St.James College of Pharmaceutical Sciences St.James medical Academy River Bank, Chalakudy			
Programme:	Pharm D	Sem.:	V th
Name of Course: (*Subject*)	CLINICAL PHARMACOKINETICS AND TDM	Course Code:	3
Teaching faculty of the course	KRISHNAPRABHA.C		

Summary of the Lecture Plan

Topic	Lectures	Hours
Introduction to Clinical pharmacokinetics	Absorption	1
	Distribution	1
	Metabolism	1
	Elimination	1
	Differend models	2
Pharmacokinetic drug interaction	Pharmacokinetics drug interaction	1
	Inhibition and induction of drug metabolism	2
	Inhibition of biliary excretion	1
Design of dosage regimen	Nomogram and Tabulations in designing dosage regimen	2
	Conversion from IVto oral dosing	3
	Determination of dose and dosing intervals	2
	Drug dosing in the elderly,pediatrics and obese patients	4
Therapeutic Drug monitoring	Introduction	1
	Individualization of drug dosage regimen	3
	Indications and protocol for TDM	2
	Pharmacokinetic/pharmacodynamic correlation in drug therapy	1
	TDM of drugs used in cardiovascular disease conditions	2
	TDM of drugs used in seizure disorders	2
	TDM of drugs used in psychiatric conditions	2
Dosage adjustment in Renal and Hepatic disease	Renal impairment	2
	Pharmacokinetic considerations	1
	General approach for dosage adjustment in renal disease	2
	Measurement of Glomerular filtration rate and creatinine clearance	3
	Dosage adjustment for uremic patients	2
	Extracorporeal removal of drugs	2
	Effect of hepatic disease on pharmacokinetics	2

Population pharmacokinetics	Bayesian Theory	1
	Adaptive method	2
	Analysis of population pharmacokinetic data	1
pharmacogenetics	Genetic polymorphism in drug metabolism	2
	polymorphism in drug transport	2

Major issues or Core aspects to be addressed/ covered:

Clinical pharmacokinetics
hepatic clearance
Differend models
Pharmacokinetic drug interaction
Induction of drug metabolism
Inhibition of drug metabolism
Design of dosage regimem
Nomogram and Tabulations in designing dosage regimen
Determination of dose and dosing intervals
Conversion from IVto oral dosing
Therapeutic Drug monitoring
Indications and protocol for TDM
TDM of drugs used in cardiovascular,seizure and psychiatric disease conditions
Dosage adjustment in Renal and Hepatic disease
Renal impairment
Dosage adjustment for uremic patients
Measurement of Glomerular filtration rate and creatinine clearance

Sample Questions

Pharmacokinetic drug interaction
Inhibition of biliary excretion
Design of dosage regimen
Explain about IV to oral therapy
Determination of dose and dosing intervals
Drug dosing in obese patients
Therapeutic Drug monitoring
Describe indications and protocol for TDM
Individualization of drug dosage regimen
TDM of drugs used in cardiovascular disease conditions
Dosage adjustment in Renal and Hepatic disease
Explain about General approach for dosage adjustment in renal disease
Extracorporeal removal of drugs

Measurement of Glomerular filtration rate and creatinine clearance
Explain about effect of hepatic disease on pharmacokinetics
Population pharmacokinetics
Bayesian Theory
Analysis of population pharmacokinetic data
pharmacogenetics
Define pharmacogenetics
Genetic polymorphism in drug transport and drug target
Genetic polymorphism in drug metabolism