

Program	Institute
Nurse Practitioner in Critical Care Postgraduate Residency Program	Manipal College of Nursing (MCON)

### Department Test (DT) 2022 Details

- Test Duration: 90 minutes
- Total Questions: 100 MCQs with random sequencing of questions
- Max Marks: 100
- Marking Scheme: +1 for every correct answer, 0 for every wrong answer, 0 for every unattempted question
- Schedule: mid-June 2022 (tentative), Mode and Exact dates of Department Test (DT) will be updated at [www.manipal.edu/dt](http://www.manipal.edu/dt)

### NUTRITION

**Introduction:** Nutrition-History, Concepts, Role of nutrition in maintaining health, Nutritional problems in India, National nutritional policy, Factors affecting food and nutrition: socio-economic, cultural, tradition, production, system of distribution, life style and food habits, Role of food and its medicinal value, Classification of food, food standards, Elements of nutrition: macro and micro, calorie, BMR, **Carbohydrates:** Classification, Caloric value, Recommended daily allowances, dietary sources, functions, digestion, absorption and storage, metabolism of carbohydrates, **Malnutrition: Deficiencies and Over Consumption, Fats:** Classification, Caloric value, Recommended daily allowances, Dietary sources, Functions, Digestion, Absorption, Storage and Metabolism, **Malnutrition: Deficiencies and, Over Consumption, Proteins:** Classification, Caloric value, Recommended daily allowances, Dietary sources, Functions, Digestion, Absorption, Storage and Metabolism, **Malnutrition: Deficiencies and, Over Consumption, Energy:** Unit of Energy – Kcal, Energy requirements for different categories of people, Measurements of energy, Body Mass Index (BMI) and basic metabolism, Basal Metabolic Rate (BMR)– determination and factors affecting, **Vitamins:** Classification, Recommended daily allowances, dietary sources, functions, absorption, synthesis, metabolism storage and excretion, deficiencies, Hypervitaminosis, **Minerals:** Classification, Recommended daily allowances, Dietary sources, Functions, Absorption, Synthesis, Metabolism, Storage and Excretion, Deficiencies, over consumption and toxicity, **Water and Electrolytes:** Water: Daily requirement, regulation of water metabolism, distribution of body water, Electrolytes: Types, sources, composition of body fluids, Maintenance of fluid and electrolyte balance, over hydration, dehydration and water intoxication, electrolyte imbalances, **Cookery Rules and Preservation of Nutrients:** Principles, methods of cooking and serving-Preservation of nutrients, Safe food handling, Storage of food, Food preservation, food additives and its principles, Prevention of food adulteration Act (PFA), Food standards, Preparation of simple beverages and different types of food, **Balanced Diet:** Elements, Food groups, Recommended Daily Allowance, Nutritive value of foods, Calculation of balanced diet for different categories of people, Planning menu, Budgeting of food, Introduction to therapeutic diets, **Role of Nurse in Nutritional Programmes:** National programmes related to nutrition: Vitamin A deficiency programme, National iodine deficiency disorders (IDD) programme, Mid-day meal programme, Integrated child development scheme (ICDS), National and International agencies working towards food/ nutrition-NIPCCD, CARE, FAO, NIN, CFTRI (Central food technology and research institute) etc., Assessment of nutritional status, Nutrition education and role of nurse.

### MICROBIOLOGY

**Introduction:** Importance and relevance to nursing, Historical perspective, Concepts and terminology, Principles of microbiology, **General Characteristics of Microbes:** Structure and classification of Microbes, Morphological types, Size and form of bacteria, Motility, Colonization, Growth and nutrition of microbes, Laboratory methods for Identification of Micro-organisms, Staining techniques, Culture; various medias, **Infection Control:** Infection, Asepsis, Disinfection, Sterilization, Chemotherapy and antibiotics, Standard safety measures, Biomedical waste management, Role of Nurse, Hospital acquired infection, Hospital infection control programme, **Pathogenic Organisms:** Micro-organisms, Viruses, Fungi, Parasites, Rodents and Vectors, **Immunity:** Immunity-Types, Antigen and antibody reaction, Hypersensitivity – skin test, Serological tests, Immunoprophylaxis, Vaccines and sera, Immunization for various diseases, Immunization Schedule

### PHARMACOLOGY

**Introduction to Pharmacology:** History, Nature of the drug, Definitions, Sources, Terminology used, Types, Pharmacodynamics, Adverse, toxic, Pharmacokinetics, Review, Indian pharmacopoeia, Rational use of drugs, Principles of therapeutics, **Calculation of Dosage of Drugs:** Metric System, Apothecary's table of equivalents, Common abbreviation used, Calculation of dosage, Preparation of solution, **Chemotherapy:** Pharmacology; Penicillin, Cephalosporins, Aminoglycosides, Macrolide and Broad Spectrum Antibiotics, Sulfonamides, Quinolones, Antiamoebic, Antimalarials, Anthelmintics, Antiscabies agents, Antiviral and anti-fungal agents, Antitubercular drugs, Anti leprosy drugs, Anticancer drugs, Immuno-suppressants Composition, **Pharmacology of commonly used Antiseptics, Disinfectants and Insecticides:**

Antiseptics, Disinfectants, Insecticides, **Drugs acting on GI System:** Pharmacology of commonly used: Antiemetics, Emetics, Purgatives, Antacids, Cholinergic, Anticholinergics, Fluid and electrolyte therapy, Anti diarrhoeals, Histamines, **Drugs used on Respiratory Systems:** Pharmacology of commonly used: Antiasthmatics, Mucolytics, Decongestants, Expectorants, Antitussives, Bronchodilators, Broncho constrictors, Antihistamines, **Drugs used on Musculoskeletal System:** Anti inflammatory drugs, muscle relaxants, **Drugs used on Urinary System:** Pharmacology of commonly used: Diuretics and antidiuretics, Urinary antiseptics, Cholinergic and anticholinergics, Acidifiers and alkanizers, **Miscellaneous:** Drugs used in de-addiction, CPR and emergency, Vitamins and minerals, Immunosuppressants, Antidotes, Antivenom, Vaccines and sera, **Drugs used on Skin and Mucous Membranes:** Topical applications for skin, eye, ear, nose and buccal cavity Antipruritics, **Drugs acting on Nervous System:** Basic and applied pharmacology of commonly used: Analgesics and Anaesthetics, Cholinergic and anti-cholinergics, **Cardiovascular Drugs:** Haematinics, Cardiotonics, Anti anginals, Anti-hypertensives and Vasodilators, Anti-arrhythmics, Plasma expanders, Coagulants and anticoagulants, Antiplatelets and thrombolytics, Hypolipidemics, **Drugs used for Hormonal disorders and Supplementation, Contraception and Medical Termination of Pregnancy:** Insulins & Oral hypoglycemic, Thyroid supplements and suppressants, Steroids, Anabolics, Uterine stimulants and relaxants, Oral contraceptives, Other estrogen-progesterone preparations, Corticotrophine and Gonadotropines, Adrenaline, Prostaglandins, Calcitonins, Calcium salts, Calcium regulators, **Introduction to Drugs used in alternative Systems of Medicine:** Ayurveda, Homeopathy, Unani and Siddha etc.

### **PATHOLOGY**

**Introduction:** 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, **Special Pathology:** Pathological changes in disease conditions of various systems: Respiratory tract, Cardio-vascular system, Gastro Intestinal Tract, Liver, Gall bladder and Pancreas, Kidneys and Urinary tract, Male genital systems, Female genital system, Cancer Breast, Central Nervous system, Metastatic tumour, Skeletal system, Arthritis and tumours, **Clinical Pathology:** Various blood and bone marrow tests in assessment and monitoring of disease conditions: Hemoglobin, RBC, White Blood Cell (WBC) and platelet counts, Bleeding time, clotting time and prothrombine 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, **Examination of Body Cavity Fluids, Transudates and Exudates:** Laboratories tests used in CSF analysis, Examination of other body cavity fluids, transudates and 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, **Urine and Faeces:** Urine (Physical characteristics, Analysis, Culture and Sensitivity), Faeces (Characteristics, Stool examination: Occult blood, ova, parasite and cyst, reducing substance etc.), Methods of collection for various tests, inference and normal values

### **GENETICS**

**Introduction:** Practical application of genetics in Nursing, Impact of genetic condition on families, Review of cellular division mitosis and meiosis, Characteristics and structure of genes, Chromosomes – sex determination, Chromosomal aberrations Patterns of inheritance, Mendelian theory of inheritance, Multiple allots and blood groups, Sex linked inheritance, Mechanism of inheritance, Errors in transmission (Mutation), **Maternal, Prenatal and Genetic Influences on Development of Defects and Diseases:** Conditions affecting the mother: Genetic and infections, Consanguinity atopy, Prenatal nutrition and food allergies, Maternal age, Maternal drug therapy, Prenatal testing and diagnosis, Effect of radiation, drugs and chemicals, Infertility, Spontaneous abortion, Neural tube defects and the role of folic acid in lowering the risks, Down syndrome (Trisomy 21), **Genetic testing in the Neonates and Children:** Screening for Congenital abnormalities and Developmental delay, Dysmorphism, **Genetic conditions of Adolescents and Adults:** Cancer genetics – Familial cancer, Inborn errors of metabolism, Blood group alleles and haematological disorder, Genetic haemochromatosis, Huntington's disease, Mental illness, **Services related to Genetics:** Genetic testing, Human genome project, Gene therapy, Eugenics movement, Genetic Counselling, Legal and ethical issues, role of nurse

### **MEDICAL SURGICAL NURSING - 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 Diseases (ICD-10 or later version), Acute illness Chronic illness and 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,

Introduction to Medical Surgical asepsis, Care of Surgical Patient, **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, **Nursing Management of Patients (adults including elderly) with Respiratory Problems:** Nursing Assessment-History and Physical assessment, etiology, pathophysiology, clinical manifestations, diagnosis, treatment modalities and medical, surgical, dietetics and nursing management of adults including elderly with –Upper Respiratory tract infections, 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, **Nursing Management of Patient (adults including elderly) with Disorders of Digestive System:** Nursing Assessment-History and Physical assessment, Etiology, Pathophysiology, clinical manifestations, diagnosis, treatment modalities and medical, surgical, dietetics and nursing management, Disorders of- Oral cavity, Oesophagus, Stomach and deudenum, Small intestinal disorders, Large intestinal disorders, Hernias, Appendix-inflammation, Anal and Rectum, Peritonitis/acute abdomen, Pancreas, Liver, Gall Bladder, **Nursing Management of Patient (adults including elderly) with Blood and Cardio vascular Problems:** Nursing Assessment-History and Physical assessment, Etiology, Pathophysiology, clinical manifestations, diagnosis, treatment modalities and medical, surgical, dietetics and nursing management of Vascular system (Hypertension, Hypotension, Artherosclerosis, Raynaud’s disease, Aneurism and Perpherial vascular disorders), Heart (Coronary artery diseases, Valvular disorders of heart, Endocarditis, Pericarditis Myocarditis, Cardio Myopathies, Cardiac dysrhythmias, Heart Block, Congestive cardiac failure, Cardiac emergencies and arrest, Cardio Pulmonary Resuscitation (CPR), Blood, Special therapies, **Nursing Management of Patient (adults including elderly) with Genito-urinary Problems:** 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 urethera – inflammation, infection, stricture, obstruction, tumour, prostrate, **Nursing Management of Disorders of Male (adults including elderly) 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, Hypospadiasis, Epispadiasis, Infections, Testis and adjacent structures, Penis, Prostate: inflammation, infection, hypertrophy, tumour, Sexual Dysfunction, Infertility, Contraception, Breast: gynecomastia, tumour, **Nursing Management of Patient (adults including elderly) with Disorders of Endocrine System:** Nursing Assessment-History and Physical assessment, Etiology, Pathophysiology, clinical manifestations, diagnosis, treatment modalities and medical, surgical, dietetics and nursing management of –Disorders of Thyroid and Parathyroid, Diabetes mellitus, Diabetes insipidus, Adrenal tumour, Pituitary disorders, **Nursing Management of Patient with Disorders of Integumentary System:** Nursing Assessment-History and Physical assessment, etiology, pathophysiology, clinical manifestations, diagnosis, treatment modalities and medical, surgical, dietetics and 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, **Nursing Management of Patient (adults including elderly) with Musculoskeletal Problems:** Nursing Assessment-History and Physical assessment, Etiology, Pathophysiology, clinical manifestations, diagnosis, treatment modalities and medical, surgical, dietetics and 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 and replacement surgeries, Rehabilitation, **Nursing Management of Patient (adults including elderly) with Immunological Problems:** Nursing Assessment-History and Physical assessment, Etiology, Pathophysiology, clinical manifestations, diagnosis, treatment modalities and medical, surgical, dietetics and nursing management of –Immunodeficiency disorder, Primary immuno deficiency, Phagocytic dysfunction, B-cell and T-cell deficiencies, Secondary immuno deficiencies, Acquired immuno deficiency syndrome (AIDS), National AIDS Control Program- NACO, various national and international agencies, Infection control program, Rehabilitation, **Nursing Management of Patient (adults including elderly) with Communicable Diseases:** Nursing Assessment-History and physical assessment, epidemiology, infectious process, clinical manifestations, diagnosis, treatment, prevention and dietetics. control and eradication of Communicable Diseases –Tuberculosis, Diarrhoeal diseases, Hepatitis A – E, Herpes, Chickenpox, Smallpox, Typhoid, Meningitis, Gas Gangrene, Leprosy, Dengue, Plague, Malaria, Diphtheria, Pertussis, Poliomyelitis, Measles, Mumps, Influenza, Tetanus, Yellow Fever, Filariasis, HIV, AIDS, Reproductive Tract Infections, Infection control measures, **Peri Operative Nursing:** Organisation 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 operating room attire, 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, Anaesthesia, Cardio Pulmonary Resuscitation (CPR), Pain

management techniques, Legal Aspects.

### COMMUNITY HEALTH NURSING – I

**Introduction:** Community health nursing, Definition, concepts and dimensions of health, Promotion of health, Maintenance of health, **Determinants of Health:** Eugenics, Environment, Food hygiene, Acts regulating food hygiene: Prevention of food adulteration act, Drugs and cosmetic act, Socio-cultural factors, Life Style, Hygiene, Physical activity, Financial Management, **Epidemiology:** Definition, concept, aims, scope, uses and terminology used in epidemiology, Dynamics of disease transmission: epidemiological triad, Morbidity and mortality: measurements, Levels of prevention, Methods of epidemiology-Descriptive, Analytical: Epidemic investigation and Experimental, **Epidemiology and Nursing Management of Common Communicable Diseases:** Respiratory infections, intestinal infections, arthropod infections, viral, bacterial, rickettsial diseases, parasitic zoonoses, surface infection, **Epidemiology and Nursing Management of Non-Communicable Diseases:** Malnutrition, Anaemia, Hypertension, Stroke, Rheumatic Heart Disease, Coronary Heart Disease, Cancer, Diabetes mellitus, Blindness, Accidents, Mental illness, Obesity, Iodine Deficiency Disorder, Fluorosis, Epilepsy, **Demography:** Definition, concept and scope, Methods of collection, analysis and interpretation of demographic data, Demographic rates and ratios, **Population and its Control:** Population explosion and its impact on social, economic development of individual, society and country, Population control: Overall development: Women empowerment, social, economic and educational development, Limiting family size: Promotion of small family norm, Methods: spacing (natural, biological, chemical, mechanical methods etc.), Terminal: Surgical methods, Emergency contraception.

### MEDICAL SURGICAL NURSING (Adult including Geriatrics) – II

**Nursing Management of Patient with Disorders of Ear, Nose and Throat:** Nursing Assessment-History and Physical assessment; etiology, pathophysiology, clinical manifestations, diagnosis, treatment modalities and medical and 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; Drugs used in treatment of disorders of Ear, Nose and Throat, **Nursing Management of Patient with Disorders of Eye:** Etiology, Pathophysiology, clinical manifestations, diagnosis, treatment modalities and medical and surgical nursing management of eye disorders: Refractive errors; Eyelids-infection, tumours and deformities; Conjunctiva-inflammation and infection, bleeding; Cornea-inflammation and infection; Lens-Cataracts; Glaucoma; Disorder of the uvea 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, **Nursing Management of Patient with Neurological Disorders:** Neurological assessment and Glasgow coma scale; Etiology, Pathophysiology, clinical manifestations, diagnosis, treatment modalities and medical and surgical nursing management of neurological disorders: Congenital malformations; Headache; head Injuries, Spinal Injuries: Paraplegia, Hemiplegia, Quadraplegia; Spinal cord compression- herniation of intervertebral disc; Tumours of the brain and spinal cord; Intra cranial and cerebral aneurysms; Infections: Meningitis, Encephalitis, Brain abscess, neurocysticercosis; Movement disorders-Chorea, Seizures, Epilepsies, Cerebro Vascular Accidents (CVA); Cranial, Spinal Neuropathies – Bell's palsy, trigeminal neuralgia, Peripheral Neuropathies; Guillain-Barr'e Syndrome; Myasthenia gravis; Multiple sclerosis; Degenerative diseases, Delirium, Dementia, Alzheimer's disease, Parkinson's disease, **Nursing Management of Patients with Disorders of Female Reproductive System:** Breast self Examination, Etiology, Pathophysiology, clinical manifestations, diagnosis, treatment modalities and medical and surgical nursing management of 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 Vulvar 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, Drugs used in treatment of gynaecological disorders, **Nursing Management of Patients with Burns, Reconstructive and Cosmetic surgery:** 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 Re-constructive and Cosmetic surgery; for burns,

congenital deformities, injuries and cosmetic purposes; Role of Nurse; Legal aspects; Rehabilitation; Special therapies; Psycho social aspects, **Nursing Management of Patients with Oncological Conditions:** Structure & characteristics of normal and 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 and 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; 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; Stomal Therapy; Special therapies, **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; Policies related to emergency/ disaster management; International, national, state, institutional Disaster preparedness: Co-ordination and involvement of; Community, various govt. departments, non-govt. organizations and International agencies; Legal aspects of disaster Nursing; Post Traumatic Stress Disorder; Rehabilitation, **Emergency Nursing:** Concept, priorities, principles and Scope; Organization of emergency services; 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, wound; Bites; Poisoning: Food, Gas, Drugs and Chemical Poisoning; Seizures; Thermal Emergencies; Heat stroke and Cold injuries; Pediatric Emergencies; Psychiatric Emergencies; Obstetrical Emergencies; Violence, Abuse, Sexual assault; Cardio Pulmonary Resuscitation, **Nursing care of the Elderly:** Nursing Assessment-History and physical assessment; Ageing: Demography; Concepts and theories of ageing; Cognitive Aspects of Ageing; Common Health Problems & Nursing Management: Cardiovascular, Respiratory, Musculoskeletal, Endocrine, genito-urinary, gastrointestinal, Neurological, Skin and other Sensory organs, Psychosocial and Sexual, Abuse of elderly; Use of aids and prosthesis (hearing aids, dentures), Role of nurse; Legal and Ethical Issues; Provisions and Programmes for elderly; privileges, Community Programs and health services; Home and institutional care, **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, defibrillators, 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; Drugs used in critical care unit, **Nursing Management of Patients Adults including Elderly with Occupational and Industrial Disorders:** Etiology, Pathophysiology, clinical manifestations, diagnosis, treatment modalities and management of occupational and industrial health disorders.

### CHILD HEALTH NURSING

**Modern Concepts of Child care:** Concepts of child health care; Internationally accepted rights of Child; National policy and legislations in relation to child health and welfare; National programmes related to child health and welfare; Agencies related to welfare services to the children; Changing trends in hospital care, preventive, promotive and curative aspects of child health; Child morbidity and mortality rates; Differences between an adult and child; Hospital environment for a sick child; Impact of hospitalisation on child and family; Grief and bereavement; Qualities of a paediatric nurse; Principles of pre and post-operative care of infants and children; Child health nursing procedures, **The Healthy Child:** Principles of growth and development; Factors affecting growth and development; Prenatal development; Growth and development from birth to adolescence; The needs of normal children through the stages of developmental and parental guidance; Nutritional needs of children & infants: breast feeding, exclusive breast feeding supplementary/ artificial feeding and weaning; Baby friendly hospital concept; Accidents; Value of play and selection of play material; Preventive immunization, immunization programme and cold chain; Preventive paediatrics; Care of under-five and under five clinics/well baby clinics, **Nursing Care of a Neonate:** Nursing care of a normal newborn/Essential newborn care; Neonatal resuscitation; Nursing management of a low birth weight baby, preterm, SGA; Kangaroo mother care; Nursing management of common neonatal disorders; Organization of neonatal unit; Identification and nursing management of common congenital malformations., **Integrated management of neonatal and childhood illnesses (IMNCI), Nursing Management in Common Childhood Diseases:** Nutritional deficiency disorders; Respiratory disorders and infections; Gastrointestinal infections, infestations and congenital disorders; Cardio vascular problem: congenital defects and rheumatic fever, rheumatic heart disease; Genito-urinary disorders: acute glomerulo nephritis, Nephrotic syndrome, Wilms' tumor, infection and congenital disorders; Neurological infections and disorders: convulsions, epilepsy, meningitis, hydrocephalus, spina-bifida; Hematological disorders: Anemias, thalassemia, ITP, Leukemia, hemophilia; Endocrine disorders: Juvenile Diabetes Mellitus; Orthopedic disorders: club feet, hip dislocation and fracture;

Disorders of skin, eye, and ears; Paediatric oncology – Leukemia, lymphoma, brain tumor, Wilm’s tumor, neuroblastoma, Ewing sarcoma, Retinoblastoma; Common communicable diseases in children, their identification, nursing management in hospital and home and prevention; Child health emergencies: poisoning, foreign bodies, hemorrhage, burns and drowning; Nursing care of infant and children with HIV/AIDS, **Management of Behavioural and Social Problems in Children:** Management of common behavioural disorders; Management of common psychiatric problems; Management of challenged children: Mentally, Physically and Socially challenged; Welfare services for challenged children in India; Child guidance clinics.

### MENTAL HEALTH NURSING

**Perspectives of Mental Health and Mental Health nursing:** Evolution of mental health services, treatments and nursing practices; Prevalence and incidence of mental health problems and disorders; Mental Health Act; National Mental Health policy, National Mental Health programme; Mental health team; Roles: Concepts of normal and abnormal behavior, **Principles and Concepts of Mental Health Nursing:** Definition: Mental health nursing and terminologies used; Classification of mental disorders: ICD, DSM; Personality development, defense mechanisms; Maladaptive behaviour of individuals and groups: stress, crisis and disaster; Etiology: bio-psycho-social factors; Psychopathology of mental disorders: Structure and function of brain, limbic system and abnormal neuro transmission; Principles of Mental health Nursing; Standards of Mental health nursing practice; Conceptual models and the role of nurse: Existential Model, Psycho-analytical models, Behavioural model, Interpersonal model, **Assessment of Mental Health Status:** History taking; Mental status examination; Mini mental status examination; Neurological examination: Review; Investigations: Related Blood chemistry, EEG, CT and MRI; Psychological tests, Role and responsibilities of nurse, **Therapeutic Communication and Nurse-patient Relationship:** Therapeutic communication: Types, techniques, characteristics; Types of relationship; Ethics and responsibilities; Elements of nurse patient contract; Review of technique of IPR- Johari Window; Goals, phases, tasks, therapeutic techniques; Therapeutic impasse and its intervention, **Treatment Modalities and Therapies used in Mental Disorders:** Psycho-pharmacology; Psychological therapies: Therapeutic community, psychotherapy-Individual: psycho-analytical, cognitive and supportive, Family, Group, Behavioural, Play, Psycho-drama, Music, Dance, Recreational and Light therapy, Relaxation therapies: Yoga, Meditation, bio feedback; Alternative systems of medicine; Occupational therapy; Physical Therapy: electro convulsive therapy; Geriatric considerations, **Nursing Management of Patient with Schizophrenia, and other Psychotic Disorders:** Classification: ICD; Etiology, psycho-pathology, types, clinical manifestations, diagnosis; Nursing Assessment- History, Physical and mental assessment; Treatment modalities and nursing management of patients with Schizophrenia and other psychotic disorders; Geriatric considerations, **Nursing Management of Patient with Mood Disorders:** Mood disorders: Bipolar affective disorder, Mania, depression and dysthymia etc. Etiology, psycho-pathology, clinical manifestations, diagnosis; Nursing Assessment- History, Physical and Mental assessment; Treatment modalities and nursing management of patients with mood disorders, **Nursing Management of Patient with Neurotic, Stress Related and Somatization Disorders:** Anxiety disorder, Phobias, Dissociation and Conversion disorder, Obsessive compulsive disorder, Somatoform disorders, Post traumatic stress disorder, **Nursing Management of Patient with Substance use Disorders:** Commonly used psychotropic substance: Classification, forms, routes, action, intoxication and withdrawal; Etiology of dependence: tolerance, psychological and physical dependence, withdrawal syndrome, diagnosis, **Nursing Management of Patient with Personality, Sexual and Eating Disorders, Childhood and Adolescent Disorders including Mental Deficiency, organic Brain Disorders:** Classification of disorders; Etiology, psycho-pathology, characteristics, diagnosis; Nursing assessment, treatment, **Psychiatric emergencies and Crisis Intervention:** Types of psychiatric emergencies and their management; Stress adaptation Model; Grief: Theories of grieving process; Crisis Intervention: **Legal issues in Mental Health Nursing:** Mental Health Act 1987: Act, Sections, Articles and their implications etc.; Indian Lunacy Act 1912; Rights of mentally ill clients; Forensic psychiatry; Acts related to narcotic and psychotropic substances and illegal drug trafficking, **Community Mental Health Nursing:** National Mental Health Programme; Institutionalization Versus Deinstitutionalization; Model of Preventive psychiatry; Mental Health Services and Agencies: Mental health nursing issues for special populations: Children, Adolescence, Women, Elderly, Victims of violence and abuse; Handicapped, HIV/AIDS etc.

### NURSING RESEARCH AND STATISTICS

**Research and Research Process:** Definition of Research and nursing research; Steps of scientific method; Characteristics of good research; Steps of Research process, **Evidence Based Practice:** Definition; Research utilization; Resources; Steps, **Research Problem/Question:** Identification of problem area; Problem statement; Criteria of a good research problem; Writing objectives, **Review of Literature:** Sources; Online search: CINHALL, COCHRANE etc, **Research Approaches and Designs:** Historical, survey and experimental; Qualitative and Quantitative designs, **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: Questioning, interviewing; Observations, record analysis and measurement; Types of instruments; Validity & Reliability of the Instrument;

Pilot study; Data collection procedure, **Analysis of Data:** Compilation, Tabulation, classification, summarization, presentation, interpretation of data, **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, **Communication and Utilization of Research:** Communication of research findings

### COMMUNITY HEALTH NURSING – II

**Community Health and Community Health Nursing:** Definition, Concept; Principles; Historical development, **Health Planning and Policies and Problems:** National health planning in India-Five Year Plans; Various committees and commissions on health and family welfare: Central council for health and family welfare (CCH and FW); National health policies (1983, 2002), National population policy; Health problems, **Delivery of Community Health Services:** Planning, budgeting and material management of SCs, PHC and CHC; **Rural:** Organization, staffing and functions of rural health services provided by government at: Village, Subcentre, Primary health centre, Community health center/ subdivisional, Hospitals, District, State, Centre. **Urban:** Organization, staffing and functions of urban health services provided by government at: Slums, Dispensaries, Maternal and child health centers, Special Clinics, Hospitals, Corporation/Municipality/ Board. Components of health services; Environmental sanitation; Health education; Vital statistics; M.C.H. – antenatal, natal, postnatal, MTP Act, female foeticide act, child adoption act; Family Welfare; National health programmes; School health services; Occupational health; Defence services; Institutional services; Systems of medicine and health care: Allopathy, Indian System of Medicine and Homeopathy; Alternative health care systems like yoga, meditation, social and spiritual healing etc, **Community Health Nursing Approaches, Concepts and Roles and Responsibilities of Nursing Personnel:** Nursing theories and Nursing process; Epidemiological approach; problem solving approach; Evidence based approach; Concepts of Primary Health Care: Roles and responsibilities of Community health nursing personnel in Family health services, Information Education Communication (IEC); Management Information System (MIS): National Health Programmes; Environmental sanitation; Maternal and child health and Family welfare; Treatment of Minor ailments; School Health Services; Occupational Health; Organisation of clinics, camps; Waste management. Home visit, **Assisting individuals and groups to Promote and maintain their Health:** Empowerment for self-care of individuals, families and groups in – **Assessment of self and family:** Monitoring growth and development; Mile stones; Weight measurement; Social development; Temperature and Blood pressure monitoring; Menstrual cycle; Breast self-examination and testicles; Warning Signs of various diseases; Tests: Urine for sugar and albumin, blood sugar. **Seek health services for** Routine checkup, Immunization, Counselling, Diagnosis, Treatment, Follow-up. Maintenance of health records for self and family. Continue medical care and follow-up in community for various diseases and disabilities. Carryout therapeutic procedures as prescribed/ required for self and family; Waste Management; Sensitize and handle social issues affecting health and development for self and family: Women Empowerment, Women and child abuse, Abuse of elders, Female Foeticide, Commercial sex workers, Food adulteration, Substance abuse; Utilize community resources for self and family, **Role of a Nurse:** National ARI programme; Revised National Tuberculosis Control Programme (RNTCP); National Anti-Malaria programme; National Filaria control programme; National Guinea worm eradication programme; National Leprosy eradication programme; National AIDS control programme; STD control programme; National programme for control of blindness; Iodine deficiency disorder; Expanded programme on immunization; National Family Welfare Programme – RCH Programme; National water supply and sanitation programme; Minimum Need programme; National Diabetics control programme; Polio Eradication: Pulse Polio Programme; National Cancer Control Programme; Yaws Eradication Programme; National Nutritional Anemia Prophylaxis Programme; 20 Point Programme; ICDS programme; Mid-day meal applied nutritional programme; National Mental Health Programme; Health schemes: ESI, CGHS, Health Insurance, **Health Agencies International** – WHO, UNFPA, UNDP, World Bank, FAO, UNICEF, DANIDA, European Commission (EC), Red Cross, USAID, UNESCO Colombo Plan, ILO, CARE etc. **National** – Indian Red Cross, Indian Council for Child welfare, Family Planning Association of India, (FPAI), Tuberculosis Association of India, Hindu Kusht Nivaran Sangh, Central Social Welfare Board, All India Women’s Conference, Blind Association of India etc.

### MIDWIFERY AND OBSTETRICAL NURSING

**Concepts of Midwifery and Obstetrical Nursing:** Concepts; trends; Historical perspectives and current trends; Legal and ethical aspects; Pre-conception care and preparing for parenthood; National policy and legislation in relation to maternal health and welfare; Maternal, morbidity, mortality and fertility rates; Perinatal, morbidity and mortality rates., **Anatomy and Physiology of Female Reproductive system and Foetal Development:** Female pelvis – general description of the bones joints, ligaments, planes of the pelvis diameters of the true pelvis, important landmarks, variations in pelvis shape; Female organs of reproduction – external genitalia, internal genital organs and their anatomical relations, musculature – blood supply, nerves, lymphatics, pelvic cellular tissue, pelvic peritoneum; Physiology of menstrual cycle; Human sexuality; Foetal development; Conception; Review of fertilization, implantation (embedding of the ovum), development of the embryo and placenta at term – functions, abnormalities, the foetal sac, amniotic fluid, the umbilical cord; Foetal

circulation, foetal skull, bones, sutures and measurements, **Assessment and Management of Pregnancy (ante-natal):** Normal pregnancy; Physiological changes during pregnancy; Diagnosis of pregnancy; Antenatal care; Per vaginal examination; Screening and assessment for high risk cases; Risk approach; History and Physical examination; Modalities of diagnosis; Invasive and Non-Invasive procedures :- ultrasonics, cardiotomography, NST, CST, Antenatal preparation, Psycho-social and cultural aspects of pregnancy, **Assessment and Management of Intra-natal Period:** Physiology of labour, mechanism of labour. Management of labour; **First stage;** Signs and symptoms of onset of labour; normal and abnormal; Duration Preparation of: Labour room, Woman; Assessment and observation of women in labour; partogram-maternal and foetal monitoring; Active management of labour, Induction of labour Pain relief and comfort in labour; **Second stage:** Signs and symptoms; normal and abnormal; Duration; Conduct of delivery; Principles and techniques; Episiotomy. Receiving the new born: Neonatal resuscitation; initial steps and subsequent resuscitation; Care of umbilical cord; Immediate assessment including screening for congenital anomalies. **Third stage:** Signs and symptoms; normal and abnormal; Duration; Method of placental expulsion; Management; Examination of the placenta, perineum; Fourth Stage, **Assessment and Management of women during Post Natal Period:** Normal puerperium; physiology; Postnatal assessment and management; Promoting physical and emotional well-being; Lactation management; Immunization, Family dynamics; Family welfare services, **Assessment and Management of Normal Neonates:** Normal Neonate; Physiological adaptation, Initial and Daily assessment; Essential newborn care; Thermal control; Breast feeding, prevention of infections; Immunization; Minor disorders of newborn and its management; Levels of Neonatal care (level I, II, & III), **High-risk Pregnancy- assessment and Management:** Screening and assessment: -Ultrasonics, Cardiotomography, NST, CST, non-invasive and invasive procedures; Newer modalities of diagnosis; High-risk approach; Levels of care; Disorders of pregnancy-Hyper-emesis gravidarum, bleeding in early pregnancy, abortion, ectopic pregnancy, Vesicular mole, Ante-partum hemorrhage, Uterine abnormality and displacement, Diseases complicating pregnancy, Medical and surgical conditions, Infections, RTI (STD), UTI, HIV, TORCH; Gynaecological diseases complicating pregnancy; Pregnancy induced hypertension and diabetes, Toxemia of pregnancy, hydramnios; Rh incompatibility; Mental disorders; Adolescent pregnancy, Elderly primi and grand multipara; Multiple pregnancy; Abnormalities of placenta and cord; Intra-uterine growth-retardation, **Abnormal Labour – assessment and Management:** Disorders in labour; CPD and contracted pelvis dystocia due to soft tissue abnormalities; Malpositions and malpresentations; Premature labour, disorders of uterine actions – precipitate labour, prolonged labour; Complications of third stage: injuries to birth canal, postpartum haemorrhage; Obstetrical emergencies and their management; Presentation and prolapse of cord, Vasa praevia, amniotic fluid embolism, rupture of uterus, shoulder dystocia, obstetrical shock, inversion of uterus; Obstetrical procedures and operations; Induction of labour, forceps, vacuum, version, manual removal of placenta, caesarean section, destructive operations, **Abnormalities during Postnatal Periods:** Puerperial sepsis, pyrexia, breast engorgement & infections, UTI, thrombo- Embolic disorders, post- partum hemorrhage, Eclampsia and sub-involution; Psychological complications: Postpartum Blues, Postpartum Depression, Postpartum Psychosis, **Assessment and Management of High Risk Newborn:** LBW, Infections; Respiratory problems; Haemolytic disorders and hemorrhagic hypoglycemia, hypocalcemia; Birth injuries; Malformations; Monitoring of high risk neonates; Feeding of high risk neonates; Organisation and management of neonatal intensive care units; Infection control in NICU, **Pharmaco-therapeutics in obstetrics:** Indication, dosage, action, contra indication and side effects of drugs; Effect of drugs on pregnancy, labour and puerperium; Oxytocins, antihypertensives, diuretics, tocolytic agents, anticonvulsants; Analgesics and anesthetics in obstetrics, **Family Welfare Programme:** Population trends and problems in India; Concepts of family welfare programme; National Population; National family welfare programme; RCH, ICDS, MCH Safe motherhood; Organization and administration; at national, state, district, block and village levels; Methods of contraception; spacing, temporary and permanent, Emergency contraception; Infertility and its management; Counselling for family welfare; Maintenance of vital statistics; Role of national, international and voluntary organizations.

### MANAGEMENT OF NURSING SERVICES AND EDUCATION

**Introduction to Management in Nursing:** Definition, concepts and theories; Functions; Principles, **Management Process:** Planning; mission, philosophy, objectives, operational plan; Staffing: philosophy, norms, activities, patient classification systems, scheduling; Human resource management; recruiting, selecting, deployment, retaining, promoting, super-annuation 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), **Management of Nursing Services in the Hospital and Community:** Planning: Hospital and patient care units including ward management- Emergency and disaster management; Human resource management: Recruiting, selecting, deployment, retaining, promoting, super-annuation etc., 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 patient care units; Directing and leading: delegation, participatory management; Assignments, rotations,



delegations; Supervision and guidance, implement standards, policies, procedures and practices; Staff development and welfare; Maintenance of discipline; Controlling/Evaluation: Nursing rounds/Visits, Nursing protocols, Manuals; Quality Assurance Model, documentation; Records and reports Performance appraisal, **Organizational Behaviour and Human Relations:** Concepts and theories of organizational behaviours; 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, **In Service Education:** Nature and scope; planning and organization of in-service education; Principles of adult learning, **Management of Nursing Educational Institutions:** Establishment of Nursing educational institution-INC norms and guidelines; Co-ordination with regulatory bodies: Accreditation, Affiliation; 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; Institutional records and reports-administrative, faculty, staff and students, **Nursing as a Profession:** Regulatory bodies; INC, SNC Acts; constitution, functions; Current trends and issues in Nursing; Professional ethics: Code of ethics: INC, ICN; Code of professional conduct: INC, ICN; Practice standards for Nursing; 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, **Professional Advancement:** Continuing education; Career Opportunities; Collective bargaining; Membership with Professional organizations: National and International.

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### ETHICS

Ethical principles, Code of ethics, Code of professional conduct. Role of regulatory bodies, autonomy and accountability

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♣ Best of Luck ♣

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