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Dr. Rashmi Yadav | Dr. Pawan Singh

ENVIRONMENTAL SCIENCES

According to the New Syllabus
as prescribed by : Pharmacy Council of India

Environmetal Sciences

For the Students of

B. PHARM SECOND SEMESTER

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Gyan Publications

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❑ *Published By :*

Gyan Publications

E-11, Janak Puri, (Ajanta Colony)

Near Anand Hospital,

Garh Road, Meerut- 250004

Mobile : 7895144449, 7895244449

e-mail : gyanpublications38@gmail.com

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❑ ISBN NO. 978-93-93456-79-3

❑ *First Edition* : 2023-24

❑ *Price* : ₹ 170/-

❑ *Laser Type Setting :*
Ankit Computers, Meerut

❑ *Printed :*
Ureshiya Printing Press
0121-4324497

Other Useful Text Books

Semester-II

1. Human Anatomy and Physiology-II
2. Pharmaceutical Organic Chemistry-I
3. Biochemistry
4. Pathophysiology
5. Computer Application in Pharmacy
6. Environmental Sciences

Semester-IV

1. Pharmaceutical Organic Chemistry-III
2. Medicinal Chemistry-I
3. Physical Pharmaceutics-II
4. Pharmacology-I
5. Pharmacognosy and Phytochemistry-I

Semester-VI

1. Medicinal Chemistry-III
2. Pharmacology-III
3. Herbal Drug Technology
4. Pharmaceutics and Pharmacokinetics
5. Pharmaceutical Biotechnology
6. Quality Assurance

Semester-VIII

1. Biostatistics and Research Methodology
2. Social and Preventive Pharmacy
3. Pharmaceutical Marketing Management
4. Pharmacovigilance
5. Experimental Pharmacology

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Preface

Education is a process of development which includes the three major activities, teaching, training and instruction. Teaching is social as well as a professional activity. It is science as well as art. Modern education is not in a sphere but it has a long and large area of study. Now a day's most part of the world population is facing different problems related with the nature and they are studying the solutions to save the nature and global problems, but on the second hand we even today do not try to understand our local problems related to the nature. So for the awareness of the problems of nature and pollution the higher education commission has suggested to add the Environmental Studies in the course of different levels.

Environmental Sciences is also well known as Environmental Studies in the Indian Colleges and Universities. Before that it was the part of the science but now days it is a very common subject and higher education commission has suggested including it as a general paper in all the courses. Awareness in the field of environmental Education is becoming a global talk. People worldwide are realizing its importance as they are able to smell a Polluted tomorrow. Careful handling of today's environment would only serve as a legacy for tomorrow's generation. Hence, we need to be judicious in exploiting our resources optimally. To ensure a sustainable development we need to know something about how our environment works.

Most of the universities have introduced this new content as course of Environmental Sciences / Environmental Studies in B. Pharm., D. Pharm., B.Ed., B.Sc. B.A. and other Courses. The present book has been written by including some content of print and non-print media. Now this book is especially for modified syllabus of D. Pharm. and B. Pharma. of Indian & Foreign Universities/ Institute & Pharmacy Colleges Recognized by All India Council of Pharmacy, New Delhi.

The authors have consulted several books in designing, organizing and preparing the script of this book. We express our sense of gratitude to all sources which have been used directly or indirectly for the instructional material and the sequence. We thankful our publisher for keeping faith with us and for his untiring efforts in publishing the book with so great enthusiasm. The authors shall feel highly obliged for the readers and their valuable suggestions that will help in the further modification and improvement of this book.

—Dr. Mohan Lal 'Arya'
—Dr. Rajkumari Gola
—Dr. Rashmi Yadav
—Dr. Pawan Singh

SYLLABUS

BP 206 T. ENVIRONMENTAL SCIENCES

UNIT-I

The Multi disciplinary nature of environmental studies: Natural Resources Renewable and non-renewable resources; Natural resources and associated problems(a) Forest resources; (b) Water resources; (c) Mineral resources; (d) Food resources; (e) Energy resources; (f) Land resources: Role of an individual in conservation of natural resources.

UNIT-II

Ecosystems : Concept of an ecosystem, Structure and function of an ecosystem, Introduction, types, characteristic features, structure and function of the ecosystems: Forest ecosystem; Grassland ecosystem; Desert ecosystem; Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries).

UNIT-III

Environmental Pollution: Air pollution; Water pollution; Soil pollution.



Prof. (Dr.) M. L. 'Arya'

Prof. (Dr.) Mohan Lal 'Arya', Professor, IFTM University, Moradabad UP, India, which is a premier Institute imparting higher Education, has earned his B.A. and M.A. (Geography & Sociology) & Ph.D. in Geography from M.J.P. Rohilkhand University Bareilly, B.Ed., M.Ed., M.A. and M. Phil. in Education from C.C.S. University Meerut, Ph.D. in Education from IFTM University Moradabad UP, India and UGC-NET in Education. He has more than 16 years of teaching experience. He has supervised more than 110 PG Dissertation of M.A. & M.Ed. Students. Under his supervision 09 student have been awarded Ph.D., 01 Students have submitted the Ph.D. thesis and 07 are working for Ph.D. degree. He is Advisory Board of Member, Editorial Board Member and Life time Member of Various research journals. He has published more than 19 Books & 14 Chapters in Book and He has published more than 100 Research Papers & Articles in National and International Research Journals and participated in more than 97 conferences/ seminars/ workshops/ FDPs of National and International repute. He has received more than 06 Awards and Honors from various National & International organizations. He has attended several conference and seminars in capacity of Resource Person. He has been a member of Editorial Research Board & Member of Council of Advisory Board of several National and International Research Journals and also Members in Profession related Committees at State and National level. He takes keen interest in social upliftment and skill development drives like Blood-donation, tree-plantation, Literacy Campaign etc.



Dr. Rajkumari Gola

Dr. Rajkumari Gola, is presently working as an Assistant Professor, Department of Education, IFTM University, Moradabad, which is a premier Institute imparting higher Education. She has obtained her Ph.D. (Education) from IFTM University, Moradabad and M.A. (Education, Psychology and English) & B.Ed. from Various Universities/Institutions. She has published 04 books & 03 Chapters in Book and She has published more than 12 Research Papers & Articles in National and International Research Journals and participated in more than 30 conferences/ seminars/ workshops/ FDPs of National and International repute. She has currently supervising more than 02 research scholars for Ph.D. in Education. She takes keen interest in social upliftment and skill development drives like Blood-donation, tree-plantation, Literacy Campaign etc.



Dr. Rashmi Yadav

Dr. Rashmi Yadav, is presently working as an Assistant Professor, Model College of Education, Chandusi, Sambhal, which is a premier Institute imparting higher Education. She has obtained her Ph.D. in Education from IFTM University, Moradabad and B.Sc., M.Sc. (Zoology), B.Ed. & M.Ed. from M.J.P. Rohilkhand University, Bareilly, B.P.Ed. From Dr. B. R. A. University, Agra. She has published 01 book & 02 Chapters in Book and She has published more than 08 Research Papers & Articles in National and International Research Journals and participated in more than 11 conferences/ seminars/ workshops/ FDPs of National and International repute. She takes keen interest in social upliftment and skill development drives like Blood-donation, tree-plantation, Literacy Campaign etc.



Dr. Pawan Singh

Dr. Pawan Singh, obtained his B.Pharm from I.F.T.M., Moradabad and M. Pharm SRMS College of Eng., Tech. & Research, Bareilly, U.P. He has obtained his Ph.D. in Pharmacy from IFTM University, Moradabad, U.P. Apart from his academic duties as Assistant Professor in School of Pharmacy Academy, IFTM University, Moradabad. He has published 01 Book & a number of research papers, review articles and chapters in books that have been published in renowned national and international journals that are UGC indexed. In addition he has presented at a number of prestigious and international conferences, seminars and workshops.

ISBN NO. 978-93-93456-79-3



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E-mail : gyanpublications38@gmail.com **Website:** www.gyanpublications.com