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Ranking of Government Colleges in HP

Criterion 6 Faculty Profile & Research Activities

**Key Indicator 6.9 Number of Books Published/
Chapter in Books**

**Metric 6.9 Number of Books Published/
Chapter in Books**



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No. of Books Published/ Chapter in Books

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Aksh

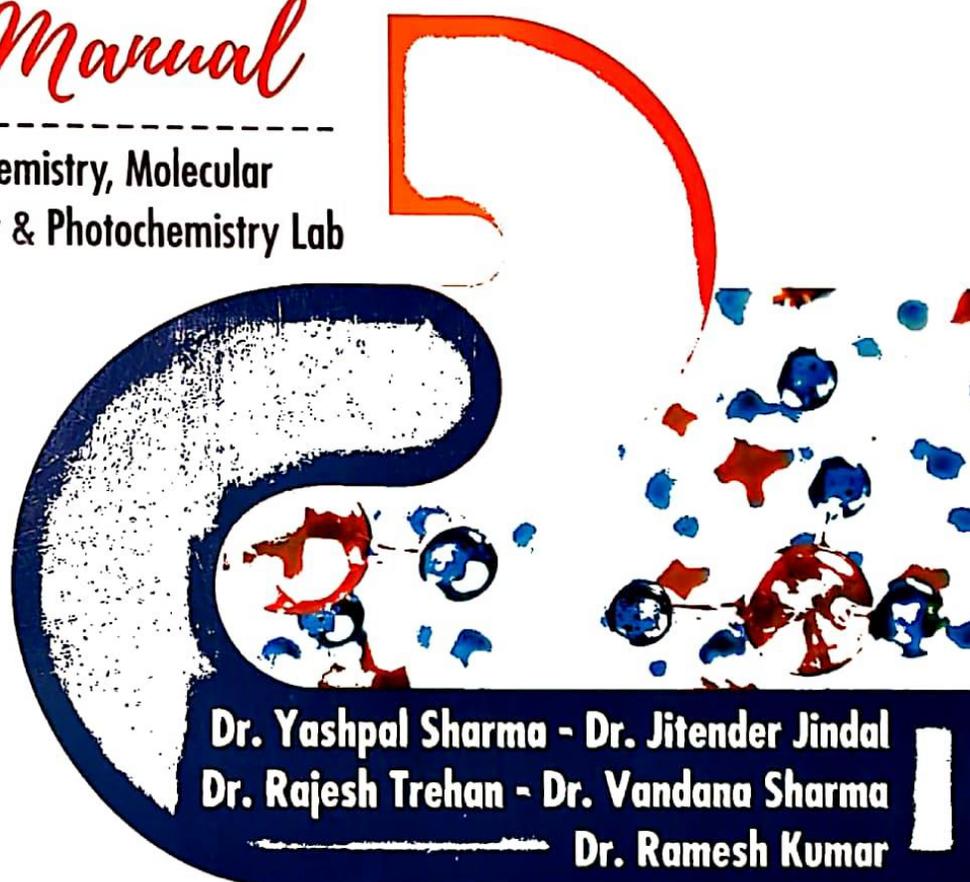
B.Sc.-3rd Year

(Code : CHEM 303 PR)

Chemistry

Lab Manual

Quantum Chemistry, Molecular
Spectroscopy & Photochemistry Lab



Dr. Yashpal Sharma - Dr. Jitender Jindal
Dr. Rajesh Trehan - Dr. Vandana Sharma
Dr. Ramesh Kumar

According to Syllabus prescribed by the
HIMACHAL PRADESH UNIVERSITY, SHIMLA
SARDAR PATEL UNIVERSITY, MANDI

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 **AKASH**

CHEMISTRY

LAB MANUAL

B.Sc.–3rd Year

Code : CHEM 303 PR

**QUANTUM CHEMISTRY, MOLECULAR
SPECTROSCOPY AND PHOTOCHEMISTRY LAB**

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FIRST EDITION

Essentials Of Biochemistry



Dr. Aarti Trehan
Dr. Nihar Ranjan Kar
Mrs. K. Aruna Kumari
Dr. Rajesh Trehan



ESSENTIALS OF BIOCHEMISTRY

Dr. Aarti Trehan, Dr. Nihar Ranjan Kar, Mrs. K. Aruna
Kumari And Dr. Rajesh Trehan

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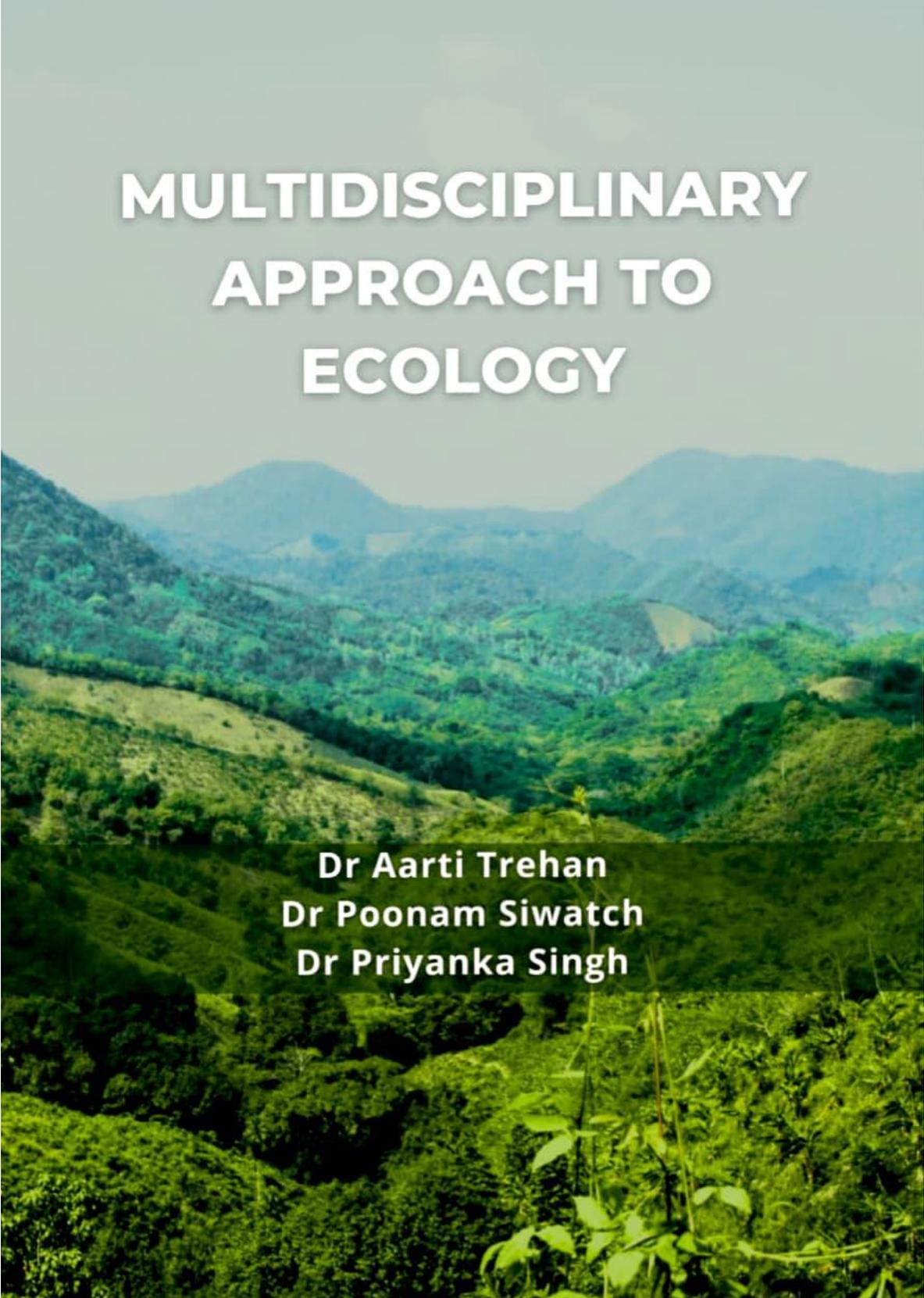
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Multidisciplinary Approach to Ecology

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HUMAN VALUES AS A SOURCE FOR SUSTAINING THE ENVIRONMENT**Rajesh Trehan¹ and Sudesh Sharma²**¹Department of Chemistry, DYSP Govt. P. G. College, Nahar-173001 (H.P.) India²Department of Physics, DYSP Govt. P. G. College, Nahar-173001 (H.P.) India**ABSTRACT**

Environment is a basic need for all living beings because every necessity for them depends on it. Unless the environment is protected, the existence of life on the planet would be impossible. That is why environmental issues have become so sensitive and globally important. All people must give their contribution for the betterment of environment. Human values for the environment refer to the principles, beliefs, and attitudes that individuals and societies hold regarding the natural world and its conservation. Environmental ethics helps define man's moral and ethical obligations toward the environment, but human values become a factor when looking at environmental ethics. Human values are the things that are important to individuals that they then use to evaluate actions or events. In other words, humans assign value to certain things and then use this assigned value to make decisions about whether something is right or wrong. Human values are unique to each individual because not everyone places the same importance on each element of life. These are affected by our culture and religion also. The rapid expansion and new breakthroughs in the arena of science and technology have taken humankind into a new age. The developments have both pros and cons. On the one hand, while technological developments have affected almost every aspect of human life, at the other; it has its devastating effect on the nature itself. Thus, mankind faces double challenges from modern machines and for saving the nature, the mother earth. All people need to have a common understanding of the role played by human beings in reducing or worsening environmental deterioration. How do people out of different cultures perceive these problems? How do they react to them? The aim of this study is to figure out what factors are most important in explaining different levels of awareness concerning environmental problems and to compare the level of environment related human values as well as the actual behaviour towards environment. Environmental values in Hinduism especially in Indian context and their impact has been elaborated.

Keywords: Environment, human values, sustainability, environmental ethics, awareness.

INTRODUCTION

Human values can play a crucial role in sustaining the environment. When people value the environment, they are more likely to make decisions that support the health and well-being of the planet. Human values can help sustain the environment in many ways, as:

- **Respect for Nature:** This value recognizes that the natural world has inherent value and should be respected and protected. When people hold this value, they are more likely to take steps to protect the environment, such as reducing their use of single-use plastics or supporting conservation efforts.
- **Responsibility:** This value emphasizes the need for individuals and societies to take responsibility for their impact on the environment. When people feel responsible for the environment, they are more likely to take steps to reduce their carbon footprint, conserve resources, and support sustainable practices.
- **Cooperation:** This value recognizes that environmental problems require collective action and collaboration. When people value cooperation, they are more likely to work together to find solutions to environmental problems, such as reducing greenhouse gas emissions or protecting biodiversity.

SUSTAINABILITY SYNERGY: GREEN CHEMISTRY, AGRICULTURE, ENVIRONMENT AND TECHNOLOGY



SURESH KUMAR



Sustainability Synergy: Green Chemistry, Agriculture, Environment and Technology

By

Suresh Kumar

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Role of Biofertilizers towards Environmental Sustainability

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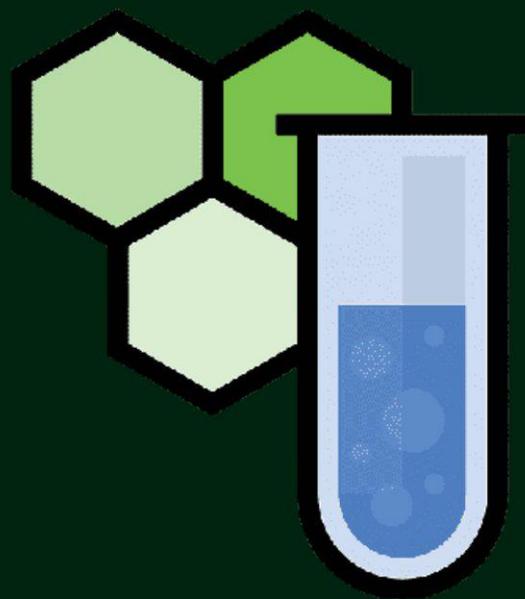
Biofertilizers play a crucial role in promoting environmental sustainability in agriculture. Traditional agricultural practices heavily reliant on synthetic fertilizers have led to numerous environmental issues such as soil degradation, water pollution, and greenhouse gas emissions. Biofertilizers offer a sustainable alternative by harnessing the power of beneficial microorganisms and organic substances to enhance soil fertility and plant nutrition. Present study highlights the key roles biofertilizers play in environmental sustainability. Firstly, biofertilizers improve soil health and fertility through the introduction of beneficial microorganisms. Nitrogen-fixing bacteria convert atmospheric nitrogen into plant-available forms, reducing the need for synthetic nitrogen fertilizers and mitigating nitrogen runoff that contributes to water pollution. Phosphate-solubilizing microorganisms break down insoluble phosphates, making them accessible to plants while minimizing phosphate leaching into water bodies. Secondly, biofertilizers enhance nutrient cycling and minimize nutrient losses, thereby improve nutrient use efficiency and reduce the risk of excess nutrients entering waterways to cause eutrophication. By promoting nutrient availability and uptake, biofertilizers contribute to healthy plant growth, increased crop yields, and improved food security. Moreover, biofertilizers foster soil biodiversity and microbial activity. They support the growth of beneficial microorganisms, such as mycorrhizal fungi, which form symbiotic relationships with plants, aiding in nutrient absorption and

Chemistry

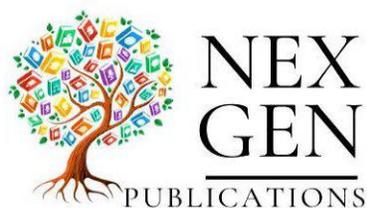
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