

St.James College of Pharmaceutical Sciences St.James medical Academy River Bank, Chalakudy			
Programme:	B.Pharm	Sem.:	Seventh semester
Name of Course: (Subject)	Pharmacy Practice	Course Code:	BP 703T.Pharmacy Practice
Teaching faculty of the course	Happy Thomas		

### **Summary of the Lecture Plan**

Topic	Lectures	Hours
Hospital and its organization	Definition, classification	1
	Organization of Hospital	
Hospital Pharmacy and its organization	Definition, Objectives, Functions	1
	Organization of Hospital pharmacy	1
	Location and layout	1
	Qualifications & Responsibilities of a hospital pharmacist	1
Drug distribution system in a hospital	Dispensing of drugs to inpatients	1
	Charging policy and labelling	1
	Dispensing of drugs to ambulatory patients and controlled drugs	1
Hospital formulary	Definition, contents, preparation	1
	Addition and deletion	1
Pharmacy and therapeutic committee	Organization, functions	1
	Role of PTC	1
Clinical pharmacy	Concept of clinical pharmacy	1
	Drug therapy monitoring	1
Patient medication history interview	Objective and medication interview forms	1
Therapeutic drug monitoring	Need for Therapeutic Drug Monitoring	1
	Factors to be considered during the Therapeutic Drug Monitoring	
Medication adherence	Causes of medication non-adherence	1
	Pharmacist role in the medication adherence	1
	Monitoring of patient medication adherence	
Adverse drug reaction	Classification	1
	Reporting and management	1
Drug interactions	Pharmacokinetic and Pharmacodynamic interactions	1
Drug information services	Drug and poison information center	1
	Sources of drug information	
	Computerized services	1

	Storage and retrieval of information	
Patient counselling	Definition and steps	1
Communication skill	Communication skill with prescribers and patients	2
Rational use of drugs	Rational use of injections, antibiotics and over the counter drugs	1
	Sale of over the counter drugs	1
Pharmacotherapeutics	Drug therapy and management aspect of disorders	8
Interpretation of clinical laboratory tests	Hematology, liver function test, renal function test, pulmonary function test	2
Community pharmacy	Organization and structure of retail and wholesale drug store	1
	Legal requirements for establishment and maintenance of a drug store	2
Drug store management and inventory control	Organization of drug store	1
	Purchase and inventory control	2
	Procurement and stocking	1

**Major issues or Core aspects to be addressed/ covered:**

<b>Hospital and its organization</b>
definition
Classification
Organization of hospital
Medical staff involved and their functions
<b>Hospital Pharmacy and its organization</b>
Definition
Functions of hospital pharmacy
Organization, location and layout of hospital pharmacy
Functions and responsibilities of hospital pharmacist
<b>Drug distribution system in a hospital</b>
Methods adopted
Types of drug distribution systems to inpatients, outpatients, ambulatory patients and controlled drugs
Charging policy
Labeling
<b>Hospital formulary</b>
Definition, contents
Hospital formulary and drug list
Preparation, revision
Addition and deletion of hospital formulary
<b>Pharmacy and therapeutic committee</b>

Organization, functions
Policies –drugs into formulary, inpatient and outpatient prescription, automatic stop order, emergency drug list preparation
Clinical pharmacy
Introduction and concept
Functions and responsibilities
Drug therapy monitoring- medication chart review, pharmacist intervention
Ward round participation
Medication history and pharmaceutical care
Patient medication history interview
Need for medication history interview
Steps involved
Medication interview forms
Therapeutic drug monitoring
Need for Therapeutic Drug Monitoring
Factors to be considered
Steps involved
Methods of TDM assessment
Medication adherence
Causes of medication non-adherence
Strategies for improving medication adherence
Pharmacist role and monitoring in the medication adherence
Adverse drug reaction
Classification
Reporting and management-different monitoring scales and reporting methods, pharmacists role in detecting ADR
Drug interactions
Pharmacokinetic interactions- ADME interactions
Pharmacodynamic interactions- synergism, antagonism, addition etc
Drug information services
Drug and Poison information center
Sources of drug information- primary, secondary, tertiary sources
Steps in answering drug and poison information queries
Computerized services
storage and retrieval of information- soft wares used
Patient counseling
Definition of patient counseling
Steps involved in patient counseling- four steps
Communication skills needed
Communication skill
Communication skill with prescribers and patients

Verbal and non-verbal communication
Steps of communication
Rational use of drugs
Definition, factors affecting, irrational drug use
Methods of improving rational drug use- WHO indicators etc
Rational use of injections, antibiotics and over the counter drugs
Pharmacotherapeutics
Drug therapy and management aspect of following disorders Diabetes, Hypertension, congestive cardiac failure, myocardial infarction, Asthma, Epilepsy, Peptic ulcer, rheumatoid arthritis and tuberculosis
Interpretation of clinical laboratory tests
Pulmonary function test
Hematology
Renal function test
Liver function test
Community Pharmacy
Organization and structure of retail and wholesale drug store
Types and design
Legal requirements for establishment and maintenance of a drug store, Dispensing of proprietary products
Maintenance of records of retail and wholesale drug store- financial, legal etc
Drug store management and inventory control
Organization
Types of materials stocked and storage conditions
Purchase and inventory control
Principles, procedure, purchase order, procurement and stocking
Economic order quantity, reorder quantity level
Methods used for the analysis of drug expenditure

### Sample Questions

Hospital
Define and classify hospital?
Add a note on organization of hospital
Explain the medical services offered by a hospital?
Hospital pharmacy
Define hospital pharmacy? What are the responsibilities of hospital pharmacist?
Write about the functions of a hospital pharmacist?
Explain the organization of a hospital pharmacy with flowchart?
Add a note on the location and layout of hospital pharmacy?
Drug distribution system in hospitals
Explain the drug distribution to outpatients?
What are the types of drug distribution systems for inpatients? Explain any two in detail?

Explain complete floor stock system?
Write a note on charging policy?
Explain dispensing of controlled drugs?
<b>Hospital formulary</b>
Define hospital formulary? what are the contents?
Explain the addition and deletion of a hospital formulary?
Explain the preparation and revision of a hospital formulary?
<b>Pharmacy and therapeutic committee</b>
Write a note on organization of PTC?
Explain the role of PTC in different hospital functions?
Define PTC? Write a note on automatic stop orders?
<b>Clinical pharmacy</b>
Define clinical pharmacy? What are the roles and responsibilities of clinical pharmacists?
Add a note on ward round participation?
What is medication history?
Explain in detail about pharmaceutical care?
Write about Medication chart review?
<b>Patient medication history interview</b>
Explain the need of patient medication history interview?
Add a note on patient medication history interview? Give an example of medication history forms
<b>Therapeutic drug monitoring</b>
Define TDM? Explain indications?
What are the steps included in conducting TDM?
Methods of assessing TDM?
<b>Medication adherence</b>
Define medication adherence? what are the causes?
How will you monitor medication adherence?
What is the role of pharmacist in improving medication adherence?
<b>Adverse drug reaction</b>
Define and classify ADR with examples?
Methods for assessing ADR causality?
Elaborate the methods for reporting ADR?
Explain the role of pharmacist in ADR?
<b>Drug interactions</b>
Explain pharmacokinetic drug interaction with examples?
What are the types of pharmacodynamics drug interactions?

Explain the terms antagonism, addition and synergism?
<b>Drug and poison information services</b>
Define DI services? Explain the setup of DIC?
What are the sources of drug and poison information?
Explain the steps to answer drug information query?
Explain the requirements needed for PIC?
<b>Patient counselling</b>
Define patient counselling and explain the steps involved?
What is role of pharmacist in patient counselling?
<b>Communication skill</b>
Explain verbal and non-verbal communication?
Role of communication in clinical setting?
<b>Rational use of drugs</b>
Define rational drug use? What are the factors affecting it?
How can you improve rational drug use? What is the role of pharmacist?
Explain the rational drug use of antibiotics?
What are the guidelines for rational drug use? Elaborate on rational use of OTC drugs?
<b>Pharmacotherapeutics</b>
Explain the management of hypertension?
Pharmacotherapy of diabetes mellitus?
Clinical management of rheumatoid arthritis?
What is DOTS therapy?
Explain the management of peptic ulcer disease?
Pharmacotherapy of bronchial asthma?
<b>Interpretation of clinical laboratory tests</b>
What are the haematological considerations in laboratory setting?
Explain lung volumes?
Explain liver function test?
Write a note on renal function test?
<b>Community Pharmacy</b>
What are the legal requirements to start a community pharmacy?
Record maintenance in community pharmacy?
Explain the design of a community pharmacy?
Write a note on computerized services?
<b>Drug store management and inventory control</b>
Explain drug procurement in a drug store?
What are the steps involved in purchase procedure?

Define inventory control? What are the steps involved?

What are the methods of inventory control? Explain ABC, VED, and EOQ analysis in detail?

Explain types of materials stocked and storage conditions in a drug store?