Number	COMPETENCY The student should be able to	Domain K/S/A/C
PH1.1	Define and describe the principles of pharmacology and pharmacotherapeutics	K
PH1.2	Describe the basis of Evidence based medicine and Therapeutic drug monitoring	K
PH1.3	Enumerate and identify drug formulations and drug delivery systems	K/S
PH1.4	Describe absorption, distribution, metabolism & excretion of drugs	K
PH1.5	Describe general principles of mechanism of drug action	K
PH1.6	Describe principles of Pharmacovigilance & ADR reporting systems	K
PH1.7	Define, identify and describe the management of adverse drug reactions (ADR)	K/S
PH1.8	Identify and describe the management of drug interactions	K/S
PH1.9	Describe nomenclature of drugs i.e. generic, branded drugs	K/S
PH1.10	Describe parts of a correct, complete and legible generic prescription. Identify errors in prescription and correct appropriately	K/S
PH1.11	Describe various routes of drug administration, eg., oral, SC, IV, IM, SL	K
PH1.12	Calculate the dosage of drugs using appropriate formulae for an individual patient, including children, elderly and patient with renal dysfunction.	K/S
PH1.13	Describe mechanism of action, types, doses, side effects, indications and contraindications of adrenergic and anti-adrenergic drugs	K
PH1.14	Describe mechanism of action, types, doses, side effects, indications and contraindications of cholinergic and anticholinergic drugs	K
PH1.15	Describe mechanism/s of action, types, doses, side effects, indications and contraindications of skeletal muscle relaxants	K
PH1.16	Describe mechanism/s of action, types, doses, side effects, indications and contraindications of the drugs which act by modulating autacoids, including: anti-histaminics, 5-HT modulating drugs, NSAIDs, drugs for gout, anti-rheumatic drugs, drugs for migraine	K
PH1.17	Describe the mechanism/s of action, types, doses, side effects, indications and contraindications of local anesthetics	K
PH1.18	Describe the mechanism/s of action, types, doses, side effects, indications and contraindications of general anaesthetics, and pre- anesthetic medications	K
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, anti- depressant drugs, anti-maniacs, opioid agonists and antagonists, drugs used for neurodegenerative disorders, anti-epileptics drugs)	K
PH1.20	Describe the effects of acute and chronic ethanol intake	K
PH1.21	Describe the symptoms and management of methanol and ethanol poisonings	K
PH1.22	Describe drugs of abuse (dependence, addiction, stimulants, depressants, psychedelics, drugs used for criminal offences)	K
PH1.23	Describe the process and mechanism of drug deaddiction	K/S

PH1.24	Describe the mechanism/s of action, types, doses, side effects, indications and contraindications of the drugs affecting renal systems including diuretics, antidiuretics- vasopressin and analogues	K
PH1.25	Describe the mechanism/s of action, types, doses, side effects, indications and contraindications of the drugs acting on blood, like anticoagulants, antiplatelets, fibrinolytics, plasma expanders	K
PH1.26	Describe mechanisms of action, types, doses, side effects, indications and contraindications of the drugs modulating the renin- angiotensin and aldosterone system	K
PH1.27	Describe the mechanisms of action, types, doses, side effects, indications and contraindications of antihypertensive drugs and drugs used in shock	K
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	K
PH1.29	Describe the mechanisms of action, types, doses, side effects, indications and contraindications of the drugs used in congestive heart failure	K
PH1.30	Describe the mechanisms of action, types, doses, side effects, indications and contraindications of the antiarrhythmics	K
PH1.31	Describe the mechanisms of action, types, doses, side effects, indications and contraindications of the drugs used in the management of dyslipidemias	K
PH1.32	Describe the mechanism/s of action, types, doses, side effects, indications and contraindications of drugs used in bronchial asthma and COPD	K
PH1.33	Describe the mechanism of action, types, doses, side effects, indications and contraindications of the drugs used in cough (antitussives, expectorants/ mucolytics)	K
PH1.34	Describe the mechanism/s of action, types, doses, side effects, indications and contraindications of the drugs used as below: 1. Acid-peptic disease and GERD 2. Antiemetics and prokinetics 3. Antidiarrhoeals 4 . Laxatives 5. Inflammatory Bowel Disease 6. Irritable Bowel Disorders, biliary and pancreatic diseases	K
PH1.35	Describe the mechanism/s of action, types, doses, side effects, indications and contraindications of drugs used in hematological disorders like: 1.D rugs used in anemias 2. Colony Stimulating factors	K
PH1.36	Describe the mechanism of action, types, doses, side effects, indications and contraindications of drugs used in endocrine disorders (diabetes mellitus, thyroid disorders and osteoporosis)	K
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	K
PH1.38	Describe the mechanism of action, types, doses, side effects, indications and contraindications of corticosteroids	K
PH1.39	Describe mechanism of action, types, doses, side effects, indications and contraindications the drugs used for contraception	K
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 used in erectile dysfunction	K

PH1.41	Describe the mechanisms of action, types, doses, side effects, indications and contraindications of uterine relaxants and stimulants	K
PH1.42	Describe general principles of chemotherapy	K
PH1.43	Describe and discuss the rational use of antimicrobials including antibiotic stewardship program	K
PH1.44	Describe the first line antitubercular dugs, their mechanisms of action, side effects and doses.	K
PH1.45	Describe the dugs used in MDR and XDR Tuberculosis	K
PH1.46	Describe the mechanisms of action, types, doses, side effects, indications and contraindications of antileprotic drugs	K
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	K
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	K
PH1.49	Describe mechanism of action, classes, side effects, indications and contraindications of anticancer drugs	K
PH1.50	Describe mechanisms of action, types, doses, side effects, indications and contraindications of immunomodulators and management of organ transplant rejection	K
PH1.51	Describe occupational and environmental pesticides, food adulterants, pollutants and insect repellents	K
PH1.52	Describe management of common poisoning, insecticides, common sting and bites	K
PH1.53	Describe heavy metal poisoning and chelating agents	K
PH1.54	Describe vaccines and their uses	K
PH1.55	Describe and discuss the following National Health Programmes including Immunisation, Tuberculosis, Leprosy, Malaria, HIV, Filaria, Kala Azar, Diarrhoeal diseases, Anaemia & nutritional disorders, Blindness, Non-communicable diseases, cancer and Iodine deficiency	K
PH1.56	Describe basic aspects of Geriatric and Pediatric pharmacology	K
PH1.57	Describe drugs used in skin disorders	K
PH1.58	Describe drugs used in Ocular disorders	K
PH1.59	Describe and discuss the following: Essential medicines, Fixed dose combinations, Over the counter drugs, Herbal medicines	K
PH1.60	Describe and discuss Pharmacogenomics and Pharmacoeconomics	K
PH1.61	Describe and discuss dietary supplements and nutraceuticals	K
PH1.62	Describe and discuss antiseptics and disinfectants	K
PH1.63	Describe Drug Regulations, acts and other legal aspects	K
PH1.64	Describe overview of drug development, Phases of clinical trials and Good Clinical Practice	K
PH2.1	Demonstrate understanding of the use of various dosage forms (oral/local/parenteral; solid/liquid)	S/C
PH2.2	Prepare oral rehydration solution from ORS packet and explain its use	S/C
PH2.3	Demonstrate the appropriate setting up of an intravenous drip in a simulated environment	S

PH2.4	Demonstrate the correct method of calculation of drug dosage in patients including those used in special situations	S
PH3.1	Write a rational, correct and legible generic prescription for a given condition and communicate the same to the patient	S/C
PH3.2	Perform and interpret a critical appraisal (audit) of a given prescription	S
PH3.3	Perform a critical evaluation of the drug promotional literature	S
PH3.4	To recognise and report an adverse drug reaction	S
PH3.5	To prepare and explain a list of P-drugs for a given case/condition	S
PH3.6	Demonstrate how to optimize interaction with pharmaceutical representative to get authentic information on drugs	S
PH3.7	Prepare a list of essential medicines for a healthcare facility	S
PH3.8	Communicate effectively with a patient on the proper use of prescribed medication	C/A
PH4.1	Administer drugs through various routes in a simulated environment using mannequins	S
PH4.2	Demonstrate the effects of drugs on blood pressure (vasopressor and vaso-depressors with appropriate blockers) using computer aided learning	S
PH5.1	Communicate with the patient with empathy and ethics on all aspects of drug use	A/C
PH5.2	Communicate with the patient regarding optimal use of a) drug therapy, b) devices and c) storage of medicines	A/C
PH5.3	Motivate patients with chronic diseases to adhere to the prescribed management by the health care provider	A/C
PH5.4	Explain to the patient the relationship between cost of treatment and patient compliance	A/C
PH5.5	Demonstrate an understanding of the caution in prescribing drugs likely to produce dependence and recommend the line of management	K
PH5.6	Demonstrate ability to educate public & patients about various aspects of drug use including drug dependence and OTC drugs	A/C
PH5.7	Demonstrate an understanding of the legal and ethical aspects of prescribing drugs	K

Column C: K- Knowledge, S – Skill, A - Attitude / professionalism, C- Communication. Column D:

Level K/KH/SH/P	Core (Y/N)	Suggested Teaching Learning method	Suggested Assessment method	Vertical Integration	Horizontal Integration
K	Y	Lecture	Written/ Viva voce		
KH	Y	Lecture	Written/ Viva voce		
SH	Y	Lecture, Practical	Written/ Viva voce		
KH	Y	Lecture, Small Group discussion	Written/ Viva voce		
KH	Y	Lecture, Small Group discussion	Written/ Viva voce		
KH	Y	Lecture, Practical	Written/ Viva voce		
KH	Y	Lecture, Practical	Written/ Viva voce		
KH	Y	Lecture, Practical	Written/ Viva voce		
SH	Y	Lecture, Practical	Written/ Viva voce		
SH	Y	Lecture, Practical	Written/ Viva voce		
KH	Y	Lecture, Small group discussion	Written/ Viva voce		
SH	Y	Lecture, practical	Written/ Viva voce	Pediatrics, General Medicine	
KH	Y	Lecture, Small Group discussion	Written/ Viva voce		
KH	Y	Lecture, Small Group discussion	Written/ Viva voce		
KH	Y	Lecture	Written/ Viva voce	Anesthesiology, Physiology	
KH	Y	Lecture	Written/ Viva voce	General Medicine	
KH	Y	Lecture	Written/ Viva voce	Anesthesiology	
KH	Y	Lecture	Written/ Viva voce	Anesthesiology	
KH	Y	Lecture	Written/ Viva voce	Psychiatry, Physiology	
KH	Y	Lecture, Small group discussion	Written/ Viva voce	Psychiatry	
KH	Y	Lecture, Small group discussion	Written/ Viva voce	General Medicine	
KH	Y	Lecture, Small group discussion	Written/ Viva voce	Psychiatry	Forensic Medicine
KH	Y	Lecture, Small group discussion	Written/ Viva voce	Psychiatry	

K H	Y	Lecture	W ritten/ Viva voce		
KH	Y	Lecture	Written/ Viva voce	Physiology, General Medicine	
KH	Y	Lecture	Written/ Viva voce	Physiology, General Medicine	
KH	Y	Lecture	Written/ Viva voce	General Medicine	
KH	Y	Lecture	Written/ Viva voce	General Medicine	
KH	Y	Lecture	Written/ Viva voce	General Medicine	
KH	N	Lecture	Written/ Viva voce	General Medicine	
KH	Y	Lecture, Small group discussion	Written/ Viva voce	General Medicine	
KH	Y	Lecture, Small Group discussion	Written/ Viva voce	Respiratory Medicine	
KH	Y	Lecture, Small Group discussion	Written/ Viva voce	Respiratory Medicine	
KH	Y	Lecture, Small Group discussion	Written/ Viva voce	General Medicine	
KH	Y	Lecture	Written/ Viva voce	General Medicine, Physiology	Pharmacology
KH	Y	Lecture	Written/ Viva voce	General Medicine	
KH	Y	Lecture	Written/ Viva voce		
KH	Y	Lecture	Written/ Viva voce		
KH	Y	Lecture	Written/ Viva voce	Obstetrics & Gynaecology	
KH	Y	Lecture	Written/ Viva voce	Obstetrics & Gynaecology	

KH	Y	Lecture	Written/ Viva voce	Obstetrics & Gynaecology	
KH	Y	Lecture	Written/ Viva voce		
KH	Y	Lecture	Written/ Viva voce	General Medicine, Pediatrics	Microbiology
KH	Y	Lecture	Written/ Viva voce	Respiratory Medicine	
KH	Y	Lecture	Written/ Viva voce	Respiratory Medicine	Microbiology
KH	Y	Lecture	Written/ Viva voce	Dermatology, Venereology & Leprosy	Microbiology
KH	Y	Lecture	Written/ Viva voce	General Medicine	Microbiology
KH	Y	Lecture	Written/Viva voce		Microbiology
KH	Y	Lecture	Written/Viva voce		
KH	Y	Lecture	Written/ Viva voce		
KH/	Y	Lecture	Written/ Viva voce		
KH	Y	Lecture	Written/ Viva voce	General Medicine	
KH	N	Lecture	Written/ Viva voce		
KH	Y	Lecture	Written/ Viva voce		
KH	Y	Lecture	Written/ Viva voce		Community Medicine
KH	Y	Lecture	Written/ Viva voce	Pediatrics	
KH	Y	Lecture	Written/ Viva voce	Dermatology, Venereology & Leprosy	
KH	Y	Lecture	Written/ Viva voce	Ophthalmology	
KH	Y	Lecture	Written/ Viva voce		
KH	N	Lecture	Written/ Viva voce		
KH	N	Lecture	Written/ Viva voce		
KH	Y	Lecture	Written/ Viva voce		
KH	Y	Lecture	Written/ Viva voce		
KH	Y	Lecture	Written/ Viva voce		
SH	Y	DOAP sessions	Skills assessment		
SH	Y	DOAP sessions	Skills assessment		
SH	Y	DOAP sessions	Skills assessment		

SH	Y	DOAP sessions	Skills assessment	Pediatrics, General Medicine	
P	Y	Skill station	Skill station	General Medicine	
P	Y	Skill Lab	Maintenance of log book		
P	Y	Skill Lab	Maintenance of log book/ Skill station	General Medicine	
SH	Y	Skill station	Maintenance of log book/ Skill station		
P	Y	Skill station	Maintenance of log book	General Medicine	
SH	N	Skill station	maintenance of log book		
SH	Y	Skill station	Maintenance of log book		
SH	Y	Skill Lab	Skill station		
SH	Y	DOAP sessions	Skills assessment		
SH	Y	Skill lab	Skill station		
SH	Y	Small group discussion	skill station	General Medicine	
SH	Y	Small group discussion	Skill station		
SH	Y	Small group discussion	short note/skill station		
SH	Y	Small group discussion	short note/ viva voce	General Medicine	
KH	Y	Small group discussion	short note/ Viva voce	Psychiatry	
SH	Y	Small group discussion	Skill station	Psychiatry	
KH	Y	Small group discussion	short note/ Viva voce		Forensic Medicine

K – Knows, KH - Knows How, SH - Shows how, P- performs independently, Column F: DOAP