

Practical Biotechnology

Principles and Protocols

This book principally contains practical aspects of biotechnology, its theoretical background, working principles, and procedures for conducting experiments in laboratories. The experiments in this book are spread in different chapters like Biochemistry, Microbiology, Immunology, Molecular Biology, Plant and Animal Biotechnology, Environmental Technology, Industrial Biotechnology, Biostatistics and Bioinformatics. Besides, a chapter has been devoted towards discussion on safety guidelines, setting up of biotechnology laboratory, ethical issues concerning microbiology and genetic engineering work along with different reagent preparation for conducting experiments. Each chapter describes both the theory and relevant practical details for a given technique, and to identify both the potential and limitations of the technique. This book is designed as an intensive introduction to the various tools of Molecular Biology. It introduces all the basic methods of molecular biology including cloning, PCR, Southern blotting, Northern blotting, Western blotting, DNA sequencing.

Salient Features

- Brief description and working principles of essential instrumentation used in biotechnology practical experiments.
- Commonly asked questions in viva voce examinations.
- Well-tested experimental protocols for each technique.
- Reagents and preparation of each experiment separately.
- Complete schedule of experiments and the preparation required.
- Study questions at the end of each chapter.

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