Number	COMPETENCY The student should be able to	LECTURE	INTERGRATION	DOAP	TUTORIALS	SDL	SGT
PH1.1	Define and describe the principles of pharmacology and pharmacotherapeutics	PH1.1					
PH1.1.1	DefinePharmacology						
PH1.1.2	Describe the principles of pharmacology.						
PH1.1.3	Define Pharmacotherapeutics.						
PH1.1.4	Describe the principles of Pharmacotherapeutics.						
PH1.2	Describe the basis of Evidence based medicine and Therapeutic drug monitoring	PH1.2					
PH1.2.1	Explain the basis of Evidence based medicine.						
PH 1.2.2	Describe the basis of Therapeutic drug monitoring.						
PH1.3	Enumerate and identify drug formulations and drug delivery systems	PH1.3		1.3			
PH1.3.1	Enumerate drug formulations.						
PH1.3.2	Discussed the drug formulations.						
PH1.3.3	Enumerate different drug delivery Systems.						
PH1.4	Describe absorption, distribution, metabolism & excretion of drugs	PH1.4					1.4
PH1.4.1.2	Describe mechanism of drug absorption & Explain its parameters						
PH1.4.1.3	Describe Bioavailability & explain its parameters along with clinical significance.						
PH1.4.2.1	Explain Distribution & factors affecting Distribution.						
PH1.4.2.2	Explain Apparent volume of distribution & redistribution						
PH1.4.2.3	Discuss how plasma protein binding affect volume of distribution & its clinical significance						
PH1.4.3.1	Define Biotransformation & discuss the different types of biotransformation reaction						
PH1.4.3.2	Explain the factors modifying biotransformation and it consequences.						
PH1.4.3.3	Enumerate cytochrome P-450 Enzyme & discuss in clinical significance (Induction & Inhibition of cytochrome P-450)						
PH1.4.3.4	Explain first pass metabolism & its clinical significance.						
PH1.4.4.1	Define Clearance & Discuss its kinetics of elimination.						
PH1.4.4.2	Discuss the elimination of drugs through Renal route & factors modifying it.						
PH1.4.4.3	Define Plasma ½ life and Explain its clinical significance.						
PH1.4.4.4	Discuss the Steady State Plasma Concentrationand how to calculate it.						
PH1.4.4.5	Describe Maintenance andLoading dose& explain is clinical significance.						
PH1.4.16	Discuss the Methods used to prolong drug action.						
Number	**COMPETENCY** **The student should be able to**	**LECTURE**	**INTERGRATION**	**DOAP**	**TUTORIALS**	**SDL**	**SGT**
PH1.5	Describe general principles of mechanism of drug action	PH1.5					1.5
PH1.5.1	Discuss the Mechanism of Drug action.						
PH1.5.2	Explain the Receptor mediated drug action.						
PH1.5.3	Explain Receptor occupation theory with examples.						
PH1.5.4	Describe Dose response relationship & it clinical significances.						
PH1.5.5	Discuss the Combined effects of drugs and its clinical significance.						
PH1.5.6	Discuss the factors modifying drugs action indetail.						
PH1.6	Describe principles of Pharmacovigilance & ADR reporting systems	PH1.6		PH1.6			

PH1.6.1	Define Pharmacovigilance & describe its principle.						
PH1.6.2	Discuss the ADR reporting system under Pharmacovigilance program of India.						
PH1.6.3	Analyze the causality assessment used in assessment of severity of ADR						
PH1.7	Define, identify and describe the management of adverse drug reactions (ADR	PH1.7		PH1.7			
PH1.7.1	Define adverse drug reaction and adverse drug event and discuss the management of adverse drug reactions.						
PH1.7.2	Classify different type of ADRS With examples.						
PH1.7.3	Discuss teratogenic effect of drug and classify risk category of drugs during pregnancy.						
PH1.8	Identify and describe the management of drug interactions	PH1.8		PH1.8			
PH1.8.1	Explain the different type of drug interaction						
PH1.8.2	Discuss the mechanism of drug interaction on the basis of pharmacokinetics and pharmacodynamics with example.						
PH1.8.3	Describe the management of different type of drug interactions						
PH1.9	Describe nomenclature of drugs i.e. generic, branded drugs	PH1.9					
PH1.9.1	Discuss the different categories of drug nomenclature.						
PH1.9.2	Describe the international non- proprietary name of a drug and Patent act.						
PH1.9.3	Explain about drug compendia India and essential drug concept.						
PH1.10	Describe parts of a correct, complete and legible generic prescription. Identify errors in prescription and correct appropriately	PH1.10		PH1.10			
PH1.10.1	Discuss the different part of prescription explain.						
PH1.10.2	Describe the qualities of a correct, complete and legible generic prescription.						
PH1.10.3	Define medication error.						
PH1.10.4	Discuss the different type of medication error in a prescription						
PH1.10.5	Analyze the different measures to minimize a prescription error .						
PH1.11	Describe various routes of drug administration, eg., oral, SC, IV, IM, SL	PH1.11					PH1.11
PH1.11.1	Enumerate the different routes of drug administration.						
PH1.11.2	Discuss the factors governing the choice of route.						
PH1.11.3	Analyze the advantage & disadvantages of different routes of drug administration.						
PH1.11.4	Discuss the new drug delivery system with examples.						
Number	**COMPETENCY** **The student should be able to**	**LECTURE**	**INTERGRATION**	**DOAP**	**TUTORIALS**	**SDL**	**SGT**
PH1.12	Calculate the dosage of drugs using appropriate formulae for an individual patient, including children, elderly and patient with renaldysfunction	PH1.12	Pediatrics, General Medicine (V)	1.12			
PH1.12.1	Discuss the drug dosage calculation						
PH1.12.2	Explain the calculation of dosage of drug using different formula for a individual patient.						
PH1.12.3	Describe the dose calculation in children, elderly & renal failure patient.						
PH1.12.4	Discuss the calculation of IV drug rate in various clinical condition.						
PH1.13	Describe mechanism of action, types, doses, side effects, indications and contraindications of adrenergic and anti-adrenergic drugs						
PH1.13.1	Explain the autonomic nervous system and their neurotransmitters.						

PH1.13.2	Discuss synthesis of neurotransmitters of adrenergic system and its receptors.						
PH1.13.3	Classify sympathomimetic drugs.						
PH1.13.4	Discuss the therapeutic Uses and ADRs of sympathomimetic drugs						
PH1.13.5	Classify Alpha blocker						
PH1.13.6	Discuss their ADRs, therapeutic uses, pharmacological action& drug interaction.						
PH1.13.7	Classify β blocker						
PH1.13.8	Discuss their pharmacological actions, therapeutic uses.						
PH1.13.9	Describe the ADRs and drug interaction of β blocker						
PH1.13.10	Discuss the different drugs used in glaucoma						
PH1.13.11	Define different type of glaucoma and explain the etiology of increase intraocular tension in glaucoma.						
PH1.14	Describe mechanism of action, types, doses, side effects, indications and contraindications of cholinergic and Anticholinergics drugs	PH1.14					PH1.14
PH1.14.1	Discuss synthesis of neurotransmitters cholinergic system and its metabolism						
PH1.14.2	Describe different types of muscarinic and nicotinic receptors						
PH1.14.3	Classify parasympathomimetic drugs						
PH1.14.4	Explain the esters of choline and cholinomimetic alkaloid.						
PH1.14.5	Discuss the management of mushroom poisoning.						
PH1.14.6	Classify the anticholinesterases.						
PH1.14.7	Explain the pharmacokinetic & pharmacodynamics of anticholinesterases.						
PH1.14.8	Discuss the uses and ADRs of Anticholinesterases						
PH1.14.9	Classify Anticholinergics and discuss their uses, ADR, drug interactions and contraindications.						
PH1.14.10	Discuss the management of Organophosphorus poisoning and atropine poisoning						
PH1.15	Describe mechanism/s of action, types, doses, side effects, indications and contraindications of skeletal muscle relaxants	PH1.15					
PH1.15.1	Discuss the mechnism of skeltal muscle contraction		Physiology (V)				
PH1.15.2	Classify skeletal muscle relaxants.and discuss their MOA & adverse effcts						
PH1.15.3	Discuss clinical implication of different skeletal Muscle Relaxants.		Anesthesiology(v)				
Number	**COMPETENCY** **The student should be able to**	**LECTURE**	**INTERGRATION**	**DOAP**	**TUTORIALS**	**SDL**	**SGT**
PH1.15.3	Explain the indication, C/I and interaction of skeletal muscle relaxant.						
PH1.15.4	Classify the features of competitive and depolarizing block.						
PH1.15.5	Explain the Curare poisoning.						
PH1.15.5	Discuss Ganglion stimulant & depressants.						
PH1.16	Describe mechanism/s of action, types, doses, side effects, indications and contraindications of the drugs which act by modulating autacoids, including: Antihistaminic, 5-HT modulating drugs, NSAIDs, drugs for gout, anti-rheumatic	PH1.16	General Medicine (V)				
PH1.16.1	Explain the biosynthesis of Histamines, distribution of receptors,Pathophysiological role& pharmacological effects.		Pathology(H))				
PH1.16.2	Describe mechanism of action ,types, doses, side effects, indications and contraindications of Antihistaminic.						
	Describe Biosynthesis of Serotonin, distribution of receptors, pathophysiological		Pathology(H)				

PH1.16.3	role & pharmacological effects.						
PH1.16.4	Describe mechanism of action, types, doses, side effects, indications and contraindications of Antiserotonin Drugs.						
PH1.16.5	Describe biosynthesis of Prostaglandins, distribution of receptors, pathophysiological role& pharmacological effects.		Pathology(H)				
PH1.16.6	Describe mechanism of action, types, doses, side effects, indications and contraindications of Antiprostaglandin drugs						
PH1.16.7	Classify NSAIDS, Explain its mechanism of action, types, doses, side effects, indications						
PH1.16.8	Explain Pathophysiology of Pain, Inflammation, Fever.						
PH1.16.9	Discuss the salient features of individual important NSAIDS (Aspirin, Paracetamol, Naproxen)						
PH1.16.10	Discuss the pathophysiology of Gout with clinical features & explain the drugs used for Acute &Chronic Gout.		Pathology(H)				
PH1.16.11	Discuss the pathophysiology of Rheumatoid Arthritis& clinical features.						
PH1.16.12	Classify the drugs used for Rheumatoid Arthritis& analyze their mechanism of action& utility						
PH1.16.13	Discuss the pathophysiology of Migraine & drugs used for Acute onset and Prophylaxis of migraine.						
PH1.17	Describe the mechanism/s of action, types, doses, side effects, indications and contraindications of local anesthetics	PH1.17	Anesthesiology (V)				
PH1.17.1	Describe mechanism of action, types, doses, side effects, indications and contraindications of Local Anesthetics.						
PH1.17.2	Classify local anesthetics & explain different types of Local anesthetics.						
Number	**COMPETENCY** **The student should be able to**	**LECTURE**	**INTERGRATION**	**DOAP**	**TUTORIALS**	**SDL**	**SGT**
PH1.18	Describe the mechanism of action, types, doses, side effects, indications and contraindications of general anesthetics, and Preanaesthetic medications	PH1.18	Anesthesiology (V)				
PH1.18.1	Discuss History, Stages &Classification of General Anesthetics.						
PH1.18.2	Describe Pharmacodynamics, Pharmacokinetics, Merits, Demerits of Inhalational Anesthetics.						
PH1.18.3	Describe Pharmacodynamic, Pharmacokinetic & merits & demerits of Intravenous general anesthetics.						
PH1.18.4	Explain the drugs used for free anesthetic medication.						
PH1.19	Describe the mechanism/s of action, types, doses, side effects, indications and contraindications of the drugs which act on CNS, (including anxiolytics, sedatives & hypnotics, anti-psychotic, antidepressant drugs, anti-maniacs, opioid agonists	PH1.19	Psychiatry, Physiology (V)				
PH1.19.1	Describe Effector coupling in CNS, Cell signaling & Synaptic transmission.						
PH1.19.2	Discuss the different Neurotransmitters& Neuromodulators of CNS&Differentiate between Psychosis& Neurosis.						
PH1.19.3	Classify Sedative hypnotics & Anxiolytics&Explain their mechanism/s of action, therapeutic usage, side effects						
PH1.19.4	Describe the physiology of Sleep &Management of insomnia.						
	Classify Antipsychotics & discuss types of psychosis their mechanism/s of action						

PH1.19.5	therapeutic usage, side effects, adverse drug reaction, doses, indications						
PH1.19.6	Classify Antidepressants& discuss types Depression, their mechanism/s of action, therapeutic usage, side effects,adverse drug reaction, doses indications & contraindications.						
PH1.19.7	Classify Antimanic & discusstheir mechanism/s of action therapeutic usage, side effects, adverse drug reaction, doses, indications & contraindications.						
PH1.19.8	Classify Opioid Agonist, their mechanism/s of action therapeutic usage, side effects, adverse drug reaction, doses, indications & contraindications.						
PH1.19.9	Classify Opioid Antagonists, their mechanism/s of action therapeutic usage, side effects, adverse drug reaction, doses, indications & contraindications.						
PH1.19.10	Classify Antiparkinsonian drugs, their mechanism/s of action, therapeutic usage, side effects, adverse drug reaction, doses, indications & contraindications.						
PH1.19.11	Classify drugs used in Alzheimer, their mechanism/s of action, therapeutic usage, side effects, adverse drug reaction, doses, indications & contraindications.						
PH1.19.12	Classify Antiepileptic Drugs & Explain types, mechanism/s of action, uses, doses, side effects, adverse drug reaction, Indications & contraindications						
Number	**COMPETENCY** **The student should be able to**	**LECTURE**	**INTERGRATION**	**DOAP**	**TUTORIALS**	**SDL**	**SGT**
PH1.20	Describe the effects of acute and chronic ethanol intake	PH1.20	Psychiatry (V)				1.2
PH1.20.1	Describe the effects of Acute and Chronic Ethanol intake & explain its Dynamics &Kinetics						
PH1.21	Describe the symptoms and management of methanol and ethanol poisonings	PH1.21	General Medicine (V)				1.21
PH1.21.1	Describe the Symptoms & management of Ethanol poisoning.						
PH1.21.2	Describe the Symptoms & management of Methanol poisoning.						
PH1.22	Describe drugs of abuse (dependence, addiction, stimulants, depressants, psychedelics, drugs used for criminal offences)	PH1.22	Psychiatry (V), FMT (H)				1.22
PH1.22.1	Describe Drugs of abuse, dependence,addiction, (Stimulants, Depressants, Psychedelics).						
PH1.22.2	Describe the Drugs used for criminal offences.						
PH1.23	Describe the process and mechanism of drug de addiction	PH1.23	Psychiatry (V)				1.23
PH1.23.1	Describe the Process and Mechanism of drug deaddiction.						
PH1.24	Describe the mechanisms of action, types, doses, side effects, indications and contraindications of the drugs affecting renal systems including diuretics, ant	PH1.24					
PH1.24.1	Discuss the Physiology of urine formation.						
PH1.24.2	Classify Diuretics on the basis of their mechanisms of action & discuss its doses, side effects, indications and contraindications.						
PH1.24.3	Classify Antidiuretics& Explain their mechanisms of action, types, doses, side effects, indications and contraindications						
PH1.24.4	Classify Vasopressin & Analogues, Explain their mechanisms of action, types, doses, side effects, indications and contraindications						
PH1.25	Describe the mechanisms of action, types, doses, side effects, indications and contraindications of the drugs acting on blood, like anticoagulants, ant platelets, fibrinolytics, plasma expanders	PH1.25	Physiology, General Medicine (V)				
PH1.25.1	Discuss the Blood Hemostasis		Pathology(H)				

PH1.25.2	Classify Anticoagulants & explain their mechanisms of actions, side effects, indications and contraindications.		Pathology(H)				
PH1.25.3	Classify Antiplatelets &explain their mechanisms of actions, side effects, indications and contraindications.		Pathology(H)				
PH1.25.4	Classify Fibrinolytics & Antifibrinolytics &explain their mechanisms of actions, indications and contraindications		Pathology(H)				
PH1.25.5	Classify Plasma expanders &explain their mechanisms of actions, indications and contraindications						
PH1.26	Describe mechanisms of action, types, doses, side effects, indications and contraindications of the drugs modulating the reninangiotensin and aldosterone system	PH1.26	Physiology, General Medicine (V)				
PH1.26.1	Discuss the physiology of Renin angiotensin system.						
PH1.26.2	Classify the drugs modulating the Renin angiotensin system. Explain their mechanism of action, types, doses, side effects, indications and contraindications.						
PH1.26.3	Discuss the Aldosterone system, its physiological & pharmacological effects, its metabolism& drugs affecting the aldosterone secretion.						
Number	**COMPETENCY** **The student should be able to**	**LECTURE**	**INTERGRATION**	**DOAP**	**TUTORIALS**	**SDL**	**SGT**
PH1.27	Describe the mechanisms of action, types, doses, side effects, indications and contraindications of antihypertensive drugs and drugs used in shock.	PH1.27	General Medicine (V)				
PH1.27.1	Classify the Antihypertensive, explain their mechanism of action, types, doses, side effects, indications and contraindications						
PH1.27.2	Analyze the JNC classification &its Guidelines.						
PH1.27.3	Discuss Antihypertensive drugs used in pregnancy, asthma & dialectic patient & PVD.						
PH1.27.4	Treatment/Management Hypertensive crisis in Resistant Hypertension.						
PH1.27.5	Classify the different types of Shocks. Explain the Pathophysiology of different types of shocks.		Pathology(H)				
PH1.27.6	Discuss the Pharmacotherapy used for different types of Shocks.						
PH1.28	Describe the mechanisms of action, types, doses, side effects, indications and contraindications of the drugs used in ischemic heart disease (stable, unstable angina and myocardial infarction), peripheral vascular disease	PH1.28	General Medicine (V)				
PH1.28.1	Discuses the pathophysiology and clinical features of different types of angina.		Pathology(H)				
PH1.28.2	Classify Antianginal drugs and explain their mechanisms of action, types, doses, side effects, indications and contraindications						
PH1.28.3	Discuss the management STEMI & NSTEMI (myocardial infraction)						
PH1.28.4	Discuss the pathophysiology of PVD & its clinical features along with its managements.		Pathology(H)				
PH1.28.5	Describe the mechanisms of action, types, doses, side effects, indications and contraindications of drugs used in PVD.						
PH1.29	Describe the mechanisms of action, types, doses, side effects, indications and contraindications of the drugs used in congestive heart failure	PH1.29	General Medicine (V)				
PH1.29.1	Discuss the path physiology of Congestive heart failurewith its clinical features.		Pathology(H)				

PH1.29.2	Classify the drugs used for CHF, discuss their mechanisms of action, types, doses, side effects, indications and contraindications.						
PH1.29.3	Discuss the mechanisms of action, types, doses, side effects, indications and contraindications & druginteractions of Digoxin.						
PH1.30	Describe the mechanisms of action, types, doses, side effects, indications and contraindications of the antiarrhythmics	PH1.30	General Medicine (V)				
PH1.30.1	Discuss the electrophysiology of Heart and different mechanisms of arrythmia.						
PH1.30.2	Classify Antiarrhythmic drugs & Explain their mechanisms of action, types, doses, side effects, indications and contraindications.						
PH1.30.3	Explain the utility of Digoxin, Adenosine,Magnesium& Potassium asAntiarrhythmic drugs.						
Number	**COMPETENCY** **The student should be able to**	**LECTURE**	**INTERGRATION**	**DOAP**	**TUTORIALS**	**SDL**	**SGT**
PH1.31	Describe the mechanisms of action, types, doses, side effects, indications and contraindications of the drugs used in the management of dyslipidemias	PH1.31	General Medicine (V)				1.31
PH1.31.1	Discuss the Lipid metabolism&Lipid transport.						
PH1.31.2	Discuss pathophysiology Hyperproteinemia.						
PH1.31.3	Classify the drugs used for Dyslipidemia and discuss their mechanisms of action, types, doses, side effects, indications and contraindications.						
PH1.32	Describe the mechanisms of action, types, doses, side effects,indications and contraindications of drugs used in bronchial asthma and COPD	PH1.32	Respiratory Medicine (V)				1.32
PH1.32.1	Discuss the pathophysiology of Bronchial asthma		Pathology(H)				
PH1.32.2	Classify the drugs used for bronchial asthma and describe their mechanism of action, types, doses, side effects, indications and contraindications						
PH1.32.3	Discuss the Management of Status asthamaticus						
PH1.33	Describe the mechanism of action, types, doses, side effects, indications and contraindications of the drugs used in cough (antitussives, expectorants/	PH1.33	Respiratory Medicine (V)				1.33
PH1.33.1	Explain the physiology of Dry and Productive cough						
PH1.33.2	Classify the drugs used as Antitussives and explain their mechanism of action, types, doses, side effects, indications and contraindications						
PH1.33.3	Classify the drugs used for productive cough and explain their mechanism of action, types, doses, side effects, indications and contraindications						
PH1.34	Describe the mechanism/s of action, types, doses, side effects, indications and contraindications of the drugs used as below:	PH1.34	General Medicne (V)				1.34
	1. Acid-peptic disease and GERD						
	2. Antiemetics and prokinetics						
	3. Antidiarrheal						
	4 . Laxatives						
	5. Inflammatory Bowel Disease						
	6. Irritable Bowel Disorders, biliary and pancreatic diseases						
PH1.34.1.1	Discuss the pathophysiology of Peptic Ulcers and its clinical features of different types peptic ulcers		Pathology(H)				
PH1.34.1.2	Classify the drugs used in peptic ulcer disease and Describe their MOA, types, doses, side effects, indications, contraindications and drug interaction						

PH1.34.1.3	Explain the pathophysiology management of H. Pylori		Pathology(H)				
PH1.34.2.1	Describe about the Neural pathway of pathogenesis of Emesis.						
PH1.34.2.2	Classify Antiemetics drugs and explain their mechanismof action, types, doses, side effects, indications and contraindications and drug interaction						
PH1.34.2.3	Classify prokinetics drugs and discuss their mechanismof action, types, doses, side effects, indications, contraindications and drug interaction						
PH1.34.3.1	Discuss the pathophysiology of Diarrhea and Constipation		Pathology(H)				
PH1.34.3.2	Classify Antidiarrheal drugs and describe their mechanismof action, types, doses, side effects, indications and contraindications						
Number	**COMPETENCY** **The student should be able to**	**LECTURE**	**INTERGRATION**	**DOAP**	**TUTORIALS**	**SDL**	**SGT**
PH1.34.3.3	Discuss about the Rehydration therapy in Diarrhea						
PH1.34.4.1	Classify drugs used for Constipation and discuss their mechanism of action, types, doses, side effects, indications and contraindications						
PH1.34.5.1	Explain the drugs used in Inflammatory Bowel Disease						
PH1.34.6.1	Explain the drugs Used in Irritable Bowel Disorders, Biliary and Pancreatic diseases						
PH1.35	Describe the mechanism/s of action, types, doses, side effects, indications and contraindications of drugs used in hematological disorders like :1. Drugs used in anemia 2. Colony Stimulating factors	PH1.35	General Medicine & Physiology (V)				
PH1.35.1.1	Discuss the Pathophysiology Erythropoietin formation		Pathology(H)				
PH1.35.1.2	Discuss the Different types of Anemia ,etiology and clinical features.		Pathology(H)				
PH1.35.1.3	Discuss the physiology of Transport,Storage and Disposition of Iron in the body.						
PH1.35.1.4	Discuss the treatment of Megaloblastic anemia.						
PH1.35.2.1	Discuss the Role of Colony Stimulating factor in the treatment of hematological disorders		Pathology(H)				
PH1.36	Describe the mechanism of action, types, doses, side effects, indications and contraindications of drugs used in endocrine disorders (diabetes mellitus, thyroid	PH1.36	General Medicine				
PH1.36.1	Discuss the Anatomy and physiology of Pituitary gland and its function						
PH1.36.2	Discuss the function of Thyroid hormones and Various pathological disorders		Pathology(H)				
PH1.36.3	Discuss the mechanism of action, types, doses, side effects, indications and contraindications of drugs used in Thyroid Disorders.						
PH1.36.4	Discuss the various hormones affecting Calcium metabolism.						
PH1.36.5	Discuss the various drugs used intreatment of Osteoporosis.						
PH1.36.6	Define Diabetes mellitus and explain the types,clinical features,Investigations and Complications of the disease						
PH1.36.7	Classify the drugs used for diabetes &explain the mechanism of action, types, doses, side effects, indications and contraindications						
PH1.36.8	Discuss the structure of Insulin, its analogues uses side effects, indications and contraindications.						
PH1.37	Describe the mechanisms of action, types, doses, side effects, indications and contraindications of the drugs used as sex hormones, their analogues and anterior Pituitary hormones	PH1.37					

PH1.37.1	Discuss the Anatomy and physiology of Pituitary gland and its function						
PH1.37.2	Discuss the anatomy and physiological action Estrogens, Progesterone and Androgens						
PH1.37.3	Discuss the mechanisms of action, types, doses, side effects, indications and contraindications of estrogens						
PH1.37.4	Discuss the mechanisms of action, types, doses, side effects, indications and contraindications of Antiestrogens.						
Number	**COMPETENCY** **The student should be able to**	**LECTURE**	**INTERGRATION**	**DOAP**	**TUTORIALS**	**SDL**	**SGT**
PH1.37.5	Discuss the mechanisms of action, types, doses, side effects, indications and contraindications of Progesterone						
PH1.37.6	Discuss the mechanisms of action, types, doses, side effects, indications and contraindications of Antiprogesterones.						
PH1.37.7	Discuss the mechanisms of action, types, doses, side effects, indications and contraindications of Androgens						
PH1.37.8	Discuss the mechanisms of action, types, doses, side effects, indications and contraindications of Antiandrogens.						
PH1.38	Describe the mechanism of action, types, doses, side effects, indications and contraindications of corticosteroids.	PH1.38					
PH1.38.1	Discuss the physiological role of Mineralocorticoids and Glucocorticoids.						
PH1.38.2	Discuss their mechanism of action, types, doses, side effects, indications and contraindications						
PH1.39	Describe mechanism of action, types, doses, side effects, indications and contraindications the drugs used for contraception	PH1.39	Obstetrics & Gynaecology (V)				
PH1.39.1	Discuss the mechanism of action, types, doses, side effects, indications and contraindications of the drugs Used for Contraception						
PH1.40	Describe mechanism of action, types, doses, side effects, indications and contraindications of 1. Drugs used in the treatment of infertility, and 2. Drugs	PH1.40	Obstetrics & Gynaecology (V)				
PH1.40.1	Describe the mechanism of action, types, doses, side effects, indications and contraindications of Drugs used in the treatment of infertility.						
PH1.40.2	Describe the Drugs used in erectile dysfunction.						
PH1.41	Describe the mechanisms of action, types, doses, side effects, indications and contraindications of uterine relaxantsand stimulants	PH1.41	Obstetrics & Gynaecology (V)				
PH1.41.1	Discuss the drugs used as Uterine relaxants&their mechanisms of action, types, doses, side effects, indications and contraindications						
PH1.41.2	Discuss the drugs used as Uterine stimulants& explain their mechanisms of action, types, doses, side effects, indications and contraindications						
PH1.42	Describe general principles of chemotherapy	PH1.42					
PH1.42.1	Discuss General principles and History of chemotherapy						
PH1.42.2	Classify antimicrobial on the basis of Mechanisms of action and Spectrum		Microbiology(H)				
PH1.42.3	Describe the Mechanism of antimicrobial resistance		Microbiology(H)				
PH1.42.4	Discuss the types and goals of antimicrobial therapy		Microbiology(H)				
PH1.42.5	Explain the Super infection and Misuse of antimicrobial		Microbiology(H)				
Number	**COMPETENCY** **The student should be able to**	**LECTURE**	**INTERGRATION**	**DOAP**	**TUTORIALS**	**SDL**	**SGT**

PH1.43	Describe and discuss the rational use of antimicrobials including antibiotic stewardship program	PH1.43	General Medicine, Pediatrics(V) , Microbiology (H)				
PH1.43.1	Discuss the rational use of antimicrobials in different types of infective conditions		Microbiology(H)				
PH1.43.2	Describe the Antibiotic stewardship program and Explain its role in antimicrobial policy of hospital		Microbiology(H)				
PH1.43.3	Classify Beta-Lactams and explain their mechanisms of action, types, doses, side effects, indications and contraindication.						
PH1.43.4	Classify Aminoglycosides and Explain their mechanisms of action, types, doses, side effects, indications and contraindications						
PH1.43.5	Classify the Fluoroquinolones and Explain their mechanisms of action, types, doses, side effects, indications and contraindications						
PH1.44	Describe the first line ant tubercular dugs, their mechanisms of action, side effects and doses.	PH1.44	Respiratory Medicine				
PH1.44.1	Classify 1st line Antituberculardrugs & Discuss their mechanisms of action, types, doses, side effects, Dosage & Drugs interaction of same.						
PH1.45	Describe the drugs used in MDR& XDR Tuberculosis	PH1.45	Respiratory Medicine (V), Microbiology (H)				
PH1.45.1	Explain the MDR and XDR Tuberculosis						
PH1.45.2	Discuss the drugs used in MDR & XDR Tuberculosis						
PH1.46	Describe the mechanisms of action, types, doses, side effects, indications and contraindications of antileprotic drug.	PH1.46	Dermatology, Venereology & Leprosy (V), Microbiology (H)				
PH1.46.1	Discuss different types of leprosy with it clinical features pathophysiology						
PH1.46.2	Classify Antileprotic drugs&Explain their mechanisms of action, types, doses, side effects, indications and contraindications						
PH1.47	Describe the mechanisms of action, types, doses, side effects, indications and contraindications of the drugs used in malaria, KALA-AZAR, amebiasis and intestinal helminthiasis	PH1.47	General Medicine (V), Microbiology (H)				
PH1.47.1.1	Discuss the life cycle of malarial parasites & Discuss Clinical manifestation of Malaria		Microbiology(H)				
PH1.47.1.2	Classify the drugs used or different type of Malaria with their mechanisms of action, types, doses, side effects, indications and contraindications (mechanisms of action of drug acting at different stages of life cycle of parasite)						
PH1.47.1.3	Discuss the different types Antimalarial therapy						
PH1.47.1.4	Discuss the treatment of Complicated & uncomplicated Malaria/ Chloroquine resistant malaria/ Falciparum/ Ovale/ Vivax.						
PH1.47.2.1	Discuss the Lifecycle of the Parasite causing Kalaazar		Microbiology(H)				
PH1.47.2.2	Classify the drugs used for Kala Azar with their mechanisms of action, types, doses, side effects, indications and contraindications.						
Number	**COMPETENCY** **The student should be able to**	**LECTURE**	**INTERGRATION**	**DOAP**	**TUTORIALS**	**SDL**	**SGT**
PH1.47.3.1	Discuss Lifecycle of E. Histolytica.		Microbiology(H)				
	Classify the drugs used for Amoebiasis & discuss their mechanisms of action,						

PH1.47.3.2	types, doses, side effects, indications and contraindications						
PH1.47.4.1	Discuss Lifecycle of Intestinal Helminths.		Microbiology(H)				
PH1.47.4.2	Classify drugs& used as Anthelmintic& Explain their mechanisms of action, types, doses, side effects, indications and contraindications						
PH1.48	Describe the mechanisms of action, types, doses, side effects, indications and contraindications of the drugs used in UTI/ STD and viral diseases including HIV	PH1.48	Microbiology (H)				
PH1.48.1.1	Discuss the etiology of UTI caused by different microorganisms & clinical presentation of UTI						
PH1.48.1.2	Classify the drug used in UTI & Discuss the mechanisms of action, types, doses, side effects, indications and contraindications						
PH1.48.2.1	Discuss the etiology of STD, caused by different microorganism & clinical a presentation of STD'S						
PH1.48.2.2	Classify the drug used in STD & Discuss the mechanisms of action, types, doses, side effects, indications and contraindications						
PH1.48.3.1	Discuss the different types of Viruses& Explain the viral multiplication in the human body.						
PH1.48.3.2	Classify the drugs used for different types of viral infection. Discuss their mechanisms of action, types, doses, side effects, indications and contraindications(Herpes/ Influenza / Hepatitis)						
PH1.48.3.3	Classify the Antiretroviral drug & Discuss theirmechanisms of action, types, doses, side effects, indications and contraindications						
PH1.48.3.4	Discuss Antiretroviral therapy & its Therapeutic Regime						
PH1.48.3.5	Describe the prophylaxis of HIV (Host exposure prophylaxis, Perinatal exposure prophylaxis)		Microbiology(H)				
PH1.49	Describe mechanism of action, classes, side effects, indications and contraindications of anticancer drugs	PH1.49					
PH1.49.1	Describe the Principle of Cancer chemotherapy &Effect of drugs on different phases of Cell Cycle.						
PH1.49.2	Classification of Anticancer drugs & discuss their mechanisms of action, side effects, indications and contraindications						
PH1.49.3	Discuss the different Toxicity Amelioration during chemotherapy						
PH1.50	Describe mechanisms of action, types, doses, side effects, indications and contraindications of immunomodulators and management of organ transplant rejection	PH1.50					
PH1.50.1	Discuss the Generation of Humoral &Cell mediated immune response.						
PH1.50.3	Discuss the Role of immunosuppression in organ transplantation						
PH1.50.4	Discuss the Use of immunosuppressants of Successful organ transplantation / Discuss the use of Management of organ transplant rejection.		Pathology(H)				
Number	**COMPETENCY** **The student should be able to**	**LECTURE**	**INTERGRATION**	**DOAP**	**TUTORIALS**	**SDL**	**SGT**
PH1.51	Describe occupational and environmental pesticides, food adulterants, pollutants and insect repellents	PH1.51					
PH1.51.1	Define occupational Hazards						
PH1.51.2	Enumerate the Hazards related to Asbestos, silicone &Coal dust?						

PH1.51.3	Define environmental pollution						
PH1.51.4	Discuss the different types of environmental pollution						
PH1.51.5	Explain the management of different types of environmental pollution						
PH1.51.6	Define Adulteration						
PH1.51.7	Explain the different types of Adulterationof food.						
PH1.51.8	Classify Insect repellents						
PH1.51.9	Discuss the toxicity caused by insect repellants						
PH1.52	Describe management of common poisoning, insecticides, common sting and bites	PH1.52	General Medicine (V)				
PH1.52.1	Describe the General principle of management of poisoning						
PH1.52.2	Management of Organophosphorus poisoning						
PH1.52.3	Management of Mushroom poisoning						
PH1.52.4	Explain different types of common stings & bites and Discuss their management						
PH1.53	Describe heavy metal poisoning and chelating agents	PH1.53					
PH1.53.1	Discuss the different types heavy metal poisoning, Enumerate their clinical toxicological features						
PH1.53.2	Discuss the chelating agents. Explain the pharmacology chelating agents						
PH1.53.3	Discuss the indication & toxicity of individual chelating agents						
PH1.54	Describe the vaccines and their uses	PH1.54					
PH1.54.1	Discuss different types of Live & Killed vaccines.		Microbiology(H)				
PH1.54.2	Describe National Immunization Program						
PH1.54.3	Discuss the uses of Antisera & immunoglobulins with examples.						
PH1.55	Describe and discuss the following National Health Programmers including Immunization, Tuberculosis, Leprosy, Malaria, HIV, Filarial, Kala Azar, Diarrheal diseases, Anemia & nutritional disorders, Blindness, Non-communicable diseases, cancer and Iodine deficiency	PH1.55	Community Medicine (H)				
PH1.55.1	Describe the National Health Program						
PH1.55.2	Discuss the Universal Immunization Program & National Immunization schedule.						
PH1.55.3	Discuss the Recent Amendments in Revised national tuberculosis control program						
PH1.55.4	Discuss National Leprosy eradication program						
PH1.55.5	Discuss National Malaria control program						
PH1.55.6	Discuss National framework for Malaria Elimination nation in India						
PH1.55.7	Discuss National AIDS control program						
Number	**COMPETENCY**	**LECTURE**	**INTERGRATION**	**DOAP**	**TUTORIALS**	**SDL**	**SGT**
	The student should be able to						
PH1.55.8	Discuss National Filariasis & Kala Azar control program						
PH1.55.9	Discuss the Diarrheal Disease control program. Explain the policy on use of Zine in the National program of management for Diarrheal Disease.						
PH1.55.10	Discuss the National Nutrition Program						
PH1.55.11	Discuss the National program for control of blindness. Explain vision 2020.						
PH1.55.12	Explain National diabetes control program						
PH1.55.13	Discuss National Cancer control program						
PH1.55.14	Discuss the National Iodine deficiency control program						
PH1.56	Describe basic aspects of Geriatric and Pediatric pharmacology	PH1.56	Pediatrics (V)				

PH1.56.1	Discuss the physiological changes associated with aging						
PH1.56.2	Discuss the pharmacokinetic & dynamic changes with aging						
PH1.56.3	Describe the drugs to be avoided in elderly patient & explain safer alternatives						
PH1.56.4	Explain the common ADR in elderly Patient						
PH1.56.5	Discuss the drugs absorption, distribution metabolism, elimination in neontes& infants.						
PH1.56.6	Discuss the pharmacodynamics in neonates & infants& how to calculate the doses in children on basis of surface area, weight & age.						
PH1.56.7	Enumerate the drugs having specific ADR in children & explain their mechanism and management						
PH1.56.8	Explain the changes in the pediatric response to drugs in different type diseases.						
PH1.57	Describe drugs used in skin disorders	PH1.57	Dermatology, Venereology & Leprosy (V)				
PH1.57.1	Discuss the diagrammatic representation of 3 compartment of skin related to drug delivery						
PH1.57 .2	Describe important considerations when drugs applied to skin						
PH1.57 .3	Describe the different type of topical preparations & explain their MOA, Uses, ADR.						
PH1.57 .4	Discuss the drugs used for treatment of Psoriasis, Acne. Melanoma, Vitiligo, Pruritis						
PH1.57.5	Discuss drugs used Hyperkeratosis & Alopecia						
PH1.58	Describe drugs used in Ocular disorders	PH1.58	Ophthalmology (V)				
PH1.58.1	Discuss the Ocular Anatomy & Physiology						
PH1.58.2	Describe the characteristics of ocular routes of drug administration						
PH1.58.3	Discuss different types of Glaucoma& explain their management						
PH1.58.4	Describe the affect of different pharmacological agent an pupil size						
PH1.58.5	Enumerate Topical antimicrobial, antiviral, antifungal for various ophthalmic diseases						
PH1.58.6	Describe the agents used to treatRetinal neovascularization&Macular degeneration						
Number	**COMPETENCY** **The student should be able to**	**LECTURE**	**INTERGRATION**	**DOAP**	**TUTORIALS**	**SDL**	**SGT**
PH1.58.7	Discuss the Wetting agents &Tear Substitutes& explain their therapeutic uses						
PH1.59	Describe and discuss the following: Essential medicines, Fixed dose combinations, Over the counter drugs, Herbal medicines	PH1.59					
PH1.59.1	Describe Over the counter drugs						
PH1.59.2	Discuss the therapeutic & toxic potential of Over the counter drugs						
PH1.59.3	Discuss the clinical aspect of uses of Botanicals Substances (Herbals) (Garlic, Ginkgo biloba, Ginseng, ST. John's wort, Milk thistle)						
PH1.59.4	Describe the list of essential medicines (India & Uttarakhand) & describe its importance in health setup.						
PH1.59.5	Criteria for preparation of list of essential drugs list.						
PH1.60	Describe and discuss Pharmacogenomics and Pharmacoeconomics	PH1.60					

PH1.60.1	Define Pharmacogenomics and Pharmacoeconomics. Discuss their important in clinical research						
PH1.60.2	Define genetic polymorphism & discuss its different types						
PH1.60.3	Describe the consequences of genetic polymorphism in						
PH1.60.4	Pharmacodynamics, Pharmacokinetics & ADR of a drug.						
PH1.60.5	Discuss the basic Economic concept of health care system						
PH1.60.6	Describe the types of Economic analysis						
PH1.60.7	Define the quality of life & Explain it Principle dimensions						
PH1.60.8	Calculate the Quality of life on the basis of quality adjusted life period.						
PH1.61	Describe and discuss dietary supplements and nutraceuticals	PH1.61					
PH1.61.1	Discuss the clinical uses of Co-enzyme Q10. Mention its adverse effect, drug interaction, dosage						
PH1.61.2	Discuss clinical uses of Glucosamine. Its Adverse Effects, Drug interaction, Precautions and dosage						
PH1.61.3	Discuss the pharmacological effect & clinical uses of Melatonin. Its Adverse Effects, drug interactions & dosage						
PH1.62	Describe and discuss antiseptics and disinfectants	PH1.62					
PH1.62.1	Explain Antiseptics, Disinfection& Sterilization and mention key difference between them.						
PH1.62.2	Classify antiseptics/disinfectants with mechanism of action & uses						
PH1.62.3	Explain the properties of good antiseptic / disinfectants & their spectrum of activity						
PH1.62.4	Describe the therapeutic Index of Antiseptics						
PH1.63	Describe Drug Regulations, acts and other legal aspects	PH1.63					
PH1.63.1	Discuss about the role of drug regulatory authorities of India						
PH1.63.2	Describe Drug Regulatory acts and Schedules						
PH1.63.3	Enumerate the newly approved& Banned drugs by CDSCO						
PH1.64	Describe overview of drug development, Phases of clinical trials and Good Clinical Practice	PH1.64					
PH1.64.1	Discuss about New drug development and the stages						
Number	**COMPETENCY** **The student should be able to**	**LECTURE**	**INTERGRATION**	**DOAP**	**TUTORIALS**	**SDL**	**SGT**
PH1.64.2	Discuss the different steps of drug discovery						
PH1.64.3	Discuss the Pharmacokinetics, Pharmacodynamics, Toxic studies during preclinical trials						
PH1.64.4	Explain various Phases of clinical trial						
PH1.64.5	What is good clinical practice & discuss the principles of good clinical practice						
PH1.64.6	Describe the declaration of Helsinki guidelines for biomedical research						

SKILLS: Topic: Clinical Pharmacy Number of competencies: (04) Number of procedures that require certification : (NIL)

Number	**COMPETENCY** **The student should be able to**	**LECTURE**	**INTERGRATION**	**DOAP**	**TUTORIALS**	**SDL**	**SGT**
PH2.1	Demonstrate understanding of the use of various dosage forms (oral/local/parenteral; solid/liquid)						
2.1.1	Discuss the different sources of the drug						

2.1.2	Describe the various routes of drug administration						
2.1.3	Describe the various preparation of oral routes						
2.1.4	Describe the factors affecting oral route of adminstration						
2.1.5	Describe about the special oral preparation						
2.1.6	Write down advantages & disadvantages of oral route of drug administration						
2.1.7	Write down advantages & disadvantages of sublinqual route of drug administration						
	Write down advantages & disadvantages of reactal route of drug administration						
2.1.8	classify the different types of parentral preparation						
2.1.9	Write down advantages & disadvantages of Intravenous injection						
	Write downadvantages & disadvantagesof IM injection						
	Write downadvantages & disadvantages of SC injection						
	Write down advantages & disadvantagesof ID injection						
	Write down advantages & disadvantages of Transdermal injection						
2.1.10	Demonstrate how to aspirate drug from ampule & vial into syringe						
2.1.11	Demonstate how to dissolve dry medicine in vial & aspirate drugs solution into syringe						
2.1.12	Demonstrate how to inject by IV route in meniquins						
2.1.13	Demonstrate how to inject drug via IM route in meniquins						
2.1.14	write down advantages & disadvantages of IM route of drug administration						
2.1.15	Demonstrate how to inject drug subcutaneously						
2.1.16	write down advantages & disadvantages of SC route of administration						
2.1.17	Demonstrate how to inject ID						
2.1.18	write down advantages & disadvantages of ID route of administration						
2.1.19	Demonstration of ID route						
2.1.20	Discuss the drug used by SL route						
2.1.21	Demonstrate advantages & disadvantages of SL						
2.1.22	Discuss the method of absorption through transdermal route with example						
2.1.23	Explain different type of transdermal patches & their MOA						
2.1.24	demonstrate advantages & disadvantages of TD patches						
Number	**COMPETENCY** **The student should be able to**	**LECTURE**	**INTERGRATION**	**DOAP**	**TUTORIALS**	**SDL**	**SGT**
2.1.25	Explain the different type of Topical preparation a)nose dropes- their advantages & disadvantages, procedure of instillation of drug in nose b) eye drops - their advantages & disadvantages, procedure of instillation of drug in eye c) ear drops - their advantages & disadvantages procedure of instillation of drug in ear d) eye ointment- explain about the eye ointment advantages & disadvantages & its procedure for eye ointment . C) Nasal spray- Explain different type of Nasal spray. Explain the						

2.1.26	Explain the different types of Topical preparation advantages & disadvantages procedure- 1. 1. ointment - their advantages & disadvantages procedure 2. gel - their advantages & disadvantages procedure 3. lotion - their advantages & disadvantages procedure 4. liniment - their advantages & disadvantages procedure 5. creams - their advantages & disadvantages procedure 6. spray - their advantages & disadvantages procedure 7 paints - their advantages & disadvantages procedure						
2.1.27	Explain suppositories & their advantages , disadvantage and procedure						
	Explain vaginal penaries& their advantages , disadvantage and procedure						
2.1.28	Explain differrent preparation of inhalational oral routes						
2.1.29	what are the advantages , disadvantage and procedure for 1. Dry powder inhaler 2. metar dose inhaler 3. nebuliser 4. Rotahaler (Explain the care requred for use of rotahaler)						
2.1.30	whar are the advantage & disadvantage of procedure for 1. local & orals 2. gargles 3. mouth washer						
2.1.31	Explain the new technique for NDDS (New drug delivery system)						
2.1.32	What are the advatange & disadvantage of new drug delivery system						
2.1.33	Discuss the precaution required for storage for dosage from & environmental factor affecting dosage form.						
PH2.2	Prepare oral rehydration solution from ORS packet and explain its use						
PH2.2.1	To prepare & dispense 1 dose of oral ORS salt for 1000 ml of ORS.						
PH2.2 .2	To Preapare & dispense 1:5000 solution of pot permegnate (condy's lotion)						
PH2.3	Demonstrate the appropriate setting up of an intravenous drip in a simulated environment						
Number	**COMPETENCY** **The student should be able to**	**LECTURE**	**INTERGRATION**	**DOAP**	**TUTORIALS**	**SDL**	**SGT**
PH2.3.1	Disuss & demonstrate the appropriate setting for IV drip in the meniquens						
PH2.3.2	How to do the following 1. drug from ampule 2. drug aspirate from vial 3. dissolve dry medicine in vial 4. inject via IV route						
PH2.3.3	Demonstrate the modals for IV injection in laboratory / maniquens						
PH2.4							
PH2.4.1	Explain about the different types of dosage, fixed dose combination & ratio proportion						

PH2.4.2	Discuss the pausoligy & demostrate the correct method of calculation of drug dosage						
PH2.4.3	calculation of the quantity of drug present in given solution and importance of calculating the given quantity of drug & molar solution for individualisation for therapy						
PH2.4.4	Calculate the quantity of drug & drip rate for different condition						

SKILLS: Topic: Clinical Pharmacology Number of competencies: (08) Number of procedures that require certification : (04)

PH3.1	Write a rational, correct and legible generic prescription for a given condition and communicate the same to the patient						
PH3.1 .1	Discuss the rationality						
PH3.1.2	What are the different parts of prescription						
PH3.1 .3	Explain the generic prescription (propiratory & non propiratory) name of drug						
PH3.1 .4	Explain the correct rational, legible & generic prescription writting for a given condition						
PH3.1 .5	Explain the appropriate methodology to communicate the details of the drugs to the patient						
PH3.2	Perform and interpret a critical appraisal (audit) of a given prescription						
PH3.2.1	Explain the critically evalution of presecription / audit on the basis of its quality & rationality. Describe the e- rational prescribing						
PH3.2.2	Explain the common error in prescription writting and tips for avoiding prescription error						
PH3.2.2	Describe the parameter of prescription audit.						
PH3.2.3	Describe the method for writing of good & rational prescription						
PH3.3	Perform a critical evaluation of the drug promotional literature						
PH3.3.1	discuss about the critical appraisal of drug promotional literature						
PH3.3.2	Disucuss about the factors analysed for the critical DPL (drug promotional literature)						
PH3.3.3	describe about the ethical criteria for drug promotion						
PH3.3.4	Describe about the different sources of drug promotion						
Number	**COMPETENCY** **The student should be able to**	**LECTURE**	**INTERGRATION**	**DOAP**	**TUTORIALS**	**SDL**	**SGT**
PH3.3.5	Explain about the different sources by which doctor can be updated about drug						
PH3.3.6	Ennumerate anthentic sources of drug information & appreciate the merit & limitation of drug information sources						
PH3.3.7	Identity the unethical points in advertisment in doctor MR interaction						
PH3.4	To recognise and report an adverse drug reaction						
PH3.4.1	What is ADR & Explain the different types of ADR						
PH3.4.2	Discuss about the pharmacovigilance programe of India & explain about its global organisation						
PH3.4.3	What is causuality anesment & explain its types						
PH3.4.4	Disuss about suspected ADR reporting form issued under PvPI						

PH3.4.5	Appreciate the import of ADR monitoring ennumerate methods used identify which ADR should be reported find out severity & casuality of ADR fill ADR monitoring form for a case scenerio report an ADR TO MONITORING CENTRE ENTER DATA INTO VIGIFLOW & QENERATE pdf of REPOT						
PH3.5	To prepare and explain a list of P-drugs for a given case/condition						
PH3.5.1	What is the P drug concept Explain the different criteria for selection of P- drug for any disease						
PH3.5.2	Acquire cognitive, motor & communicatation skill that are necessary for rational therapeutics						
PH3.5.3	Choose a appropriate drug from P-drug list deciding what information is to be given to monitor then write appropriate prescription for a given case						
PH3.6	Demonstrate how to optimize interaction with pharmaceutical representative to get authentic information on drugs						
PH3.6.1	Define drug interaction. What are the different types of drug interaction						
PH3.6.2	Explain the phamacokinetic drug interaction with example.						
PH3.6.3	Explain the pharmacodynamic drug inteaction with example.						
PH3.6.4	Explain the machannism of drug interaction						
PH3.6.5	Describe the preventive & curative treatment for drug interaction						
PH3.7	Prepare a list of essential medicines for a healthcare facility						
PH3.7.1	Discuss the list of essential medicine for national & state level.						
PH3.7.2	Discuss about different parts of National list of essential medicine 2016						
PH3.7.3	What is national formulary of India & How to design Hospital formulary with the help of national formulary						
PH3.8	Communicate effectively with a patient on the proper use of prescribed medication						
PH3.8.1	What is method of effective communication with patient for proper use of prescribed medication.						
PH3.8.2	Explain the different steps of effective communication						

SKILLS: Topic: Experimental Pharmacology Number of competencies: (02) Number of procedures that require certification :(N

Number	COMPETENCY The student should be able to	LECTURE	INTERGRATION	DOAP	TUTORIALS	SDL	SGT
PH4.1	Administer drugs through various routes in a simulated environment using mannequins						
PH4.1.1	Administer following drugs through 1. IV 2. IM 3. SC 4. Intubation 5. Catheter 6. Ryle's tube						

PH4.1.2	write down the dosage form of drugs display on various station						
PH4.1.3	Administor the drug properly by IV/ IM/ SC ,ampule, vial dissolution						
PH4.1.4	Understand & discribe precautions required during use of which dosage form						
PH4.1.5	Discuss the checklist for the adminstration of drug in all routes						
PH4.2	Demonstrate the effects of drugs on blood pressure (vasopressor and vaso-depressors with appropriate blockers) using computer aided learning						
PH4.2.1	Discuss the effect of various vasopressor & depressor drug on the HR & BP by using computer added learning						
PH4.2.2	Describe MOA of various drugs						
PH4.2.3	Comment on nature of unknown drug						
PH4.2.4	Discuss the effect of different drugs on rabit eye on pupils, intraoccular tension, light reflex and touch reflex using computer added learning						
PH4.2.5	Discusss the effect of cholinergic & anticholinergic drug on HR, BP						
PH4.2.6	Discuss the effect of adrenegic & antadrenegic drug on HR, BP.						

Communication Topic: Pharmacology Number of competencies: (07) Number of procedures that require certification : (NI

PH5.1	Communicate with the patient with empathy and ethics on all aspects of drug use						
PH5.1.1	Explain how to commumicate with empathy and ethics on all aspects of drug use						
PH5.2	Communicate with the patient regarding optimal use of a) drug therapy, b) devices and c) storage of medicines						
PH5.2.1	Explain how to commumicate with the patient regardinng optimal use of drug therapy, devices and storage of medicines						
PH5.3	Motivate patients with chronic diseases to adhere to the prescribed management by the health care provider						
PH5.3.1	Discuse motivational points with patient having chronic diseases to adhere to the prescribed mangement by health care provider						
Number	**COMPETENCY** **The student should be able to**	**LECTURE**	**INTERGRATION**	**DOAP**	**TUTORIALS**	**SDL**	**SGT**
PH5.4	Explain to the patient the relationship between cost of treatment and patient compliance						
PH5.4.1	Discuss the pharmoco economics & its impact on compliance of patient Describe the different types of pharmoco economics standered Explain the different types of medical costs and its relationship with compliance of patient						
PH5.5	Demonstrate an understanding of the caution in prescribing drugs likely to produce dependence and recommend the line of management						

PH5.5.1	Discuss and demostrate an understanding of the coution in prescribing drugs likely produce dependence and recommend the line of management define drug dependence discuss physiological & psychlogical dependence. Enumerate the drug which can care drug dependence What is schedule x drugs & discuss its use is principal of these effects of drugs						

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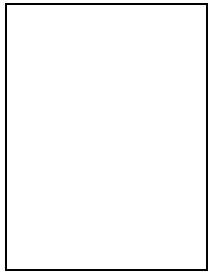

Number	**COMPETENCY**	**LECTURE**	**INTERGRATION**	**DOAP**
	The student should be able to			

TUTORIALS	SDL	SGT	ASSESSMENT

PH2.2	Prepare oral rehydration solution from ORS packet and explain its
	Demonstrate the appropriate setting up of an intravenous drip in a simulated environment
PH2.3	Demonstrate the correct method of calculation of drug dosage in patients including those used in special situations
PH2.4	