K.K.wagh College of Nursing

Second Year B.B.Sc (Nursing)

Outcome of Syllabus

Pharmacology ,Pathology and Genetics

Unit	Time (Hrs)	Learning Objectives	Content	Teaching Learning Activities	outcome
I	2	Describe pharmaco-dynamics, pharmacokinetics, classification and the principles of drug administrati-on	Introduction to Pharmacology •Definitions •Sources •Terminology use •Types: Classification •Pharmaco-dynamics: Actions, therapeutic •Adverse, toxic •Pharmacokinetics: Absorption, distribution, metabolism, interaction, excretion •Review: Routes and principles of administration of drugs •Indian pharmacopoeia: Legal issues O Storage of various drugs O Calculation of drug dos age •Rational use of drugs •Principles of therapeutics	•Lecture •Discussion	At the end of unit I student understand about Introduction to Pharmacology
II	5	Explain chemotherapy of specific infections	Chemotherapy Pharmacology of commonly used: •Penicillin •Cephalosporins	•Lecture •Discussion •Drug study/ Presentation field visits/	At the end of unit II student understand about

		and infestations and nurse's responsibilities	•Aminoglycosides •Macrolide & Broad Spectrum Antibiotics •Sulfonamides •Quinolones •Antiamoebic •Antimalarials •Antihelmintics •Antiscabies agents •Antiviral & Antifungal agents •Antitubercular drugs •Antileprosy drugs •Anticancer drugs •Immuno-suppressants Composition, action, dosage, route, indications, contraindications, drug interactions, side effects, adverse effects, toxicity & role of nurse.	educational trips to pharmaceutical farms / companies Pharmacological management of clinical conditions. Practical classes in the pharmacology department like administration \of injections and medications	Chemotherapy

III	2	Describe antiseptics, disinfectants, insecticides and nurse's responsibility	Pharmacology of commonly use danitiseptics, disinfectants andinsecticides •Antiseptics: Composition, action, dosage, route, indications, contraindications, drug interactions, side-effects, adverse effects, toxicity, and role of nurse •Disinfectants •Insecticides	•Lecture •Discussion •Drug study/ Presentation	At the end of unit III student understand about Antiseptics.
IV	2	Describe drugs acting gastro-intestinal system and nurse's responsibility	Drugs acting on G I System Pharmacology of commonly used •Antiemetics •Emetics •Purgatives •Antacids •Cholinergic •Anticholinergics •Fluid and Electrolyte therapy •Antidiarrhoeals	•Lecture •Discussion •Drug study/ presentations	At the end of unit IV student understand about Drugs acting on G I System

			•Histamines Composition, action, dosage, route, indications, contraindications, drug interactions, side effects, adverse effects, toxicity & role of nurse		
V	2	Describe drugs used on Respiratory systems and nurse's responsibilities	Drugs used on Respiratory System Pharmacology of commonly used •Antiasthmatics •Mucolytics •Decongestants •Expectorants •Antitussives •Bronchodilators •Broncho constrictors •Antihistamines Composition, action, dosage, route, indications, contraindications, drug interactions, side effects, adverse effects, toxicity & role of nurse	Lecture • Discussion •Drug study/ presentations	At the end of unit V student understand about Drugs used on Respiratory System
VI	2	Describe drugs used on Urinary systems and nurse's responsibilities	Drugs used on Urinary System Pharmacology of commonly used •Diuretics and Antidiuretics •Urinary antiseptics •Cholinergics and anticholinergics •Acidifiers and alkalanizers Composition, action, dosage, route, indications, contraindications, drug interactions, side effects,	•Lecture •Discussion •Drug study/ presentations	At the end of unit VI student understand about Drugs used on Urinary System

			adverse effects, toxicity & role of nurse.		
VII	3	Describe drugs used in deaddiction, emergency, deficiency of vitamins & minerals, positioning, for immunization and immunosuppression drugs	Miscellaneous • Drugs used in deaddiction •Drugs used in CPR & emergency •Vitamins and minerals •Immunosuppressants •Antidotes •Antivenom •Vaccines and Sera	•Lecture •Discussion •Drug study/ presentations	At the end of unit VII student understand about Miscellaneous Drug
VIII	1	Describe drugs used on skin and mucous membranes and nurse's responsibilities	Drugs used on skin and mucus membranes •Topical applications for skin, eye, ear, nose, and buccal cavity •Antipruritics Composition, action, dosage, route, indications, contraindications, drug interactions, side effects, adverse effects, toxicity & role of nurse.	•Lecture •Discussion •Drug study/ presentations	At the end of unit VIII student understand about Drugs used on skin and mucus
IX	5	Describe drugs used on Nervous system and nurse's responsibilities	Drugs acting on Nervous System Basic & applied pharmacology of commonly used: •Analgesics & Anesthetics ¬Analgesics - Nonsteroidal 4nti-inflammatory(NSAID) drugs ¬Antipyretics ¬Hypnotics and sedatives -Opioids -Non opioids -Tranquilizers -General & local	Lecture • Discussion • Drug study/ presentations	At the end of unit IX student understand about Drugs acting on Nervous System

			anaesthetics - Gases – Oxygen, nitrous oxide, Carbon dioxide •Cholinergic & anticholinergics: Muscle relaxants Major tranquilizers Anti psychotics ¬Antidepressants ¬Anticonvulsants ¬Adrenergic		
X	4	Describe drugs used on Cardiovascular system and nurse's responsibilities	Cardiovascular Drugs •Haematinics •Cardiotonics •Anti anginals •Antihypertensives & vasodilators •Anti-arrhythmics • Plasma expanders •Coagulants & anticoagulants •Antiplatelets & thrombolytics •Hypolipidemics Composition, action, dosage, route, indications, contraindications, drug interactions, side effects, adverse effects, toxicity & role of nurse	•Lecture •Discussion •Drug study/ presentation s	At the end of unit X student understand about Cardiovascular Drugs
XI	3	Describe drugs used for hormonal disorders and supplementation, contraception and medical termination of pregnancy and nurse's responsibilities	Drugs used for hormonal disorders and supplementation, contraception and medical termination of pregnancy •Insulin & Oral hypogl ycemics •Thyroid supplements & suppressants •Steroids , Anabolics	•Lecture •Discussion •Drug study/ presentation s	At the end of unit XI student understand about Drugs used for hormonal

			•Uterine stimulants & relaxants •Oral contraceptives •Other estrogen –progestrone preparations •Corticotrophine & Gonadotropines		
XII	4	Demonstrate awareness of the common drugs used in alternative system of medicine	Introduction to drugs used in alternative system of medicine •Ayurveda, Homeopathy, Unani and Siddha et	•Lecture •Discussion •Observatio nal visits	At the end of unit XII student understand about Introduction to drugs used in alternative system of medicine

Unit	Time (Hrs)		Objectives	Content	Teaching Learning activities	Outcome
	Th	Pr				
I	**3**		1.Define the common terms used in pathology 2.Appreciate the deviations from normal to abnormal structure and functions of the body system	General Pathology Introduction to pathology o Review of cell and tissues •Definition of terms •Methods & techniques Cellular & tissue changes •Infiltration and re generation •Inflammations and infections •Wound healing and repair o Nature of injuries, adaptive responses, reversible &	Lecture • Discussion • Explain using charts	At the end of unit I student understand about General Pathology Introduction to pathology

				irreversible cell injury o Cell accumulations Vascular changes Cellular growth and neoplasms •Normal and cancer cell •Benign and malignant growths •In situ carcinoma Disturbances of fluid and electrolyte balance, role of nurse		
II	**10**	**3**	Explain pathological changes in disease conditions of various systems	Systemic Pathology •Pathological changes in disease conditions of various systems: •Respiratory tract ¬Tuberculosis, Bronchitis, ¬Pleural effusion & Pneumonia ¬Lung abscess, emphysema, bronchiectasis ¬Bronc hial asthma, chronic obstructive pulmonary disease and tumours.	Lecture •Discussion •Explain using charts, slides, specimen, x- rays and scans •Visit to pathology lab, endoscopy unit and OT	At the end of unit II student understand about Systemic Pathology
	3			Gastointestinal tract ¬Peptic ulcer, Typhoid ¬Carcinoma of GI tract – buccal,esophageal, gastric and intestinal •Liver, Gall bladder & pancreas ¬Hepatitis, chronic liver abscess,Cirrhosis ¬Tumours of liver, gall bladder and pancreas ¬Cholecystitis	Lecture •Discussion •Explain using charts	At the end of unit II student understand about drugs for Gastointestin al tract

				•Kidneys & Urinary tract ¬Glomerulonephritis, pyelonephritis ¬Calculi, Renal failure, Renal carcinoma & Cystitis ¬Diabetes Mellitus •Male genital system ¬Crypt orchidism, testicular atrophy ¬Prostatic hype rplasia, Carcinoma penis & prostate •Female genital system ¬Fibroids ¬Carcinoma cervix & endometrium¬ Vesicular mole, choriocarcinoma ¬Ectopic gestation ¬Ovarian cyst & tumours •Cancer breast •Central NervousSystem ¬Vascular disorders – thrombosis,embolism ¬Stroke, paraplegia, quadriplegia ¬Tumours, meningiomas- gliomas •Metastatic tumour •Skeletal system ¬Bone healing, osteoporosis, osteomyelitis •Arthritis and tumours		
III	**4**	**2**	Describe various laboratory test in assessment and monitoring	Haematology & Pathology •Various blood and bone marrow tests in assessment and monitoring of disease conditions	Lecture •Discussion	At the end of unit III student understand about drugs on Hematology

			of disease conditions	¬Hemoglobin ¬RBC, white cells & platelet counts ¬Bleeding time, clotting time and prothrombin time ¬Blood grouping and cross matching ¬Blood chemistry ¬Blood culture ¬Serological and immunological tests ¬Other blood tests ¬Examination of bone marrow ¬Methods of collection of blood specimen for various clinical pathology, biochemistry, microbiological tests, inference and normal values o Nurse's role in collection and dispatch of various samples for laboratory tests. O Universal safety pre cautions		& Pathology
IV	**2**	**1**	Describe the laboratory tests for examination of body cavity fluids, transudates and exudates	Examination of body cavity fluids, transudates and exudates •The laboratory tests used in CSFanalysis •Examination of ot her body cavity fluids, transudates and exudates-sputum, wound discharge etc. •Analysis of gastric and duodenalcontents •Analysis of semen-sperm count,	Lecture •Discussion •Demonstra tion	At the end of unit IV student understand about Examination of body cavity fluids,

				motility and morphology and their importance in infertility •Methods of collection of CSF and other cavity fluids specimen for various clinical pathology, biochemistry, microbiology tests, inference and norm al values. •Nurse's role in assisting and preparing the patient for these diagnostic tests		
V	1	1	Describe the laboratory tests for examination of Urine and Faeces	Urine & Faeces •Urine ¬Physical characteristics ¬Analysis ¬Culture and sensitivity •Characteristics ¬Characteristics ¬Stool examination: occult blood, ova, parasite and cyst, reducing substance etc. •Methods of collection for various tests, inference and norm al values	Lecture • Discussion • Demonstratio n	At the end of unit V student will able to understand about Urine & Faeces

Lab – 07 Hrs

Museum specimens of,

- Respiratory disorders
- Tuberculosis
- Cardiovascular disorders-IE, RHD, Hypertension, MI
- Ulcers of GIT
- Hepatobiliary disorders
- Renal diseases
- Female genital tract

Visits to:-

- Pathology lab
- Endoscopy unit
- Operation Theatre
- Routine examination of urine
- Hb estimation
- Cell counts

Unit	Time (hrs)	Objectives	Content	Teaching Learning activities	outcome
I	3	Explain nature, principles and perspectives of heredity	Introduction •Practical application of genetics inNursing •Impact of genetic condition on families •Review of cellular division mitosis andmeiosis •Characteristics and structure of genes •Chromsomes – sex determination •Chrom osomal aberrations pattern of inheritance ¬Mendalian theory of inheritance ¬Multiple allots and blood groups ¬Sex linked inheritance ¬Mechanism of inheritance ¬Errors in transmission (Mutation)	Lecture •Discussion •Explain using charts, slides	At the end of unit I student understand about Introduction •Practical application of genetics in Nursing
II	3	Explain maternal, prenatal and genetic influences on development of defects and disease	Maternal, prenatal and genetic influences on development of defectsand diseases ¬Conditions affecting the mother:genetic and infections ¬Consanguinity atopy ¬Prenatal nutrition and foodallergies ¬Maternal age ¬Maternal drug therapy ¬Prenatal testing and diagnosis ¬Effect of ra diation, drugs and chemicals	Lecture •Discussion •Explain using charts, slide	At the end of unit II student understand about Maternal, prenatal and genetic

			¬Infertility ¬Spontaneous abortion ¬Neural tube defects and the role of folicacid in lowering the risks ¬Down syndrome (Trisomy 21)		
III	2	Explain the screening methods for genetic defects and diseases in neonates and children	Genetic tests in neonates and children •Screening for ¬Karyotype analysis ¬Congenital abnormalities ¬Developmental delay ¬Dimorphism	Lecture •Discussion •Explain using charts, slides	At the end of unit III student understand about Genetic tests in neonates and children
IV	2	Identify genetic disorders in adolescents and adults	Genetic conditions of adolescents and adults •Cancer genetics – Familial cancer •Inborn errors of metabolism •Blood group alleles and hematological disorders •Genetic haemochromatosis •Huntington's disease •Mental illness	Lecture •Discussion •Explain using charts, slides	At the end of unit IV student understand about Genetic conditions of adolescents and adults
v	5	Describe the role of nurse in genetic services and counseling	Services related to Genetics •Genetic testing •Human genome project •Gene therapy •The Eugenics movement •Genetic counseling •Legal and ethical issues •Role of nurse	Lecture •Discusson •Explain using charts, slides	At the end of unit V student understand about Services related to Genetics testing