

PREFACE

Spectacular advances have taken place in science and technology in the last century. Keeping this in mind UGC has introduced new practical curricula for undergraduate and postgraduate students of various universities. It is thus mandatory that infrastructure facilities in life science should be provided in different colleges and universities so that our students should be able to compete nationally and internationally. For reasons not known there lies a wide range of disparity between the theoretical and practical studies, more so with the introduction of new UGC syllabus. As a result both teachers and students of undergraduate and postgraduate level face tremendous difficulties in acquiring study material of practical utility, particularly topics related to experimental, analytical and separation techniques.

We thought it reasonable, therefore, to write "*Experimental Biology*", which presents both the principles of analytical biology that makes experimental, analytical and separation techniques possible in the laboratory, with background information to understand what the students are going to do and why, including technical information the students gather in the laboratory. The book is subdivided into different parts, including Chapters like: Immunology, Microbiology, Animal Cell Culture, Biochemical Techniques, Separation and Analytical Techniques, Haematology, Physiology. The appendices in the last part are included to provide information important to the study of the above mentioned practicals as a whole.

This laboratory manual is the outcome of teaching in this area for past twenty-seven years to M.Sc. Zoology students, B.Sc. Honours students and students belonging to Biotechnology, Agriculture and allied fields. The idea behind this practical manual was thus to provide theoretical basis of the practical study items to be undertaken in the laboratory in a lucid manner. We shall be grateful if this book is accepted as a valued practical textbook by the students of Life Science at the undergraduate and postgraduate level of most Universities.

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