

# **PHARMACEUTICAL MICROBIOLOGY – II**

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## **PHARMACEUTICAL MICROBIOLOGY – II**

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## **PREFACE**

*In this edition the attempt has been made to write a Pharmaceutical Microbiology text book as per the new syllabus prescribed by Pharmacy Council of India for Semester - III. There are many text books on microbiology already available in market by famous authors. Drug safety is a major focus of pharmaceutical microbiology. Pathogenic bacteria, fungi (yeasts and moulds) and toxins produced by microorganisms are all possible contaminants hence it is required for Quality Assurance and Quality Control on protecting pharmaceutical and healthcare products from spoilage by microorganisms. Most of the information in this book has presented in a very simple manner, with tables, figures and wherever necessary with diagrams. The aim of this book is made easy for understandable to the student. This book is as per the revised syllabus prescribed by the Pharmacy Council of India under Regulations 6, 7 and 8 of the Bachelor of Pharmacy (B. Pharm.) course regulations 2014 in 2016 and amended from 2017 onwards throughout India under same uniform syllabus. As per the norms, the book is compiled with semester wise syllabus in which Pharmaceutical Microbiology is under Semester - III.*

*Semester - III, Pharmaceutical Microbiology subject is divided into five sub-units.*

*Unit-I, deals with the history of microbiology world, its general introduction and importance, description on Prokaryotes and Eukaryotes. Further detail study on bacteria world with their culture techniques for growth and their identification by various modern microscopic techniques.*

*Unit-II, deals with various staining techniques and biochemical tests for identification of various types of bacteria. Further most importantly, sterilization techniques are discussed in details with respect to equipment details, evaluation of efficiency and various sterility indicators.*

*Unit-III, describes about Fungi and Viruses in details. Disinfectants are also discussed in details for identification of bacteriostatic and bactericidal actions. Standard IP, BP and USP methods for sterility testing of products are also equally given importance in this sub-unit.*

*Unit IV deals with various conditions for culturing microbes under aseptic conditions. Principles and methods of different microbiological assay are highlighted with various methods for standardization of antibiotics, vitamins and amino acids. Assessment of new antibiotics is also added in this important sub-unit.*

*Unit V is most important where most care and precaution taken for storage of pharmaceutical products from the microbial spoilage and their stability. Microbial contaminants and their contamination processes are also revealed in this unit. Furthermore, some methods are described on animal cell culture and their importance in pharmaceutical industry and research. It is hoped that all the units will provide up to date knowledge to all the students with the detail information by systemic manners described in this book.*

*My attempt for this edition of the pharmaceutical microbiology book is with better hope to gain the popularity by the students and readers throughout the country. Any criticism and suggestions from the readers are always welcome. In the future editions, such suggestions will be incorporated and other mistakes will be rectified.*

* Ms. Ankita Tripathi*

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 Ms. Ankita Tripathi



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