

M.Sc. Nursing (NPCC) Syllabus

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SECTION – A - MEDICAL SURGICAL NURSING

Unit-I: Introduction:

Introduction to medical surgical nursing, Evolution and trends of medical and surgical nursing;

Review of Concepts of Health and illness, Disease concepts, causations, classification International, Classification of Diseases (ICD10 or later version), Acute illness, Chronic illness & Terminal illness, stages of illness; Review of concepts of comprehensive nursing care in medical surgical conditions based on nursing process; Role of Nurse, patient and family in care of adult patient; Role and responsibilities of a nurse in medical surgical settings-Outpatient department.-Inpatient unit-Intensive care unit.-Home and community settings; Introduction to medical surgical asepsis, Inflammation and Infection, Immunity, Wound healing; Care of Surgical Patient-Pre operative, -Intra operative, - Post operative

Unit-II: Common signs and symptoms and management

Fluid and electrolyte imbalance, Vomiting, Dyspnea and cough, Respiratory obstruction, Fever, Shock, Unconsciousness, Syncope Pain, Incontinence, Edema, Age related problems geriatric.

Unit-III: Nursing management of patients (adults including elderly) with respiratory problems

Review of anatomy and physiology of respiratory system, Nursing Assessment History and Physical assessment, Etiology, patho-physiology, clinical manifestations, diagnosis, treatment modalities and medical, surgical, dietetics & nursing management of adults including elderly with - Upper Respiratory tract infection,-Bronchitis,-Asthma,-Emphysema,-Empyema,-Atelectasis,-Chronic Obstructive,-Pulmonary Diseases (COPD), -Bronchiectasis,-Pneumonia, Pulmonary tuberculosis,-Lung abscess,-Pleural effusion,-Cysts and Tumours,-Chest injuries, -Respiratory arrest and insufficiency,-Pulmonary embolism,-special therapies, alternative therapies, Nursing procedures Drugs used in treatment of respiratory disorders

Unit-IV: Nursing management of patient (adults including elderly) with disorders of digestive system

Review of anatomy and physiology of digestive system, Nursing Assessment History and Physical assessment Etiology, Patho-physiology, clinical manifestations, diagnosis, treatment modalities and medical, surgical, dietetics & nursing management; Disorders of Oral cavity-lips, gums, and teeth Oesophagus inflammation, stricture, obstruction, bleeding and tumours, Stomach and duodenum, hiatus hernia, gastritis, peptic and duodenal ulcer, bleeding, tumours, pyloric stenosis, Small intestinal disorders inflammation and infection, enteritis, malabsorption, obstruction, tumour and perforation ; Large intestinal disorders-Colitis, inflammation and infection, obstruction, tumour and lump, Hernias,

Appendix inflammation, mass, abscess, rupture, Anal & Rectum; hemorrhoids, fissures, Fistulas, Peritonitis/acute abdomen, Pancreas; inflammation, cyst, abscess and tumours, Liver; inflammation, cyst, abscess, cirrhosis, portal hypertension, hepatic failure, tumours, Gall Bladder; inflammation, obstruction, stones and tumours Special therapies, alternative therapies, Nursing procedures, Drugs used in treatment of disorders of digestive system

Unit-V: Nursing management of patient (adults including elderly) with blood and cardio vascular problems

Review of anatomy and physiology of blood and cardio vascular system; Nursing Assessment History and Physical assessment ; Etiology, Pathophysiology, clinical manifestations, diagnosis, treatment modalities and medical, surgical, dietetics & nursing management of Vascular system, Hypertension, Hypotension, Arteriosclerosis, Raynaud's disease, Aneurism and Peripheral vascular disorders Heart; Coronary artery diseases, Ischemic Heart Disease, Coronary atherosclerosis, Angina pectoris, Myocardial infarction; Valvular disorders of the heart, Congenital and acquired, Rheumatic Heart diseases; Endocarditis, Pericarditis Myocarditis; Cardio Myopathies; Cardiac dysrhythmias, Heart Block; Congestive cardiac failure; Cor pulmonale, pulmonary edema, cardiogenic shock, cardiac tamponade; Cardiac emergencies and arrest; Cardio Pulmonary Resuscitation (CPR); Blood, Anaemias, Polycythemia, Bleeding disorders; clotting factor defects and platelets defects, Thalassemia, Leukaemias, Leukopenias and agranulocytosis, Lymphomas Myelomas; Special therapies,-Blood transfusion, safety checks, procedure and requirements, management of adverse transfusion reactions:, records for blood transfusion. Management and counseling of blood donors, phlebotomy procedure and post donation management. Blood bank functioning and hospital transfusion committee. Bio-safety and waste management in relation to blood transfusion-Role of a nurse in Organ donation, retrieval and banking-Alternative therapies,-Nursing procedures,-Drugs used in treatment of blood and cardio vascular disorders.

Unit-VI: Nursing management of patient (adults including elderly) with genitourinary problems

Review of anatomy and physiology of genitourinary system; Nursing Assessment History and Physical assessment; Etiology, Pathophysiology, clinical manifestations, diagnosis, treatment modalities and medical, surgical, dietetics & nursing management of Nephritis, Nephrotic syndrome, Nephrosis, Renal calculus Tumours, Acute renal failure, Chronic renal failure, End stage renal disease, Dialysis, renal transplant Congenital disorders, urinary infections; Benign prostate hypertrophy. Disorders of ureter, urinary bladder and urethra inflammation, infection, stricture, obstruction, tumour, prostate Special therapies, alternative

Therapies, Nursing procedures, Drugs used in treatment of genitourinary disorders.

Unit-VII: Nursing Management of disorders of male (adult including elderly)

Reproductive system

Review of anatomy and physiology of male reproductive system, Nursing Assessment History and Physical assessment, Etiology, Pathophysiology, clinical manifestations, diagnosis, treatment modalities and medical, surgical, dietetics & nursing management of disorders of male reproductive system; Congenital malformations cryptorchidism; Hypospadias, Epispadias Infections; Testis and adjacent structures, Penis; Prostate: inflammation, infection, hypertrophy, tumour; Sexual Dysfunction; Infertility; Contraception; Breast; gynecomastia, tumour; Climacteric changes, Special therapies, alternative therapies,-Nursing procedures,-Drugs used in treatment of disorders of male reproductive system

Unit-VIII: Nursing management of patient (adults including elderly) with disorders of endocrine system

Review of anatomy and physiology of endocrine system; Nursing Assessment History and Physical assessment; Etiology, Pathophysiology, clinical manifestations, diagnosis, treatment modalities and medical, surgical, dietetics & nursing management of -Disorders of Thyroid and Parathyroid, Diabetes mellitus, Diabetes insipidus, Adrenal tumour, Pituitary disorders. Special therapies, alternative therapies nursing procedures Drugs used in treatment of disorders of endocrine system

Unit-IX: Nursing management of patient (adults including elderly) with disorders of Integumentary system

Review of anatomy and physiology of Skin and its appendages; Nursing Assessment History and Physical assessment; Etiology, Pathophysiology, clinical manifestations, diagnosis, treatment modalities and medical, surgical, dietetics & nursing management of disorders of skin and its appendages -Lesions and abrasions, -Infection and infestations; Dermatitis,-Dermatoses; infectious and Non infectious "inflammatory dermatoses"-Acne Vulgaris,-Allergies and Eczema, -Psoriasis, -Malignant melanoma,-Alopecia, -Special therapies, alternative therapies,-Nursing procedures Drugs used in treatment of disorders of Integumentary system

Unit-X: Nursing management of patient (adults including elderly) with musculoskeletal problems

Review of anatomy and physiology of musculoskeletal system, Nursing Assessment History and Physical assessment, Etiology, Pathophysiology,

clinical manifestations, diagnosis, treatment, modalities and medical, surgical, dietetics & nursing management of Disorders of: Muscles, Ligaments and Joints inflammation, infection, trauma; Bones inflammation, infection, dislocation, fracture, tumour and trauma ; Osteomalacia and osteoporosis; Arthritis; Congenital deformities; Spinal column defects and deformities, Tumor, Prolapsed inter vertebral disc, pott's spine; Paget's disease; Amputation; Prosthesis; Transplant & replacement surgeries Rehabilitation. Special therapies, alternative therapies nursing procedures Drugs used in treatment of disorders of musculo skeletal system.

Unit-XI: Nursing management of patient (adults including elderly) with Immunological problems

Review of Immune system, Nursing Assessment History and Physical assessment, Etiology, Pathophysiology, clinical manifestations, diagnosis. treatment modalities and medical, surgical, dietetics & nursing management of-Immunodeficiency disorder, Primary immuno deficiency, Phagocytic dysfunction, B-cell and T-cell Deficiencies, Secondary immune deficiencies, Acquired immunodeficiency syndrome (AIDS), Incidence of HIV & AIDS, Epidemiology; Transmission Prevention of Transmission, Standard Safety precautions, Role of Nurse; counseling; Health education and home care consideration. National AIDS Control Program- NACO, various national and international agencies; Infection control program Rehabilitation. Special therapies, alternative therapies Nursing procedures Drugs used in treatment of disorders of immunological system.

Unit-XII: Nursing management of patient (adults including elderly) with Communicable Diseases

Overview of infectious disease, the infectious process, Nursing Assessment History and Physical assessment Epidemiology, infectious process, clinical manifestations, diagnosis, treatment, prevention and dietics, Control and eradication of common Communicable Diseases- Tuberculosis, diarrhoeal diseases, hepatitis A E, herpes Chickenpox, smallpox, typhoid, meningitis, gas gangrene, leprosy, Dengue, Plague, Malaria, Diptheria, Pertussis, Poliomyelitis, Measles, Mumps, Influenza, Tetanus, Yellow fever, Flariasis, HIV, AIDS Reproductive Tract Infections Special infection control measures: Notification, Isolation, Quarantine, Immunization, Infectious Disease Hospitals Special therapies, alternative therapies Nursing procedures, Drugs used in treatment of Communicable diseases

Unit-XIII: Peri operative nursing:

Organization and Physical set up of the Operation Theatre (OT):-
Classifications, O.T. DESIGN, Staffing Members of the OT team, Duties and responsibilities of nurse in O.T., Principles of Health and operative room asepse, Instruments, Sutures and suture materials, Equipments, O.T. tables and sets for common surgical procedures, Positions and draping for common surgical procedures, Scrubbing procedures, Gowning and gloving, Preparation of O.T. Sets, Monitoring the patient during surgical procedures; Maintenance of therapeutic environment in O.T.; Standard Safety measures, Infection control; fumigation, disinfection and sterilization, Biomedical waste management, Prevention of accidents and hazards in O.T; Anaesthesia Types, Methods of administration, Effects and Stages, Equipments, Drugs, Cardio Pulmonary Resuscitation (CPR);Pain management techniques; Legal Aspects

Unit XIV: Nursing management of Patient with disorders of Ear Nose and Throat

Review of anatomy and physiology of the Ear, Nose and Throat Nursing Assessment-History and Physical assessment Etiology, Pathophysiology, clinical manifestations, diagnosis, treatment modalities and medical & surgical nursing management of Ear, Nose and Throat disorders:

- **External ear:** deformities, otalgia, foreign bodies, and tumours, - Middle Ear- Impacted wax, Tympanic membrane perforation, otitis media, otosclerosis, mastoiditis, tumours, -Inner ear Meniere's Disease, labyrinthitis, ototoxicity, tumours - Upper airway infections, Common cold, sinusitis, ethinitis, rhinitis, pharyngitis, tonsillitis and adenoiditis, peritonsillar abscess, laryngitis, Upper respiratory airway epistaxis Nasal obstruction, laryngeal obstruction, cancer of the larynx Cancer of the oral cavity, Speech defects and speech therapy, Deafness -Prevention, control and rehabilitation Hearing Aids, implanted hearing devices-Special therapies, - Nursing procedures, - Drugs used in treatment of disorders of Ear, Nose and Throat, Role of nurse,-Communicating with hearing impaired and muteness.

Unit-V: Nursing management of patient with disorders of eye

Review of anatomy and physiology of the eye; Nursing Assessment-History and Physical assessment; Etiology, Pathophysiology, clinical manifestations, diagnosis, treatment modalities and medical & surgical nursing management of eye disorders : - Refractive errors, - Eyelids-infection, tumours and deformities, - Conjunctiva- inflammation presentation and infection, bleeding- Cornea-inflammation and infection - Lens-Cataracts - Glaucoma - Disorder of the urinary tract, - Ocular tumours Disorders of posterior chamber and retina: Retinal and vitreous problems Retinal detachment - Ocular emergencies and their prevention Blindness National blindness control program Eye Banking Eye prostheses

and Rehabilitation Role of a nurse Communication with visually impaired Patient Eye camps, Special therapies Nursing procedures Drugs used in treatment of disorders of eye

Unit-VI: Nursing management of patient with neurological disorders

Review of anatomy and physiology of the neurological system Nursing Assessment- History and Physical and neurological assessment and Glasgow coma scale Etiology, Pathophysiology, clinical manifestations, diagnosis, treatment modalities and medical & surgical nursing management of neurological disorders Congenital malformations Headache Head Injuries.

Spinal Injuries: - Paraplegia, - Hemiplegia,- Quadraplegia

Spinal cord compression- herniation of intervertebral disc

Tumors of the brain & spinal cord- Intra cranial and cerebral aneurysms.

Infections:- Meningitis, Encephalitis, Brainabscess, neurocysticercosis

Movement disorders -Chorea, -Seizures-Epilepsies

Cerebro Vascular Accidents (CVA)- Cranial, Spinal Neuropathies — Bell's palsy, trigeminal neuralgia, Peripheral Neuropathies; GuillainBarr'e Syndrome, Myasthenia gravis Multiple Sclerosis, Degenerative diseases, Delirium, Dementia, Alzheimer's disease, Parkinson's disease; Management of unconscious patients and patients with stroke-Role of the nurse in communicating with patient having neurological deficit, Rehabilitation of patients with neurological deficit, Role of nurse in long stay facility (institutions) and at home Special therapies, Nursing procedures Drugs used in treatment of neurological disorders

Unit-VII: Nursing management of patients with disorders of female reproductive system

Review of anatomy and physiology of the female reproductive system; Nursing Assessment-History and Physical assessment; Breast Self Examination; Etiology, Pathophysiology, clinical manifestations, diagnosis, treatment modalities and medical & surgical nursing management disorder of female reproductive system; Congenital abnormalities of female reproductive system; Sexuality and Reproductive Health; Sexual Health Assessment; Menstrual Disorders; Dysmenorrhea, Amenorrhea, Premenstrual Syndrome; Abnormal Uterine Bleeding; Menorrhagia, Metrorrhagia; Pelvic Inflammatory Disease- Ovarian and fallopian tube disorders; infections, cysts, tumours Uterine and cervical disorders Endometriosis, polyps, Fibroids Cervical and uterine tumours, uterine displacement, Cystocele / Urethrocele, Rectocele Vaginal disorders; Infections and Discharges, Fistulas Vulvur disorders; Infections, cysts, tumours Diseases of breasts, Deformities, Infections, Cysts and Tumours

Menopause and Hormonal Replacement Therapy Infertility Contraception; Types Methods, Risk and effectiveness- Spacing Methods, Barrier methods, Intra Uterine Devices, Hormonal, Post Conceptional Methods etc Terminal methods, Sterilization, Emergency Contraception methods, Abortion -Natural, Medical and surgical abortion - MTP Act, Toxic Shock Syndrome, Injuries and Trauma Sexual violence, Special therapies Nursing procedures, Drugs used in treatment of gynaecological disorders National family welfare programme etc.,

Unit-VIII: Nursing management of patients with Burns, reconstructive and cosmetic surgery

Review of anatomy and physiology of the skin and connective tissues and various deformities

;Nursing Assessment-History and physical assessment and assessment of burns and fluid and electrolyte loss Etiology, classification, pathophysiology clinical manifestations, diagnosis treatment modalities and medical & surgical nursing management of burns and re-constructive and cosmetic surgery Types of Reconstructive and cosmetic surgery for burns, congenital deformities, injuries and cosmetic purposes Role of Nurse Legal aspects Rehabilitation Special therapies; Psycho social aspects nursing procedures, Drugs used in treatment of burns, reconstructive and cosmetic surgery

Unit-XI: Nursing management of patients with oncological conditions

Structure & characteristics of normal & cancer cells; Nursing Assessment-History and Physical Assessment; Prevention, Screening, Early detection, Warning signs of cancer; Epidemiology, Etiology, Classification, Pathophysiology, Staging, clinical manifestations, diagnosis, treatment modalities and medical & surgical nursing management of oncological conditions Common malignancies of various body systems; Oral, larynx, lung, Stomach and Colon, Liver, Leukemias and lymphomas, Breast, Cervix, Ovary, Uterus, Sarcoma, Brain, Renal, Bladder, Prostate etc; Oncological emergencies; Modalities of treatment Immunotherapy Chemotherapy Radiotherapy Surgical Interventions Stem cell and Bone marrow transplants Gene therapy- Other forms of treatment; Psychosocial aspects of cancer; Rehabilitation; Palliative care Symptom and Pain; Management, Nutritional support; Home care; Hospice care; Stoma Therapy; Special therapies- Psycho social aspects; Nursing procedures

Unit-XX: Nursing management of patient in Emergency & Disaster situations Disaster Nursing:

Concepts and principles of Disaster Nursing; Causes and Types of Disaster: Natural and Man-made Earthquakes, Floods, Epidemics, Cyclones- Fire, Explosion, Accidents,- Violence, Terrorism; bio chemical, War Policies related to emergency /disaster management; International, national, state, institutional Disaster preparedness: Team, Guidelines, protocols, Equipments, Resources Coordination and involvement of Community, various govt. departments Non-Government. organizations and International agencies Role of nurse: working; Legal Aspects of Disaster Nursing; Impact on Health and after effects; Post Traumatic Stress Disorder Rehabilitation; physical, psychosocial, Financial, Relocation.

Emergency Nursing

Concept, priorities, principles and Scope of emergency nursing Organization of emergency services: physical setup, staffing, equipment and supplies, protocols, Concepts of triage and role of triage nurse Coordination and involvement of different departments and facilities Nursing Assessment-History and Physical assessment Etiology, Pathophysiology, clinical manifestations, diagnosis, treatment modalities and medical & surgical nursing management of patient with medical and surgical Emergency Principles of emergency management Common Emergencies; Respiratory Emergencies; Cardiac Emergencies Shock and Haemorrhage, Pain, Poly-Trauma, road accidents, crush injuries, wounds , Bites, Poisoning; Food, Gas, Drugs & chemical poisoning , Seizures Thermal Emergencies; Heat stroke & Cold injuries Pediatric Emergencies Psychiatric Emergencies Obstetrical Emergencies, Violence, Abuse, Sexual assault, Cardio Pulmonary Resuscitation, Crisis Intervention, Role of the nurse; Communication and Inter Personal Relations Medico legal aspects

Unit-XXI: Nursing care of the elderly

Nursing Assessment-History and Physical assessment; Aging; Demography; Myths and realities; Concepts and theories of aging; Cognitive Aspects of Aging; Normal biological aging Age related body systems changes; Psychosocial Aspects of Aging; Medications and elderly Stress & coping in older adults; Common Health Problems & Nursing Management Cardiovascular, Respiratory, Musculoskeletal, Endocrine, genito-urinary, gastrointestinal Neurological, Skin and other Sensory organs- Psychosocial and Sexual-Abuse of elderly, Role of nurse for care of elderly: ambulation, nutritional, communicational, psychosocial and spiritual Role of nurse for caregivers of elderly Role of family and formal and non formal caregivers Use of aids and prosthesis (hearing aids, dentures, Legal & Ethical Issues, Provisions and Programmes for elderly; privileges, Community Programs and health services, Home and institutional care

Unit-XXII: Nursing management of patient in critical care units

Nursing Assessment-History and Physical assessment; Classification; Principles of critical care nursing; Organization; Physical setup, Policies, staffing norms, Protocols, equipment and supplies; Special equipments; ventilators, Cardiac monitors, defibrillator, Resuscitation equipments Infection Control Protocols Nursing management of critically ill patient Monitoring of critically ill patient; CPR-Advance Cardiac Life support; Treatments and procedures. Transitional care Ethical and Legal Aspects; Communication with patient and family; Intensive care records; Crisis Intervention; Death and Dying-coping with Drugs used in critical care unit

Unit-XXIII: Nursing management of patients, adults including elderly with Occupational and Industrial Disorders

Nursing Assessment-History and Physical assessment; Etiology, Pathophysiology, clinical, manifestations, diagnosis, treatment modalities and medical & surgical nursing management of occupational and industrial health disorders; Role of nurses Special therapies , alternative therapies, Nursing procedures- Drugs used in treatment of Occupational and Industrial disorders

SECTION – B - PHARMACOLOGY

Unit – I: Introduction to pharmacology

Definitions, Sources, Terminology used, Types: Classification, Pharmacodynamics: Actions, therapeutic, Adverse, toxic, Pharmacokinetics: absorption, distribution, metabolism, interaction, excretion, Review: Routes and Principles of administration of drugs, Indian pharmacopoeia: Legal issues, rational use of drugs, Principles of therapeutics.

Unit – II: Chemotherapy

Pharmacology of commonly used; Penicillin, Cephalosporins; Aminoglycosides Macrolide & Broad Spectrum Antibiotics, Sulfonamides Quinolones, Antiamoebic, Antimalarials, Anthelmintics, Anti-scabies agents Antiviral & anti-fungal agents. Antitubercular drugs, Anti leprosy drugs, Anticancer drugs, Immuno-suppressants Composition, action, dosage, route, indications, contraindications, drug interactions, side effects, adverse effects, toxicity and role of nurse.

Unit – III: Pharmacology of commonly used antiseptics, disinfectants and insecticides

Antiseptics; Composition, action, dosage, route, indications, contraindications, drug interactions, side effects, adverse effects, toxicity and role of nurse, Disinfectants, Insecticides.

Unit – IV: Drugs acting on G.I. system

Pharmacology of commonly used-Antiemetics, Emetics, Purgatives, Antacids, Cholinergic, Anticholinergics, Fluid and electrolyte therapy, Anti diarrhoeals, Histamines, Composition, action, dosage, route, indications, contra indications, drug interactions, side effects, adverse effects, toxicity and role of nurse.

Unit – V: Drugs used on Respiratory Systems

Pharmacology of commonly used- Antiasthmatics, Mucolytics Decongestants, Expectorants Antitussives Bronchodilators Broncho constrictors Antihistamines, Composition, action, dosage, route, indications, contra indications, drug interactions, side effects, adverse effects, toxicity and role of nurse.

Unit – VI: Drugs used on Urinary System

Pharmacology of commonly used- Diuretics and antidiuretics Urinary antiseptics, cholinergic and anticholinergics, Acidifiers and alkalanizers Composition, action, dosage, route, indications, contraindications, drug inter actions, side effects, adverse effects, toxicity and role of nurse.

Unit – VII: Miscellaneous

Drugs used in de-addiction, Drugs used in CPR and emergency, Vitamins and minerals, Immunosuppressant, Antidotes, Antivenom, Vaccines and sera

Unit – VIII: Drugs used on skin and mucous 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 and role of nurse.

Unit – IX: Drugs acting on Nervous system

- Basic & applied pharmacology of commonly used:
- Analgesics and Anaesthetics- Analgesics, Non steroidal anti inflammatory (NSAID) drugs

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Antipyretics

-Hypnotics and Sedatives

- Opioids, Non-Opioids, Tranquilizers

-General & local anesthetics

-Gases: oxygen, nitrous oxide, carbon dioxide

- Cholinergic and anti-cholinergic:

-Muscle relaxants

-Major tranquilizers

-Anti-psychotics

-Antidepressants

-Anticonvulsants.

-Adrenergics

-Noradrenergics

-Mood stabilizers

-Acetylcholine

-Stimulants

Composition, action, dosage, route, indications, contraindications, drug interactions, side effects, adverse effects, toxicity and role of nurse.

Unit – X: Cardiovascular drugs

- Haematinics
- Cardio tonics,
- Anti anginals
- Anti-hypertensives &
- Vasodilators
- Anti-arrhythmics
- Plasma expanders
- Coagulants & anticoagulants
- Anti platelets & thrombolytics
- Hypolipidemics

Composition, action, dosage, route, indications, contraindications, drug interactions, side effects, adverse effects, toxicity role of nurse.

Unit – XI: Drugs used for hormonal Disorders and supplementation, contraception and medical termination of pregnancy

- Insulins & Oral hypoglycemics
- Thyroid supplements and suppressants
- Steroids, Anabolics
- Uterine stimulants and relaxants
- Oral contraceptives
- Other estrogen-progestrone, preparations
- Corticotrophine & Gonadotropines
- Adrenaline.

- Prostaglandins route, indications,
 - Calcitonins contraindications, drug
 - Calcium salts interactions, side effects, adverse
 - Calcium regulators effects, toxicity and role of nurse
- Composition, action, dosage,

Unit – XII: Introduction to Drugs used in alternative systems of medicine:

Ayurveda, Homeopathy, Unani and Siddha etc.

SECTION – C - PATHOLOGY AND GENETICS

Unit – I: Introduction

Importance of the study of pathology, Definition of terms, Methods and techniques, Cellular and Tissue changes, Infiltration and regeneration, Inflammations and Infections, Wound healing, Vascular changes; Cellular growth, Neoplasms, Normal and Cancer cell, Benign and Malignant growths, In situ carcinoma; Disturbances of fluid and electrolyte imbalance.

Unit – II: Special pathology

Pathological changes in disease conditions of various systems:

Respiratory tract: Tuberculosis, Bronchitis, Pleural effusion and pneumonia, Lung abscess, emphysema, bronchiectasis, Bronchial asthma, Chronic obstructive, Pulmonary disease & tumours, Cardiovascular system, Pericardial effusion, Rheumatic heart disease, Infective endocarditis, atherosclerosis, Ischemia, infarction & aneurysm
Gastrointestinal Tract;

Peptic ulcer, typhoid, Carcinoma of GI tract buccal, Esophageal, Gastric & intestinal, Liver, Gall bladder & Pancreas, Hepatitis, Chronic liver abscess, cirrhosis, Tumours of liver, gall bladder and pancreas, Cholecystitis, Kidneys & Urinary tract, Glomerulonephritis, pyelonephritis, Calculi, renal failure, renal carcinoma & cystitis, Male genital systems, Cryptorchidism testicular atrophy, Prostatic hyperplasia, Carcinoma Penis & prostate, Female genital system., Fibroids, Carcinoma cervix and Endometri, Vesicular mole, choriocarcinoma

Ectopic gestation, Ovarian cyst & tumours, Cancer Breast, Central Nervous system, Hydrocephalus, Meningitis, encephalitis, Vascular disorders thrombosis, embolism, Stroke, paraplegia, Quadriplegia, Tumours, meningiomas gliomas, Metastatic tumour, Skeletal system
Bone healing, osteoporosis, osteomyelitis Arthritis & tumours.

Unit – III: Clinical pathology

Various blood and bone marrow tests in assessment and monitoring of disease conditions, Hemoglobin. RBC. White cell & 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, microbiology tests, inference and normal values.

Unit- IV: Examination of body cavity fluids, transudates and exudates

The laboratories tests used in CSF analysis, Examination of other body cavity fluids, transudates exudates, sputum, wound discharge etc, Analysis of gastric and duodenal contents, Analysis of semen sperm count, 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 normal values

Unit – IV: Urine and faeces

Urine -Physical characteristics, Analysis, Culture and sensitivity; Faeces- Characteristics, Stool examination: occult blood, ova, parasite and cyst, reducing substances etc.; Methods of collection for various tests, inference of normal values.

SECTION – D - NURSING RESEARCH AND STATISTICS

Unit- I: Research and research process

Introduction and need for nursing research, Definition of Research & nursing research, Steps of scientific method, Characteristics of good research, Steps of Research process overview.

Unit- II: Research Problem Question

Identification of problem area, Problem statement, Criteria of a good research problem, Writing objectives

Unit- III: Review of Literature

Location, Sources, Online search; CINHALL, COCHRANE etc, Purposes, Method of review

Unit- IV: Research approaches and designs:

Historical, survey and experimental, Qualitative and Quantitative designs

Unit- V: Sampling and data collection:

Definition of Population, Sample, Sampling criteria, factors influencing sampling process, types of sampling techniques, Data - why, what, from whom, when and where to collect. Data collection methods and instruments:- Methods of data collection, - Questioning, interviewing, - Observations, record analysis and measurement, - Types of instruments. Validity & Reliability of the Instrument - Pilot study, - Data collection procedure

Unit- VI: Analysis of data:

Compilation, Tabulation, classification, summarization, presentation, interpretation of data

Unit- VII: Introduction to statistics:

Definition, use of statistics, scales of measurement, Frequency distribution and graphical presentation of data, Mean, Median, Mode, Standard deviation, Normal Probability and tests of significance, Co-efficient of correlation., Statistical packages and its application

Unit- VIII: Communication and utilization of Research:

Communication of research findings- Verbal report, - Writing research report, - Writing scientific article /paper, - Critical review of published research, - Utilization of research findings

SECTION – E - MANAGEMENT OF NURSING SERVICES AND EDUCATION

Unit-I: Introduction to management in nursing

Definition, concepts and theories , Functions of management, Principles of Management, Role of Nurse as a manager

Unit-II: Management process

Planning; mission, philosophy, objectives, operational plan; Staffing-philosophy, - staffing study, norms, - activities, patient classification systems, scheduling; Human resource management - recruiting, - selecting, - deployment, - retaining, - promoting, superannuation etc; Budgeting: - concept, principles, types, cost benefit analysis, audit; Material management:- equipment and supplies; Directing process, (Leading); Controlling: Quality management; Program Evaluation Review Technique (PERT), Bench marking, Activity Plan (Gantt Chart),

Unit-III: Management of nursing services in the hospital and Community:

Planning:- Hospital and patients care units including ward management, - Emergency and disaster Management, - Human resource management:, - Recruiting, selecting, deployment, retaining, promoting, superannuation etc, - Categories of nursing personnel including job description of all levels, - Categories of nursing personnel including job description of all levels,- Patient/population classification systems, - Patients/population assignment and Nursing care responsibilities, - Staff development and welfare; Budgeting : Proposal, Projecting requirements for staff equipments and supplies for :- Hospital and patient care units, - Emergency and disaster management; Material management: procurement, inventory control, auditing and maintenance in - Hospital and patients care units, - Emergency and disaster management; Directing and leading : delegating participatory management - Assignments, rotations, delegations, - Supervision & guidance, - Implement standards, policies, procedures and practices, - Staff development and welfare, - Maintenances of discipline; Controlling / Evaluation - Nursing Rounds / visits, Nursing protocols Manuals - Quality assurance model, Documentation, - Records and reports performance Appraisal

Unit-IV: Organizational behavior and human relations:

Concepts and theories of Organizational behaviors Review of Channels of communication Leadership styles Review of Motivation; concepts and theories Group dynamics Techniques of - Communication; and Interpersonal relationships, - Human relations; Public relations in context of nursing Relations with professional associations and employee unions and Collective bargaining

Unit-V: In service education:

Nature & scope of inservice education program; Organization of in service; Education; Principles of adult learning, Planning for in-service education program, techniques, methods & evaluation of staff education program; Preparation of report

Unit-VI: Management of nursing educational institutions

Establishment of Nursing educational institution-INC norms and guidelines; Co-ordination with - Regulatory bodies, - Accreditation, - Affiliation; Philosophy / objectives - Organization,- Structure, - Committees, - Physical facilities, - College/School, - Hostel,- Students,- Selection, - Admission, - Guidance and Counseling, - Maintaining discipline, - Faculty and staff-Selection, - Recruitment, - Job description, - Placement, - Performance appraisal, - Development and welfare; Budgeting; Equipments and supplies: audio visual equipments, laboratory equipment, books, journals etc; Curriculum; Planning, implementation and evaluation; Clinical facilities; Transport facilities; Institutional Records and reports administrative, faculty, staff and students

Unit-VII: Nursing as a profession:

Philosophy; nursing practice - Aims and objectives, - Characteristics of a professional nurse, - Regulatory bodies; INC. SNC Acts;- constitution, functions , - Current trends and issues in

Nursing; Professional ethics - Code of ethics; INC, -Code of Professional conduct; INC, ICN;

Practice standards for Nursing; INC, Consumer protection act, Legal Aspects in Nursing, Legal terms related to practice; registration and licensing, - Laws related to nursing practice; Breach and penalties, - Malpractice and negligence

Unit-VIII: Professional Advancement:

Continuing education; Career Opportunities; Collective bargaining; Membership with

Professional organizations; National and International; Participation in research activities;

Publications, Journals, Newspapers etc.