

Pharmacotherapeutics

Practical Notebook Course Code ER20-24P

for Second Year Diploma in Pharmacy

has been written and designed as per the Pharmacy Council of India's Education Regulation, 2020, for Second Year Diploma in Pharmacy course (Course Code ER20-24P). This practical notebook is designed to fulfil the course objectives and also help the pharmacy students to acquire and train in the basic skills required to support the pharmaceutical care services for selected common disease conditions with course objectives and course outcomes. In this practical notebook the SOAP is designed for the hypothetical clinical cases of 15 selected common diseases. The students are advised to prepare at least 6 real clinical cases of their interest as a part of this curriculum. It also includes patient counselling of 5 cases on disease conditions, medication, lifestyle modifications and monitoring parameters and 4 exercises on dose calculation of selected drugs in pediatrics and geriatrics.

Varun Dutt Sharma MPharm

is ex-Principal, Janta Polytechnic, Jahangirabad, Bulandshahar, UP, and currently Consultant at VYDSAM Ayurveda PG College, Khurja, UP.

SK Pandey BPharm

is ex-Head, Department of Pharmacy, Janta Polytechnic, Jahangirabad, Bulandshahar, UP.

Pharmacotherapeutics

Sharma | Pandey

Scan for the price of this book and catalogue

ISBN: 978-93-5466-506-6



9 789354 665066



CBS Publishers & Distributors Pvt Ltd
4819/XI, Prahlad Street, 24 Ansari Road, Daryaganj, New Delhi 110 002, India
E-mail: delhi@cbspd.com, customercare@cbspd.com; Website: www.cbspd.com
New Delhi | Bengaluru | Chennai | Kochi | Kolkata | Lucknow | Mumbai
Hyderabad | Jharkhand | Nagpur | Patna | Pune | Uttarakhand

Pharmacotherapeutics

Practical Notebook

Course Code ER20-24P

for Second Year Diploma in Pharmacy

As per the latest syllabus prescribed by Pharmacy Council of India



Varun Dutt Sharma
SK Pandey



CBSPD Dedicated to Education
CBS Publishers & Distributors Pvt Ltd

Pharmacotherapeutics

Practical Notebook

Course Code ER20-24P

for **Second Year Diploma in Pharmacy**
As per the latest syllabus prescribed by Pharmacy Council of India

Pharmacotherapeutics

Practical Notebook

Course Code ER20-24P

for **Second Year Diploma in Pharmacy**
As per the latest syllabus prescribed by Pharmacy Council of India

Varun Dutt Sharma MPharm

Ex-Principal

Janta Polytechnic, Jahangirabad, Bulandshahar, Uttar Pradesh
Consultant, VYDSAM Ayurveda PG College, Khurja, Uttar Pradesh

SK Pandey BPharm

Ex-Head, Department of Pharmacy

Janta Polytechnic, Jahangirabad, Bulandshahar, Uttar Pradesh



CBS Publishers & Distributors Pvt Ltd

New Delhi • Bengaluru • Chennai • Kochi • Kolkata • Lucknow • Mumbai
Hyderabad • Jharkhand • Nagpur • Patna • Pune • Uttarakhand

Disclaimer

Science and technology are constantly changing fields. New research and experience broaden the scope of information and knowledge. The authors have tried their best in giving information available to them while preparing the material for this book. Although, all efforts have been made to ensure optimum accuracy of the material, yet it is quite possible some errors might have been left uncorrected. The publisher, the printer and the authors will not be held responsible for any inadvertent errors, omissions or inaccuracies.

Pharmacotherapeutics Practical Notebook

Course Code ER20-24P

for **Second Year Diploma in Pharmacy**
As per new syllabus prescribed by Pharmacy Council of India

ISBN: 978-93-5466-506-6

Copyright © Authors and Publisher

First Edition: 2023

All rights reserved. No part of this book may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or any information storage and retrieval system without permission, in written, from the authors and the publisher.

Published by Satish Kumar Jain and produced by Varun Jain for

CBS Publishers & Distributors Pvt Ltd

4819/XI Prahlad Street, 24 Ansari Road, Daryaganj, New Delhi 110 002, India.

Ph: 011-23289259, 23266861, 23266867

Fax: 011-23243014

Website: www.cbspd.com

e-mail: delhi@cbspd.com; cbspubs@airtelmail.in

Corporate Office: 204 FIE, Industrial Area, Patparganj, Delhi 110 092, India

Ph: 011-4934 4934

Fax: 011-4934 4935

e-mail: publishing@cbspd.com; publicity@cbspd.com

Branches

- **Bengaluru:** Seema House 2975, 17th Cross, K.R. Road, Banasankari 2nd Stage, Bengaluru 560 070, Karnataka, India
Ph: +91-80-26771678/79 Fax: +91-80-26771680 e-mail: bangalore@cbspd.com
- **Chennai:** 7, Subbaraya Street, Shenoy Nagar, Chennai 600 030, Tamil Nadu, India
Ph: +91-44-26680620, 26681266 Fax: +91-44-42032115 e-mail: chennai@cbspd.com
- **Kochi:** 42/1325, 36, Power House Road, Opposite KSEB, Ernakulam 682 018 Kochi, Kerala, India
Ph: +91-484-4059061-67 Fax: +91-484-4059065 e-mail: kochi@cbspd.com
- **Kolkata:** 147, Hind Ceramics Compound, 1st Floor, Nilgunj Road, Belghoria, Kolkata 700 056, West Bengal, India
Ph: +91-33-25633055/56 e-mail: kolkata@cbspd.com
- **Lucknow:** Basement, Khushnuma Complex, 7-Meerabai Marg (Behind Jawahar Bhawan), Lucknow-226 001, Uttar Pradesh, India
Ph: +910522-4000032 e-mail: tiwari.lucknow@cbspd.com
- **Mumbai:** PWD Shed, Gala No. 25/26, Ramchandra Bhatt Marg, Next to JJ Hospital Gate No. 2, Opp Union Bank of India, Noorbaug, Mumbai-400009, Maharashtra, India
Ph: +91-22-66661880/89 e-mail: mumbai@cbspd.com

Representatives

- | | | | | | |
|--------------------|--------------|--------------------|--------------|----------------------|--------------|
| • Hyderabad | 0-9885175004 | • Jharkhand | 0-9811541605 | • Nagpur | 0-9421945513 |
| • Patna | 0-9334159340 | • Pune | 0-9923910676 | • Uttarakhand | 0-9716462459 |

Printed at: Chaman Enterprises, Delhi, India

Certificate

Student's Name: _____

Class _____ Roll No. _____

Subject _____

This is to certify that experiments, written in the index, have been performed by the student, are satisfactory.

Grade

Name and signature of lab. in-charge

College stamp



Date

Preface

The Pharmacy Council of India made regulations under Section 10 of Pharmacy Act, 1948 called “The Education Regulations, 2020, for Diploma in Pharmacy course.” It was approved by Government of India, Ministry of Health and Family Welfare, which was notified in October, 2020 and implemented in 2021 for Diploma in Pharmacy students. Introduction to new subject *Pharmacotherapeutics—Practical* in ER-20 will bring about revolutionary changes that will uplift the knowledge and skills of the students on par with the contemporary and future professional demands in the field of pharmaceutical care services which will certainly redefine the roles of the diploma holder qualified pharmacists in both community and hospital settings. This new curriculum certainly not only expertise on medications but also the students should be able to provide an expert opinion on medications to healthcare professionals on safe and effective therapeutic use of drugs or medicines.

The practical notebook contains 24 experiments as per guidelines of ER-2020. The left blank page is provided for making observations and calculations where ever applicable.

We shall gratefully acknowledge the comments, suggestions and criticism by respected teachers and students for improvement of future edition. We express sincere thanks to Mr Satish Kumar Jain Chairman and Managing Director and Mr YN Arjuna Senior Vice President—Publishing, Editorial, and Publicity, CBS Publishers & Distributors, for their cooperation, encouragement and assistance in bringing out of this practical notebook. Finally our gratitude to our colleagues for their inspiration and motivation.

Varun Dutt Sharma
SK Pandey

Instructions

1. Always put on neat and clean white apron whenever you are working in the laboratory.
2. Bring always practical notebook for viva and evaluation.
3. Thoroughly clean the apparatus required in the practical work.
4. The practical notebook should be completed in every respect and should be submitted on the same day to the teacher concerned for marking and signature.
5. Never throw waste papers and burnt matchsticks in the sink, this will block the sink which may lead to over flowing. Put the waste materials in the dustbin.
6. Keep your working place neat and clean. After the work is finished, the student should clean the apparatus and other articles.
7. The water taps and gas taps should be tightly closed after the work is over.
8. Never take and use any chemical or reagents prior taking permission from the teacher or the laboratory technician.
9. Always be in college uniform and maintain strict discipline.
10. Electrical switches should be put off before leaving the laboratory.
11. Actual observations and readings should be recorded in practical notebook , calculations and conclusions should be based on actual observations.
12. Practical must be performed individually.
13. Safety rules must be followed strictly and the student must know the emergency treatment for the accidents and laboratory infections.

Syllabus

Pharmacotherapeutics—Practical

Course Code: ER20-24P

25 Hours (1 Hour/week)

Scope: This course is designed to train the students in the basic skills required to support the pharmaceutical care services for selected common disease conditions.

Course Objectives: This course will train the students on

1. How to prepare a SOAP (Subjective, Objective, Assessment and Plan) note for clinical cases of selected common diseases.
2. Patient counseling techniques/methods for common disease conditions.

Course Outcomes: Upon successful completion of this course, the students will be able to:

1. Write SOAP (Subjective, Objective, Assessment and Plan) notes for the given clinical cases of selected common diseases
2. Counsel the patients about the disease conditions, uses of drugs, methods of handling and administration of drug, life-style modifications and monitoring parameters.

Practicals

- I. Preparation and discussion of SOAP (Subjective, Objective, Assessment and Plan) notes for at least SIX clinical cases (real/hypothetical) of the following disease conditions.
 1. Hypertension
 2. Angina Pectoris
 3. Myocardial Infarction
 4. Hyperlipidaemia
 5. Asthma
 7. COPD
 8. Diabetes
 9. Epilepsy
 10. Stroke
 11. Depression
 12. Tuberculosis
 13. Anaemia (any one type as covered in theory)
 14. Viral infection (any one type as covered in theory)
 15. Dermatological (any one type as covered in theory)
- II. Patient counseling exercises using role plays based on the real/hypothetical clinical case scenarios. The students are expected to provide counseling on disease condition, medication, lifestyle modifications, monitoring parameters, etc. and the same shall be documented (minimum 5 cases).
- III. Simulated cases to enable dose calculation of selected drugs in paediatrics and geriatrics under various pathological conditions (minimum 4 cases).

Contents

Preface
Syllabus

vii
ix

1. SOAP of Clinical Cases of Selected Disease Conditions

1

- Experiment 1:** To submit SOAP report on the real/hypothetical clinical case of Diabetes 5
Experiment 2: To submit SOAP report on the real/hypothetical clinical case of Hypertension 11
Experiment 3: To submit SOAP report on the real/hypothetical clinical case of Angina Pectoris 27
Experiment 4: To submit SOAP report on the real/hypothetical clinical case of Asthama 23
Experiment 5: To submit SOAP report on the real/hypothetical clinical case of Myocardial Infarction 29
Experiment 6: To submit SOAP report on the real/hypothetical clinical case of Rhumatoid Arthritis 35
Experiment 7: To submit SOAP report on the real/hypothetical clinical case of Hyperlipidemia or Dyslipidemia 41
Experiment 8: To submit SOAP report on the real/hypothetical clinical case of COPD 47
Experiment 9: To submit SOAP report on the real/hypothetical clinical case of Epilepsy 53
Experiment 10: To submit SOAP report on the real/hypothetical clinical case of Stroke 59
Experiment 11: To submit SOAP report on the real/hypothetical clinical case of Depression 65
Experiment 12: To submit SOAP report on the real/hypothetical clinical case of Tuberculosis 71
Experiment 13: To submit SOAP report on the real/hypothetical clinical case of Iron Deficiency Anemia 77
Experiment 14: To submit SOAP report on the real/hypothetical clinical case of SARS-CoV-2 83
Experiment 15: To submit SOAP report on the real/hypothetical clinical case of Scabies 89

2. Patient Counseling

67

- Experiment 16:** To provide patient counseling session on the real/hypothetical clinical case of Hypertension 99
Experiment 17: To provide patient counseling session on the real/hypothetical clinical case of Diabetes 103
Experiment 18: To provide patient counseling session on the real/hypothetical clinical case of Asthma 107
Experiment 19: To provide patient counseling session on the real/hypothetical clinical case of Anemia 109
Experiment 20: To provide patient counseling session on the real/hypothetical clinical case of Epilepsy 113

3. Dose Calculation

121

- Experiment 21:** Calculate the dose of paracetamol for 8 years of a child (body weight 30 kg, surface area—1.08 square meters) suffering from fever and body ache. Adult dose—500 mg 125
Experiment 22: Calculate the dose of aspirin for 6 years of a child (body weight—20 kg, surface area—0.80 square meters) suffering from headache and toothache. Adult dose—500 mg 127
Experiment 23: Calculate the dose of ferrous fumarate for 3 months old infant (body weight—2 kg, surface area—0.15 square meters) suffering from iron deficiency anemia. Adult dose—0.6 gm 129
Experiment 24: To interpret/justify the dose of gentamicin of a 85 years old person (body weight—82 kg, height of 5'5") suffering from nonlife-threatening infection. Ordered—85 mg IM 8 hourly. Usual dose is 1mg per kg. Ideal body weight is 55–72 kg, so safe dose range is 55–72 mg 131

