

St.James College of Pharmaceutical Sciences St.James medical Academy River Bank, Chalakudy			
Programme:	Pharm D PB	Sem.:	First Year
Name of Course: (Subject)	Pharmacotherapeutics I&II	Course Code:	1.1
Teaching faculty of the course	Bincy T Abraham, Jisna Jose		

### Summary of the Lecture Plan

Topic	Lectures	Hours
Cardiovascular system	Hypertension	2
	Congestive cardiac failure	2
	Angina Pectoris	2
	Myocardial infarction	2
	Hyperlipidaemias	2
	Electrophysiology of heart and Arrhythmias	2
Respiratory system	Introduction to Pulmonary function test	2
	Asthma	2
	Chronic obstructive airways disease	2
	Drug induced pulmonary diseases	1
Endocrine system	Diabetes	2
	Thyroid diseases	2
	Oral contraceptives	1
	Hormone replacement therapy	1
	Osteoporosis	2
General prescribing guidelines	Paediatric patients	2
	Geriatric patients	1
	Pregnancy and breast feeding	2
Ophthalmology	Glaucoma	2
	Conjunctivitis	1
Rational drug use	Essential drug concept & Rational drug use	1
Infectious disease	Guidelines for the rational use of antibiotics and surgical Prophylaxis	2
	Tuberculosis	2
	Meningitis	3
	Respiratory tract infections	3
	Gastroenteritis	2
	Endocarditis	2
	Septicemia	3
	Urinary tract infections	2
	Protozoal infection- Malaria	2
	HIV & Opportunistic infection	3

	Fungal infections	2
	Viral infections	2
	Gonorrhoea and Syphilis	1
Musculoskeletal disorders	Rheumatoid arthritis	2
	Osteoarthritis	2
	Gout	2
	Spondylitis	1
	Systemic lupus erythematosus	2
Renal system	Acute Renal Failure	2
	Chronic Renal Failure	2
	Renal Dialysis	2
	Drug induced renal disorders	1
Oncology	Basic principles of Cancer therapy	2
	General introduction to cancer chemotherapeutic agents	2
	Chemotherapy of breast cancer	3
	Leukemia	3
	Management of chemotherapy nausea and emesis	2
Dermatology	Psoriasis	2
	Scabies	2
	Eczema	2
	Impetigo	1

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

<b>Cardiovascular system</b>
Hypertension-Definition, Epidemiology, Aetiology, Pathophysiology, Clinical features, Diagnostic tests, Complications, Management both pharmacological and non-pharmacological and patient counseling points.
Congestive cardiac failure- Definition, Epidemiology, Aetiology, Pathophysiology, Clinical features, Diagnostic tests, Complications, Management both pharmacological and non-pharmacological and patient counseling points.
Angina Pectoris- Definition, Epidemiology, Aetiology, Pathophysiology, Clinical features, Diagnostic tests, Complications, Management both pharmacological and non-pharmacological and patient counseling points.
Myocardial infarction- Definition, Epidemiology, Aetiology, Pathophysiology, Clinical features, Diagnostic tests, Complications, Management both pharmacological and non-pharmacological and patient counseling points.
Hyperlipidaemia- Definition, Epidemiology, Aetiology, Pathophysiology, Clinical features, Diagnostic tests, Complications, Management both pharmacological and non-pharmacological and patient counseling points.
Electrophysiology of heart and Arrhythmias-Cardiac cells, electrical conduction pathway of heart, ECG, Phases of cardiac action potential.

Respiratory system
PFT-various methods like spirometry, body plethysmography, exercise test.
Asthma- Definition, Epidemiology, Aetiology, Pathophysiology, Clinical features, Diagnostic tests, Complications, Management both pharmacological and non-pharmacological and patient counseling points.
COPD- Definition, Epidemiology, Aetiology, Pathophysiology, Clinical features, Diagnostic tests, Complications, Management both pharmacological and non-pharmacological and patient counseling points.
Drug induced pulmonary diseases-drug effects on Lung parenchyma, Pulmonary vasculature and pleural space.
Endocrine system
Diabetes- Definition, Epidemiology, Aetiology, Pathophysiology, Clinical features, Diagnostic tests, Complications, Management both pharmacological and non-pharmacological and patient counseling points.
Thyroid diseases- Definition, Epidemiology, Aetiology, Pathophysiology, Clinical features, Diagnostic tests, Complications, Management both pharmacological and non-pharmacological and patient counseling points of hypo and hyperthyroidism.
Oral contraceptives- Definition,types,mechanism of action, dose etc.
Hormone replacement therapy-Replacement therapy of hormones like Estrogen, Testosterone etc.
Osteoporosis- Definition, Epidemiology, Aetiology, Pathophysiology, Clinical features, Diagnostic tests, Complications, Management both pharmacological and non-pharmacological and patient counseling points.
General prescribing guidelines
Paediatric patients-Pharmacokinetic changes and pharmacodynamics considerations and general principles for prescribing drugs like child dose calculation.
Geriatric patients- Pharmacokinetic changes and pharmacodynamics considerations and general principles for prescribing drugs like child dose calculation for renal and hepatic failure patients.
Pregnancy and breast feeding-principles of teratogenesis and pharmacological effect of drug on the fetus and neonates.
Ophthalmology
Glaucoma-Definition, different types of Glaucoma, Clinical features, Pathophysiology and management.
Conjunctivitis-Definition, two types-Bacterial and viral conjunctivitis, clinical features, pathophysiology and Management.
Rational drug use
Rational drug use-Definition, concept of Essential drug list and rational drug use, role of pharmacist in rational drug formulations.
Infectious disease
Importance of Culture and Sensitivity tests, Antibigram report, Types of antibiotics.
Tuberculosis: Definition, Types, Etiology, Pathophysiology, Clinical manifestations, Pharmacotherapy- DOTS

Meningitis: Definition, Etiology, Pathophysiology, Clinical manifestations, Pharmacotherapy- Antibiotics used
Respiratory tract infections : Upper respiratory tract infections- Pharyngitis, Laryngitis, Otitis media & Lower respiratory tract Infections- Pneumonia, Bronchitis
Gastroenteritis : Definition, Etiology, Pathophysiology, Clinical manifestations, Management- Pharmacological & non pharmacological
Endocarditis: Definition, Types, Etiology, Pathophysiology, Clinical manifestations, Pharmacotherapy- Antibiotics used
Septicemia : : Definition, Etiology, Pathophysiology, Clinical manifestations, Management
Urinary tract infections : Definition, Types: Upper UTI-Pyelonephritis & Lower UTI-Cystitis, Urithritis, Etiology, Pathophysiology, Clinical manifestations,
Musculoskeletal disorders
Rheumatoid arthritis : Definition, Etiology, Pathophysiology, Clinical manifestations, Management- Pharmacological (DMARDS &NBDMARDS) & non pharmacological
Osteoarthritis: Definition, Etiology, Pathophysiology, Clinical manifestations, Management- Pharmacological & non pharmacological
Gout: Definition, Types, Etiology, Pathophysiology, Clinical manifestations, Pharmacotherapy
Spondylitis: Definition, Types, Etiology, Pathophysiology, Clinical manifestations, Pharmacotherapy
Systemic lupus erythematosus: Definition, Etiology, Pathophysiology, Clinical manifestations, Management- Pharmacological & non pharmacological
Renal system
Acute Renal Failure & Chronic Renal Failure: Definition, Types, Etiology, Pathophysiology, Clinical manifestations, Pharmacotherapy
Renal Dialysis: Hemodialysis, Peritoneal dialysis
Drug induced renal disorders: Example
Oncology
Basic principles of Cancer therapy: Factors, cell cycle
General introduction to cancer chemotherapeutic agents: Classification of agents with example
Chemotherapy of breast cancer: Definition, stages, Etiology, Pathophysiology, Clinical manifestations, Pharmacotherapy
Leukemia: Definition, Types, Etiology, Pathophysiology, Clinical manifestations, Pharmacotherapy
Management of chemotherapy nausea and emesis: Agents with example
Dermatology
Psoriasis: Definition, Types, Etiology, Pathophysiology, Clinical manifestations, Management- Pharmacological & non pharmacological
Scabies: Definition, Types, Etiology, Pathophysiology, Clinical manifestations, Management- Pharmacological & non pharmacological

Eczema: Definition, Types, Etiology, Pathophysiology, Clinical manifestations, Management- Pharmacological & non pharmacological

Impetigo: Definition, Types, Etiology, Pathophysiology, Clinical manifestations, Management- Pharmacological & non pharmacological

### Sample Questions

#### Cardiovascular system

Hypertension-Explain the pathogenesis of Hypertension?

Briefly explain the Management of Hypertension?

Non pharmacological methods to adopt to prevent Hypertension?

Congestive cardiac failure- signs and symptoms of CCF?

Explain the pathophysiology of CCF?

Management of CCF?

Angina Pectoris- Explain the pathogenesis of Angina Pectoris?

Briefly explain the Management of Angina Pectoris?

Non pharmacological methods to adopt to prevent Angina Pectoris?

Myocardial infarction- Explain the pathogenesis of Myocardial infarction?

Signs and symptoms of MI?

Briefly explain the Management of MI?

Non pharmacological methods to adopt to prevent MI?

Hyperlipidemia- Explain the pathogenesis of Hyperlipidemia?

Briefly explain the Management of Hyperlipidemia?

Non pharmacological methods to adopt to prevent Hyperlipidemia?

Electrophysiology of heart and Arrhythmias-Explain electrophysiology of Heart?

Explain the pathogenesis of Arrhythmia

Briefly explain the Management of Arrhythmia

#### Respiratory system

PFT-Different types of pulmonary function test?

Asthma- Explain the pathogenesis of Asthma?

Briefly explain the Management of Asthma?

Non pharmacological methods to adopt to prevent Asthma?

COPD- How will you diagnosis COPD?

Explain the pathogenesis of COPD?

Briefly explain the Management of COPD?

Non pharmacological methods to adopt to prevent COPD?

Drug induced pulmonary diseases- Briefly explain effect of drug on Lung parenchyma?

Briefly explain effect of drug on Pulmonary vasculature?

#### Endocrine system

Diabetes- Types of Diabetes? Explain the pathogenesis of Diabetes?

Briefly explain the Management of Diabetes?

Non pharmacological methods to adopt to prevent Diabetes?

Complications of Diabetes?

<p>Thyroid diseases- Explain the pathogenesis of Hypothyroidism?  Signs and symptoms of Hypothyroidism?  Briefly explain the Management of Hypothyroidism?  Non pharmacological methods to adopt to prevent Hypothyroidism?  Explain the pathogenesis of Hyperthyroidism?  Signs and symptoms of Hyperthyroidism?  Briefly explain the Management of Hyperthyroidism?  Non pharmacological methods to adopt to prevent Hyperthyroidism?</p>
<p>Oral contraceptives- Briefly explain the different types of oral contraceptives in detail?</p>
<p>Hormone replacement therapy-Notes on different types of Hormone therapis?</p>
<p>Osteoporosis- Explain the pathogenesis of Osteoporosis?  Signs and symptoms of Osteoporosis?  Briefly explain the Management of Osteoporosis?  Non pharmacological methods to adopt to prevent Osteoporosis?</p>
<p>General prescribing guidelines</p>
<p>Pediatric patients-Pharmacokinetic and pharmacodynamics consideration while prescribing drugs for pediatric?</p>
<p>Geriatric patients-Explain the general principles should be followed while prescribing for geriatrics?</p>
<p>Pregnancy and breast feeding-Drug classification according to pregnancy category?  Principles of teratogenesis?  Explain the drug effect on Neonates &amp;Feotus?</p>
<p>Ophthalmology</p>
<p>Glaucoma-Types of Glaucoma?  Signs and symptoms of Glaucoma?  Briefly explain the Management of Glaucoma?</p>
<p>Conjunctivitis- Signs and symptoms of Bacterial Conjunctivitis?  Briefly explain the Management of Bacterial Conjunctivitis?  Signs and symptoms of Viral Conjunctivitis?  Briefly explain the Management of Viral Conjunctivitis?</p>
<p>Rational drug use</p>
<p>Essential Drug concept &amp;Rational drug use-Define Essential Drug list?  Define rational drug use?  Advantages and disadvantages of RDU?  Role of pharmacist in RDU?</p>
<p>Infectious disease</p>
<p>Describe the signs and symptoms, pathophysiology and therapeutic management of TB.</p>
<p>Describe the pathophysiology, clinical symptoms and therapy of Malaria.</p>
<p>Discuss etiology, pathophysiologyand therapy of Meningitis.</p>
<p>Describe the signs and symptoms, pathophysiology and management of Endocarditis.</p>
<p>Discuss the aetiology, pathogenesis and treatment of Gastroenteritis.</p>

Prevention and treatment of Gonorrhoea.
Explain about surgical prophylaxis and rational use of antibiotics.
Musculoskeletal disorders
Explain pathophysiology, signs and symptoms and therapeutic management of Gout
Write a note on DMARDs.
Explain immuno pathogenesis and management of Rheumatoid Arthritis.
Management of SLE.
Pharmacotherapy of Spondylitis.
Renal system
Discuss on drug induced renal disorders and hemodialysis.
Explain CRF and its management.
Classify ARF, discuss clinical manifestations and management of ARF.
Oncology
Explain pharmacotherapy and pathophysiology of Breast cancer
Management of Chemotherapy induced nausea and vomiting.
Explain general principle of Cancer chemotherapy.
Significance of cell cycle in cancer chemotherapy.
Dermatology
Discuss about aetiology, types and therapeutic management of Eczema.
Pharmacotherapy of Impetigo.
Explain in detail about pathophysiology, clinical manifestation and treatment of Psoriasis.