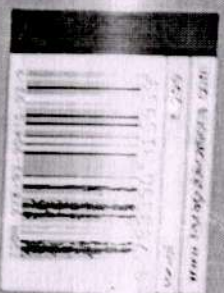
डॉ. कमलेश पाल

आप वर्तमान में वीर बहादुर सिंह पूर्वांचल विश्वविद्यालय जौनपुर में मानविकी एवं समाज विज्ञान विभाग के निभागाध्यक्ष हैं। आप भारतीय सामाजिक विज्ञान अनुसंधान में नई दिस्ती द्वारा समाजशास्त्र विभाग, काशी हिन्दू विश्वविद्यालय वाराणसी में प्राध्यापक रहे हैं। आपकी विशेष रुचि भारत की जाति व्यवस्था, जनजातीय संरचना, अस्वस्थ शास्त्र, नगरीय समाजशास्त्र आदि है। आपके दो दर्जन से अधिक अंतरराष्ट्रीय एवं अंतर्राष्ट्रीय जर्नल्स में प्रकाशित हो चुके हैं तथा अकादमिक ग्रंथ हैं।

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आप वर्तमान में इलाहाबाद विश्वविद्यालय के संघटक कॉलेज, ईश्वर गणप पीजी कॉलेज, प्रयागराज में राजनीति शास्त्र के सहायक आचार्य हैं। आप इसके पूर्व डॉ. इरीसिंह और केन्द्रीय विश्वविद्यालय, सगर एवं इलाहाबाद विश्वविद्यालय, प्रयागराज में शिक्षण कार्य कर चुके हैं। आप ए. प्र. सामाजिक विज्ञान शोध संस्थान (भारतीय सामाजिक विज्ञान अनुसंधान परिषद का संयुक्त संस्थान) उज्जैन से डॉक्टरेट हैं। आपकी विशेष रुचि भारतीय शासन एवं राजनीति, स्थानीय स्वायत्तता, अन्तरराष्ट्रीय राजनीति, लोकतंत्र तथा विकास आदि है। आपके दो दर्जन से अधिक शोध आलेख राष्ट्रीय एवं अंतरराष्ट्रीय जर्नल्स में प्रकाशित हो चुके हैं तथा इसके पूर्व चार किताबें भी प्रकाशित हुई हैं।

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# 1

(Chapter)

## भारत में जाति का उद्भव एवं विकास

डा. रवि प्रताप सिंह

सारांश

जाति व्यवस्था भारतीय समाज का अटूट अंग रही है और इसने जीवन के सभी पक्षों को प्रभावित किया है। विगत 50 वर्षों से राजनीतिक संस्थाओं की कार्यप्रणाली और सामान्य राजनीतिक जीवन के अनुभव से इस बात को संकेत मिलता है कि भारत की राजनीतिक और सामाजिक व्यवस्था पर जातिवाद का प्रभाव विद्यमान है। आधुनिक प्रभावों के फलस्वरूप व्यस्क मताधिकार के आधार पर निर्वाचन आरम्भ हुए और जातिगत संस्थाएं एकाएक महत्वपूर्ण बन गईं, क्योंकि उनके पास भारी संख्या में मत थे और लोकतंत्र में सत्ता प्राप्ति हेतु इन मतों का मूल्य था। जयप्रकाश नारायण सरीखे व्यक्ति ने एक बार कहा कि भारत में मौजूद सभी दलों की तुलना में जाति नाम का दल सबसे महत्वपूर्ण हो गया है।

मुख्य शब्द: जाति, उद्भव, विकास, जातिवाद, भारतीय समाज।

जाति प्रथा का अर्थ एवं स्वरूप

समकालीन भारत में जाति-व्यवस्था राजनीतिक एवं सामाजिक संरचना की महत्वपूर्ण घटक है। भारतीय समाजिक संरचना के विशद, विवेचन के उपरान्त हम कह सकते हैं कि जाति-व्यवस्था सामाजिक संगठनों के निर्माण का प्रमुख आधार रहा है। यह सर्वविदित है कि जाति शब्द की उत्पत्ति संस्कृत की 'जन' धातु से मानी जाती है, जिसका अर्थ 'प्रजाति' 'जन्म' अथवा भेद से

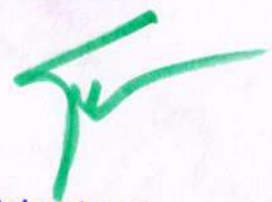
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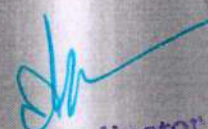
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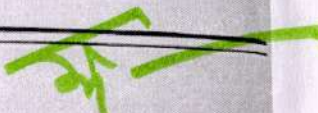
  
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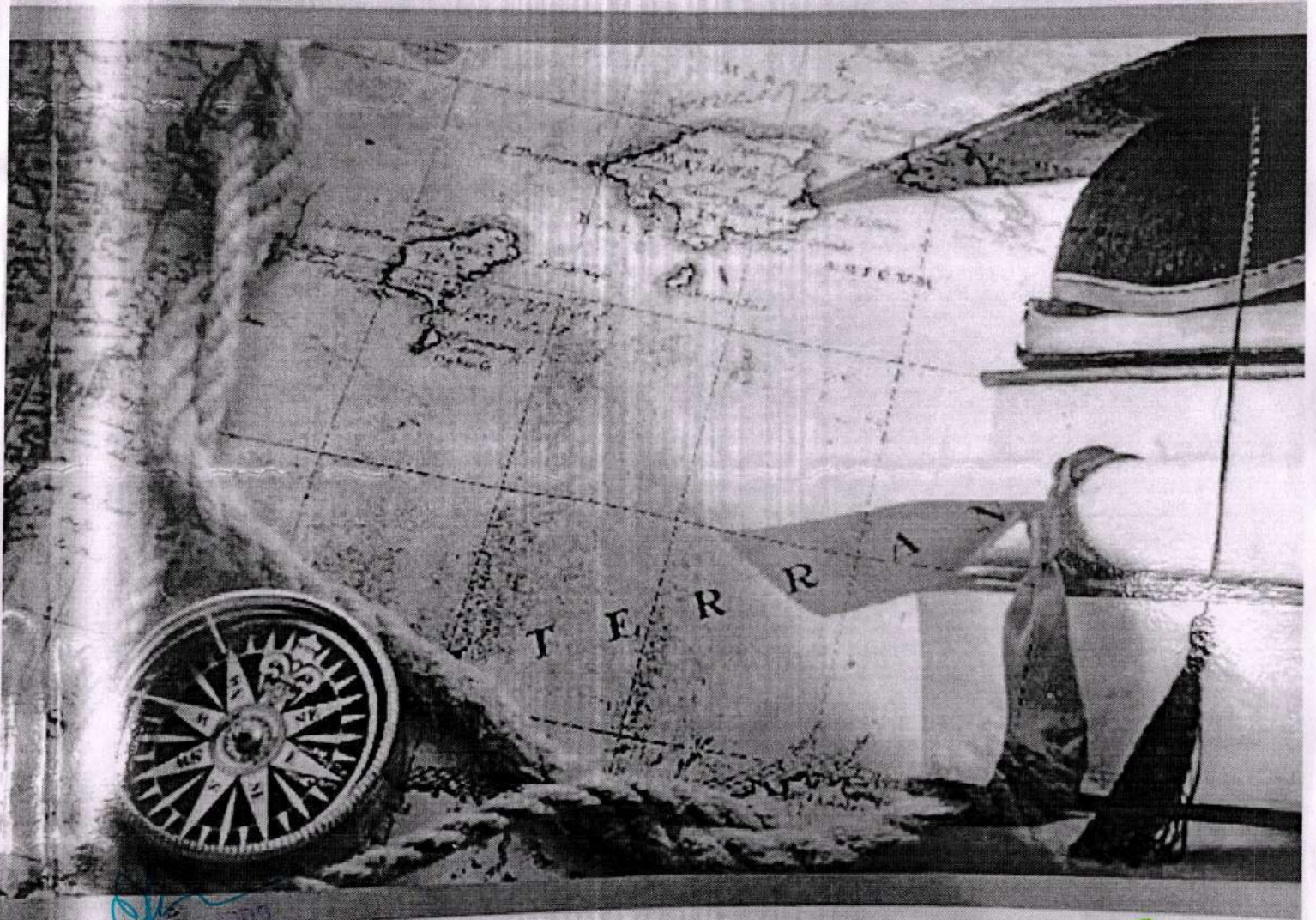
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This book "Applied Research in Humanities & Social Science" is based on the proceedings of the "International Conference on Advancements in Interdisciplinary Research (ICAIR-2021)", Jointly Organized by Shia P. G. College, Lucknow (An Associated College of University of Lucknow, U.P. India) & Science Tech Institute, Lucknow (Run by: Manraj Kuwar Singh Educational Society, U.P. India), during October 26th-28th, 2021. The aim of this conference was to bring together the young as well as experienced researchers on one platform to discuss the recent findings in the aforesaid areas of Humanities & Social Science. After peer-reviewing process, 25 relevant research papers were finally included in this book as chapters.

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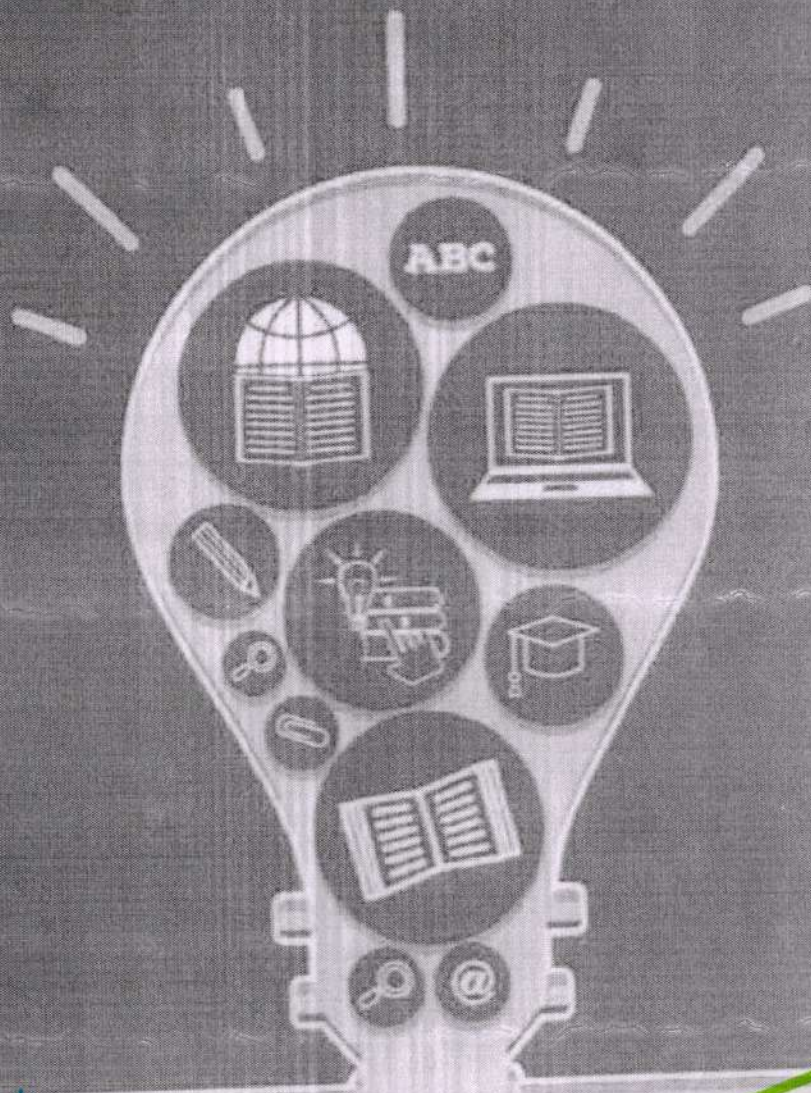
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## Chapter - 12

(2021)

### New Education Policy 2020 and Financing of Higher Education in India

Syed Sajid Husain Kazmi & Mohd Ali

#### Introduction

The public expenditure on higher education in many developed countries and few developing countries as a percentage of total expenditure on education indicates the relative importance given to higher education which has social, economic and political externalities. Traditionally, the Human Capital theory has dealt with the necessity of investment in education with the objective of enhancing productivity. The externalities associated with education and the returns expected from it have necessitated the role of the State in financing of higher education.

But the adoption of structural adjustment policy since 1980s has given emphasis to the application of the market principles in the operation of the higher education system. It assumes higher education as a quasi-public good (Titlik, 2005) where the private returns from higher education is argued to be higher than the social returns. Hence, the higher education institutions mostly in developing countries were compelled to resort to cost sharing and cost recovery measures for financing of higher education.

In Indian context, the National Knowledge Commission (NKC) has also emphasised the significance of

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### Syed Sajid Husain Kazmi

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He has published numerous research articles in reputed peer reviewed National and International Journals. He has edited 2 Books entitled "Traumashastra: Biopsychosocial Perspectives of Trauma" in 2019 and "COVID-19: Biopsychosocial Perspectives" in 2020. He is Editor of Journal of Advance Research in Science and Social Science (JARSSC), a peer reviewed and refereed Open access Journal.



### Mohd Ali

He is a qualified teacher educator actively associated with various social platform working toward reforming Indian Education system. He has completed M.A., M.Sc. and M.Ed. from Lucknow University. He has qualified UGC NET-JRF

examination and currently working as Assistant Professor in the Department of Education, Shia P.G. College, Lucknow. His area of interest are Educational Psychology, Social Psychology, Special Education and Indian Education System.

He has published various research papers in National and International Journals and also in the Editorial Board of Journal of Advance Research in Science & Social Science (JARSSC). He has also co-edited a book entitled "Traumashastra".



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Chap 78

### Gandhiji's Vision of Science and its Contemporary Relevance

S.S.R. Bagri, Mohd Ali<sup>2</sup>, & Sarraj Shabbar Rizvi<sup>3</sup>

#### Abstract

Gandhiji being the father of our great nation is a beacon of light for every Indian and his towering personality continues to have a huge bearing on the salient features of our democratic life. Gandhiji's lasting legacy is an important frame of reference for all policy makers and our democratic institutions are basically founded on his vision. Unlike the principles of civil and non violence which are well understood as the cornerstone of Gandhian philosophy, his views on science and technology stand ill defined and are misinterpreted even to date. Gandhiji's insistence on the use of domestic resources, for instance, is often presented as a case of his reluctance to embrace industrialization. This paper is an attempt to attain the same objective by taking a fresh look at his sayings that are accessible and unequivocally accepted.

**Keywords:** Gandhiji, Truth, Scientific method, Industrialization, Urbanization, Spinning wheel, Khadi, Environmental deterioration

#### Introduction

In the ancient and medieval periods, science used to be an intellectual pursuit that was fraught with dangers if it clashed with religion or traditional beliefs. In the post-renaissance Europe, the spirit of inquiry and exploration sparked an unprecedented growth of scientific knowledge and heralded the era of innovations and discoveries. Scientific developments began to make their influence felt in every walk of human life and in due course of time they improved the quality of life to such an extent that life became inconceivable in the absence of technological innovations. Scientific ideas illuminated human minds and enabled mankind to explain the working of the world around us through rational explanations about the natural phenomena. By the turn of the twentieth century, science and technology came to assume such prominence that the level of scientific development became a reliable indicator of a nation's progress.

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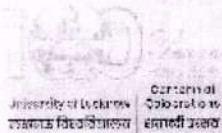
रखेछा से कानून-पालन की आदत होती है. इसीलिए इसे अन्तिम अस्त्र के रूप में ही प्रयोग में लाना चाहिए। सविनय अवज्ञा हृदय से आदर्शपूर्ण और संयत होनी चाहिए। इसके पीछे घृणा और शत्रुता की कोई भावना नहीं होनी चाहिए।

6. उपवास : यह सत्याग्रह का कठिनतम अस्त्र है। त्याग की भावना प्रेरित होकर आत्मशुद्धि के उद्देश्य से किया गया उपवास कभी भी किसी को अपमानित करने या दबाने की इच्छा से प्रेरित नहीं होता। उपवास सत्याग्रह है और भूख हड़ताल दुराग्रह। गांधी जी ने उपवास को वैयक्तिक साधन से सामाजिक साधन बना दिया और मान्यता प्रकट की। सर्वजनिक उपवास जनता की आत्मशक्ति में वृद्धि करता है।

अतः निष्कर्ष के रूप में हम यह कह सकते हैं कि पूरी मानवजाति के कल्याण के लिए सत्याग्रह गांधी जी एक अनुपम देन है. एक नरदान है अब जहाँ तक गांधी विचारों की प्रासंगिकता को लेकन है, तो जहाँ आप दुनिया भौतिकता की चपेट में हताश, कुतित और एक-दूसरे के शत्रु के रूप में एक-दूसरे को देख रही है, वही आज गांधीवाद फिर से प्रासंगिक हो जा रहा है. क्योंकि गांधीवाद के सिद्धान्त के केन्द्र में मशीन न होकर मनुष्य है, पूँजीवाद न होकर सर्वोदय है, भौतिकवाद न होकर एक संतुलित जीवन की कामना है, जो कि जीवन को उसकी जल्लरा की कसौटी पर रख देखाता है, न कि इच्छा पर। फिर यूएनओआओ द्वारा 2 अक्टूबर को अंतरराष्ट्रीय शांति दिवस मनाया जाना इस बात का प्रबल समर्थन करते हैं कि गांधीवाद आज भी प्रासंगिक है, सम्पूर्ण मानव जाति का कल्याण के निमित्त इति पवित्र मार्ग कोई अन्य नहीं हो सकता है।

#### सन्दर्भ

1. समाज दर्शन सैद्धान्तिक एवं समसाम्यक विवेचन डॉ० हृदय नारायण मिश्र प्रकाशन इलाहाबाद, 2006
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50	PARIKSHIT N H	Experimental Investigation on the Influence of Natural and Commercial available absorbent as Internal curing agent on cement mortar
51	DIVYA	Perception of New It Rules Towards OTT Platforms
52	UPMA TRIPATHI	Impact of New Education Policy 2020 on Higher Education

**Day- 2 (27<sup>th</sup> Oct, 2021) 1:00 PM to 2:00 PM**

Oral Presentation (Main Session)

Zoom link: <https://us02web.zoom.us/j/81944436673?pwd=UXhKL2pkQ0tIQ2ozSnJlQXRWNFordz09>

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Note: You will get only 08 min for oral Presentation

Sr. No.	SPEAKER	TOPIC
53	SHIVAM PANDEY	
54	SUDHAKAR PRAKASH	Studies on a species of the Genus <i>Allocreadium</i> from fresh water fishes, Sitapur, U.P. India
55	RACHITA AWASTHI	WOMEN EDUCATION ; A KEY OF SUCCESS SOCIETY
56	SHAHLA FAIZAN	Effect of fly ash application on the growth and productivity of wheat ( <i>Triticum aestivum</i> )
57	VANDNA SHAKYA	Study of surface morphology of zno-wo <sub>3</sub> nanocomposites and it's application as solid state humidity sensor
58	SHAMSHER KHAN	Impact of online education and e-learning on higher education: potential and benefits

**1.00 PM to 2.00 PM Day-2 (27<sup>th</sup> Oct, 2021)**

Parallel Session

Session chair: Dr. Shiba Sethi  
Dr. K.C. Dubey

Oral Presentation

Email: [susheelsingh489@gmail.com](mailto:susheelsingh489@gmail.com)

Mobile No. 7082859537


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59	KUMANAN	Field evaluation of pumpkin genotypes to sodicity
60	KANEEZ MEHDI ZAIDI	Constructivism as an Interdisciplinary Approach to Learning
61	PRACHI BISHT	A differential analysis of the mental health of the farm women with young children and teenagers during COVID 19 pandemic
62	AMIT KUMAR	Group invariant solutions and Dynamical wave profile of the (3+1)-dimensional generalized KP equation using Lie symmetry method
63	DR HARISH RAJAK	Identification of novel scaffold for HDAC inhibitors as anticancer agent: Computer aided drug design studies
64	MITALI HALDER	Socio-Economic Development of Primitive Tribes

  
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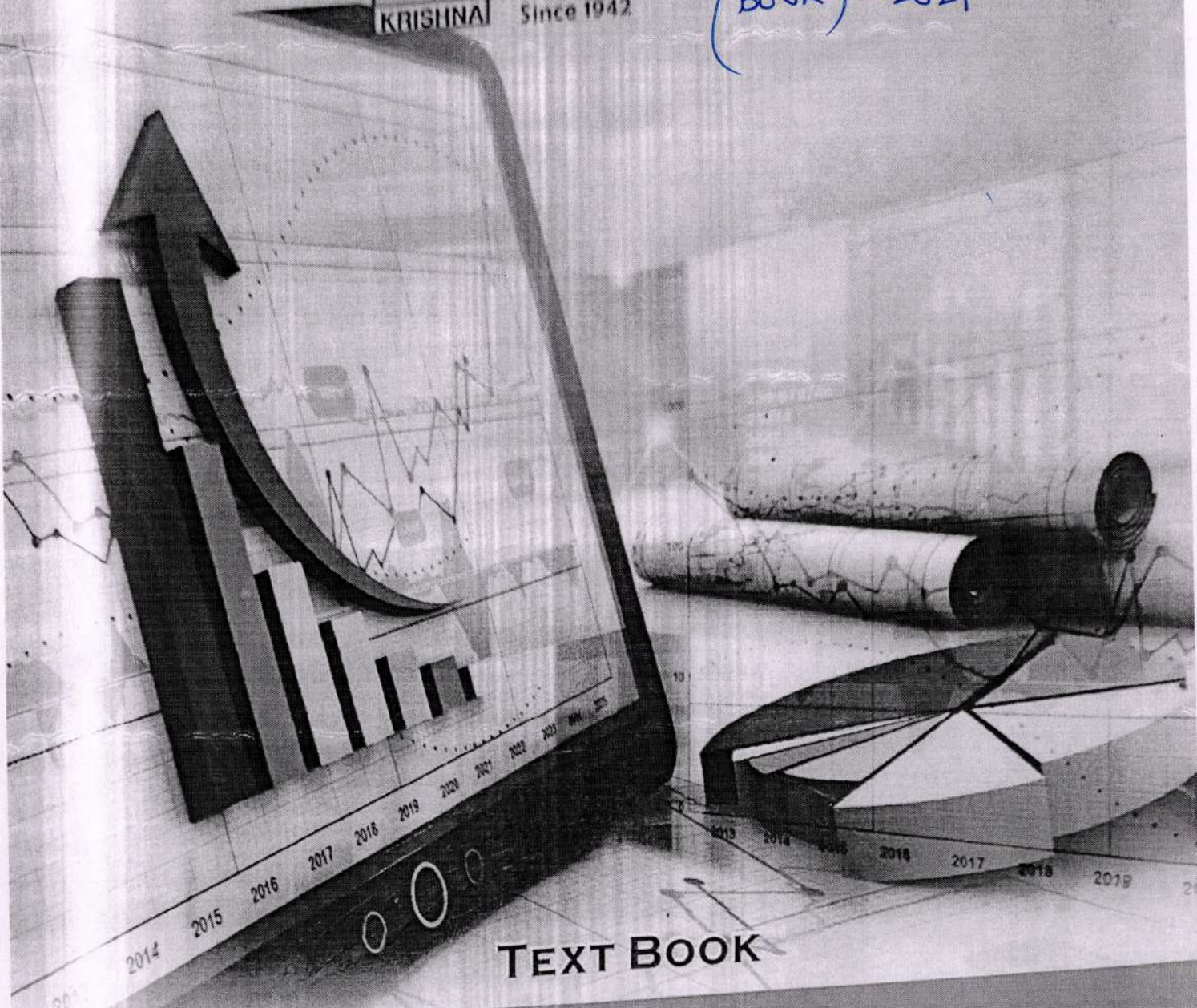


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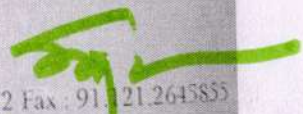
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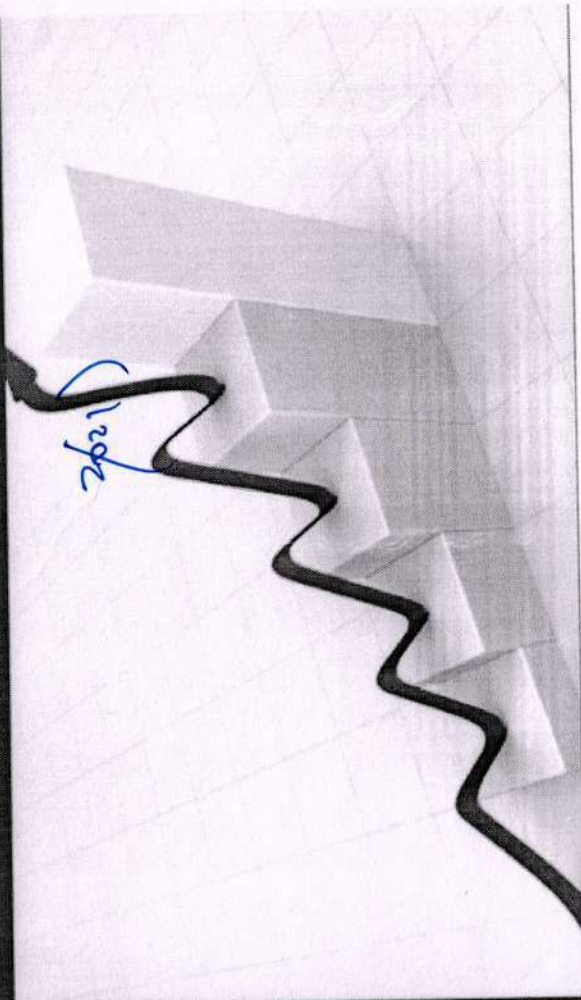
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# Recent Advances in Applied Statistics and its Applications

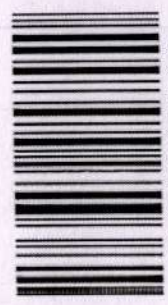


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AN ALTERNATIVE ESTIMATOR OF FINITE POPULATION VARIANCE USING AUXILIARY INFORMATION

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ABSTRACT

Principal

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Using auxiliary information, an alternative estimator of finite population variance is proposed; its bias and mean square error (MSE) are found. Further, an optimum estimator with estimated optimum values is investigated and its properties are analyzed. As an illustration, an empirical example is also included in support of the theoretical findings. **Keywords:** Auxiliary Information, Mean Square Error (MSE), Optimum and Estimated Optimum Estimator.

1. INTRODUCTION

Let  $(Y_i, X_i)$  be the values on the variables  $(y, x)$  for the  $i^{th}$  ( $i = 1, 2, \dots, N$ ) unit of a finite population of size  $N$  where  $y$  and  $x$  are the study and auxiliary variables respectively. Let  $(\bar{Y}, \bar{X})$  be the population means of  $(y, x)$  respectively and

$$h_{rs} = \frac{1}{N} \sum_{i=1}^N (Y_i - \bar{Y})(X_i - \bar{X}) \quad (1.1)$$

Further, let a simple random sample of size  $n$  be drawn from the population with the sample observations  $y_1, y_2, \dots, y_n$  on  $y$  and  $x_1, x_2, \dots, x_n$  on  $x$ . Also let  $\bar{y} = \frac{1}{n} \sum_{i=1}^n y_i$  and  $\bar{x} = \frac{1}{n} \sum_{i=1}^n x_i$  be the sample means of  $y$  values and  $x$  values respectively. For simplicity, we assume that  $N$  is large enough as compared to  $n$  so that the finite population correction terms may be ignored.

We know that finite population variance  $\sigma_y^2$  of the study variable is

$$\sigma_y^2 = \frac{1}{N} \sum_{i=1}^N (Y_i - \bar{Y})^2 = \theta - \bar{Y}^2 \quad (1.2)$$

where  $\theta = \frac{1}{N} \sum_{i=1}^N Y_i^2$ .

We can further write

$$\sigma_y^2 = \bar{Y}^2 \left( \frac{\theta}{\bar{Y}^2} - 1 \right) \quad (1.3)$$

where  $\left( \frac{\theta}{\bar{Y}^2} - 1 \right) \geq 0$ .

Replacing  $\theta$  and  $\bar{Y}^2$  in (1.3) by their some consistent or unbiased estimators, we may get an alternative estimator of the population variance  $\sigma_y^2$ . In particular, replacing  $\theta$  by its unbiased estimator  $\hat{\theta} = \frac{1}{n} \sum_{i=1}^n Y_i^2$ ,  $\bar{Y}^2$  by its consistent estimator  $\bar{y}^2$  and using the ratio, product or difference type methodology, we get the following estimator of  $\sigma_y^2$ :

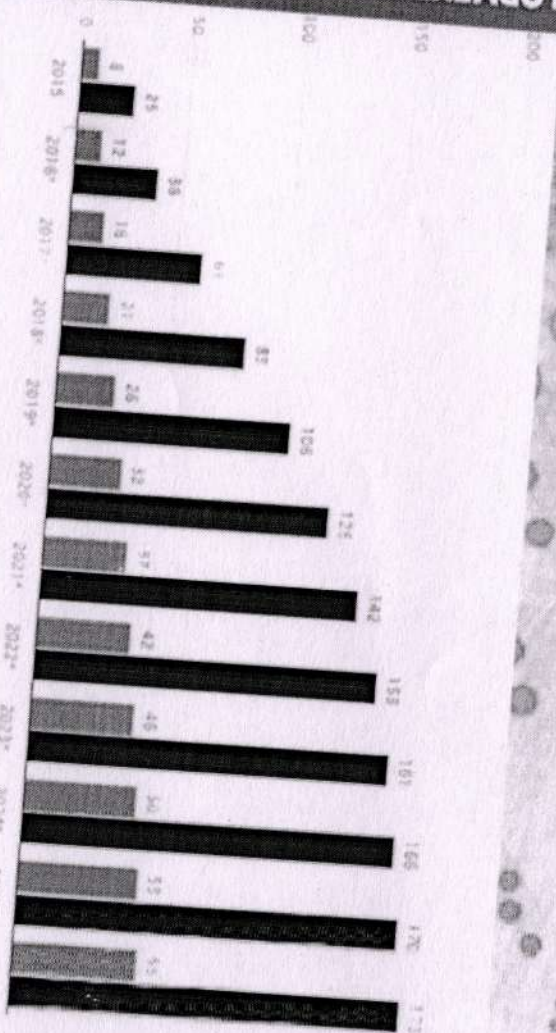
$$s_z^2 = \left\{ \bar{y}^2 + k(\bar{x} - \bar{X}) \left( \frac{\hat{\theta}}{\bar{y}^2} - 1 \right) \right\} \quad (1.4)$$

where  $k$  is a characterizing scalar minimizing the mean square error of the estimator.

Dr Athar Hasan (Chapter 2)

2021

# APPLIED RESEARCH DEVELOPMENT IN STATISTICAL AND COMPUTATIONAL SCIENCES



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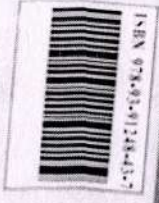
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## Chapter: 4

## DIFFERENCE - REGRESSION TYPE ESTIMATOR OF POPULATION VARIANCE

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## Abstract:

For estimating finite population variance using information on single auxiliary information in the form of mean, a difference-regression type estimator is proposed. The bias and mean square error (MSE) of the proposed estimator are found and its properties are studied. Further, an optimum estimator with estimated optimum value is also investigated. The comparative study showing its efficiency over the usual conventional estimator of population variance is also carried out. As an illustration, an empirical example is also included in support of theoretical findings.

**Keywords:** Difference - Regression type estimator, Auxiliary information, Bias and Mean Square Error

(MSE), Optimum and Estimated Optimum Value, Efficiency.

## 1. Introduction:

Let  $(Y_i, X_i)$  be the values on the variables  $(y, x)$  for the  $i^{th}$  ( $i = 1, 2, \dots, N$ ) unit of a finite population of size  $N$  where  $y$  and  $x$  are the study and auxiliary variables respectively. Let  $(\bar{Y}, \bar{X})$  be the population means of  $(y, x)$  respectively and

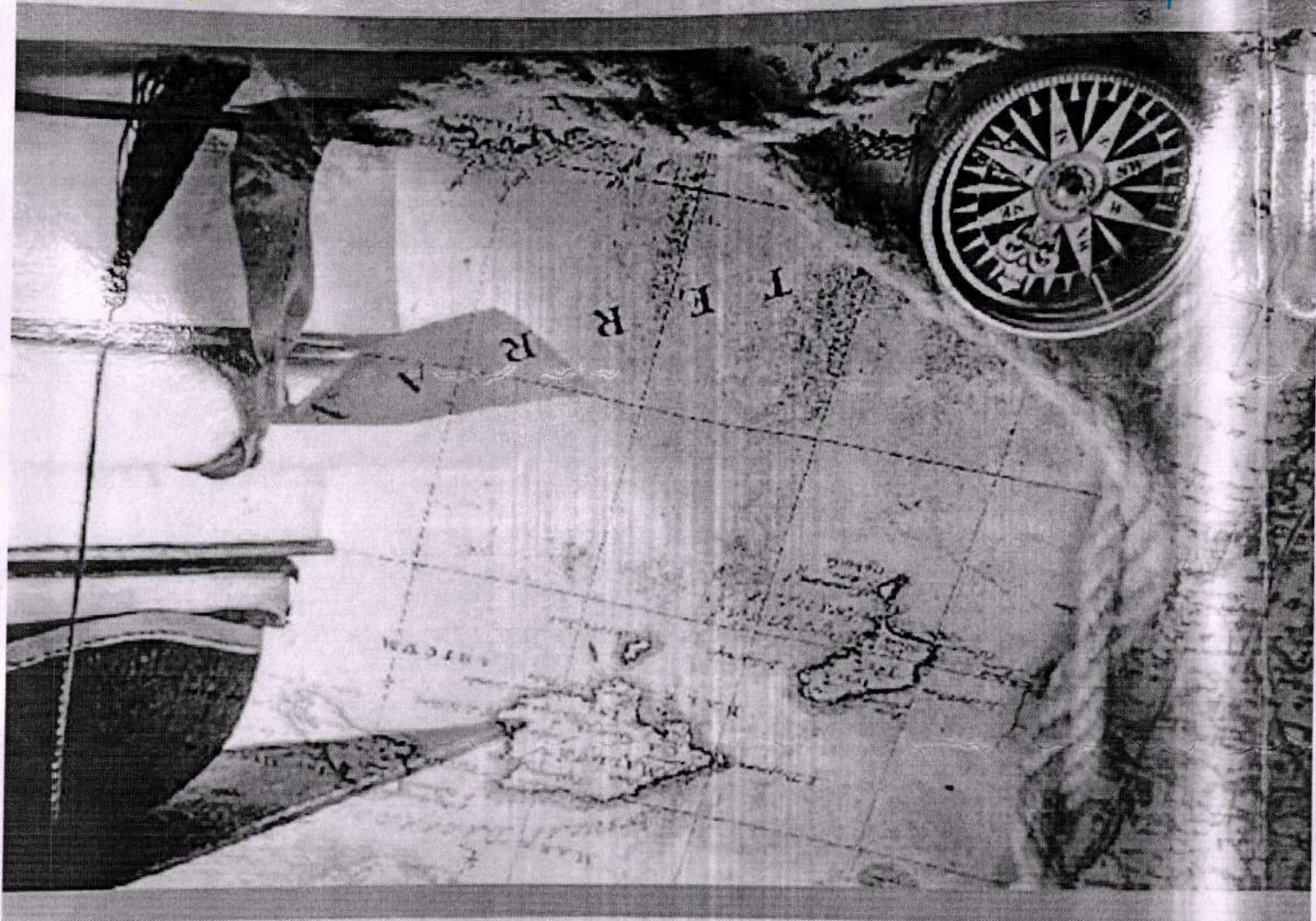
$$\mu_{rs} = \frac{1}{N} \sum_{i=1}^N (Y_i - \bar{Y})^r (X_i - \bar{X})^s \quad (1.1)$$

Further, let a simple random sample of size  $n$  without replacement be drawn from the population with sample observations  $y_1, y_2, \dots, y_n$  on  $y$  and  $x_1, x_2, \dots, x_n$  on  $x$ . Also let  $\bar{y} = \frac{1}{n} \sum_{i=1}^n y_i$  and  $\bar{x} = \frac{1}{n} \sum_{i=1}^n x_i$  be the sample means of  $y$  values and  $x$  values respectively. For

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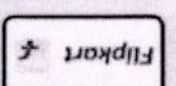
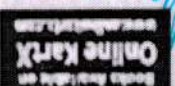
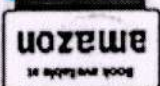
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## Chapter-2

Zinc Oxide thin film as H<sub>2</sub>S Gas Sensor

<sup>1</sup>Shazia Umar\*, <sup>2</sup>Sangh Mittra, <sup>3</sup>Susheel Kumar Singh, <sup>4</sup>Bhuvan Bhasker  
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## Abstract:

The zinc oxide thin film have been synthesized and studied as the sensing element for the detection of H<sub>2</sub>S gas. The zinc oxide thin films were synthesized by dip-coating method. Gas sensing properties of zinc oxide thin films were studied for H<sub>2</sub>S, LPG and NH<sub>3</sub> gases by changing the concentration of test gases. The prepared zinc oxide thin films can be used as promising material for semiconductor gas sensor for poisonous gases like H<sub>2</sub>S with high sensitivity. We report the conducting and transparent ZnO thin films fabricated by sol-gel dip-coating method. XRD, UV-VIS, SEM and PL are used to characterize these films. X-ray diffraction studies show that films are polycrystalline in nature and have hexagonal wurtzite structure. These films are found to show (002) preferential growth.

**Keywords:** Zinc oxide; Thin film; Gas sensors; Dip coating; XRD; SEM

## Introduction:

Dip-coating technique is used for the synthesis of zinc-oxide thin film. Dip coating is a very simple technique widely used for thin film deposition. Hydrogen sulphide (H<sub>2</sub>S) is a toxic and inflammable gas, produced in sewage plants, coal mines and oil and natural gas industries [1]. It is used in large amounts in various chemical industries, research laboratories and as a process gas in the production of heavy water. It is required to detect H<sub>2</sub>S at these low levels. Spectral and fluorescence analysis [2,3] maybe used for detecting low concentrations of this gas but these sensors have high cost and large size. Semiconductor gas sensors have proved to be a low cost convenient option for monitoring of gas species and sensors in the form of thin or thick films, based on metal oxides like SnO<sub>2</sub>, ZnO. Semiconductor gas sensors have proved to be a low cost and convenient option for monitoring of gas species and sensors in the form of thin or thick films, based on metal oxides like SnO<sub>2</sub>, ZnO have been reported for detection of H<sub>2</sub>S gas [4, 5] in a ppm range.

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Applied Research in Humanities and Social Science

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Constructivism the theory of learning is a prominent educational theory in the 21st Century as it aims at developing skills like collaboration, reasoning, creative thinking and problem solving. The theory finds its origin Piaget's theory of cognitive development which explains how children reason about the world. Constructivism is based on the idea that knowledge is constructed and learners are active creators of knowledge. Learning takes place by contemplation and comparison of new ideas with our previous knowledge and consequently arriving at conclusions through logic and reasoning. Constructivism emphasizes that students need to engage in active learning through personal experiences. The theory suggests that people create their own

**Introduction**

**Keywords:** Constructivism, Interdisciplinary approach, Learning

process the theory puts forward interdisciplinary approach to learning, throwing light on various dimensions of the learning process. In this context this paper is an attempt to analyse theory of constructivism as an meaningful, purposeful and deeper resulting in learning experiences that stay with the student for learning and connecting it to a real-world context. Consequently, the learning becomes centered, very often the content is rooted in life experiences, giving an authentic purpose for the world through their study choices. Interdisciplinary study is usually theme or problem centered, very often the content is rooted in life experiences, giving an authentic purpose for the concepts to reach a point of understanding is essentially an interdisciplinary study. Constructivism emphasizes that learners are creating their own understanding and knowledge of arriving at conclusions through logic and reasoning. Making connections between different contemplation and comparison of new ideas with our previous knowledge and consequently knowledge is constructed and learners are active creators of knowledge. Learning takes place by explains how children reason about the world. Constructivism is based on the idea that problem solving. The theory finds its origin Piaget's theory of cognitive development which Century as it aims at developing skills like collaboration, reasoning, creative thinking and Abstract Constructivism the theory of learning is a prominent educational theory in the 21st

Chapter 7  
Constructivism as an Interdisciplinary Approach to Learning  
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*Chapter 7*

*2021*

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Prof. R. K. Shukla is Professor in Department of Physics at University of Lucknow, Lucknow. He has published more than 200 research paper in prestigious international journals. His research interests focus on Free Electron Laser, Fiber Optics Sensors and Material Science. He has supervised several Ph.D. Thesis in the field of Material Science and Sensors. Prof. Shukla has earlier authored several books like Mechanics, Optics, Quantum Mechanics, Fiber Optics, Practical Physics etc. Prof. Shukla has two Patents on Refractometer Sensor to his credit. He has established Thin and Thick films Laboratory in his Department. He also participated and delivered his talk in number National and International Conferences. He has successfully completed major research Projects funded by DST, Govt. of India and UGC, New Delhi.



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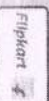
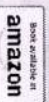
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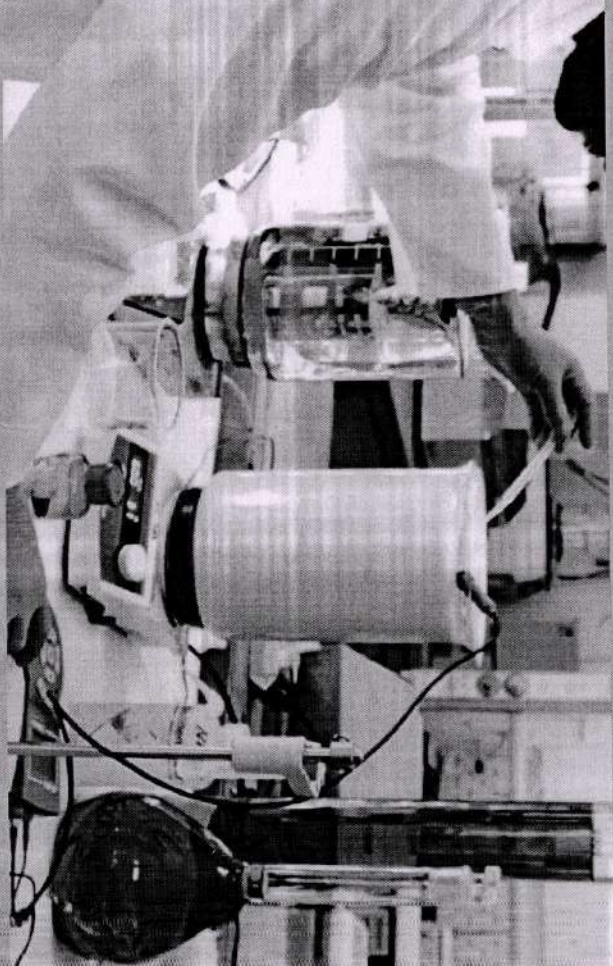
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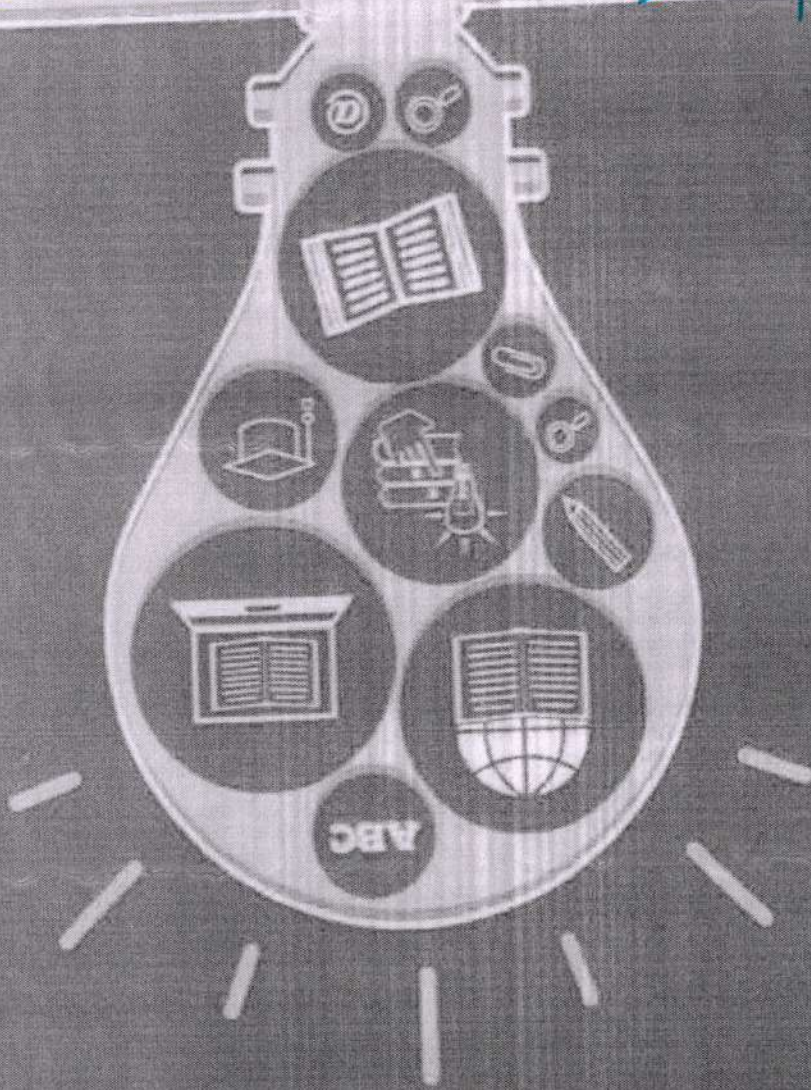
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He has published various research papers in National and International Journals and also in the Editorial Board of Journal of Advance Research in Science & Social Science (JARSSC). He has also co-edited a book entitled "Traumashastra".

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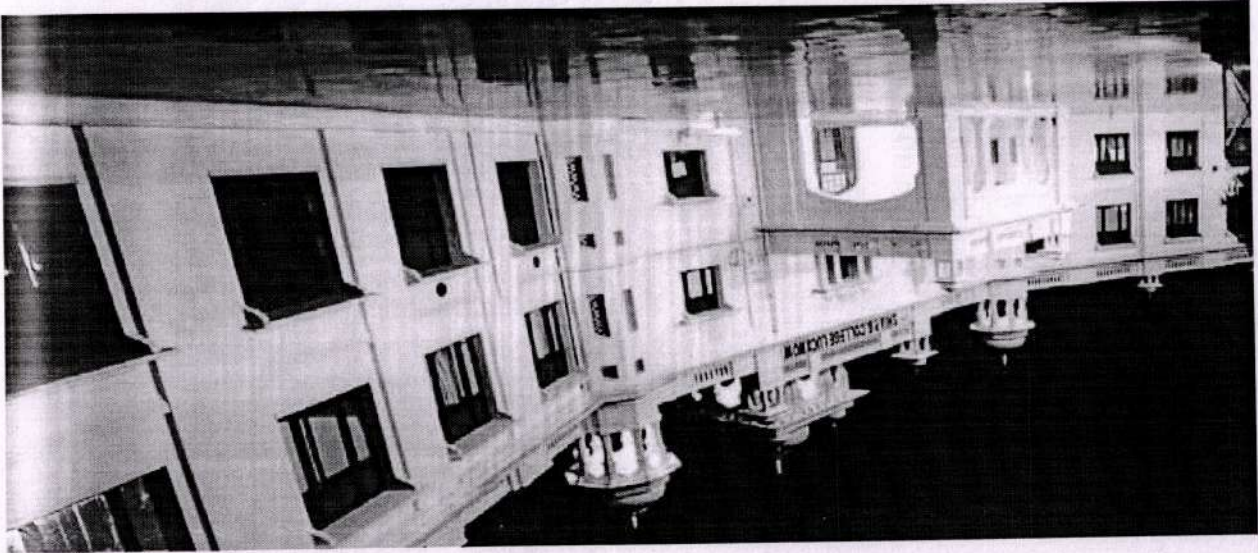
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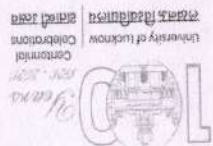
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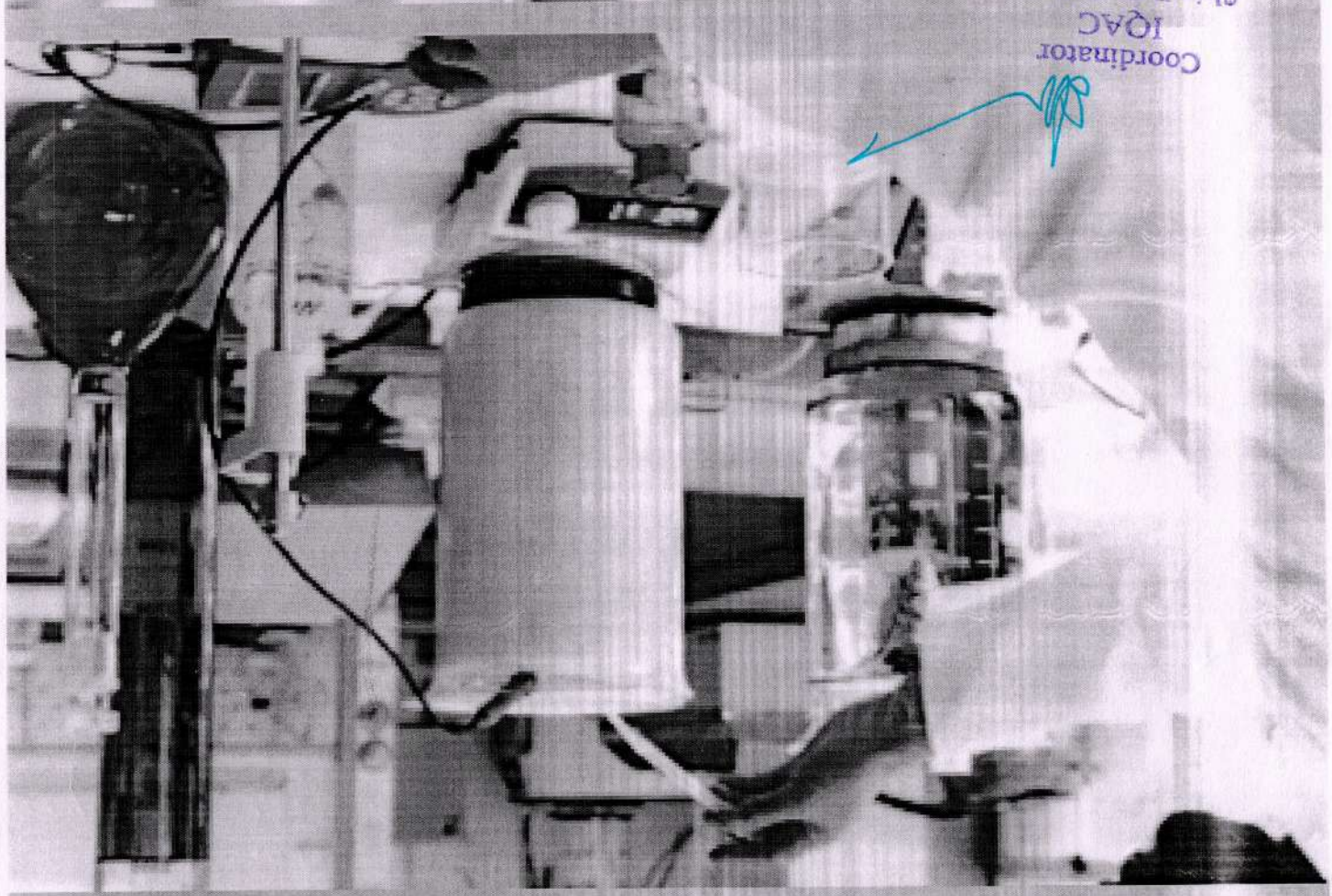
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# Applied Research Development in Physical & Chemical Sciences and Engineering

Dr. Syed Hasam Mehdi  
C-1 Chemistry  
2021



Chapter-9  
Molecular docking study of Glycozolidal (2,7-dimethoxy-9H-carbazole-3-carbaldehyde),  $C_{15}H_{13}NO_3$

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Abstract:

The present manuscript deals with the molecular docking study of our earlier reported compound Glycozolidal (2,7-dimethoxy-9H-carbazole-3-carbaldehyde),  $C_{15}H_{13}NO_3$  known for its various pharmacological properties like anti-cancer, anti-malaria, anti-TB and anti-HIV. Present study has revealed that the studied molecule has a very good docking with the target protein BFG which is exhibited in the three dimensional docking figure. The physico-chemical properties of the compound have also been calculated using Gaussian 09 software using DFT which has established that the molecule has a potential scope as an anti-carcinogenic candidate. To the best of our knowledge docking study is not reported yet for the present compound.

Keywords: Glycozolidal (2,7-dimethoxy-9H-carbazole-3-carbaldehyde),  $C_{15}H_{13}NO_3$ ];  
 Molecular docking, Anti-cancer.

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Department of Applied Physics  
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1. Introduction

Study of modern medicine is a flourishing field with activities around the identification, characterization and assessment of therapeutic potential of phytochemicals in various disease conditions. Carbazole alkaloids, being prominently present in various medicinal herbs like Rutaceae plants, especially in Clausena genus, are being widely studied to unravel the molecular mechanisms associated with their effects. The compound Glycozolidal (2,7-dimethoxy-9H-carbazole-3-carbaldehyde),  $C_{15}H_{13}NO_3$ , is a naturally occurring carbazole, which is isolated from the roots of Clausena lanium, is reported to possess diverse pharmacological activities such as anti-cancer, anti-malaria, anti-TB and anti-HIV properties[1,2]. We have reported its geometry optimization, vibrational assignments and thermodynamic studies in our earlier work [3]. In the current manuscript we have reported the molecular docking study due to its pharmacological properties in order to obtain a deeper understanding of the compound. The examined compound is docked with protein receptor neuropeptide Y (NPY) having anti-carcinogenic behavior, which is taken

Evaluation of *Wrightia tinctoria* R. Br. for antiproliferative potential, chemical characterization of chloroform fraction and identification of bioactive compounds

Chapter-14

CH-2 (2024)

Nishat Fatima<sup>1</sup>  
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#### ABSTRACT:

*Wrightia tinctoria* R. Br. is an important medicinal plant commonly known as "Sweet Indrajao, Boy's Olander and Pala Indigo Plant", belongs to family Apocynaceae. The present work was carried out to evaluate the anticancer potential and characterization of bioactive principles of *W. tinctoria* bark using chloroform (WTC) fraction.

The anticancer activity was investigated by using 3-[4,5-dimethylthiazol-2-yl]-2,5-diphenyl tetrazolium bromide (MTT) assay and colony formation assay for cell viability. Hoechst staining was performed to examine the apoptosis and H2DCFDA was used to determine ROS mediated cell death in breast cancer (MDA-MB-231 and MCF-7) cells. Bioassay guided strategy with Gas Liquid Chromatography Mass Spectrometry (GLC/MS/MS) were performed for compounds identification.

Our experimental findings from different *in vitro* assays showed that the *W. tinctoria* crude extract and different polar to non polar fractions exhibited significant inhibition of growth and proliferation of breast cancer cells. Among different fractions, the WTC fraction imparted persuasive anticancer activity. Fluorescence microscopy with Hoechst and H2DCFDA dye staining showed that the WTC fraction induces ROS mediated apoptosis in MDA-MB-231 and MCF-7 cancer cells. The GLC-MS/MS profiling of WTC fraction demonstrated sixteen compounds which belong to different chemical classes showing the rich chemical diversity of *W. tinctoria*.

In conclusion, our study revealed an extensive biochemical profile of *W. tinctoria* bark fraction as well its potential as a pharmacological agent with respect of its antiproliferative property. Therefore, further in depth studies are needed to scrutinize the molecular based mechanism involved in anticancer activity of *W. tinctoria* bark along with isolation and identification of bioactive principles.

Keywords: Anticancer, breast cancer, *Wrightia tinctoria*, phytochemicals, Apoptosis

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Applied Research Development in Physical, Chemical and Pharmaceutical Sciences and Engineering

## Chapter: 1

## Medicinal importance of oligosaccharides

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**Abstract:** Oligosaccharides (carbohydrates) are composed from 2 to 10 simple units of monosaccharides. Oligosaccharides possess many crucial functions in biological systems such as cell binding and cell recognition. The biological roles of oligosaccharides demonstrate to span the spectrum from those that are trivial, to those that are necessary for the growth, development, function or survival of an organism. Some general principles have been emerged. First, it is not easy to predict a priori the functions a given oligosaccharide on a provided glycoconjugate might be mediating, or their relative importance to the organism. Second, the sequence of same oligosaccharide may facilitate various functions at different locations within the same organism. Third, the more specific and promising biological functions of oligosaccharides are commonly mediated by unusual presentations of common-terminal sequences, unusual oligosaccharide sequences, or by further changes of the sugars themselves.

**Keyword:** Oligosaccharides, cell binding and cell recognition, glycoconjugate

**Introduction:**

Complex carbohydrates are regarded as main source of energy for the living body. Carbohydrates supply the continuous fuel to body requirements for daily living activities, exercise, and even rest. Complex carbohydrates are usually single units (monosaccharides), which are connected together. The oligosaccharides possess two to ten simple units of monosaccharides. Polysaccharides can be considered as polymer, and possess hundreds and thousands of monosaccharide units as monomer. Complex carbohydrates contain long sustained energy. The different types of carbohydrates can be classified on the basis of number of sugar units (monomers). They are mainly categorized into three groups and nicely depicted in figure 1.

Recent Research in Physical and Chemical Sciences

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Study of modern medicine is a flourishing field with activity revolving around the identification, characterization and assessment of therapeutic potential of phytochemicals in various disease conditions. Carbazole alkaloids, being prominently present in various medicinal herbs like Rutaceae plants, especially in Clausena genus, are being widely studied to unravel the molecular mechanisms associated with their effects. The compound occurring carbazole, which is isolated from the roots of Clausena lanstium, is reported to possess diverse pharmacological activities such as anti-cancer, anti-malaria, anti-TB and anti-HIV properties[1,2]. We have reported its geometry optimization, vibrational assignments and thermodynamic studies in our earlier work [3]. In the current manuscript we have reported the molecular docking study due to its pharmacological properties in order to obtain a deeper understanding of the compound. The examined compound is docked with protein receptor neuropeptide Y (NPY) having anti-carcinogenic behavior, which is taken

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1. Introduction

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Keywords: Glycozolidal (2,7-dimethoxy-9H-carbazole-3-carbaldehyde),  $C_{15}H_{13}NO_3$ ;

The present manuscript deals with the molecular docking study of our earlier reported compound Glycozolidal (2,7-dimethoxy-9H-carbazole-3-carbaldehyde),  $C_{15}H_{13}NO_3$  known for its various pharmacological properties like anti-cancer, anti-malaria, anti-TB and anti-HIV. Present study has revealed that the studied molecule has a very good docking with the target protein 5BFG which is exhibited in the three dimensional docking figure. The physico-chemical properties of the compound have also been calculated using Gaussian 09 software using DFT which has established that the molecule has a potential scope as an anti-carcinogenic candidate. To the best of our knowledge docking study is not reported yet for the present compound.

Abstract:

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Chapter-9  
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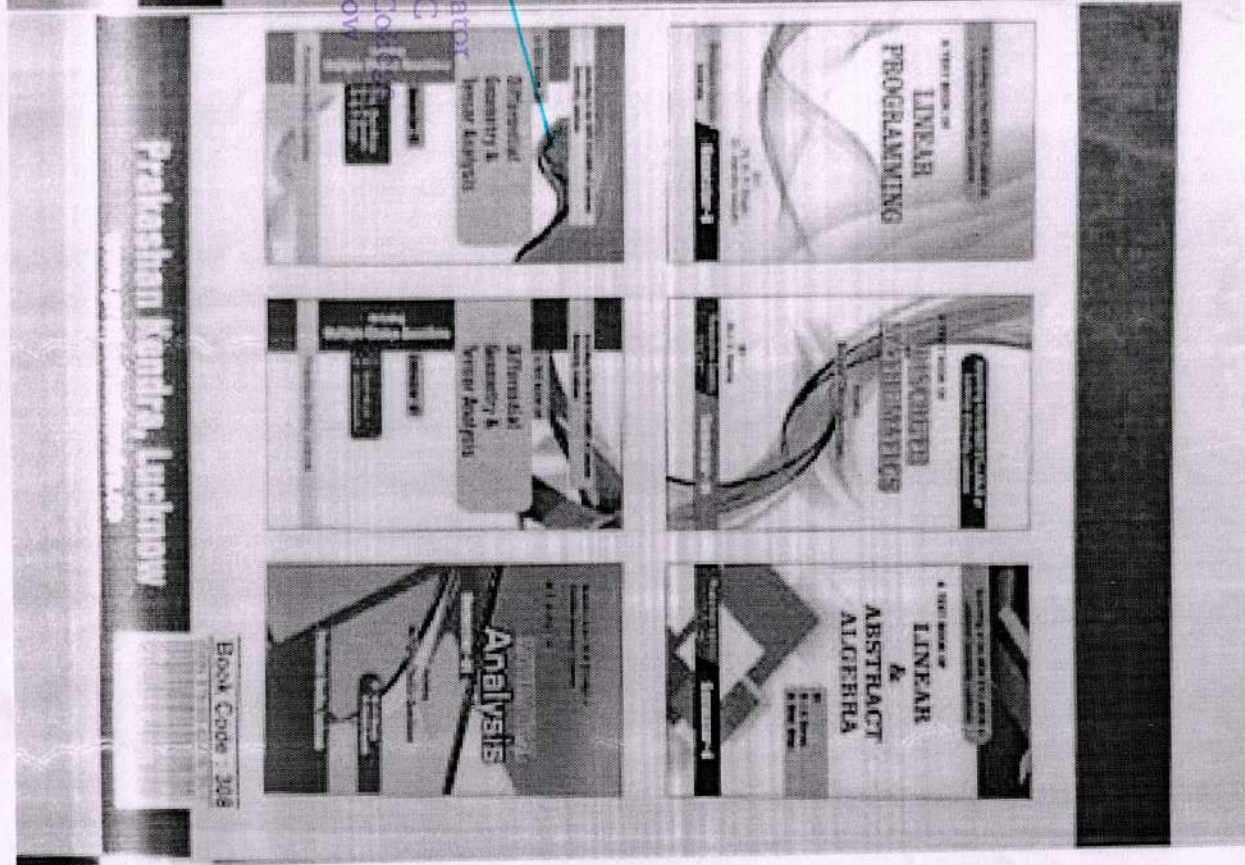
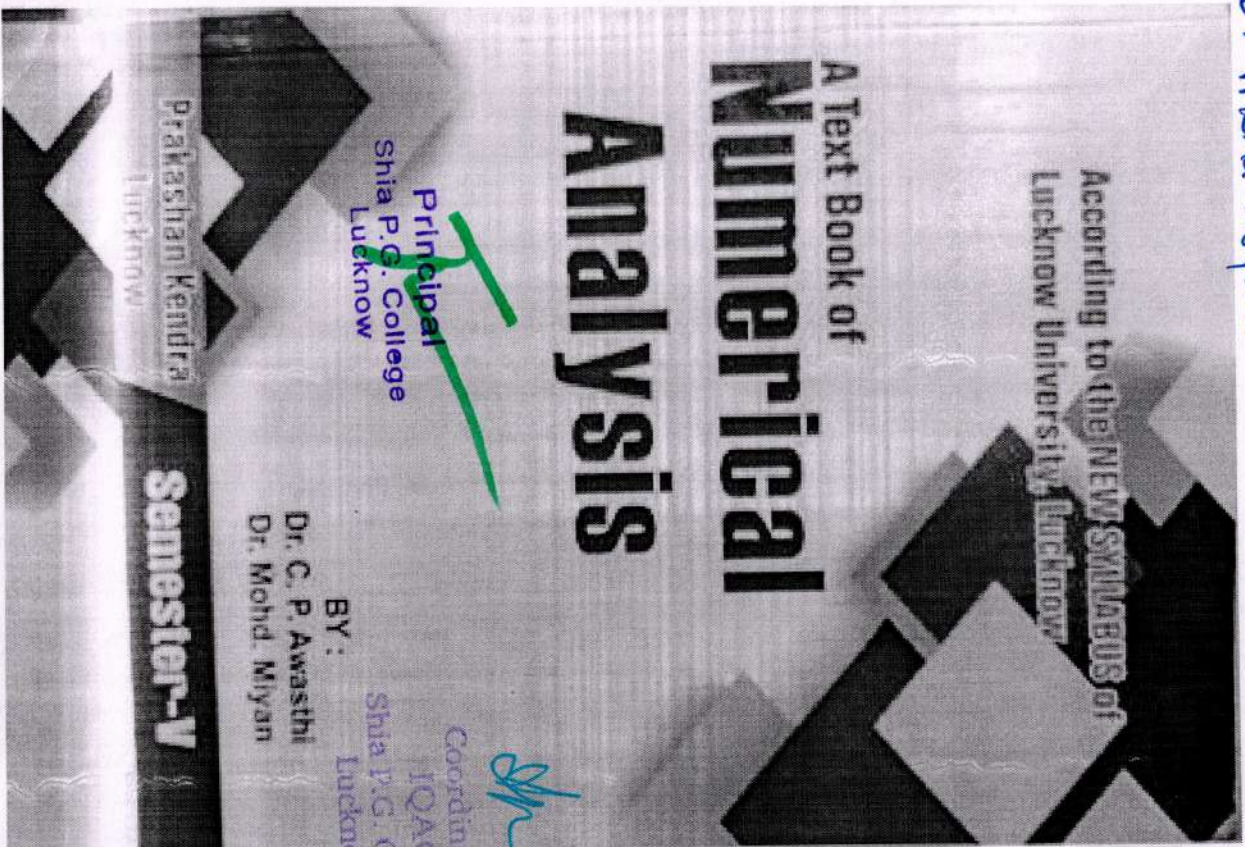
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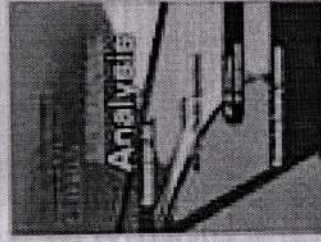
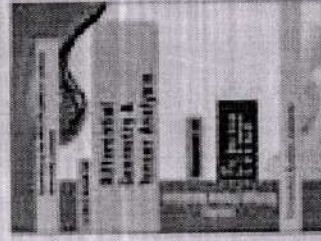
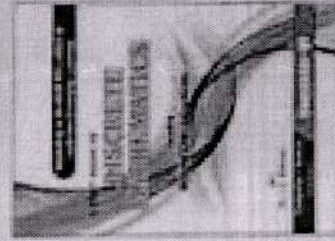
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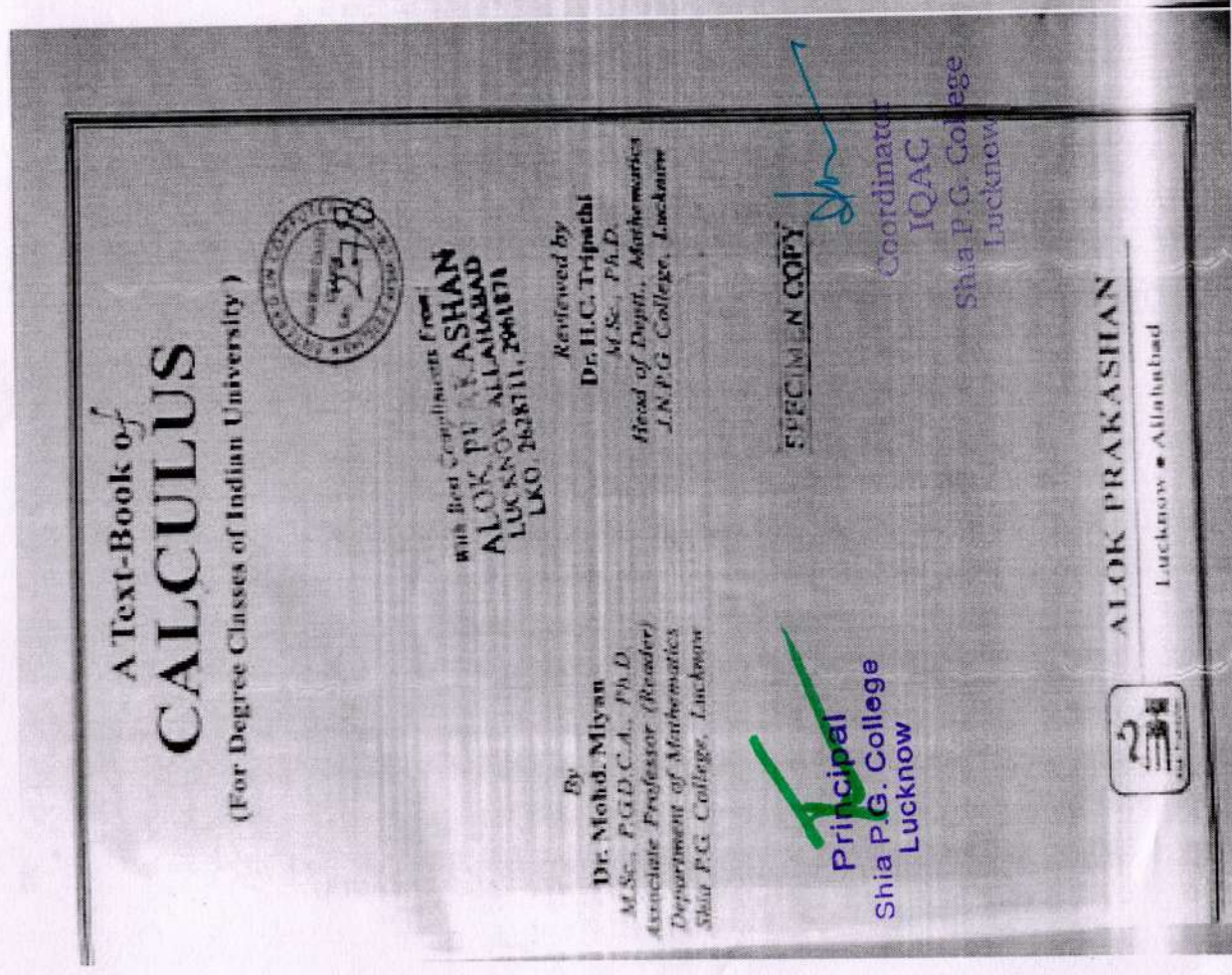
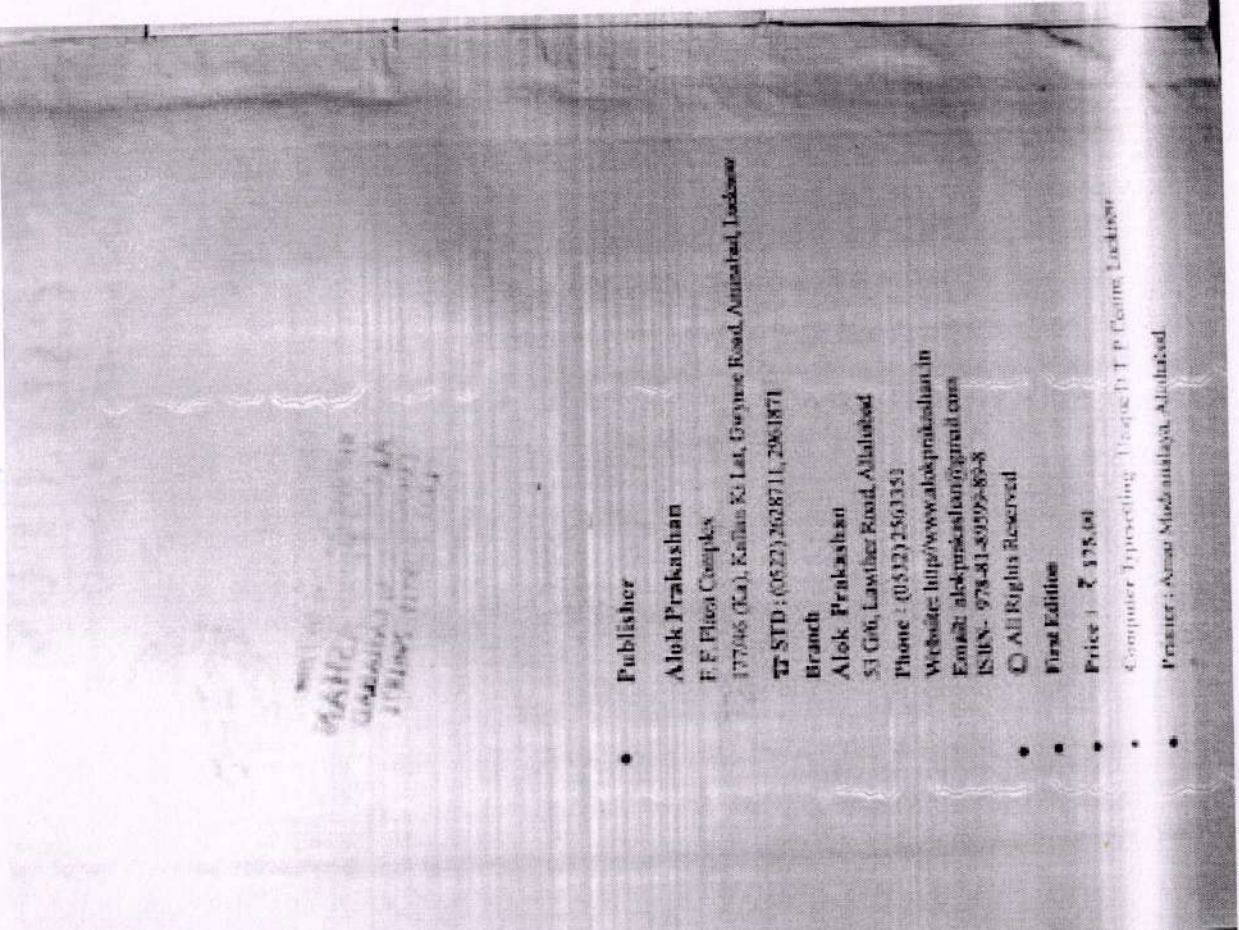


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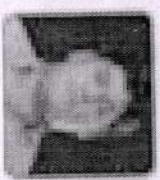
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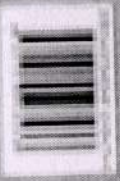
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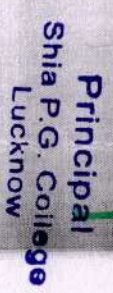
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# YOUTH EMPOWERMENT

Issues, Challenges & Concerns



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## Chapter-21

### LGBTQ REPRESENTATIONS IN FILMS

**Dr. Ritesh Chaudhary<sup>1</sup>,**  
Associate Professor, School of Media and Film Making,  
Himgiri ZEE University, Dehradun.


**Dr. Yogendra Pandey<sup>2</sup>,**  
Assistant Professor, Department of Journalism & Mass  
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*Homosexuality is a topic which is not so talked about in our society and if considered then people make fun of them, humiliate them and not take them as a part of the society. However, this inseparable part of the society is suffering a lot in every sphere of the corner. Because of their identity they are treated differently by those who are in majority. On the other hand Media is considered as puppet of the patriarchy and indirectly is controlled by the heterosexual community. It is always said that media reflects the society and get inspired by the pictures of the society. Thus, the authors tried to analyse the depiction of Lesbians, Gays, Bisexuals Transgenders and Queers in the media, mainly electronic media.*

**Keywords:** LGBT, Homosexuality, empowerment, Heterosexism

#### **Introduction**

Cinema can be very helpful in generating the social change and similar to rest of the art forms. cinema is also a part of social reality along with being a means of portraying it. The films can have slight impact on the how the society thinks. There is no doubt regarding the fact that cinema has had a lot of significant contribution to Indian queer movement. Sexual minority comprises of everyone who is a Lesbian, Gay, Bisexual, and Transgender. Projection of gender stereotypes in the movies contributes in forming the viewpoint of society regarding gender roles. When gender stereotypes are oversaturated in the movies which leads to falsification of gender roles that is then entrenched

  
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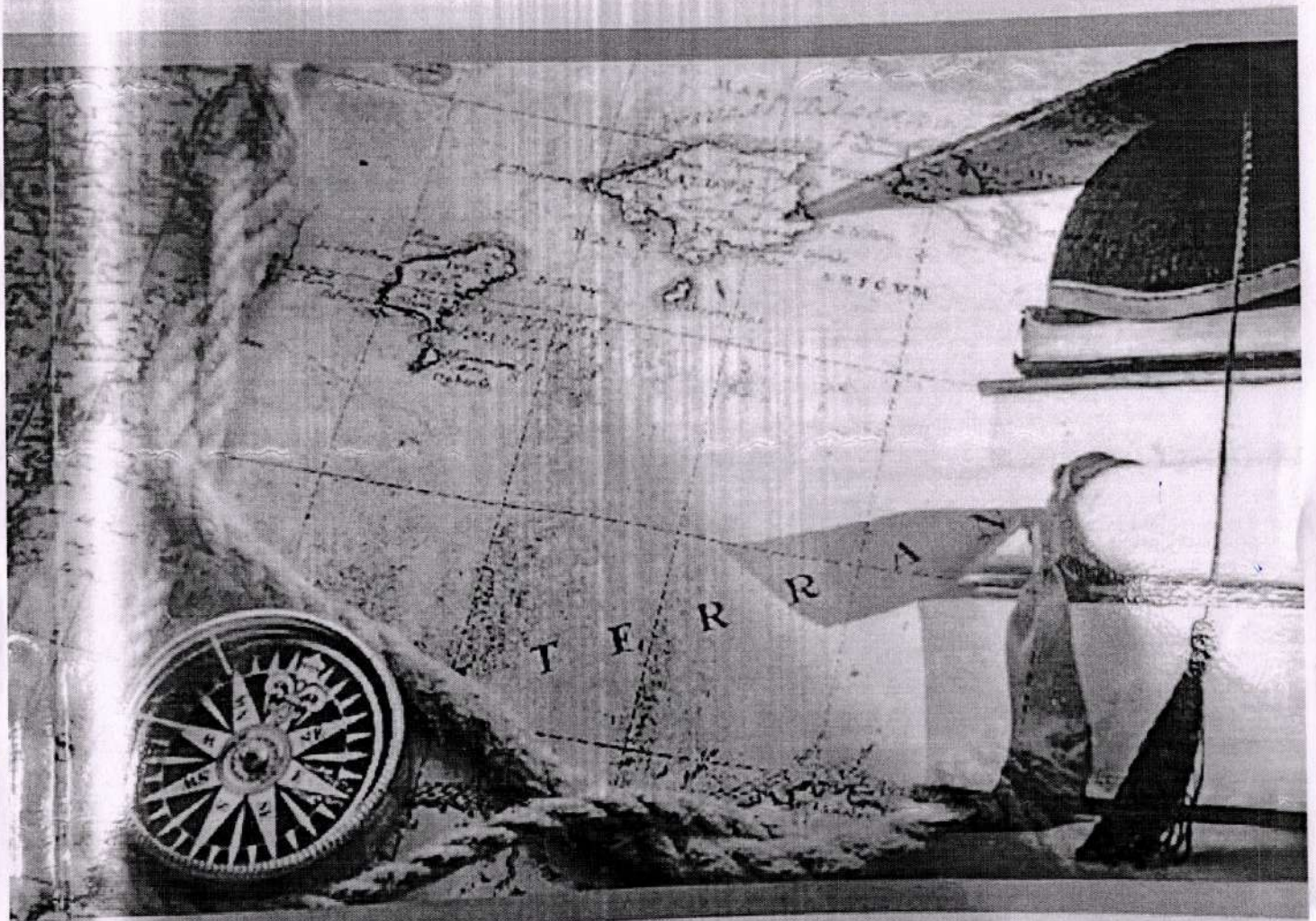
  
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# Applied Research in Humanities and Social Science




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## ABOUT THE EDITED BOOK

This book "Applied Research in Humanities & Social Science" is based on the proceedings of the "International Conference on Advancements in Interdisciplinary Research (ICAIR-2021)", Jointly Organized by Shia P. G. College, Lucknow (An Associated College of University of Lucknow, U.P. India) & Science Tech Institute, Lucknow (Run by: Manraj Kuwar Singh Educational Society, U.P. India), during October 26th-28th, 2021. The aim of this conference was to bring together the young as well as experienced researchers on one platform to discuss the recent findings in the aforesaid areas of Humanities & Social Science. After peer-reviewing process, 25 relevant research papers were finally included in this book as chapters.

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सहायक प्राध्यापक - हिंदी

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अर्चनं वन्दनं दास्यं सख्यमात्मनिवेदनम्।<sup>2</sup>

इस प्रकार विष्णु का श्रवण, कीर्तन, स्मरण, पादसेवन, अर्चन, वंदन, दास्य, सख्य और आत्मनिवेदन ये नौ स्वरूप माने गए हैं। किन्तु आचार्य वल्लभाचार्य ने इस नवधा भक्ति में एक और प्रेमलक्षणा भक्ति को जोड़कर 'दशधा भक्ति' का विधान बनाया। सूरदास ने भी दशधा भक्ति का उल्लेख किया है- 'श्रवणं कीर्तनं स्मरणं पाद रत अरचनं बंदनं दास्यं सख्यं और आत्म

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सूरसागर वास्तव में एक महासागर है जिसमें हर एक प्रकार का जल आकर मिलता है। जिस प्रकार उसमें मधुर अमृत है उसी प्रकार कुछ खारा, फीका और साधारण जल भी है। खारे, फीके और साधारण जल से अमृत को अलग करने में विवेचकों को प्रवृत्त रहना चाहिए। - आचार्य रामचंद्र शुक्ल


सूर-काव्य अमूल्य रत्नों का भंडार है। परिणाम और सौष्ठव का सामंजस्य संसार के बहुत कम कवियों में मिलता है, परन्तु सूर का काव्य तो सागर ठहरा - जो विस्तार और गहराई दोनों का समन्वित प्रतीक है। सूर ने अपने काव्य में एक नहीं, अनेक मौलिक उद्भावनाएँ प्रस्तुत की हैं। उनकी रचनाओं से हमें सूर की बहुज्ञता का भी परिचय मिलता है। संगीत के समन्वय ने इनके मधुर पदों में और भी माधुर्य छलका दिया है। वाग्वैदग्ध्य, व्यंजना, चित्रात्मकता, भावात्मकता, उक्ति चमत्कार आदि विशेषताएँ सूर में स्वाभाविक रूप में दृष्टिगोचर होती हैं। - डेजी वालिया

  
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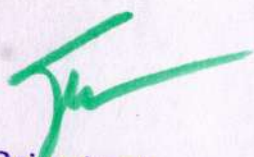
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# CONCEPTS OF VALUATION

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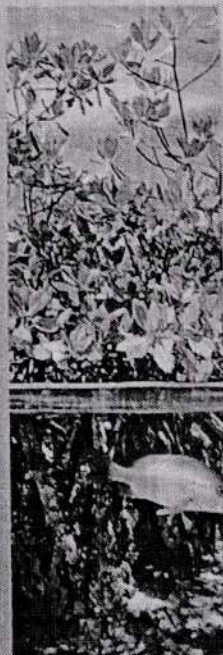
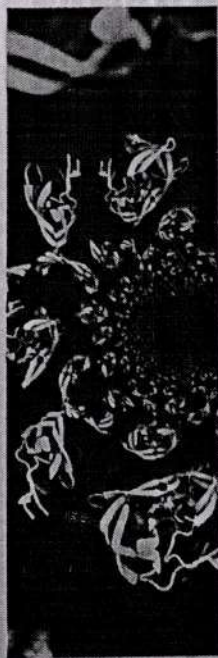
  
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# PLANT PROTEOMICS CONCEPT AND APPLICATIONS



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# PLANT PROTEOMICS CONCEPT AND APPLICATIONS

This book on "Plant Proteomics: *Concept and Applications*" aims to highlight the diverse applications of Plant Proteomics in understanding plant molecular responses to various biotic and abiotic challenges. Recent advancement in mass spectrometry, complemented with the availability of more complete genome-sequence data and modern bioinformatics, has made proteomics a fast, sensitive and reliable technique to identify and characterize novel proteins and to follow changes in protein relative abundances under adverse environmental conditions. This book includes 13 manuscripts primarily on Plant Proteomics studies.

We believe that this special issue on "Plant Proteomics: *Concept and Applications*" reflects the current perspective and state-of-the-art of Plant Proteomics, which would not only enrich us in understanding the plants response to environmental stressors but would further help us to move a step ahead in designing stress-tolerant crops. The articles in this issue will be of general interest to Plant Proteomics researchers, plant biologists, and environmental scientists.

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# PLANT SECONDARY METABOLITES FOR HUMAN HEALTH



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**Plant Secondary Metabolites for Human Health**

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Plant secondary metabolites are organic compounds e.g. polyphenols, flavonoids, alkaloids, tannins, terpenoids, triterpenoids and saponins etc. that are required for the plant to survive by fighting off herbivores, pests, and pathogens. These plant secondary metabolites have been used since early times in various medicines and food products for beneficial health purposes and are still relevant and popular today. This new book of Plant Secondary Metabolites provides an abundance of valuable information on secondary metabolites, their health properties and possibilities and their extraction and application methods.

This book offer comprehensive studies and covers the structurally diverse secondary metabolites of medicinal herbs including their biochemistry, ethnopharmacological properties and biological activity. Secondary metabolites of medicinal herbs are a treasure trove of novel compounds with potential therapeutic applications.

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Chhakra Pal\*

## सारांश

लोकतांत्रिक संरक्षाओं के ह्रास के चलते आज भारत संस्थानगत संकट के दौर से गुजर रहा है वह नैतृत्व एवं सार्विक का संकट तो है ही साथ में भारतीय सभ्यता और लोकतांत्रिक व्यवस्था की विचंगलियों का भी संकट है। संकट के दौर से गुजर रही विभिन्न संस्थाओं में से एक राज्यपाल का पद भी है राज्यपाल का पद अब भारतीय के रूप में दिया जाने लगा है केन्द्र सरकार जिना किसी को भी इस पद पर उपयुक्त करती है बदले में उससे अपने दल के हित में कार्य भी करती है परिणामतः इस पद के चारों तरफ सार्वी तत्वों की भीड़ जमावटी होने लगी है इससे इस संवैधानिक पद की गरिमा को आधार पहुँचा है उस पर कई प्रश्नचिन्ह उत्पन्न हुए हैं ऐसा नहीं है कि राज्यपाल पद की गरिमा या इसका प्रभाव केवल व्यक्तिगत कारणों से कम हुए हैं साथ केन्द्र सरकार ने पहले वह कांग्रेस की रही हो, जनता दल की, संयुक्त मोर्चा की या भाजपा की सबसे अपनी दलगत जरूरत के अनुसार राज्यपालों का उपयोग किया है जब जहाँ जैसे चाहा, राज्य की कानून व व्यवस्था की स्थिति के बारे में रिपोर्ट मँगवा ली गई, ताकि उस राज्य की सरकार को अयवस्था कर राज्य में राष्ट्रपति शासन लागू किया जा सके।

किसी भी संविधान की सफलता का उपयोगिता तभी सिद्ध होती है जब वह समय सापेक्ष हो और समाज की सच्ची उध्वता के चलते पर आगे बढ़ाए, एक अच्छे समाज की स्थापना करे। परिपतन प्रकृति का नियम है इस आधार पर राज्यपाल पद में कुछ आवश्यक परिवर्तन किए जाएं, क्योंकि राज्यपाल राज्य की कार्यपालिका का प्रमुख होता है राज्यों में राज्यपाल का लगभग वही स्थान है जो केन्द्र में राष्ट्रपति का है।

## पद का विकास

भारतीय सभ में केन्द्र की तरह राज्यों की शासन व्यवस्था भी संसदीय है राज्यों का शासन राज्यपाल द्वारा एक लोकप्रिय तथा उत्तरदायी मंत्रिमंडल की सहायता से चलाया जाता है। श्री के.एन. मुंशी के अनुसार, 'राज्यपाल राज्य में केन्द्र का पहरेदार तथा संवैधानिक सम्पत्ति का रखवाला और राज्य को केन्द्र से जोड़ने वाला-दोरा की एकता का कर्तव्य है।' भारतीय संविधान के अनुच्छेद 153 के अंतर्गत प्रत्येक राज्य के लिए एक राज्यपाल की व्यवस्था है साथ ही दो या दो से अधिक राज्यों के लिए भी एक ही राज्यपाल हो सकता है जो राज्य की शासन प्रणाली का संवैधानिक अध्यक्ष होता है राज्य की कार्यपालिका शक्ति राज्यपाल में निहित होती है तथा राज्य की समस्त कार्यवाहियों उसी के नाम से की जाती है वह केन्द्र सरकार के प्रतिनिधि अथवा दूत की भूमिका भी अदा करता है, साथ ही अनेक मामलों में वह राज्या और केन्द्र के बीच जोड़ने वाली कड़ी का काम करता है। संक्षेप में राज्यपाल का पद एक उत्तरदायित्वपूर्ण पद है, लेकिन समतामयिक

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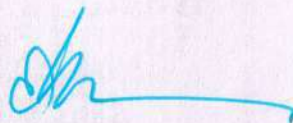
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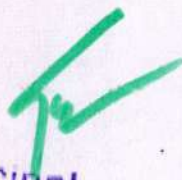
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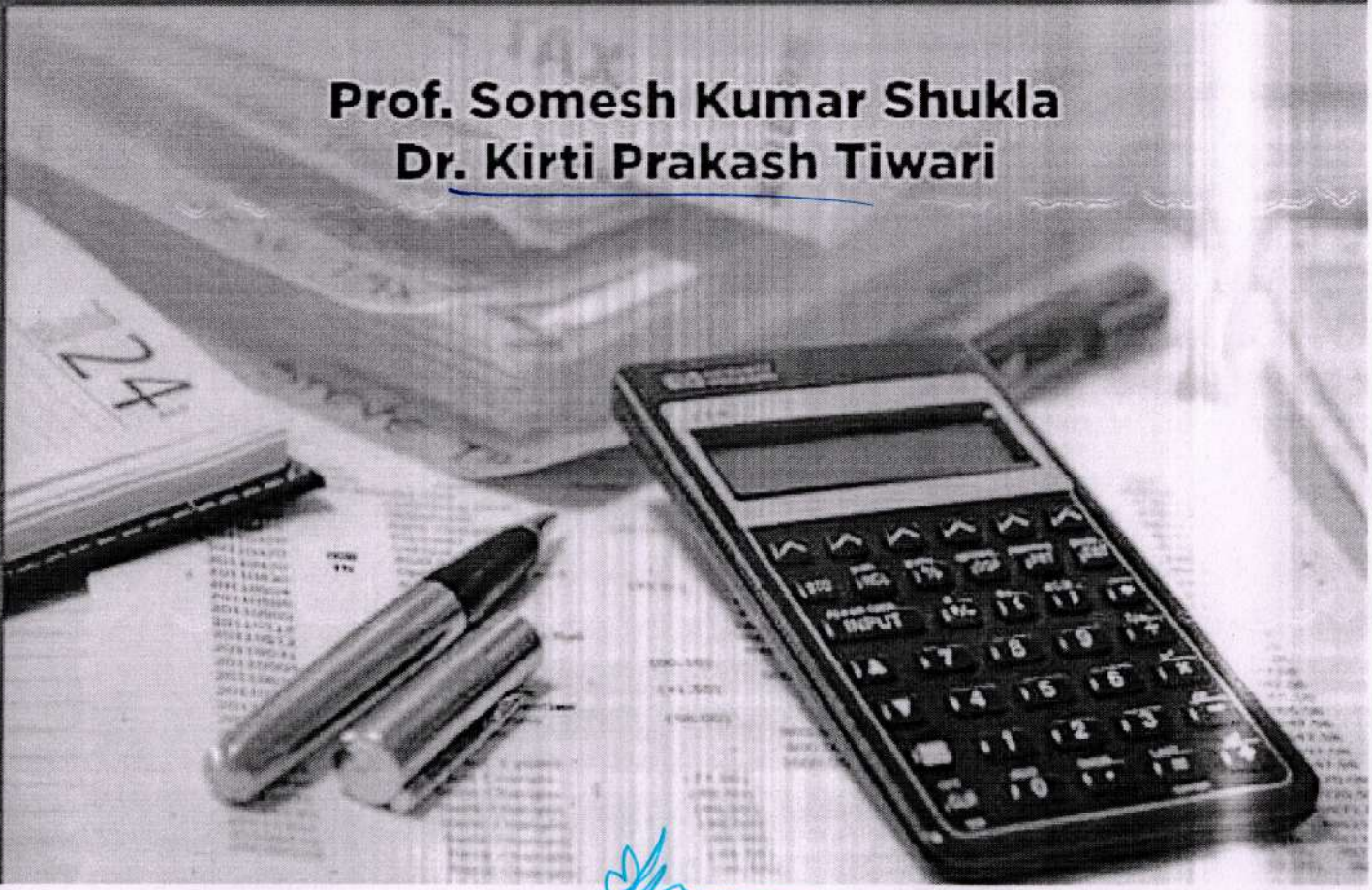
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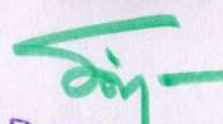
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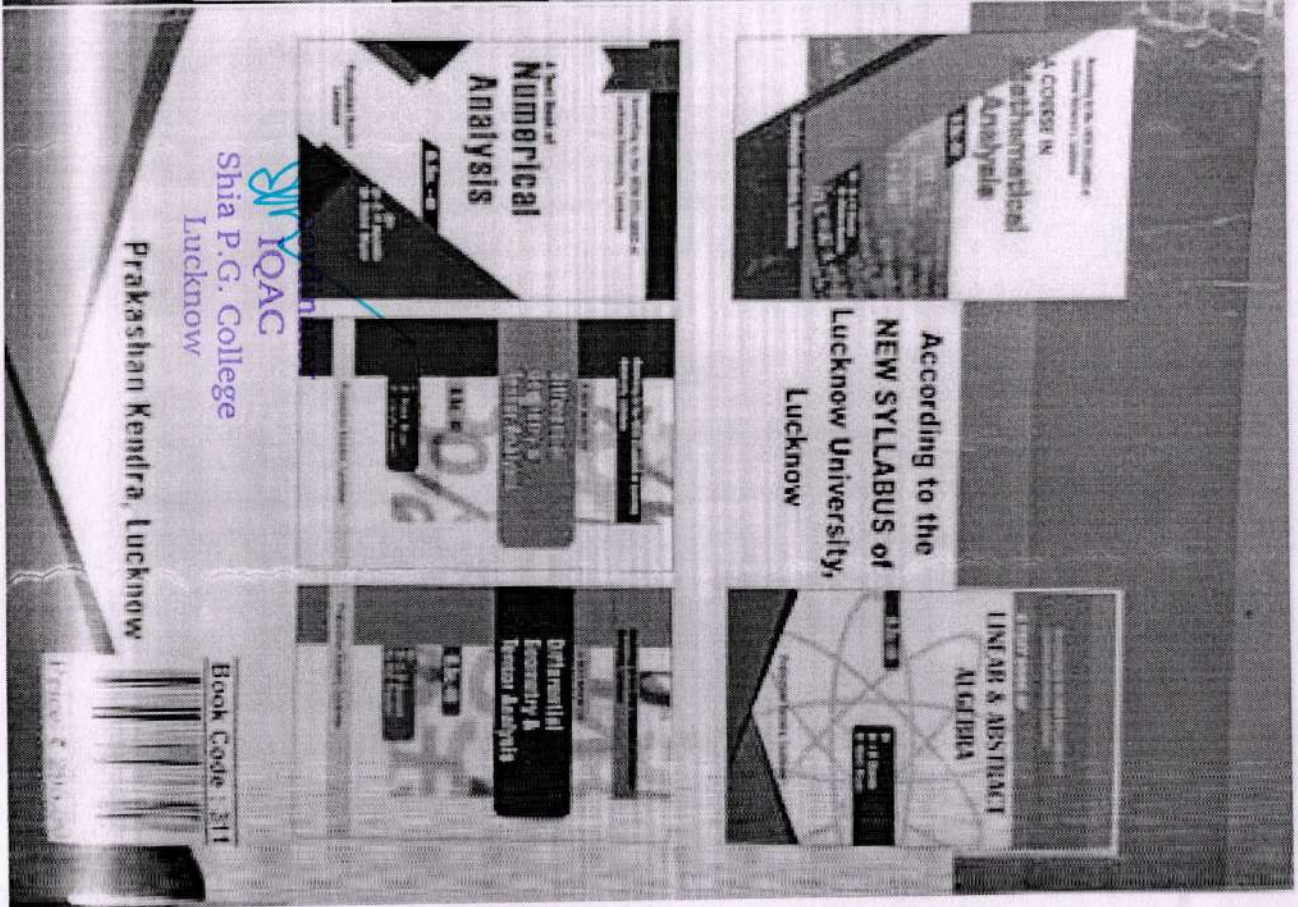
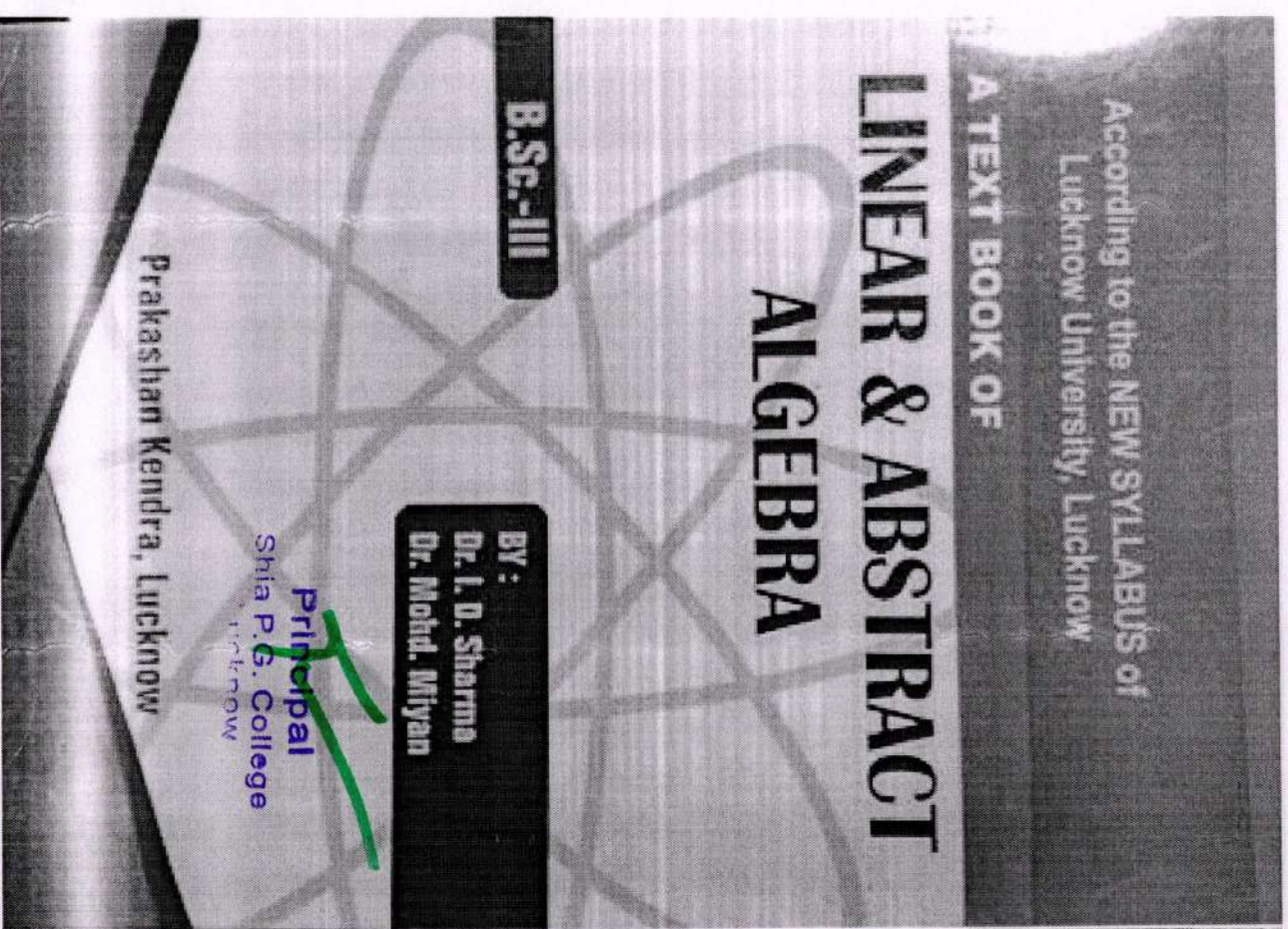


  
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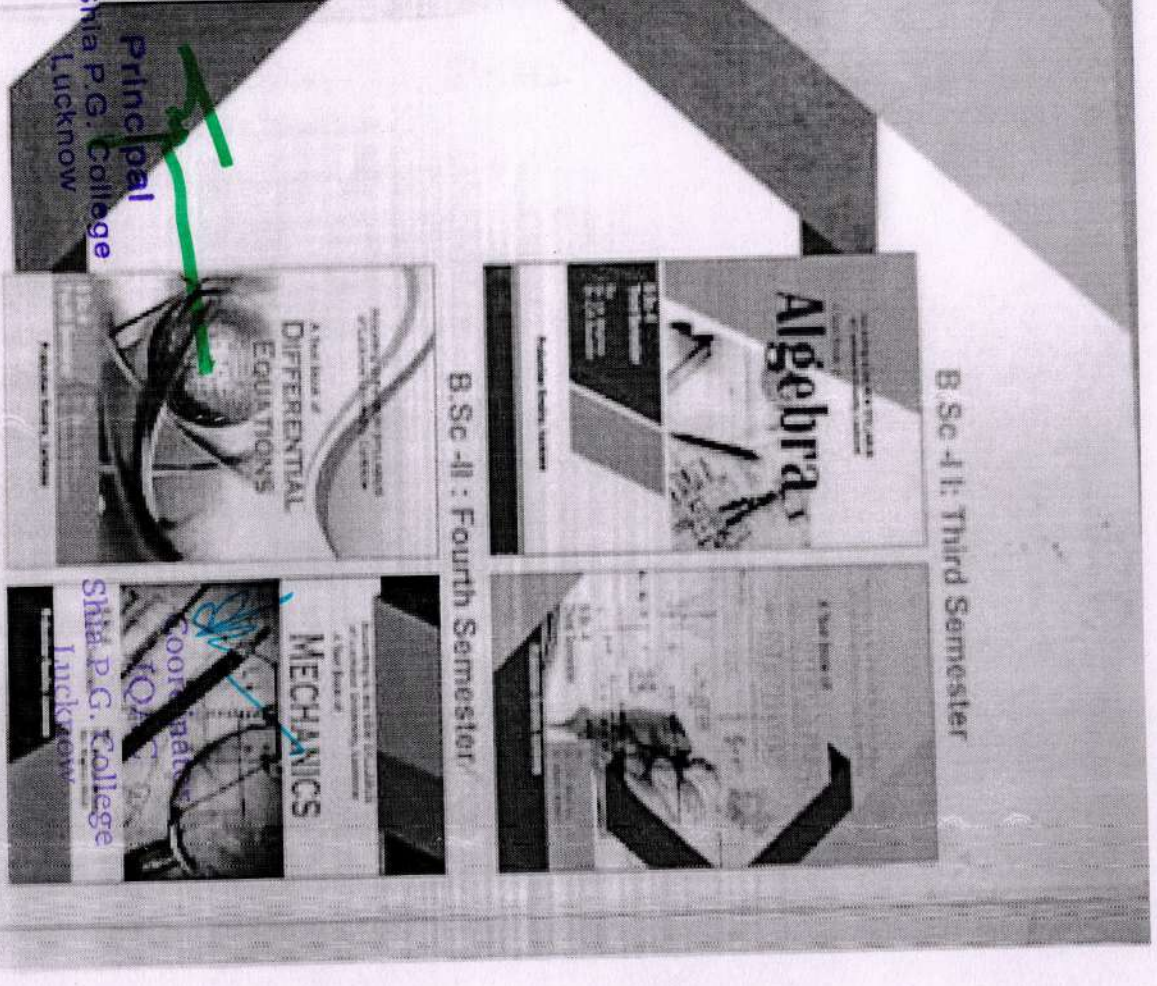
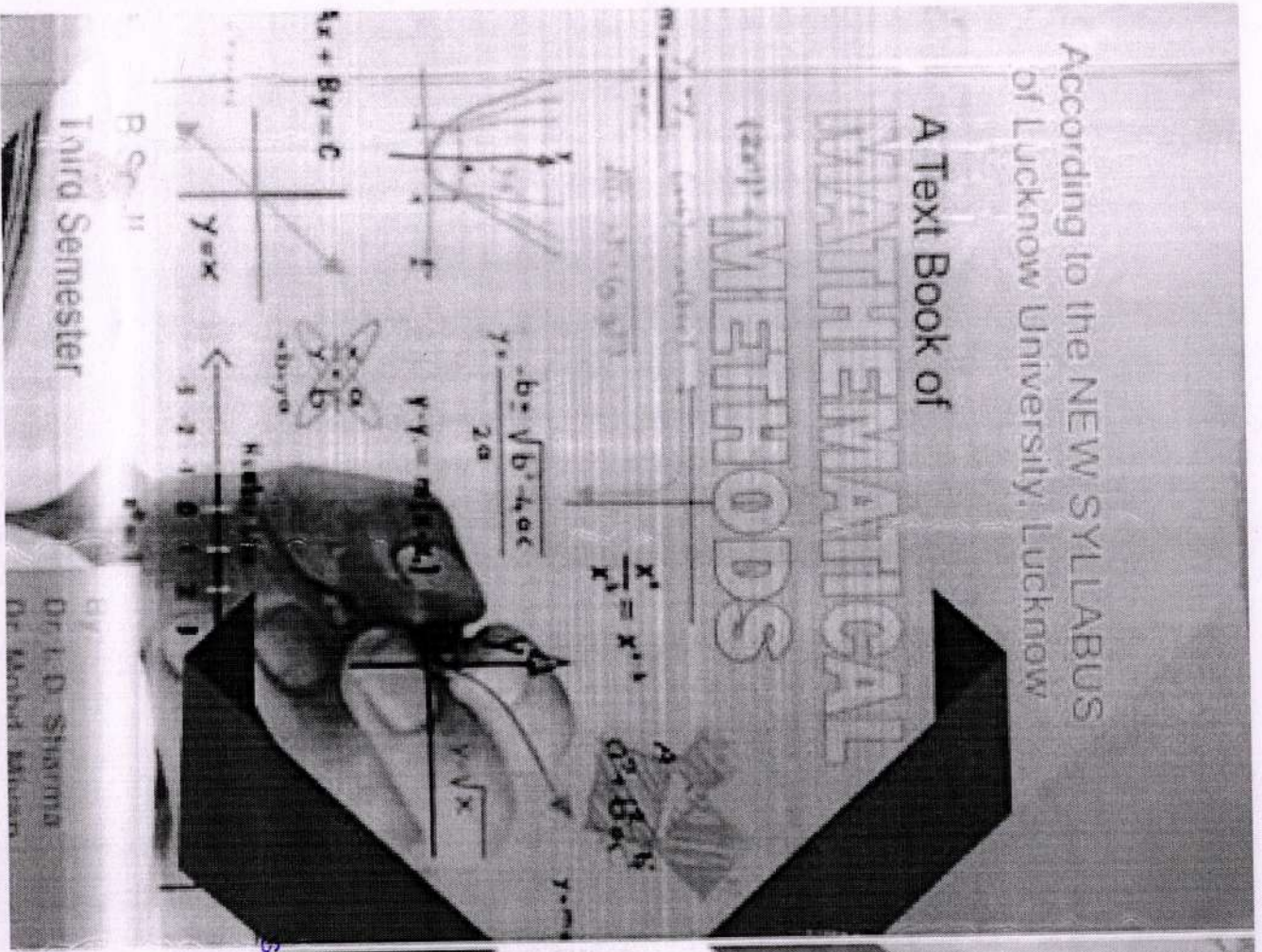
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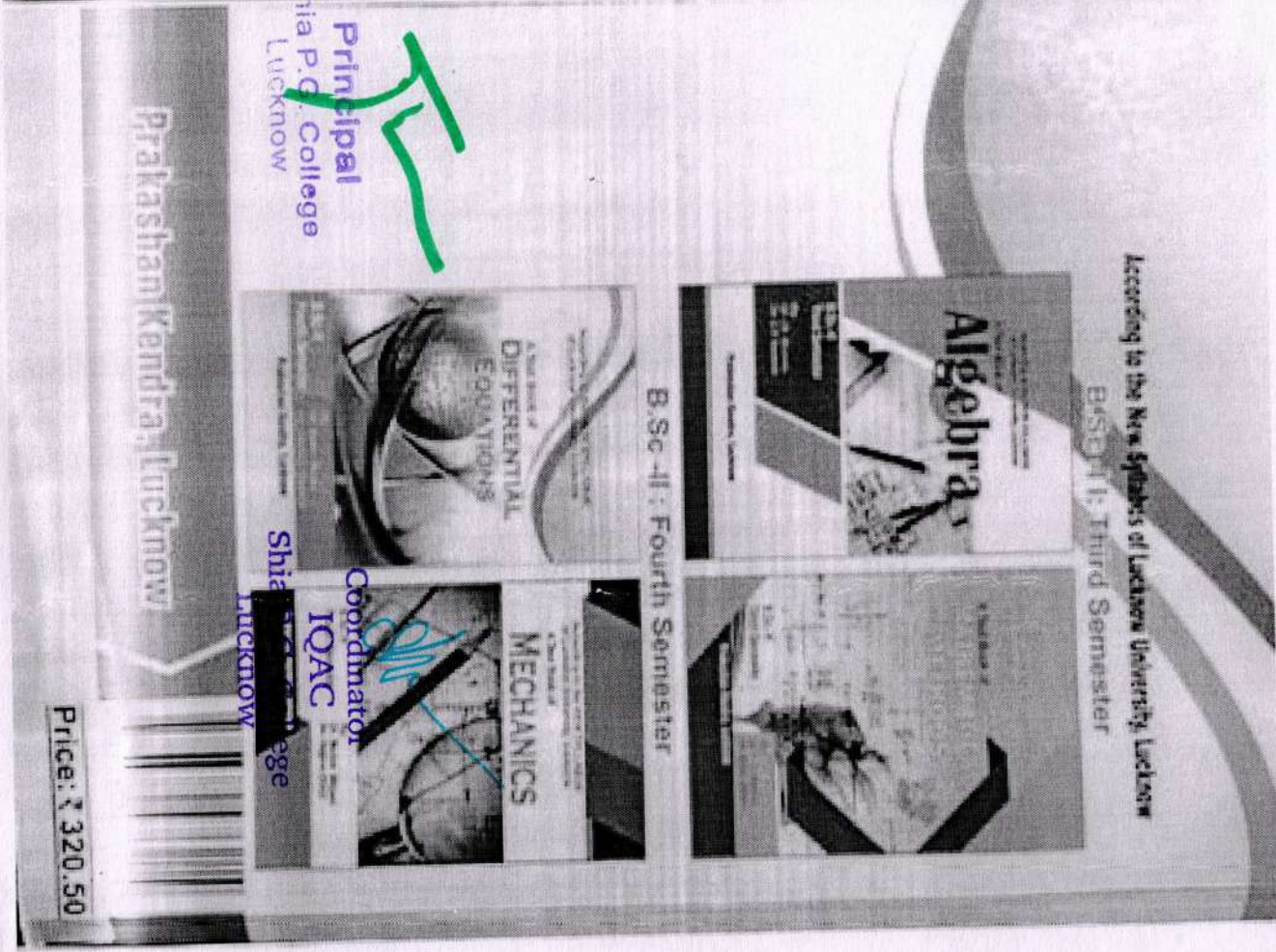
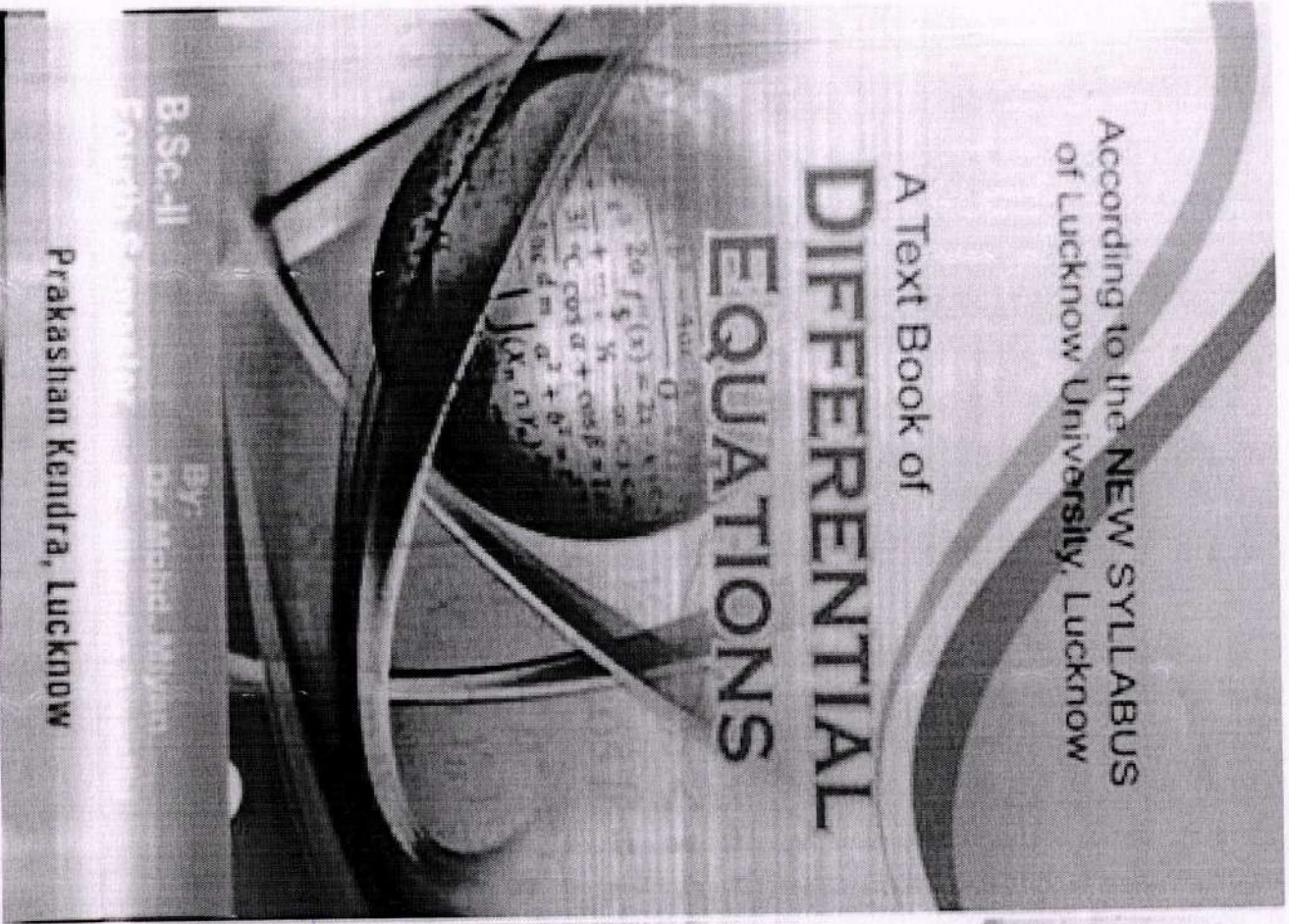
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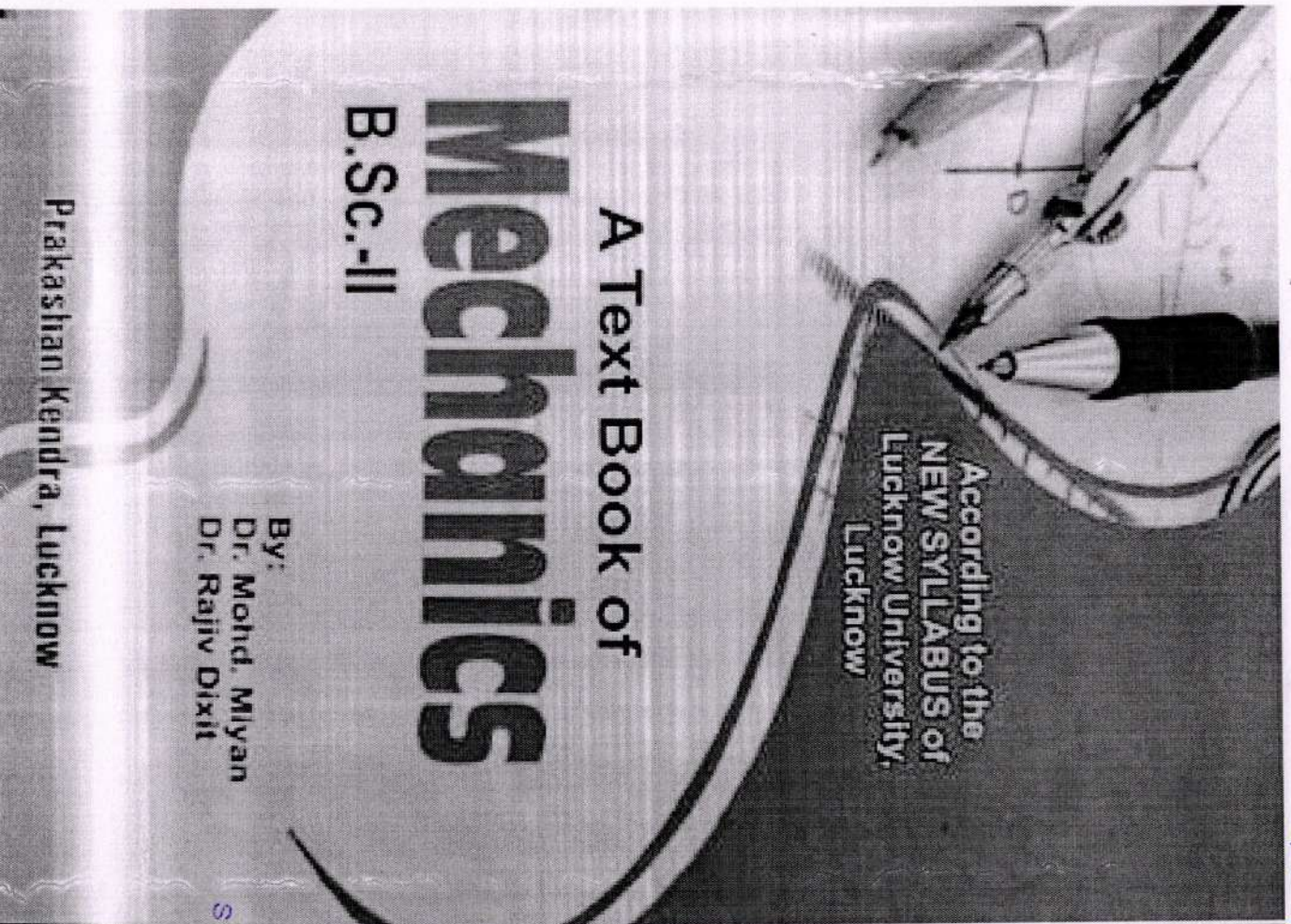
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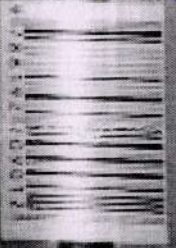
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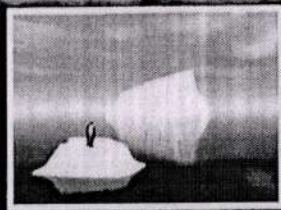
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This book presents a comprehensive review of energy research studies from authors across the globe, including recent research in the Geothermal Energy, Wind Energy, Solar Energy, and Biogas.

Sustainable development has been defined as balancing the fulfilment of human needs with the protection of the Natural environment so that these needs can be met not only in the present, but in the indefinite future. The term was used by the Brundtland Commission which coined what has become the most often-quoted definition of sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own need." The field of sustainable development can be conceptually broken into four constituent parts: environmental sustainability, economic sustainability, social sustainability and political sustainability. This new book presents the latest research in the field.

Climate change issues, the reduced world reserves of fossils, and higher and higher fuel prices play an important role in the development of clean technologies, such as biohydrogen, biodiesel and bioethanol, for producing renewable energy. This book gathers and presents current research from across the globe in the study of clean energy resources, their production and developments.

## The Editors



**Murtaza Abid** has passed M.Sc. (Botany) in 2013 from Department of Botany, Lucknow University and also completed his M. Phil in Botany in 2015. He joined his research work at Department of Biochemistry, King George's Medical University, Lucknow, U.P., India, since 2013. He has published more than 83 research papers/review articles/book chapters in National and International refereed journals of repute. He has attended many conferences and seminars and presented research papers. Presently he has edited/authored 32 International/ National Reference Books. He is also associated with several scientific societies and his many research papers obtained best research paper awards. He is also associated with Journal of Biological and Chemical Research and World Journal of Biology and Medical Research.



**Dr. M.M. Abid Ali Khan** graduated in Botany, Zoology and Chemistry in 1978 and Post Graduated in Botany in 1980 and received his PhD in Botany from Lucknow University India in 1987. He received Junior Research Fellowship and Senior Research Fellowship, Research Associate ship from Council of Scientific and Industrial Research (CSIR)-Government of India, New Delhi and worked at Central Institute of Medicinal and Aromatic Plants (CIMAP-CSIR) at Lucknow. Presently working as Senior Associate Professor of Botany, Shia P.G. College affiliated to Lucknow University. He is Chief Editor, Regional Editor and Editor of more than 10 National and International Scientific Journals and also Editorial Board member of many journals publishing from India and Foreign Countries. He has attended more than 30 National and International Scientific Conferences and presented many research papers he also organized many conferences and worked as Organizing Secretary. Dr. Khan have published over 200 research papers/review articles and book chapters in peer-reviewed International and

National Journals of repute. Dr. Khan has 32 Books in his credit.



**Dr. Abdeen Mustafa Omer** (B.Sc., M.Sc., Ph.D.) is a qualified Mechanical Engineer with a proven track record within the water industry and renewable energy technologies. He has been graduated from University of El Menoufia, Egypt, B.Sc. in Mechanical Engineering. His previous experience involved being a member of the research team at the National Council for Research/Energy Research Institute in Sudan and working director of research and development for National Water Equipment Manufacturing Co. Ltd., Sudan. He has been listed in the WHO'S WHO in the World 2005, 2006, 2007 and 2010. He has published over 300 papers in peer-reviewed journals, 100 review articles, 17 books and 50 chapters in books.



**Dr. Bina Rani** is serving as Associate Professor in the Department of Applied Sciences and Humanities at IIMT College of Engineering, Greater Noida, UP. She pursued her PhD in 1988 at NDRI (National Dairy Research Institute, Karnal, Haryana), a pioneer Institute of ICAR (Indian Council of Agricultural Research), New Delhi. She has 30 years of teaching experience and 10 years research experience. Her area of research is Hydrochemistry, New Engineering materials, Green chemistry, and Sustainability of environment. She has in her credit 20 book chapters, 40 research paper, 60 review papers in magazines, newsletters in different national and international journals of repute. Her 8 books are published on Environmental Engineering, Disaster management and environmental pollution.



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## Book

In the 1950s, the recognition of economic policy as powerful tool for promoting industrialization or for achieving full employment led to a successful wave of state interventions in both the developed and undeveloped countries. Indian economy in this context got awakened to the need of the hour and started evolving new industrial policy in 1991 so that Indian economy becomes an integral part of the global economy.

In the present book the analysis of the origins and dimensions of economic crisis in India that led eventually to the development of New Trade Policy (NTP) in 1991. An assessment of the impacts of the Trade Policy on Foreign trade in general, and on the bilateral trade between Indian and Japan in particular. Exploration of the trends in the structure of exports and imports of the new trade policy. Study and analysis, of the trade policy with reference to the pattern of Japanese Investment in India, development assistance of India and the collaborative projects in between India and Japan.

In the book discussion on the foreign trade and liberalization under the impact of the trade policy is also presented. Finally specific suggestions are put forth for future planning of the Indo-Japanese trade relations under the shadow of the new trade policy of India. In terms of the broad outline of the findings of the present book it was observed that in the past couple of decades the phenomenon of globalization has progressed from buzzy-word to reality. The forces propelling firms to go global started pushing Indian economy to the doors of liberalization in 1991 and since then the process has continued moving ahead. Prior to 1991 the economic crisis facing the country was neither an accident nor a co-incidence. The book is very useful and valuable for students and collegeaus. Our basic goals of growth, self reliance, modernization and equity, we have no choice but to persevere with our

## Author



The author would have failed to write the present book if he had not expressed genuine gratitude towards his parents late Syed Hashim Rizvi and Mrs. Hashim Rizvi. The writer born in Varanasi, he is a educated up to M.A. from M.G. Kashi Vidyapith, Varanasi. He opted his research work in the Department of Economics, Banaras Hindu University, Varanasi, U.P, under the Doctorate of Prof. Miss U.K. Mehra. She was a principal of women college campus B.H.U. She is a professor in the Department of Economics, B.H.U. The writer is currently a working as a assistant Professor, Department of Economics, Shia P.G. College Lucknow, India. Since 2017 he has a 18 years of experience of teaching. It gives great pleasure to present the book to you. Suggestions from Learned and save always invited.

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है। महिला लेखिकाएं धीरे धीरे अन्य विधाओं में भी प्रवेश कर रही हैं, लेकिन उनकी प्रिय विधा उपन्यास और कहानी है। कथा साहित्य के प्रति महिला लेखिकाओं की प्रतिबद्धता देखकर डॉ. रामचन्द्र तिवारी ने आशा व्यक्त की है—“पिछले कुछ वर्ष में स्त्री कोन्द्रित लेखन अन्तर्राष्ट्रीय विस्तार पा चुका है। अब तो लगने लगा है कि हिंदी उपन्यास की नई पहचान का श्रेय महिला लेखिकाओं को ही जायेगा।”

आज देश, समाज से उन समस्त धारणाओं को खत्म करने का प्रयास महिला कथाकारों ने किया है, जो नारी विरोधी रही हैं। वर्तमान परिदृश्य में नारी का आत्मविश्वास और स्वाभिमान लौटार जाने की आवश्यकता है। नारी को स्त्रीत्व और सतीत्व के स्तर से उपर उठकर सन्धे अर्थों में मानवीय दर्जा हासिल करने में सक्षम बनाया जाये। सदियों से दबी-कुचली, शोषित नारी को खुला आसमान देने का प्रयास किया जाय। आज इन सब के लिए जरूरत है तो एक सकारात्मक सोच और दृष्टिकोण की जो समाज में नारी उत्थान में सहायक सिद्ध होगा।

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हिन्दी साहित्य और साहित्य का समाज

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(Dabher)

हाशिये के समाज

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द्वितीय विश्व युद्ध के बाद दुनिया में उत्तर आधुनिक विमर्शों की शुरुआत होती है, जिसमें हाशिये पर फेंक दिये गये वर्गों की अस्मिताओं को विमर्श की धुरी में लाने का प्रयास किया गया है। इन विमर्शों में स्त्री विमर्श, दलित विमर्श, पर्यावरणीय विमर्श एवं जनजातीय आदि विमर्श प्रमुखता में आता है। औद्योगिकरण में विकास का जो मॉडल अपनाया गया उसका पार्श्व प्रभाव यह रहा है कि स्त्री, दलित, आदिवासी जो पहले से ही भेदभाव का शिकार रहे हैं, वे मुख्यधारा से और दूर छिटकते चले गये। उत्तर आधुनिक विमर्श इन सभी वर्गों के प्रश्नों को पूरी शिद्दत के साथ अकादमिक बहसों और समाज के समक्ष मुखरता से प्रस्तुत करता है।

समाज की व्यापक संस्कृति के घटक पुरुष-संस्कृति ने पितृसत्ता के माध्यम से पुरुष को अर्थ सम्पन्नता और स्वाभित्व के अधिकार सौंपे हैं और स्त्री को मिली है अधीनता, अर्थ पर निर्भरता और दासत्व। पुरुष को यह व्यवस्था ताकतवर बनाती है और स्त्री को कमजोर। इसलिए स्त्री का संघर्ष पुरुष के साथ द्वन्द्वात्मक स्थिति रखने में नहीं बरन पुरुष सत्तात्मक व्यवस्था के खिलाफ संघर्ष करने में है।

बीसवीं सदी के उत्तरार्द्ध से जीवन और जगत के विविध क्षेत्रों में स्त्री ने अपनी एक स्वतंत्र पहचान बनायी है। स्त्री घर और बाहर दोनों युनीवर्सों को बखूबी निभा रही है। हिन्दी की पहली नारीवादी लेखिका बंग महिला मानी जाती हैं किन्तु हिन्दी में स्त्री-विमर्श का आरम्भ महादेवी वर्मा की 'श्रृंखला की कड़ियाँ' नामक गद्य रचना से माना जाता है। स्त्रीवादी विमर्श न मजाक है न अपवाद। वह एक ही समय हमारे देशकाल और पूरी दुनिया से जुड़ा है। वह हमारे समाज की जरूरत है। वह समय आर्थिक, राजनीतिक, सामाजिक, भाषिक और सांस्कृतिक विमर्श है। हिन्दी में पिछले कुछ वर्षों में मुख्य रूप से स्त्रीवादी-विमर्श ने अब एक वैचारिक मोड़ पैदा करना शुरू कर दिया है।

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इस पुस्तक में शामिल लेखों/कविताओं के किसी भी अंश को ज्ञान के किसी माध्यम में प्रयोग करने के पूर्व लेखक/संपादक से लिखित अनुमति लेना आवश्यक है। किसी भी विवाद की स्थिति में न्याय क्षेत्र लखनऊ न्यायालय होगा।

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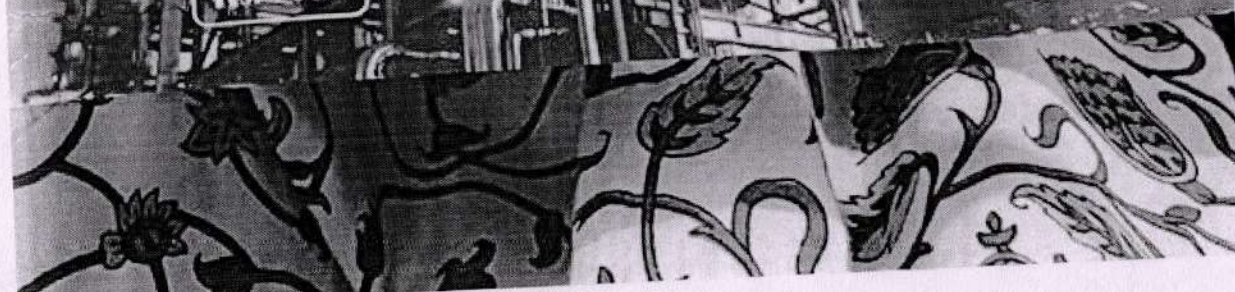
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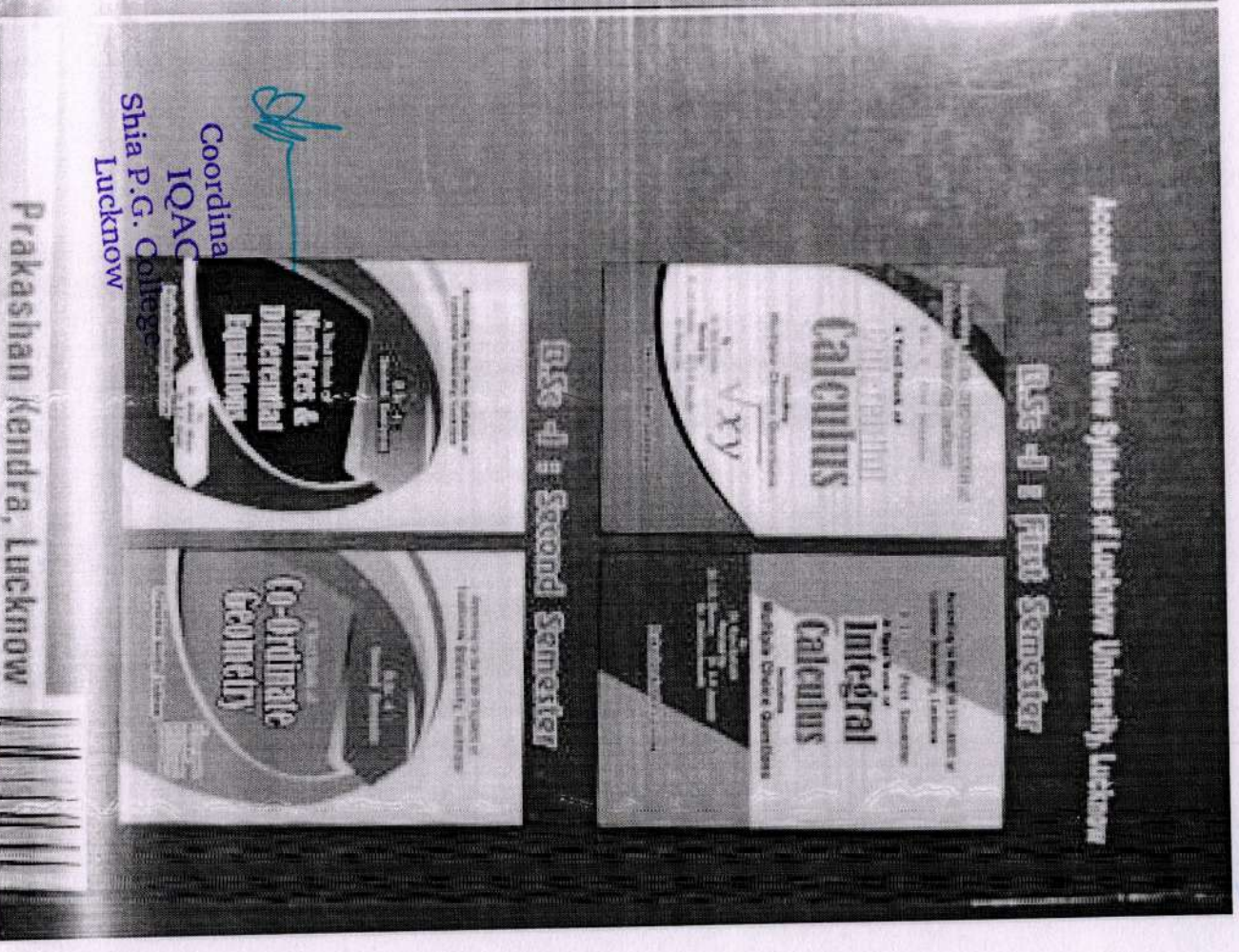
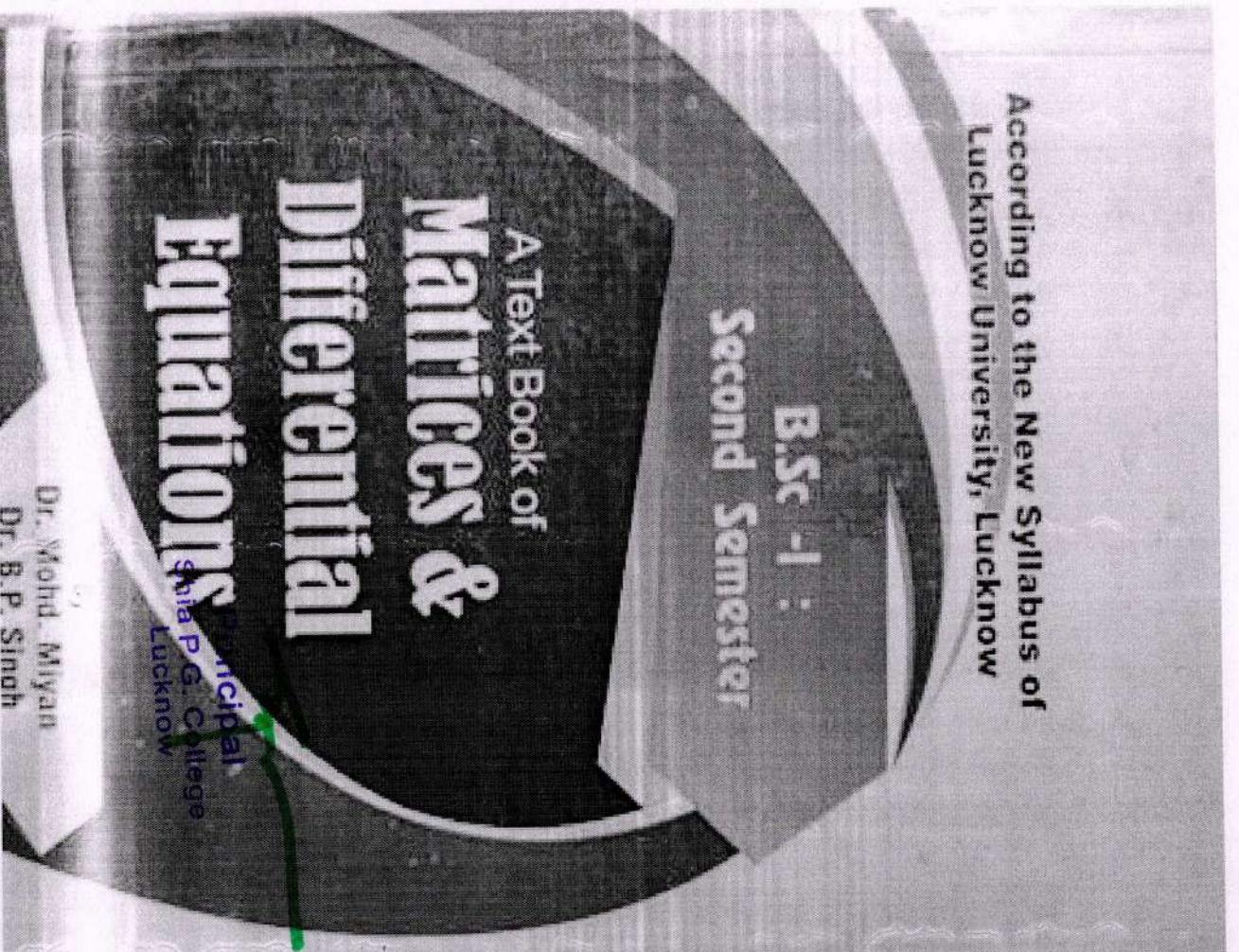
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डॉ. हेमा राम धुंधवाल का जन्म नागौर जिले के नया गाँव (अन्ना) में 1947 में हुआ। उन्होंने अपनी बारहवीं तक की पढ़ाई गाँव की स्कूल में करने के बाद दिल्ली विश्वविद्यालय, जयपुर से स्नातक एवं स्नातकोत्तर की उपाधि प्राप्त की। पश्चात् पीएच.डी. की उपाधि भी राजस्थान विश्वविद्यालय, जयपुर ही से प्राप्त की। वर्तमान में आप श्री बी. आर. फिरोज राजकीय महाविद्यालय, नागौर में प्राध्यापक के रूप में कार्यरत हैं। आपने राष्ट्रीय एवं अन्तर्राष्ट्रीय स्तर की अनेक संगोष्ठियों में भाग लिया और शोध पत्रों को प्रभावी रूप में प्रस्तुत किया। आपके अनेक शोध पत्र राष्ट्रीय एवं अन्तर्राष्ट्रीय पत्रिकाओं एवं ग्रन्थों में प्रकाशित हो चुके हैं। आप "The National Association of Geographers India" और "Rajasthan Geographical Association" के आजीवन सदस्य हैं। आप समय-समय पर अनेक विद्यार्थियों का मार्गदर्शन एवं सहयोग करते रहते हैं।

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डॉ. रानी भुगल का जन्म आरोन, जिला गुना (मध्यप्रदेश) में हुआ। इन्होंने 12वीं तक की पढ़ाई आरोन से करने के पश्चात् स्नातक एवं स्नातकोत्तर स्तर की पढ़ाई शासकीय महाविद्यालय, आरोन से की। आपने पीएच.डी. की उपाधि जीवाजी विश्वविद्यालय, कलियास से की है। वर्तमान में आप शासकीय स्नातकोत्तर महाविद्यालय गुना (मध्य प्रदेश) में साहायक प्राध्यापक (रसायन शास्त्र) के पद पर कार्यरत हैं। आपके विभिन्न राष्ट्रीय एवं अंतरराष्ट्रीय पत्र-पत्रिकाओं में शोध पत्र एवं आर्टिकल प्रकाशित हो चुके हैं।



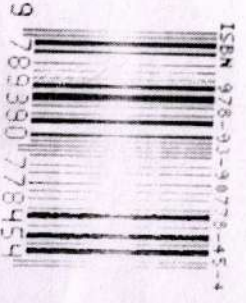
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डॉ. विद्या चौधरी, शासकीय कन्या महाविद्यालय, बैतूल, मध्यप्रदेश में प्राध्यापक (राजनीति शास्त्र) के पद पर कार्यरत हैं। आपने राष्ट्रीय एवं अन्तर्राष्ट्रीय स्तर की अनेक संगोष्ठियों में भाग लेकर शोध पत्रों को प्रस्तुत किया। आपके अनेक शोध पत्र राष्ट्रीय एवं अन्तर्राष्ट्रीय पत्र-पत्रिकाओं में प्रकाशित हो चुके हैं। आपके सरक्षण में निम्न पुस्तकें प्रकाशित हुई हैं।

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डॉ. रवि प्रताप सिंह

असिस्टेंट प्रोफेसर (राजनीतिशास्त्र)

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लखनऊ (उत्तर प्रदेश)

न्याय समाज-दर्शन की एक ऐसी बुनियादी धारणा है कि जिस पर सामाजिक चिन्तन के परम्परा से ही विचार होता रहा है। इतिहास में न्याय की अनेक प्रकार से व्याख्या हुई। कभी उसे 'जैसी करनी, वैसी भरनी' का पर्याप्त माना जाता रहा तो कभी ईश्वर की इच्छा और पूर्व जन्म के कर्मों का फल। सत्तारूढ़ व्यक्तियों ने न्याय की परिभाषा सदा ही अपने स्वार्थ की दृष्टि से की इसलिये भारतीय सिद्धान्त की प्रस्तावना में न्याय के उल्लेख का विशिष्ट महत्व है।

प्लेटो के अनुसार आत्मा के तीन तत्वों, सुधा, साहस और विवेक प्रतिनिधि तीन वर्ग हैं—श्रमिक, सूरवीर और दार्शनिक। जब समाज में इन तीनों वर्गों के कार्यों का उचित वितरण होता है और वे वर्ग अपनी-अपनी मर्यादाओं के भीतर काम करते हैं और दूसरे के कार्यक्षेत्र में हस्तक्षेप नहीं करते, संक्षेप में जब समाज के विभिन्न वर्गों के बीच पूर्ण संतुलन की स्थापना हो जाती है, तब समाज में न्याय का अविर्भाव होता है। प्लेटो का न्याय सिद्धांत वैधानिक न्याय का सिद्धांत नहीं है, वह कुछ हद तक सामाजिक न्याय का सिद्धांत है। आधुनिक न्यायशास्त्र में न्याय का अर्थ सामाजिक जीवन की वह अवस्था है जिसमें व्यक्ति के आचरण का समाज के व्यापक कल्याण के साथ समन्वय स्थापित किया गया हो। स्वभाव से प्रत्येक मनुष्य अपने स्वार्थ की पूर्ति के लिये आचरण करता है, पर उसका आचरण न्याययुक्त तभी समझा जा सकता है जबकि उसके आचरण से समाज के अभ्युदय तथा श्रेय की सिद्धि हो।

न्याय की संकल्पना में भारत के परम्परागत सामाजिक दर्शन के सर्वश्रेष्ठ तत्वों का ही समाहार नहीं हो जाता—प्रत्युत रूढ़ी मान्यता द्वारा प्रस्तुत समाजवादी और साम्यवादी चिन्तन के सर्वश्रेष्ठ तत्व भी

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