

Second Edition

Second Edition

Hospital and Clinical Pharmacy

Theory and Practical Course Codes: ER20-25T and ER20-25P
for **Second Year Diploma in Pharmacy**

Salient Features

- The book has been compiled as per the recent syllabus for Second Year Diploma in Pharmacy course prescribed by Pharmacy Council of India
- This edition also includes the practical exercises prescribed in syllabus.
- The book consists of 20 chapters, covering the entire syllabus in an easy to understand language.
- Incorporates question bank consisting of multiple choice questions (MCQs), and short and long questions.
- Appropriate tables and figures have been given for better understanding of the subject and topics.
- Model test papers acquaint the reader the style of questions asked in the board examinations.

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Anees Ahmad Siddiqui
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Dedicated to Education

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Syllabus

HOSPITAL AND CLINICAL PHARMACY

Course Code 20–25T

75 Hours (3 Hours/Week)

1. Hospital Pharmacy

6 hours

- Definition, scope, National and International scenario
- Organizational structure
- Professional responsibilities, Qualification and experience requirements, job specifications, workload requirements and inter professional relationships
- Good Pharmacy Practice (GPP) in hospital
- Hospital Pharmacy Standards (FIP Basel Statements, AHSP)
- Introduction to NAQS guidelines and NABH Accreditation and Role of Pharmacists

2. Different Committees in the Hospital

4

- Pharmacy and Therapeutics Committee—Objectives, Composition, and functions
- Hospital Formulary—Definition, Procedure for development and use of hospital formulary. Infection Control Committee—Role of Pharmacist in preventing Antimicrobial Resistance

3. Supply Chain and Inventory Control

14

- Preparation of Drug lists—High Risk drugs, Emergency drugs, Schedule H1 drugs, NDPS drugs, reserved antibiotics
- Procedures of Drug Purchases—Drug selection, short term, long term, and tender/e-tender process, quotations, etc.
- Inventory control techniques: Economic Order Quantity
- Reorder Quantity Level, Inventory Turnover, etc.
- Inventory Management of Central Drug Store—Storage conditions, Methods of storage, Distribution, Maintaining Cold Chain, Devices used for cold storage (Refrigerator, ILR, Walk-in-Cold rooms)
- FEFO, FIFO methods
- Expiry drug removal and handling, and disposal. Disposal of Narcotics, cytotoxic drugs
- Documentation—purchase and inventory



- 4. Drug distribution** 7
- Drug distribution (inpatients and outpatients)—Definition, advantages and disadvantages of individual prescription order method, Floor Stock Method, Unit Dose Drug Distribution Method, Drug Basket Method.
 - Distribution of drugs to ICCU/ICU/NICU/Emergency wards.
 - Automated drug dispensing systems and devices
 - Distribution of Narcotic and Psychotropic substances and their storage
- 5. Compounding in Hospitals**—Bulk compounding, IV admixture services and incompatibilities, Total parenteral nutrition 4
- 6. Radio Pharmaceuticals**—Storage, dispensing and disposal of Radiopharmaceuticals
- 7. Application of computers in Hospital Pharmacy Practice**—Electronic health records, Software's used in hospital pharmacy 2
- 8. Clinical Pharmacy: Definition, scope, and development**—in 12
India and other countries
Technical definitions, common terminologies used in clinical settings and their significance such as Pediatrics, Geriatric, Antenatal Care, Postnatal Care, etc.
Daily activities of clinical pharmacists: Definition, goal, and procedure of
- Ward round participation
 - Treatment Chart Review
 - Adverse drug reaction monitoring
 - Drug information and poisons information
 - Medication history
 - Patient counselling
 - Interprofessional collaboration
- Pharmaceutical care: Definition, classification of drug related problems. Principles and procedure to provide pharmaceutical care*
Medication Therapy Management, Home Medication Review
- 9. Clinical laboratory tests used in the evaluation of disease states—significance and interpretation of test results** 10
- Hematological, Liver function, Renal function, thyroid
 - Function tests
 - Tests associated with cardiac disorders
 - Fluid and electrolyte balance
 - Pulmonary Function Tests



- 10. Poisoning:** Types of poisoning: Clinical manifestations and Antidotes 6
Drugs and Poison Information Centre and their services—Definition, Requirements, Information resources with examples, and their advantages and disadvantages
- 11. Pharmacovigilance** 2
- Definition, aim and scope
 - Overview of Pharmacovigilance
- 12. Medication errors:** Definition, types, consequences, and strategies to minimize medication errors, LASA drugs and Tallman lettering as per ISMP 6
Drug Interactions: Definition, types, clinical significance of drug interactions

Course Code 20–25P

25 Hours (1 Hour/Week)

Practicals

1. Systematic approach to drug information queries using primary/secondary/tertiary resources of information (2 cases)
2. Interpretation of laboratory reports to optimize the drug therapy in a given clinical case (2 cases)
3. Filling up IPC's ADR Reporting Form and perform causality assessments using various scales (2 cases)
4. Demonstration/simulated/hands-on experience on the identification, types, use/application/administration of
 - Orthopedic and Surgical Aids such as knee cap, LS belts, abdominal belt,
 - Walker, walking sticks, etc.
 - Different types of bandages such as sterile gauze, cotton, crepe bandages, etc.
 - Needles, syringes, catheters, IV set, urine bag, Ryle's tube, urine pots, colostomy bags, oxygen masks, etc.
5. Case studies on drug-drug interactions (any 2 cases)
6. Wound dressing (simulated cases and role play—minimum 2 cases)
7. Vaccination and injection techniques (IV, IM, SC) using mannequins (5 activities)
8. Use of Hospital Pharmacy Software and various digital health tools