# Contents

Foreword by Padmaja Odaykumar	vi
Preface	ix
Abbreviations	XT
Color plates I to VIII between pages xvi and 1	
SECTION I: BASIC PHARMACOLOGY	
1. Drugs	_ 3
2. Routes of Drug Administration	_ 13
3. Uses of Drugs	_ 17
4. Drug Reactions	_ 23
5. Clinical Trials	_ 29
SECTION II: CLINICAL PHARMACY	
	41
6. Pharmaceutical Science	- 41 -
7. Demonstrate Understanding of the Use of Various Dosage Forms	_ 45
8. Prepare Oral Rehydration Solution from the ORS Packet and Explain its Use	e 63
9. Demonstrate the Appropriate Setting up of an Intravenous Drip in a Simulated Environment	_ 68
10. Demonstrate the Correct Method of Calculation of Drug Dosage in Patients Including those Used in Special Situations	77
SECTION III: CLINICAL PHARMACOLOGY	
11. Write a Rational Correct and Legible Generic Prescription for a Given Condition and Communicate the Same to the Patient	_ 89
12. Perform and Interpret a Critical Appraisal (Audit) of a Given Prescription	_ 105
13. Perform a Critical Evaluation of the Drug Promotional Literature	_110
14. To Recognize and Report an Adverse Drug Reaction	_ 114
15. To Prepare and Explain a List of P-Drugs for a Given Case/Condition	_124
16. Demonstrate How to Optimize Interaction with Pharmaceutical Representative to Get Authentic Information on Drugs	127
17. Prepare a List of Essential Medicines for Healthcare Facilities	130
18. Communicate Effectively with a Patient on the Proper Use of Prescribed Medication	134

SECTION IV: EXPERIMENTAL PHARMACOLOGY	
19. Administer Drugs through Various Routes in a Simulated Environment using Manikins	139
20. Effects of Drugs on Blood Pressure (Vasopressor and Vasodepressor with Appropriate Blockers) Using Computer-aided Learning	146
SECTION V: COMMUNICATION PHARMACOLOGY	
21. Communication with the Patient with Empathy and Ethics on all Aspects of Drug Use	159
22. Communication with the Patient Regarding the Optimum Use of Drug Therapy, Device, and Storage of Medicines	164
23. Motivate Patients with Chronic Disease to Adhere to the Prescribed Management by Healthcare Provider	169
24. Explain to the Patient the Relationship between the Cost of Treatment and Patient Compliance	172
25. Demonstrate an Understanding of the Caution in Prescribing Drugs Likely to Produce Dependence and Recommend the Line of Management	177
26. Demonstrate Ability to Educate the Public and Patients about Various Aspects of Drug Use including Drug Dependence and OTC Drugs	182
27. Demonstrate an Understanding of the Legal and Ethical Aspects of Prescribing Drugs	187
SECTION VI: ESSENTIAL PHARMACOLOGY	
28. Problem-Based Learning	195
29. Drug (Medicine) Interaction	207
30. Identify the Drug	212
31. Aerosol and Insulin Devices: Administration Techniques	214
32. Systems of Treatment	219
APPENDICES	
1. Computer Assisted Learning and Manikins	223
2. Teaching Methodology and Evaluation System	225
Medical Oath	229
Bibliography	231
Index	233

# **Abbreviations**

#### General

- BMR: Basal metabolic rate
- CNS: Central nervous system
- CME: Continue medical education
- CHF: Congestive heart failure
- def: definition
- e.g.: for example
- etc.: extra
- Ex: Example
- GIT: Gastrointestinal tract
- Hr: hour
- ICU: Intensive care unit
- IPD: Inter-patient department
- i.e.: that is, in other words
- min: Minute
- MNC: Multi National Company
- no.: Number
- OPD: Outpatient department
- P: Problem
- PK: Pharmacokinetics
- PD: Pharmacodynamics
- PVR: Peripheral vascular resistance
- Sec: Seconds
- viz: namely
- vs: verses, against
- WHO: World Health Organization

## **Prescription Related**

- Rx: Recipe, take this
- Hx: History
- Sx: Symptoms
- Dx: Diagnosis
- DDX: Differential diagnosis
- Tx: Treatment

## Frequency of Administration

- od: Once a day
- bid: Twice a day
- tid: Three times a day
- qid: Four times a day
- Stat: Immediately, at once
- SOS: If needed, where necessary

#### **Formulations**

- Tab: Tablet
- Syr: Syrup
- Cap: Capsule
- Amp: Ampoule
- Inj: Injection
- Mist: Mixture

#### **Domestic Measures**

- 1 teaspoonful = 5 ml
- 1 dessertspoonful = 10 ml
- 1 tablespoonful = 15 ml
- 1 cup = 100-150 ml
- 1 glass = 200-250 ml
- 1 ml = 15 drops

#### **Time of Administration**

- ac: Before the meal
- pc: After meal
- qAM: Every morning
- qPM: Every evening
- hs: At bedtime

## **Routes of Administration**

- PO: Per oral
- IM: Intramuscular
- IV: Intravenous
- SC: Subcutaneous
- ID: Intradermal