PHARMACOLOGY - I

PLACEMENT: III SEMESTER

THEORY: 1 Credit (20 hours)

DESCRIPTION: This course is designed to enable students to acquire understanding of

Pharmacodynamics, Pharmacokinetics, principles of therapeutics and nursing implications.

COMPETENCIES: On completion of the course, the students will be able to

1. Describe Pharmacodynamics and pharmacokinetics.

- 2. Review the principles of drug calculation and administration.
- 3. Explain the commonly used antiseptics and disinfectants.
- 4. Describe the pharmacology of drugs acting on the GI system.
- 5. Describe the pharmacology of drugs acting on the respiratory system.
- 6. Describe drugs used in the treatment of cardiovascular and blood disorders.
- 7. Explain the drugs used in the treatment of endocrine system disorders.
- 8. Describe the drugs acting on skin and drugs used to treat communicable diseases.

COURSE OUTLINE

$\boldsymbol{T-Theory}$

Unit	Time	Learning Outcomes	Content	Teaching/Learning	Assessment
	(Hrs)			Activities	Methods
I	` '	Describe	Introduction to Pharmacology	Lecture cum	Short answer
		Pharmacodynamics, Pharmacokinetics, Classification, principles of administration of drugs	Definitions & Branches	Discussion • Guided reading and written assignment on schedule K drugs	Objective type
			Nature & Sources of drugs		Assessment of
			Dosage Forms and Routes of drug administration		assignments
			Terminology used		
			 Classification, Abbreviations, Prescription, Drug Calculation, Weights and Measures 		
			Pharmacodynamics: Actions, Drug Antagonism, Synergism, Tolerance, Receptors, Therapeutic, adverse, toxic effects, pharmacovigilance		
			Pharmacokinetics: Absorption, Bioavailability, Distribution, Metabolism, Interaction, Excretion		
			 Review: Principles of drug administration and treatment individualization 		
			 Factors affecting dose, route etc. 		
			Indian Pharmacopoeia: Legal Issues, Drug Laws, Schedule Drugs		
			Rational Use of Drugs		
		1	Principles of Therapeutics		
II		Describe antiseptics, and disinfectant & nurse's responsibilities	Pharmacology of commonly used antiseptics and disinfectants	Lecture cum Discussion Drug study/ presentation	Short answerObjective type
			Antiseptics and Disinfectants		3
			Composition, action, dosage, route, indications, contraindications, Drug interactions, side effects, adverse effects, toxicity and role of nurse		
III	, ,	on gastro-intestinal	Drugs acting on G.I. system	 Lecture cum Discussion Drug study/ presentation 	Short answer
	S		Pharmacology of commonly used drugs		Objective type
			o Emetics and Antiemetics		
			Laxatives and Purgatives		
			Antacids and antipeptic ulcer drugs		
			 Anti-diarrhoeals – Fluid and electrolyte therapy, Furazolidone, dicyclomine 		
			Composition, action, dosage, route, indications, contraindications, drug interactions, side effects, adverse effects, toxicity and role of nurse		

Unit	Time	Learning Outcomes	Content	Teaching/Learning Activities	Assessment Methods
	(Hrs)				
IV	2 (T)	on respiratory system &	Drugs acting on respiratory system	 Lecture cum Discussion Drug study/ presentation 	Short answer
			Pharmacology of commonly used		Objective type
			 Antiasthmatics – Bronchodilators (Salbutamol inhalers) 		
			o Decongestants		
			 Expectorants, Antitussives and Mucolytics 		
			 Broncho-constrictors and Antihistamines 		
			Composition, action, dosage, route, indications, contraindications, drug interactions, side effects, adverse effects toxicity and role of nurse		
V	4 (T)	Describe drugs used on cardio-vascular system & nurse's responsibilities	Drugs used in treatment of Cardiovascular system and blood disorders	 Lecture cum Discussion Drug study/ presentation 	 Short answer Objective type
			Haematinics, & treatment of anemia and antiadrenergics		
			Cholinergic and anticholinergic		
			Adrenergic Drugs for CHF & vasodilators		
			Antianginals		
			Antiarrhythmics		
			Antihypertensives		
			Coagulants & Anticoagulants		
			Antiplatelets & thrombolytics		
			Hypolipidemics		
			Plasma expanders & treatment of shock		
			Drugs used to treat blood disorders		
			Composition, action, dosage, route, indications, contraindications, drug interactions, side effects, adverse effects, toxicity and role of nurse		
VI	2 (T)	in treatment of	Drugs used in treatment of endocrine system disorders	 Lecture cum Discussion Drug study/ presentation 	 Short answer Objective type
		endocrine system disorders	Insulin & oral hypoglycemics		
			Thyroid and anti-thyroid drugs		
			• Steroids		
			O Corticosteroids		
			Anabolic steroids		
			Calcitonin, parathormone, vitamin D3, calcium metabolism		
			o Calcium salts		

Unit	Time	Learning Outcomes	Content	Teaching/Learning Activities	Assessment Methods
	(Hrs)			Activities	Wiethous
VII	1 (T)		Drugs used in treatment of integumentary system Antihistaminics and antipruritics Topical applications for skin-Benzylbenzoate, Gamma BHC, Clotrimazole, Miconazole, Silver Sulphadiazine (burns) Composition, action, dosage, route, indications, contraindications, drug interactions, side effects, adverse effects toxicity and role of nurse	 Lecture cum Discussion Drug study/ presentation 	Short answerObjective type
VIII	5 (T)	Explain drug therapy/ chemotherapy of specific infections & infestations & nurse's responsibilities	Drugs used in treatment of communicable diseases (common infections, infestations) General Principles for use of Antimicrobials Pharmacology of commonly used drugs: Penicillin, Cephalosporin's, Aminoglycosides, Macrolide & broad spectrum antibiotics, Sulfonamides, quinolones, Misc. antimicrobials Anaerobic infections Antitubercular drugs, Antileprosy drugs Antimalarials Antiretroviral drugs Antiviral agents Antihelminthics, Antiscabies agents Antifungal agents Composition, action, dosage, route, indications, contraindications, Drug interactions, side effects, adverse effects, toxicity and role of nurse	Lecture cum Discussion Drug study/ presentation	Short answer Objective type

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