

Pharmacology Subject

Competencies		Clinician	Leader	Communicator	Lifelong learner	Professional	Critical thinker	Researcher
		PO1	PO2	PO3	PO4	PO5	PO6	PO7
PH1.1	Define and describe the principles of pharmacology and pharmacotherapeutics	2	1	1	2	2	1	0
PH1.2	Describe the basis of Evidence based medicine and Therapeutic drug monitoring	2	1	1	2	1	1	1
PH1.3	Enumerate and identify drug formulations and drug delivery systems	3	3	3	3	1	1	3
PH1.4	Describe absorption, distribution, metabolism & excretion of drugs	1	1	1	1	1	0	0
PH1.5	Describe general principles of mechanism of drug action	3	2	1	1	1	1	1
PH1.6	Describe principles of Pharmacovigilance & ADR reporting systems	3	3	3	3	3	3	3
PH1.7	Define, identify and describe the management of adverse drug reactions (ADR)	3	3	3	3	3	3	3
PH1.8	Identify and describe the management of drug interactions	2	1	1	2	1	2	1
PH1.9	Describe nomenclature of drugs i.e. generic, branded drugs	2	2	2	1	1	1	0
PH1.10	Describe parts of a correct, complete and legible generic prescription. Identify errors in prescription and correct appropriately	3	2	2	1	1	1	0
PH1.11	Describe various routes of drug administration, eg., oral, SC, IV, IM, SL	3	2	0	1	2	1	3
PH1.12	Calculate the dosage of drugs using appropriate formulae for an individual patient, including children, elderly and patient with renal dysfunction.	3	3	0	2	3	1	3
PH1.13	Describe mechanism of action, types, doses, side effects, indications and contraindications of adrenergic and anti-adrenergic drugs	2	3	2	2	1	1	2
PH1.14	Describe mechanism of action, types, doses, side effects, indications and contraindications of cholinergic and anticholinergic drugs	2	3	1	1	1	1	1
PH1.15	Describe mechanism/s of action, types, doses, side effects, indications and contraindications of skeletal muscle relaxants	2	1	0	1	1	0	1

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	3	2	1	2	2	1	2
PH1.17	Describe the mechanism/s of action, types, doses, side effects, indications and contraindications of local anesthetics	2	1	1	1	2	1	1
PH1.18	Describe the mechanism/s of action, types, doses, side effects, indications and contraindications of general anaesthetics, and pre- anesthetic medications	2	1	1	2	1	1	1
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)	2	3	3	2	2	2	2
PH1.20	Describe the effects of acute and chronic ethanol intake	2	2	3	1	2	1	1
PH1.21	Describe the symptoms and management of methanol and ethanol poisonings	2	3	3	1	2	1	1
PH1.22	Describe drugs of abuse (dependence, addiction, stimulants, depressants, psychedelics, drugs used for criminal offences)	1	1	2	1	1	1	3
PH1.23	Describe the process and mechanism of drug deaddiction	1	1	3	1	1	1	1
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	3	3	2	2	2	2	1

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	3	3	2	2	3	2	3
PH1.26	Describe mechanisms of action, types, doses, side effects, indications and contraindications of the drugs modulating the renin- angiotensin and aldosterone system	3	3	2	2	2	1	3
PH1.27	Describe the mechanisms of action, types, doses, side effects, indications and contraindications of antihypertensive drugs and drugs used in shock	3	3	2	3	3	3	3
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	3	3	3	3	2	3	3
PH1.29	Describe the mechanisms of action, types, doses, side effects, indications and contraindications of the drugs used in congestive heart failure	3	3	3	3	2	3	3
PH1.30	Describe the mechanisms of action, types, doses, side effects, indications and contraindications of the antiarrhythmics	1	1	1	1	1	1	1
PH1.31	Describe the mechanisms of action, types, doses, side effects, indications and contraindications of the drugs used in the management of dyslipidemias	3	3	3	3	2	3	3
PH1.32	Describe the mechanism/s of action, types, doses, side effects, indications and contraindications of drugs used in bronchial asthma and COPD	3	3	3	2	3	2	3
PH1.33	Describe the mechanism of action, types, doses, side effects, indications and contraindications of the drugs used in cough (antitussives, expectorants/ mucolytics)	3	2	2	3	1	1	1

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.	3	3	1	1	1	1	2
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 anemias 2. Colony Stimulating factors	3	3	3	2	1	2	2
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)	3	3	3	3	3	3	3
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	2	2	0	2	1	1	1
PH1.38	Describe the mechanism of action, types, doses, side effects, indications and contraindications of corticosteroids	3	3	2	3	3	1	1
PH1.39	Describe mechanism of action, types, doses, side effects, indications and contraindications the drugs used for contraception	3	3	3	3	2	2	1
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	2	2	2	1	1	1	2
PH1.41	Describe the mechanisms of action, types, doses, side effects, indications and contraindications of uterine relaxants and stimulants	3	3	2	1	1	2	1
PH1.42	Describe general principles of chemotherapy	3	2	2	2	1	2	3
PH1.43	Describe and discuss the rational use of antimicrobials including antibiotic stewardship program	2	2	2	2	2	2	3
PH1.44	Describe the first line antitubercular drugs, their mechanisms of action, side effects and doses.	3	3	3	3	1	2	3
PH1.45	Describe the drugs used in MDR and XDR Tuberculosis	3	3	2	3	1	2	3

PH1.46	Describe the mechanisms of action, types, doses, side effects, indications and contraindications of antileprotic drugs	2	2	2	2	1	2	2
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	3	3	2	3	1	2	2
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	3	3	2	2	1	2	3
PH1.49	Describe mechanism of action, classes, side effects, indications and contraindications of anticancer drugs	1	1	0	1	1	1	1
PH1.50	Describe mechanisms of action, types, doses, side effects, indications and contraindications of immunomodulators and management of organ transplant rejection	1	1	0	1	1	1	1
PH1.51	Describe occupational and environmental pesticides, food adulterants, pollutants and insect repellents	0	1	1	1	0	0	0
PH1.52	Describe management of common poisoning, insecticides, common sting and bites	3	3	2	2	2	2	1
PH1.53	Describe heavy metal poisoning and chelating agents	1	1	0	1	1	1	1
PH1.54	Describe vaccines and their uses	3	3	3	2	2	1	1
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	1	1	0	0	0	0	0
PH1.56	Describe basic aspects of Geriatric and Pediatric pharmacology	3	2	2	3	1	2	2
PH1.57	Describe drugs used in skin disorders	2	2	1	2	1	1	1
PH1.58	Describe drugs used in Ocular disorders	2	2	1	1	1	1	1

PH1.59	Describe and discuss the following: Essential medicines, Fixed dose combinations, Over the counter drugs, Herbal medicines	1	1	0	2	1	1	1
PH1.60	Describe and discuss Pharmacogenomics and Pharmacoeconomics	1	0	0	0	0	2	3
PH1.61	Describe and discuss dietary supplements and nutraceuticals	1	1	1	2	0	2	2
PH1.62	Describe and discuss antiseptics and disinfectants	1	2	2	2	1	1	1
PH1.63	Describe Drug Regulations, acts and other legal aspects	1	0	0	1	0	0	0
PH1.64	Describe overview of drug development, Phases of clinical trials and Good Clinical Practice	2	1	1	1	1	1	1
PH2.1	Demonstrate understanding of the use of various dosage forms (oral/local/parenteral; solid/liquid)	3	3	2	2	1	2	2
PH2.2	Prepare oral rehydration solution from ORS packet and explain its use	3	3	3	2	1	0	0
PH2.3	Demonstrate the appropriate setting up of an intravenous drip in a simulated environment	0	0	0	2	1	0	1
PH2.4	Demonstrate the correct method of calculation of drug dosage in patients including those used in special situations	2	2	0	2	1	1	1
PH3.1	Write a rational, correct and legible generic prescription for a given condition and communicate the same to the patient	3	2	3	2	1	0	0
PH3.2	Perform and interpret a critical appraisal (audit) of a given prescription	1	1	1	0	0	0	1
PH3.3	Perform a critical evaluation of the drug promotional literature	1	1	0	0	0	0	1
PH3.4	To recognise and report an adverse drug reaction	3	3	2	2	1	2	2
PH3.5	To prepare and explain a list of P-drugs for a given case/condition	3	2	2	2	1	2	2
PH3.6	Demonstrate how to optimize interaction with pharmaceutical representative to get authentic information on drugs	1	1	1	1	1	0	0

PH3.7	Prepare a list of essential medicines for a healthcare facility	3	1	1	1	0	1	0
PH3.8	Communicate effectively with a patient on the proper use of prescribed medication	3	3	3	2	1	1	0
PH4.1	Administer drugs through various routes in a simulated environment using mannequins	3	3	2	1	0	1	0
PH4.2	Demonstrate the effects of drugs on blood pressure (vasopressor and vaso-depressors with appropriate blockers) using computer aided learning	1	1	0	0	0	1	3
PH5.1	Communicate with the patient with empathy and ethics on all aspects of drug use	2	2	2	2	1	1	0
PH5.2	Communicate with the patient regarding optimal use of a) drug therapy, b) devices and c) storage of medicines	2	1	3	2	0	0	0
PH5.3	Motivate patients with chronic diseases to adhere to the prescribed management by the health care provider	2	1	3	2	1	0	0
PH5.4	Explain to the patient the relationship between cost of treatment and patient compliance	1	1	3	1	1	0	3
PH5.5	Demonstrate an understanding of the caution in prescribing drugs likely to produce dependence and recommend the line of management	2	1	1	1	0	1	1
PH5.6	Demonstrate ability to educate public & patients about various aspects of drug use including drug dependence and OTC drugs	2	1	2	1	1	1	1
PH5.7	Demonstrate an understanding of the legal and ethical aspects of prescribing drugs	1	1	0	1	1	1	2