



Dayananda Sagar University

Faculty of Health Sciences Ph. D Entrance Test- January 2024

A) COLLEGE OF PHARMACEUTICAL SCIENCES

PART B

Syllabus for Ph.D. Entrance Test in Pharmaceutical Sciences

Note: Candidates will choose a discipline depending on their specialization in PG study and answer.

DISCIPLINE: PHARMACEUTICAL ANALYSIS

UNIT-1

UV-Visible spectroscopy: Introduction of Electromagnetic spectrum, Theory, Laws, Instrumentation and terminology associated with UV-Visible spectroscopy, Choice of solvents and Applications of UV-Visible spectroscopy.

UNIT-2

Chromatography: Principle, Apparatus, Instrumentation, Chromatographic parameters, Endpoint determination and Applications of the following:

- a) Paper chromatography
- b) Thin Layer chromatography
- c) Column chromatography
- d) Gas chromatography
- e) High Performance Liquid chromatography
- f) High Performance Thin Layer chromatography

UNIT-3

Calibration, validation and cleaning validation for the following instruments used in pharmaceutical industry:

- g) HPLC b) HPTLC c) GC d) IR e) UV

UNIT-4

Analytical method and bio analytical method development and its validation according to ICH and USP guidelines.



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UNIT-5

Statistical Analysis – Introduction, Significance of statistical methods, normal distribution, probability, degree of freedom, standard deviation, correlation, variance, accuracy, precision, classification of errors, reliability of results, confidence interval, test for statistical significance – Students T test, F test, Chi square test, Correlation and regression.

DISCIPLINE: PHARMACEUTICS

Unit I

Preformulation studies

Introduction, preformulation goals, consideration of physico-chemical properties of new drug molecules for different dosage forms. Solubility: aqueous solubility, organic solubility, intrinsic solubility, methods of enhancement of solubility-surfactants, pH, co-solvency, solid dispersion and complexation.

Unit II

Optimization

Optimization techniques in pharmaceutical formulation and processing - introduction, optimization parameters, statistical designs for screening and optimization of pharmaceutical formulations. QbD, elements and tools of QbD.

Unit III

ADME of drugs

Definitions, Gastro-intestinal absorption of drugs, mechanisms of drug absorption, Factors affecting drug absorption: Biological, Physiological, Physicochemical, Pharmaceutical. Methods of determining absorption: *In vitro*, *in situ* and *in vivo* methods. Concepts of distribution, metabolism and elimination of drugs.

Bioavailability and Bioequivalence

Objectives and consideration in bio-availability studies, Concept of equivalents, Measurements of bio-availability, Determination of the rate of absorption. Bioequivalence and its importance.

Unit IV

Sustained and controlled release drug delivery systems

Introduction, concept, advantages and disadvantages, rationale of sustained and controlled release drug delivery systems. Physico-chemical and biological factors to be considered for the design and development of sustained and controlled release drug delivery systems.

Unit V

Targeted drug delivery systems

Concept, advantages and disadvantages of drug targeting. Development, evaluation and application of polymeric nanoparticles, solid lipid nanoparticles, liposomes, niosomes and resealed erythrocytes.



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DISCIPLINE: PHARMACOLOGY

Unit I

Molecular Mechanisms in Cell regulation, Signaling molecules and their receptors
Molecules: Nitric oxide, carbon monoxide, neurotransmitters, cytokines, peptide hormones, growth factors and eicosanoids.

Receptors: Cell surface Receptors: Ion channels, G-protein coupled receptors, tyrosine kinase receptors, cytokine receptors, nuclear receptors.

Unit II

Pharmacotherapy of Ischaemic heart disease, CCF, Cardiac arrhythmias and Dyslipidemia, Atherosclerosis, Parkinson's disease, Alzheimer's disease, Schizophrenia, Stroke, Arteriosclerosis, Asthma and COPD, Epilepsy, Rheumatoid & Osteoarthritis, Myasthenia gravis, Inflammatory bowel diseases, Constipation and Diarrhea.

Unit III

Preclinical models employed in the screening of new drugs belonging to the following categories: Antipsychotic agents, Antianxiety agents, Nootropic drugs, Antidepressant drugs, Antiparkinsonian agents, Analgesics, Antiepileptics, Antiinflammatory agents, Antiulcer agents, Antianginals and myocardial infarction, Antiarrhythmics, Antiatherosclerotic drugs, Hepatoprotectives, Antidiabetics, Antihypertensives, Anticancer agents

Unit IV

Modern techniques to elucidate the mechanism of drug actions- Cell culture and maintenance: Concepts of in-vitro screening, Different cell lines (animal & human) used in screening techniques. Primary and secondary cultures, Principles of techniques involved in cell culture and its maintenance. Alternatives to animal screening procedures- cell-line, patch-clamp technique and invitro models.

Unit V

Recombinant DNA Technology: Principles, process and applications. Gene cloning: Isolation, cloning vectors, enzymes used in molecular cloning, PCR (Polymerase chain reaction), LCR (Ligation chain reaction) and their applications.



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DISCIPLINE: PHARMACOGNOSY

Unit I

1. General methods of isolation, purification, identification and estimation of phytoconstituents (with special emphasis on HPLC & HPTLC).

2. WHO guidelines for assessment of crude drugs

Evaluation of identity, purity and quality of crude drugs.

Determination of pesticide residue.

Determination of arsenic and heavy metals.

Determination of micro-organisms

Unit II

3. Detailed phytochemical study of following class of phytoconstituents.

- Phospholipids
- Terpenes and Terpenoids
- Resins and related compounds
- Plant phenols
- Alkaloids
- Glycosides
- Steroids

Unit III

4. Enzymes:

- Types and properties of enzymes
- Isolation and purification of enzymes
- Immobilization of enzymes and its applications
- Enzyme reactors
- Detailed study of plant enzymes – Papain and Bromelain

Unit IV

5. Tissue Culture:



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- Type, techniques and application of callus, suspension, haploid, embryo, organ and immobilized culture.
- Organogenesis, embryogenesis, synthetic seed and somaclonal variation.
- Micropropagation
- Production of secondary metabolites – Strategies involving use of precursor, growth regulators and Elicitors: Production of Shikonin.
- Hairy root culture and Multiple shoot culture and their application.
- Protoplast culture and protoplast fusion.
- Biotransformation.

Unit V

6. Patents:

Indian and International patent laws, proposed amendments as applicable to herbal/natural products and processes; important points to be kept in mind while drafting and filing a patent.

7. Herbal Cosmetics:

- Raw materials of herbal origin used in cosmetics: Oil, waxes, gums, hydrophilic colloids, colours, perfumes, protective agents, bleaching agents, preservatives, anti-oxidants and other ancillary agents.
- Formulation aspects incorporating herbal extracts in various preparations like Skin care creams, deodorants, anti-perspirants, hair care preparations.
- Detailed methods of preparation of few representative preparations and standardization of above categories.



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DISCIPLINE: PHARMACEUTICAL CHEMISTRY

Unit I

1. Basic Aspects of Organic Chemistry

- Chemical bonding: emphasizing localized, delocalized and bonding weaker than covalent bonds.
- Organic reaction intermediates: carbocations, carbanions, free radicals, carbenes and nitrenes. Their method of formation, stability and synthetic applications.
- Various types of reaction mechanism, reaction and methods of determining them.

2. Detailed study of the following topics:

- Substitution reactions (aliphatic nucleophilic, aromatic electrophilic, aliphatic electrophilic, aromatic nucleophilic and free radical substitutions).
- Addition reactions (both carbon-carbon and carbon-heteroatom multiple bonds).
- Elimination reactions (E1, E2 and Hoffman Saytzeff's) and Rearrangement reactions.
- Oxidation – reduction reactions and the reagents used for such reactions.
- Protection and deprotection of various groups.

Unit II

1. A study of the following reactions of synthetic importance:

- Mannich reaction.
- Meerwein-Ponndorf-Verley (MPV) reduction.
- Oppenauer oxidation.
- Beckmann rearrangement.
- Grignard reaction.
- Hoffman rearrangement.
- Ozonolysis.
- Reformatsky reaction.
- Michael reaction.
- Birch reduction.

II Introduction to combinatorial chemistry

- Introduction to Combinatorial Libraries. Concepts and Terms
 - Parallel Organic Synthesis Technology
 - Polymer-Supported Synthesis of Organic Compounds and Libraries
 - Macro Beads in Solid-Phase Synthesis
 - Combinatorial Libraries in Solution.
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Unit III

1. Quantitative structure activity relationship (QSAR)

- a. History and development
- b. Theoretical compartment model for relationship between physical properties and biological activity(Hammet, Taft)
- c. Hansch analysis, Free Wilson analysis, applications and relationship between them.
- d. Statistical methods like Regression analysis,PLS and other multivariate statistical methods.,3D QSAR approaches.

2. Designing and applications of Prodrugs:

Basic concept, Prodrugs of functional group, Prodrug design to improve Patient acceptability, Drug solubility, Drug absorption and distribution, site specific drug delivery, and sustained drug action. Rationale of prodrug design and practical consideration of prodrug design.

Unit IV

1. Definition, classification, Isolation, SAR and chemistry of Natural products.

* Structural elucidation

1. Alkaloids and Cardiac Glycosides
 - a) Opium alkaloids: Morphine*, Papavarine*
 - b) Indole alkaloids: Reserpine*, Emetine*
 - c) Vinca alkaloids: Vinblastine*, Vincristine*
 - d) Cinchona alkaloids: Quinine*, Quinidine
 - e) Cardiac glycosides: Digitalis, Ouabain*
2. Steroidal Hormones
 - a) Female and male sex hormones –development of antifertility agents.
 - b) Adrenal cortex hormones and their derivatives
 - c) Development of anabolic steroids and antifertility agents

Unit- V

1. Antibiotics

- A) Penicillins and Cephalosporins-Chemistry, SAR
 - a) Early Penicillins and cephalosporins
 - b)AmidoPenicillins
 - c)Beta lactamase stable cephalosporins
 - d)Antipsuedomonalpenicillins and cephalosporins
- B) New oral compounds and future prospects of other betalactam agents
 - a) Nocardins and monobactams
 - b) Clavulanic acid analogs
 - c) Carbapenams
 - d) Other fused Betalactam systems

2. Antineoplastic agents of Natural origin-



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- a) Chemistry of Podophyllotoxin and its derivatives, taxol and artemisinin
- b) Purines and Pyrimidines as Antineoplastic agents

3. Marine Natural products with therapeutic potential

DISCIPLINE : PHARMACY PRACTICE

Unit I

Introduction to Clinical Pharmacy and Its Services

- Definition, evolution and scope of clinical pharmacy
- National (India) and International scenario of clinical pharmacy practice
- Pharmaceutical care
- Ward round participation
- Drug Utilization review
- Medication history interview (MHI)
- Patient medication counselling in a systematic approach
- Documentation of clinical pharmacy services and its significance
- Quality assurance of clinical pharmacy services
- Medication errors

Unit II

Drug and Poison Information Services

- Definition, scope and need for drug information service
- Definition, scope and need for poison information service
- Systematic approach in answering information queries

Unit III

Pharmacotherapeutics

- Cardiovascular system
- Respiratory system
- Endocrine system
- Infectious diseases
- Gastrointestinal system
- Haematology
- Bone and joint disorders
- Oncology disorders
- Dermatology disorders
- Renal disorders



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Unit IV

Significance of Patient Laboratory Data Interpretation

- Lung Function test
- Thyroid function test
- Renal function test
- Liver function test
- Fluid and Electrolyte balance
- Cardiac Biomarker
- Microbial culture sensitivity test
- Haematological function test

Unit V

Clinical Research

- Scope of clinical research
- Drug development process
- Phases of clinical trials
- Good Clinical Practice – ICH, GCP, Central drug standard control organisation (CDSCO) guidelines
- Composition, responsibilities, procedures of IRB / IEC
- Designing of clinical study documents (protocol, CRF, ICF, PIC)
- Designing of clinical study documents (protocol, CRF, ICF, PIC)
- Basic concept of Pharmacovigilance, Hemovigilance, Materiovigilance
- Adverse event reporting systems- India, USA, Europe, Australia, Malaysia

B) COLLEGE OF PHYSIOTHERAPY

PART B

Syllabus for Ph.D. Entrance Test in Physiotherapy

Unit I: Gross anatomy and functional anatomy: Cardiovascular system, respiratory system, central and peripheral nervous system, musculoskeletal system.

Unit II: Physiology and applied physiology of: Cardiorespiratory system, central and peripheral nervous system, special senses, muscles and blood.

Unit III: Physical agents: Low frequency currents – types of low frequency currents used for therapeutic purposes including electrodiagnostics, Medium frequency currents, High frequency Modalities - ultrasound, wax bath, infrared radiations, ultraviolet radiations, shortwave diathermy, microwave diathermy, LASER, cryotherapy.

Unit IV: Therapeutic exercises and massage: Basics of mechanics of human body, types of movements, muscle grading, types of strengthening exercises, exercises for joint mobility, suspension therapy, hydrotherapy, crutch walking, types of massage manipulations including physiological effects and limitations.



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Unit V: Biomechanics and pathomechanics of: Spine, TM joint, upper extremity, lower extremity, posture, gait, respiration.

Unit VI: Physiotherapy in neurological conditions: Neuro Anatomy & Neuro Physiology Principles of assessment and treatment for motor system, sensory system, higher mental functions, perception in central nervous system pathologies, peripheral nervous system pathologies and myopathies. Concepts: motor relearning program, bobath approach, brunnstrome approach, proprioceptive neuromuscular facilitation, roods approach and neurodevelopmental therapy. Principles of Assessment & Motor control theories . Neural control of locomotion. Neurophysiological approaches. Spinal cord injuries- complications, consequences, SCI in children & adult rehabilitation. Various treatment approaches for medical and surgical management. 16. Stroke, Parkinson's disease & its PT management. Movement Disorder. Sensory evaluation and treatment. Motor control evaluation and treatment Traumatic head injury Peripheral nerve lesion Lesions of central nervous system.

Unit VII: Physiotherapy in orthopaedic conditions: Principles of assessment and treatment in fractures, soft tissue injuries, post operative conditions including joint replacements, joint and spinal pathologies. Concepts: Cyriax, Mackenzie and Maitland. Soft tissue approach - myofascial technique, neutral tissue mobilisation, muscle energy methods.. Classification of hand injuries. Principles & methods of hand rehabilitation. Spinal cord injuries- complications, consequences, SCI in children & adult rehabilitation including sports rehab. Physiotherapy Management of cervical & thoracic spine disorders. Physiotherapy Management of conditions affecting shoulder, elbow, hip, knee, ankle & foot. Physiotherapy Management of spinal fractures, pelvic fractures & spinal cord injury. Upper & Lower limb injuries & PT management.

Unit VIII: Physiotherapy in cardiopulmonary conditions: Cardio-thoracic applied anatomy. Respiratory and cardio vascular physiology .Principles of assessment and treatment in cardiac rehabilitation and pulmonary rehabilitation, stress testing and exercise prescription, Principles of assessment and treatment in intensive care unit setting and post operative conditions. Burn and Physiotherapy management. Mechanics of ventilation. ECG, exercise ECG testing, Echo, PFT and ABG analysis etc. Chest Physiotherapy techniques.. Exercise physiology compared with abnormal exercise physiology. Common pulmonary diseases, including assessment and management. Detail study of various conditions (obstructive, restrictive, surgical conditions) patient intervention. Respiratory muscle training. Fitness, definition, aspects and parameters for testing. Scientific basis for exercise programs. Stress modifications by exercise.

Unit IX: Physiotherapy in Gynecological & Obstetrical conditions: Anatomy & Physiology of female reproductive system. Physiology of urinary and faecal continence. Principles of assessment and treatment in antenatal and post natal period. Fitness in women's health. Gynecological infections. Pelvic inflammatory diseases. Infertility. Contraception and family planning. Gynecological surgeries. Types of Prolapse.. Menopause and osteoporosis. Laproscopy and laser surgeries in Gynaecological condition. Incontinence scales. Gynaecologic problems in Female athletes. Musculoskeletal changes during Pregnancy. Common complication and discomforts during Pregnancy. Stages and mechanism of labour. Complication in labour. Physiotherapy management of edema in Pregnancy. Physiotherapy management of GDM, High risk Pregnancy. Management of common problem in Antenatal period.

Unit X: Rehabilitation medicine and community based physiotherapy: Concept of



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rehabilitation and team approach, disability evaluation, architectural barrier, orthotics and prosthetic services. Principles of Geriatric Rehabilitation.

REFERENCES :

- 1) Biomechanical basis of human movement, Joe Hamill Publishers – Williams & Wilkins, 3rd edition.
- 2) Samson Wright Applied Physiology – Cyril A. Keele, Eric Neil & Normal Joels, oxford, 13th edition.
- 3) Sports Physiology – Mcardie, Katch & Katch, Publisher – Lea & Febiger, 4th edition.
- 4) Sports Physiology - Edward L. Fox – College publishing, 2nd edition.
- 5) Clayton's Electrotherapy – Therapy & Practice – Angela Forster, All India Traveler, book seller, 9th edition.
- 6) Electrotherapy Explained – John Low & Ann Reed, Butterwith Heinmann, 3rd edition.
- 7) Massage for therapists – Margaret Hollis, Blackwell Science Ltd, 2nd edition.
- 8) The Principles of Exercise therapy – M. Deena Gardiner, CBS Publications & Distributors, 4th edition.
- 9) Therapeutic Exercise : Foundations & Techniques – Carolyn Kisner, F.A. Davis, 5th edition. 2
- 10) Brunnstroms Clinical Kinesiology, Laura K. Myth et al, Publishers – F.A. Davis
- 11) Joint Structure & Function, Cynthia C. Norkin et al, Publishers – F.A. Davis, 4th edition., 5th edition.
- 12) DeJongs The Neurologic Examination, William W. Campbell, Wolters Kluwer, 7th edition.
- 13) Physical Rehabilitation, O'Sullivan, F.A. Davis company, 6th edition.
- 14) Electrodiagnosis in Diseases of nerve & muscle: Principles & practice, Jun Kimura, OUP USA, 4th edition.



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- 15) Neurological Rehabilitation – Darcy Ann Umphred, Elsevier, 6 th edition.
- 16) Paediatric Neurological Physiotherapy – Suzan Campbell, Elsevier, 4 th edition.
- 17) Essentials of Orthopaedic Physical Assessment, David J.Maggie,Elsevier, 3 rd edition.
- 18) Mechanical diagnosis & therapy – Robin McKenzie, 2 nd edition.
- 19) Aspects of Manipulative therapy – Glasgow, Twomey, Churchill Livingstone, 2 nd edition.
- 20) T.B. of Orthopaedic Medicine – James Cyriax,Bailliere Tindall, 11 th edition.
- 21) Cardio Pulmonary Rehabilitation – Frown Felter & Dean , Mosby, 5 th edition.
- 22) Cardio Pulmonary Rehabilitation – Irwin & Tecklin, 3 rd edition.
- 23) Physiotherapy in Obstetrics & Gynaecology – Polden & Mantle,Jaypee Brothers, 2 nd edition.
- 24) Women’s Health – Ruth Sapsford, Lippincott,1 st edition .
- 25) Rehab of movement – Theoretical basis of clinical practice, Judith Pitt-Brooke, W.B.Saunders



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C) COLLEGE OF NURSING SCIENCES

PART A

Research Methodology and Applied Statistics

- Unit – I Introduction : Methods of acquiring knowledge problem solving and scientific method. Research – definition types characteristics Terminology used in research, purpose, scope and of research. Research and Nursing : Purpose scope and need for Nursing Research, development of research in Nursing, areas of Nursing research
- Unit – II Research process overview : Statement of the problem and research objectives, concepts and constructs, variables assumptions, definitions hypotheses formulation and types Delimitation
- Unit – III Review of related literature Need purpose and sources: Library, -On-line search, retrieval of database from different CD-ROMs and use of A.V. Aids.
- Unit-IV Research approaches and Designs:-
- Historical approaches
 - Survey and experimental approaches,
 - Qualitative research approaches, ethnography and phenomology.
 - Longitudinal, cross sectional and cohort studies-advantages and disadvantages.
 - Experimental designs-Purposes, characteristics, types of design, pre-experimental and quasi and true implemented design, steps of experimental research
 - Sampling Methods-size, criterias of Population, Techniques of sampling criteria, determination of sample size
 - Data collection-Tools and techniques, types, purposes, characteristics and uses.
 - Scale/Construction of tools-Selection/Construction of tools, Testing validity and reliability.

- Techniques of data collection: Technique, tools used for qualitative research, observation, Focus group discussion, measurement and record analysis and field trips.

Unit-V Data collection procedures, analysis & interpretation and data management.

Unit – VI Ethical considerations in Nursing Research

- General considerations
- Ethical considerations specific to approaches, design and data collection procedures.
- Ethics Committee – composition, role and importance
- Guidelines for ethical clearness
- Ethical issues the relation to scientific and professional community (Plagiarism)

Unit – VII Qualitative and quantitative analysis

- Descriptive, inferential and advance statistics
- Parametric and Non parametric methods
- Multivariate analysis

Unit – VIII Communicating research findings

- Research critic
- Project proposal for funding
- Research utilization

PART B

Syllabus for Ph.D. Entrance Test in Nursing Sciences

Note: Candidates will choose a discipline depending on their specialization in PG study and answer.

DISCIPLINE : MEDICAL SURGICAL NURSING

(Cardiology, Neurology, Nephrology, GIT, Orthopedics, Oncology, Nephrology, Urology)

Cardiac disorders and nursing management: Hypertension, Coronary Artery Disease, Angina of various types, Cardiomegaly, Myocardial Infarction, Congestive cardiac failure, Heart Failure, Pulmonary Edema, Shock. Rheumatic heart disease and other Valvular Diseases, Inflammatory Heart Diseases, Infective Endocarditis, Myocarditis, Pericarditis. Cardiomyopathy, dilated, restrictive, hypertrophic. Arrhythmias, heart block and associated illnesses.

Altered pulmonary conditions: Bronchitis, Bronchial asthma, Bronchiectasis, Pneumonias, Lung abscess, lung tumour, pulmonary tuberculosis, fibrosis, pneumoconiosis etc. Pleuritis, effusion, Pneumo, haemo and pyothorax, Interstitial Lung Disease, Cystic fibrosis, Acute and Chronic obstructive pulmonary disease (conditions leading to) Cor pulmonale, Acute respiratory failure, Adult respiratory distress syndrome, Pulmonary embolism and Pulmonary Hypertension.

Vascular disorders Disorders of arteries, Disorders of the aorta, Aortic Aneurysms, Aortic dissection, Raynaud's phenomenon, Peripheral arterial disease of the lower extremities, Venous thrombosis, Varicose veins, Chronic venous insufficiency and venous leg ulcers, Pulmonary embolism.

Congenital Heart Diseases : Etiology, clinical manifestations, diagnosis, prognosis, related pathophysiology, treatment modalities and nursing management of: Embryological development of heart, Classification – cyanotic and acyanotic heart disease, Tetralogy of Fallots, Atrial Septal Defect, Ventricular Septal Defect, Eisenmenger's complex, Patent ductus arteriosus, AP window, Truncus Arteriosus, Transposition of great arteries, Total Anomaly of Pulmonary Venous Connection, Pulmonary stenosis, atresia. Coarctation of aorta, Ebstein's anomaly, Double outlet right ventricle, Single ventricle and Hypoplastic left heart syndrome.

cardio thoracic surgery : Indications, selection of patient, Preoperative assessment and preparation; counselling. Intraoperative care: Principles of open heart surgery, equipment, anaesthesia, cardiopulmonary bypass. Surgical procedures for Coronary Artery Bypass Grafting, recent advances and types of grafts, Valve replacement or reconstruction, cardiac transplant, Palliative surgery and different Stents, vascular surgery, other recent advances.

Thoracic surgery: lobectomy, pneumonectomy, tumour excision etc. Immediate

postoperative care:assessment, post operative problems and interventions : Bleeding, Cardiac tamponade, Low cardiac output, Infarction, Pericardial effusion, Pleural effusion, Pneumothorax, Haemothorax, Coagulopathy, Thermal imbalance, Inadequate, ventilation/perfusion, Neurological problems, renal problems, Psychological problems, Chest physiotherapy. Nursing interventions- life style modification, complementary therapy /alternative systems of medicine. Intermediate and late post operative care after CABG, valve surgery, others and Follow up care.

Cardiac rehabilitation: Process, Physical evaluation, Life style modification, Physical conditioning for cardiovascular efficiency through exercise, Counseling and Follow up care.

Pain Management : Pain & Sedation in Critically ill patients, Theories of pain, Types of pain, Pain assessment, Systemic responses to pain, pain management-pharmacological and non-pharmacological measures and Placebo effect.

Burns : Clinical types, classification, pathophysiology, clinical features, assessment, diagnosis, prognosis, Management: Medical, Surgical & Nursing management of burns, Fluid and electrolyte therapy – calculation of fluids and its administration, Pain management, Wound care, infection control, Prevention and management of burn complications, Grafts and flaps, Reconstructive surgery and Rehabilitation.

Cancer Treatment Modalities and Nurse's Role: Surgery

Principles and classification of chemotherapeutics, Pharmacology of antineoplastic drugs- Mechanism of action, Absorption, protein binding, Bio-transformation, excretion, common side effects.

Radiation Therapy: Physics of radiotherapy, Types of ionizing rays, Radiation, equipments: Linear accelerator, cobalt, Implants, Isotopes, Types of therapies: Oral, Brachy therapy, tele therapy, selectron therapy, Effects of radiation on the body tissue, Radiation biology – cell damage, hypoxic cells, alteration of tumor kinetics.

Bone Marrow Transplantation / stem cell Transplantation: **Palliative care:** Home care, Hospice care and Role of nurse in palliative care.

Pediatric malignancies: Leukemia, Lymphoma, Neuro- blastoma, Wilm's tumor, Soft tissue sarcoma, Retinoblastoma and Nursing Management of children with Paediatric Malignancies.

Physiological Conditions and Symptoms of Cancer Patient

Nutrition: effects of cancer on nutritional Status and its consequences:-Anemia, Cachexia, Xerostomia, mucositis, Dysphagia , nausea and vomiting, constipation, diarrhoea, electrolyte imbalances, taste alterations. Impaired mobility: Decubitus ulcer, pathologic fractures, thrombophlebitis, pulmonary embolism, contractures, footdrop. Other symptoms: Dyspepsia & hiccup, dyspnoea, intestinal obstruction, Fungating wounds, Anxiety & depression, insomnia and Lymph edema. Impact of cancer on sexuality; Effects of radiotherapy/ chemotherapy/surgery on sexuality of the cancer patient nursing management of cancer patients experiencing sexual dysfunction and Sexual counseling.

Cancer Emergencies: Disseminated intravascular coagulation (DIC), malignant pleural effusion, neoplastic cardiac tamponade and septic shock, spinal cord compression, Superior venacava syndrome. Metabolic emergency: hyper and hypocalcemia, Surgical emergency, Urological emergency, Hemorrhage, Organ obstruction, Brain metastasis and Nurses role in managing oncologic emergencies.

Cerebro vascular disorders : Causes, pathophysiology, clinical types, clinical features, diagnosis and prognosis. Management: medical, surgical and nursing management of Stroke & arterio venous thrombosis, Haemorrhagic embolus, Cerebro vascular accidents, Intracranial aneurysm, Subarchnoid Haemorrhage, Arterio venous fistula, Brain tumours, Diseases of cranial nerves; Trigeminal neuralgia, Facial palsy and Bulbar palsy.

Degenerating and demyelinating disorders : Causes, pathophysiology, Clinical types, clinical features, diagnostic, Prognosis, Management: medical, surgical and Nursing management of Motor neuron diseases, Movement disorders- Tics, dystonia, chorea, Wilson's disease, essential tremors, Dementia, Parkinson's disease, Multiple sclerosis and Alzheimer's disease.

Neuro infections: Causes, pathophysiology, clinical types, clinical features, diagnostic and prognosis.

Meningitis-types, Encephalitis, Poliomyelitis, Parasitic infections, Bacterial infections, Neurosyphilis, HIV & AIDS and Brain abscess.

Paroxysmal disorders:

Causes, pathophysiology, Clinical types, Clinical features, diagnosis, Prognosis, Management: medical, surgical and nursing management of Epilepsy and seizures, Status epilepticus, Syncope, Menier's syndrome and Cephalgia.

Developmental disorders :

Causes, pathophysiology, clinical types, clinical features, diagnostic, prognosis, management: medical, surgical and nursing management of Hydrocephalus, Craniosynostosis, spina bifida- Meningocele, Meningomyelocele, encephalocele, syringomyelia, Cerebro vascular system anomalies, Cerebral palsies and Down's syndrome.

Neuro muscular disorders : Causes, pathophysiology, Clinical types, Clinical features, diagnostic, Prognosis , Management: medical, surgical and Nursing management of Polyneuritis – G B Syndrome, Muscular dystrophy, Myasthenia gravis, Trigeminal neuralgia, Bell's palsy, Menier's disease, Carpal tunnel syndrome and Peripheral neuropathies.

Neoplasms – surgical conditions: Causes, pathophysiology, Clinical types, Clinical features, diagnostic, Prognosis, Management: medical, surgical and nursing management of Space occupying lesions –types and common tumors of CNS.

Renal immunopathy/Immunopathology

Urinary tract infections- pyelonephritis, lower urinary tract infections, Disorders for ureters, bladder and urethra, Urinary dysfunctions- urinary retention, urinary incontinence, urinary reflux,

Bladder disorders- neoplasms, calculi, neurogenic bladder, trauma, congenital abnormalities, benign prostrate hypertrophy (BPH) Ureteral disorders: ureteritis, ureteral trauma, congenital anomalies of ureter, Urethral disorders- tumours, trauma and congenital anomalies of ureters.

Glomerular disorders and nursing management: Glomerular nephritis- chronic, acute,

nephritic syndrome, Acute Renal failure and chronic renal failure. Renal calculi, renal tumours-benign and malignant, renal trauma, Renal abscess, Diabetic nephropathy, Vascular disorders, Renal tuberculosis, Polycystic, Congenital disorders and Hereditary renal disorders.

Management of Renal emergencies: Anuria, acute renal failure, poisoning, trauma, urine retention, acute graft rejection, hematuria and nurse's role.

Kidney transplantation, nursing management of a patient with kidney transplantation, kidney transplantations- immunology of graft rejections, the recipient of a renal transplant, renal preservations, Human leucocytic antigen (HLA) typing matching and cross matching in renal transplantation. Surgical techniques of renal transplantations, chronic renal transplant rejection, complication after KTP

Rehabilitation of patient with nephrological problems, risk factors and prevention, rehabilitation of patients on dialysis and after kidney transplant, rehabilitation of patients after urinary diversions, family and patient teaching.

Neuro – Muscular Disorders

Disorders of the spine Intervertebral disc prolapse, Fracture of the spine, Low back disorder – Low back pain, PND, spinal stenosis and spondylosis.

Infections of bones and Joints: Causes, pathophysiology, clinical types, clinical features, diagnosis, prognosis, management, medical surgical and nursing management of: Tuberculosis, Osteomyelitis, Arthritis and Leprosy.

Nutritional/Metabolic and Endocrine Disorders : Rickets, Scurvy, Hyper vitaminosis A and D, Osteomalacia, Osteoporosis, Paget's disease, gout, Gigantism, Dwarfism, Acromegaly, and Therapeutic diets for various orthopedic disorders.

Chronic/Degenerative Diseases of Joints and Autoimmune Disorders: Causes, pathophysiology, clinical types, clinical features, diagnosis, prognosis – medical, surgical and nursing management of Osteo Arthritis, Rheumatoid Arthritis, Ankylosing spondylitis, Spinal disorders and Systemic Lupus Erythematosus.

Text book reference:

1. Alvord Alonso, David D Mc Manus. Text book of peripheral vascular disease. Canada: Jones and Barlett publishers; 2006.
2. Emile R Mahler. Alan T Hirsch. Peripheral arterial disease. Canada: Jones and Barlett publishers; 2006.
3. Joyce M Black, Jane Hawks. Text book of Medical surgical nursing. 7th Edition. New Delhi: Elsevier publication; 2005.

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1. Phipps Wilma J. Shafer's Medical Surgical Nursing. 7th ed. Bangalore: B.T.Publication; 1995.
2. B.T.Basavanthappa. Medical Surgical Nursing. 3rded. New Delhi: Jaypee publishers; 2015.
3. Lewis Heitkemper, Dirksen O'Brien. Medical Surgical Nursing. 7th Edition. Missouri: Elsevier; 2008

DISCIPLINE : OBSTETRIC AND GYNECOLOGICAL NURSING

Management of problems of women during pregnancy: Placenta Previa, Abruptio placenta. Hypertensive disorders in pregnancy, pre-eclampsia, eclampsia, Rh and ABO incompatibility. Hematological problems in pregnancy, Hydramnios-oligohydramnios, prolonged pregnancy, post maturity, multiple pregnancies, Intra uterine infection, Intra Uterine Growth Retardation (IUGR), Premature Rupture of Membrane (PROM) and intra uterine death.

Pregnancies at risk-due to pre-existing health problems: Anemia, Hepatitis, essential hypertension and chronic renal failure. Psychiatric disorders, Infections: Toxoplasmosis Rubella cytomegalo virus Herpes (TORCH), Reproductive Tract Infection (RTI), STD; HIV/AIDS, Vaginal infections.

Abnormal labour, pre-term labour & obstetrical emergencies: Atony of uterus, precipitate labour, prolonged labour, abnormal lie, presentation, position, compound presentation. Contracted pelvis-CPD, dystocia, Obstetrical shock, vasa Previa, inversion of uterus, amniotic fluid embolism, rupture uterus, presentation and prolapse cord, Augmentation of labour, Medical and surgical induction, Version, Manual removal of placenta, Obstetrical operation: Forceps delivery, Ventouse, Caesarian section, Destructive operations, Genital tract injuries-Third degree perineal tear, VVF, RVF. Complications of third stage of labour: Postpartum Hemorrhage and Retained placenta.

Post-partum complications: Puerperal sepsis, urinary complications, puerperal venous thrombosis and pulmonary embolism. Sub involution of uterus and thrombophlebitis. Psychological complications, post-partum blues, depression, psychosis

High Risk Newborn : Small for gestational age, post-mature infant and baby of diabetic and substance use mothers. Asphyxia neonatorum, meconium aspiration syndrome, pneumo thorax, Icterus neonatorum, Hypoxic ischemic encephalopathy, Neonatal seizures, Neonatal hypocalcaemia, hypoglycemia, hypomagnesaemia. Neonatal heart diseases, Neonatal hemolytic diseases, Neonatal infections, neonatal sepsis, ophthalmia neonatorum, congenital syphilis, HIV/AIDS.



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HIV/AIDS: Screening and Parent to child transmission (PTCT), Prophylaxis for mother and baby, Standard safety measures, Counseling, Breast feeding issues.

Gynecological problems and nursing management : Menstrual irregularities, Genital tract infections, Uterine displacement, Genital prolapsed, Genital injuries, Uterine malformation, Uterine fibroid, ovarian tumors, Breast carcinoma, Pelvic inflammatory diseases, reproductive tract malignancies, hysterectomy – vaginal and abdominal.

Administration and management of obstetrical and gynecological unit : Infection control; Standard safety measures, Quality Assurance:-Obstetric auditing –records /reports. Norms, policies and protocols.

Education and training in obstetrical and gynecological care: Staff orientation, training and development, In-service education program and clinical teaching programs.

Text book references:

1. I. M. Bobak, D. L. Lowdermilk & S.E. Perry. Maternity Nursing. 4th edition. St. Louis: Mosby; 1995.
2. D.C. Dutta. Textbook of obstetrics. 6th edition. Calcutta: New central book agency; 2004.
3. Diane M. Fraser. Myles textbook for midwives. 14th edition. Edinburgh: Churchill Livingstone; 2004.
4. Annamma Jacob. A comprehensive textbook of midwifery. New Delhi; Jaypee medical publishers 2005.

Reference Books:

1. James David K. High risk Pregnancy managements options. 2nd ed. London; W B Saunders; 1999.
2. Lee Richard V.Ed. Medical care of the pregnant patient. 1st ed. Philadelphia; American college; 2000.
3. Alexander J.O. Midwifery Practices care topics. 1st ed. London; Macmillan: 1996.
4. Kargar Ishbel Ed. Challenges in the Midwifery Care. 1st ed. London; Macmillan: 1997



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DISCIPLINE : CHILD HEALTH NURSING

Child with respiratory disorders :

Child with upper respiratory tract & Lower respiratory tract:

Child with gastro-intestinal disorders Child with

Hepatic disorders

Child with renal/ urinary tract disorders

Child with cardio-vascular disorders: Acquired: Rheumatic fever, Rheumatic heart disease,
Congenital: Cyanotic and acyanotic.

Child with endocrine/metabolic disorders: Diabetes insipidus, Diabetes Mellitus – IDDM,

NIDDM, hyper and hypo thyroidism, phenylketonuria, galactosemia.

Child with Neurological disorders: Convulsions, Meningitis, encephalitis, guillian- Barre syndrome.

Child with oncological disorders: Leukemias, Lymphomas, Wilms' tumor, neuroblastomas, neuroblastomas, Rhabdomyosarcoma, retinoblastoma, hepatoblastoma, bone tumors,

Child with blood disorders Child with

skin disorders

Common Eye and ENT disorders and common Communicable diseases.

Gastrointestinal system : Cleft lip, cleft palate and conditions requiring plastic surgery, Tracheo esophageal fistula/atresia, Hirschsprungs' disease/megacolon, malrotation, intestinal obstruction, duodenal atresia, gastrochisis, exomphalus, anorectal malformation, omphalocele, diaphragmatic hernia.

Anomalies of the nervous system: Spina bifida, Meningocele, Myelomeningocele, hydrocephalus.

Anomalies of the genito-urinary system: Hypospadias, Epispadias, Undescended testes, Exstrophy bladder.

Anomalies of the skeletal system Eye and

ENT disorders

Head injury, abdominal injury, poisoning, foreign body obstruction, burns &

Bites.

Management of stomas, catheters and tubes, management of wounds and drainages.

Intensive care for pediatric client : Resuscitation, stabilization & monitoring of pediatric patients

Anatomical & physiological basis of critical illness in infancy and childhood, Care of child requiring long-term ventilation

Nutritional needs of critically ill child

High Risk Newborn :

Post-mature infant and baby of diabetic and substance use mothers.

Respiratory conditions: Asphyxia neonatorum, neonatal apnoea, meconium aspiration syndrome, pneumo thorax, pneumo mediastinum. Icterus neonatorum,

Birth injuries, Hypoxic ischaemic encephalopathy, Congenital anomalies.

Neonatal seizures, Neonatal hypocalcaemia, hypoglycemia, hypomagnesaemia. Neonatal heart diseases

Neonatal hemolytic diseases

Neonatal infections, neonatal sepsis, ophthalmia neonatorum, congenital syphilis, HIV/AIDS,



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Advanced neonatal procedures, Calculation of fluid requirements.

Hematological conditions – erythroblastosis fetalis, hemorrhagic disorder in the newborn,

Developmental disturbances and implications for nursing : Adjustment reaction to school, learning disabilities, Habit disorders, speech disorders, Conduct disorders, early infantile autism, Attention deficit hyperactive disorders (ADHD), depression and childhood schizophrenia.

Challenged child and implications for nursing : Physically challenged, causes, features, early detection & management. Cerebral palsied child, mentally challenged child, Training & rehabilitation of challenged children.

Crisis and nursing intervention : The hospitalized child, Terminal illness & death during childhood and Nursing intervention-counseling.

Drugs used in Pediatrics : Criteria for dose calculation: Administration of drugs, oxygen and blood, Drug interactions, Adverse effects and their management.

Text book references:

1. Wong. Whaley & Wong's Nursing care of Infants & Children. 5th ed. St. Louis; Mosby: 1995.
2. Meharban Singh. Care of the Newborn. 6thed. New Delhi; Sagar: 2004.
3. Marlow Dorothy. Textbook of Paediatric Nursing. 6th ed. Philadelphia; W.B.Saunders: 2001.

Reference books:

1. Gupte. Short Textbook of Peadiatrics. 10th edition. New Delhi: Jaypee; 2004.
2. Datta. Paediatric Nursing. 3rd edition. New Delhi: Jaypee publishers; 2014.
3. Guha. Practical Newborn Critical care Nursing. 1st edition. New Delhi: Jaypee publishers; 2015.



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DISCIPLINE : MENTAL HEALTH NURSING

Schizophrenia and Other Psychotic Disorders (Check ICD10): Schizophrenia –Types: Disorganized Schizophrenia, Catatonic Schizophrenia, Paranoid Schizophrenia, Undifferentiated Schizophrenia and Residual Schizophrenia. Other Psychotic disorders: Schizoaffective Disorder, Brief Psychotic Disorder, Schizophrenic form Disorder, Psychotic Disorder Due to a General Medical Condition and Substance-Induced Psychotic Disorder, Treatment and Nursing Management.

Mood Disorders : The Grief Response, Maladaptive Responses To Loss, Types Of Mood Disorders, Depressive disorders, Bipolar disorders, Treatment and Nursing Management.

Neurotic, stress related and somatisation disorders :

- **Anxiety Disorders:** Types: Panic Disorder, Generalized Anxiety Disorder, Phobias, Obsessive-Compulsive Disorder, Posttraumatic Stress Disorder, Anxiety disorder due to a general Medical condition, substance-induced anxiety disorder, treatment modalities. Psychopharmacology & Nursing Management.
- **Adjustment and Impulse Control Disorders:** Adjustment Disorders, Impulse Control Disorders, treatment and nursing management.

Substance Use Disorders: Substance-Use Disorders, Substance-Induced Disorders, Classes of Psychoactive Substances and predisposing Factors the dynamics of Substance-related disorders, The Impaired Nurse, Codependency, Treatment Modalities for Substance-Related Disorders and Nursing Management.

Personality and Sexual Disorders:

- Types of Personality Disorders: Paranoid Personality Disorder, Schizoid Personality Disorder, Antisocial Personality Disorder, Borderline Personality Disorder, Histrionic Personality Disorder, Narcissitic Personality Disorder, Avoidance Personality Disorder, Dependent Personality Disorder, Obsessive-Compulsive Personality Disorder and Passive-Aggressive Personality Disorders. Identification, diagnostic, symptoms, psychopharmacology, treatment & nursing management.
- Eating Disorders: Predisposing Factors; Anorexia Nervosa And Bulimia Nervosa obesity, Psychopharmacology, Treatment & Nursing Management.
- Development of Human Sexuality, Sexual Disorders, Variation In Sexual Orientation and Nursing Management.

Behavioural & Emotional Disorders occurring during Childhood and Adolescence: Mentally Challenged, Autistic Disorders, Attention-Deficit Hyperactivity Disorder, Conduct Disorders, behavioural disorders, Oppositional Defiant Disorder, Tourette's Disorders, Separation Anxiety Disorder, Psychopharmacological Intervention and Nursing Management.

Organic Brain Disorders & Somatoform Disorders:

- Delirium, Dementia, Amnesia, Psychopharmacological Intervention and Nursing Management.
- Somatoform Disorders, Historical Aspects, Epidemiological Statistics, Pain Disorder, Hypochondriasis, Conversion Disorder, Body Dysmorphic Disorder, Sleep Disorder, Treatment Modalities and Nursing Management.
- **Dissociative Disorders and Management :** Historical Aspects, Epidemiological Statistics, Application of the Nursing Management Treatment Modalities and Nursing Management.



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Psychiatric Emergencies and Crisis Intervention:

- **Suicide:** Risk Factors. Predisposing factors, Theories of Suicide-Psychological, Sociological, Biological and Nursing Management.
- **Anger/ Aggression Management:** Anger and Aggression, Types, Predisposing Factors, Management and Role of the Nurse.
 - **Crisis Intervention** : Crisis, Definition, Phases In The Development of A Crisis, Types of Crisis; Dispositional Anticipated Life Transitions, Traumatic Stress, Maturation/ Development, Reflecting Psychopathology, Psychiatric Emergencies and their management, Grief and grief reaction, Crisis Intervention; Phases. Post traumatic stress disorder (PTSD) and role of the Nurse.

Community Mental Health Nursing: National Mental Health Program- Community mental health program, The Changing Focus of care, The Public Health Model, The Role of the Nurse, Case Management. The community as Client: Primary Prevention, populations at Risk, Secondary prevention, Tertiary Prevention and Community based rehabilitation.

Special Considerations in Mental Health Nursing:

- **Medical Conditions due to Psychological Factors**
- **The Aging Individual.**
- **The person living with HIV Disease.**
- **Problems Related to Abuse or Neglect**
- **Psychosocial rehabilitation.**
- **Counseling**

Text book references:

1. Townsend Mary. Psychiatric Health Nursing. 3rd edition. Philadelphia: F.A.Davis;2005.
2. SturtSundeen. Principles & practices of psychiatric Nursing. 7th edition. New Delhi: Harcourt Mosby Inc; 2001.
3. Sreevani.R. A Guide to Mental health psychiatric nursing. 1st edition. New Delhi: Jaypee; 2004.
4. Kapoor Bimla. Textbook of Psychiatric Nursing. 1st edition. Delhi: Kumar publishers; 1998.
5. Ahuja Niraj. A Short Text Book of Psychiatry. 4th edition. Jaypee: New Delhi; 1999.

Reference Books:

1. Prisch Noreen. Psychiatric Mental Health Nursing. 2nd edition. Australia: Thomson Delmer; 2002.
2. Fontaine. K.L. Mental Health Nursing. 1st edition. New York: Addison Wisley; 1999.
3. Vyas.J.N. Text book of Post Graduate Psychiatry. 2nd edition. New Delhi: Jaypee; 1999.
4. Boyd.Mary Ann. Psychiatric Nursing. 2nd edition. Philadelphia: Lippincott; 2002



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DISCIPLINE : COMMUNITY HEALTH NURSING

Epidemiology : Concept, scope, definition, trends, Contribution of epidemiology, Implications, Epidemiological methods, Measurement of health and disease: Health policies, Epidemiological approaches, Study of disease causatives, Health promotion, Levels of prevention, Epidemiology of Communicable diseases, Non-communicable diseases, Emerging and re-emerging diseases Epidemics, National Integrated disease Surveillance Programme, Health information system, Epidemiology study and reports, Role of Community health nurse

National Health and Family Welfare Programmes : Objectives, Organization/manpower/resources, Activities, Goals, inter-sectoral approach, implementation, item/purpose, role and responsibilities of community health nurse: National Vector Borne Disease Control Programme (NVBDCP), National Filaria Control Programme, National Leprosy Eradication Programme, Revised national TB Control Programme, National Programme for Control of Blindness, National Iodine Deficiency disorders Control Programme, National Mental Health Programme, National AIDS Control Programme, National Cancer Control Programme, RCH I and II, Non-communicable disease programmes and NRHM, Health Schemes: ESI, CGHS and Health insurance.

School Health: concepts, objectives, Health assessment, Screening, identification, referral and follow up, Safe environment, Services, programmes and plans- first aid, treatment of minor ailments, Inter-sectoral coordination, Adolescent health, Disaster, disaster preparedness, and management, Guidance and counseling, School health records - maintenance and its importance, Roles and responsibilities of community health nurse.

International health :Global burden of disease, Global health rules to halt disease spread, Global health priorities and programs, International quarantine, Health tourism, International cooperation & assistance, international travel and trade, health & food legislation, laws and adulteration of food, Disaster management, Migration, International health agencies –World Health organizations, World health assembly, UNICEF, UNFPA, UNESCO, ILO, CARE, SIDA, US AID, DANIDA, DFID. Aus AID etc. International health issues and problems, International nursing practice standards, International health vis-a vis national health, International health days and their significance

Education and administration : Quality assurance, Standards, Protocols, Policies and Procedures, Infection control; Standard safety measures, Nursing audit and Design of Sub-Centre/Primary Health Centre/Community health center, Staffing; Supervision and monitoring- Performance appraisal, Budgeting and Material management, Role and responsibilities of different categories of personnel in community health, Referral chain- community outreach services, Transportation, Public relations, Planning in-service educational programme and teaching, Training of various categories of health workers preparation of manuals.

Geriatric: Concept, trends, problems and issues. Aging process, and changes, Theories of ageing, Health problems and needs, Psycho-physiological stressors and disorders, Myths and facts of aging, Health assessment, Home for aged-various agencies, Rehabilitation of elderly, Care of elderly, Elderly abuse, Training and supervision of care givers, Government welfare measures, Programmes for elderly- Role of NGOs, Roles and responsibilities of Geriatric nurse in the community.

Rehabilitation: Introduction: Concepts, principles, trends, issues, Rehabilitation team, Models,



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Methods. Community based rehabilitation, Ethical issues, Rehabilitation Council of India, Disability and rehabilitation- Use of various prosthetic devices, Psychosocial rehabilitation, Rehabilitation of chronic diseases, Restorative rehabilitation and Vocational rehabilitation. Role of voluntary organizations, Guidance and counseling, Welfare measures, Role and responsibilities of community health nurse.

Community mental health: Magnitude, trends and issues, National Mental Health Program-Community mental health program, The Changing Focus of care and The Public Health Model. case management- Collaborative care, crisis intervention, Welfare agencies and Population at Risk. The community as Client: Primary Prevention, Secondary prevention and Tertiary Prevention. Community based rehabilitation, Human rights of mentally ill, Substance use, mentally challenged groups and role of community health nurse.

Occupational health: Introduction: Trends, issues, Definition, Aims, Objectives and Workplace safety, Ergonomics and Ergonomic solutions. Occupational environment- Physical, social, Decision making and Critical thinking. Occupational hazards for different categories of people physical, chemical, biological, mechanical and Accidents. Occupational diseases and disorders. Measures for Health promotion of workers; Prevention and control of occupational diseases, disability limitations and rehabilitation. Women and occupational health. Occupational education and counseling. Violence at workplace: Child labour. Disaster preparedness and management. Legal issues: Legislation, Labour unions, ILO and WHO recommendations, Factories act, ESI act. Role of Community health nurse, Occupational health team.

Textbook references:

1. Park.J.E. Textbook of Preventive & Social Medicine. 18th edition. Jabalpur: BanarasidasBhanot; 2005.
2. Rao KasturiSundar. Introduction to Community Health Nursing. 3rd edition. Chennai: B.I.Publication; 2000.
3. Stanhope. Community Health Nursing. 1st edition. Philidelphia: Mosby; 2008.
4. Clement Stone, Susane. Comprehensive Community Health Nursing. 8th edition. New Delhi: B.I.Waverly; 1998.
5. Hatroberta. Introduction to Community based. 2nd edition. Philidelphia: Lippincott; 2001.

Reference Books:

1. Roa. Sridhar. Principles of Community Medicine. 3rd edition. New Delhi: A.I.T.B.S; 2002.
2. Gupta. M.C. and Mahajan. Textbook of Preventive and Social Medicine. 3rd edition. New Delhi: Jaypee brothers; 2003.
3. Park. K. Essentials of Community Health Nursing. 3rd edition. Jadel: BanarasidasBhanot ; 2000.



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PART B

Syllabus for Ph.D. Entrance Test in Nursing Sciences

SUB DISCIPLINE : MEDICAL SURGICAL NURSING

(Cardiology, Neurology, Nephrology, GIT, Orthopedics, Oncology, Nephrology, Urology)

Cardiac disorders and nursing management: Hypertension, Coronary Artery Disease, Angina of various types, Cardiomegaly, Myocardial Infarction, Congestive cardiac failure, Heart Failure, Pulmonary Edema, Shock. Rheumatic heart disease and other Valvular Diseases, Inflammatory Heart Diseases, Infective Endocarditis, Myocarditis, Pericarditis. Cardiomyopathy, dilated, restrictive, hypertrophic. Arrhythmias, heart block and associated illnesses.

Altered pulmonary conditions: Bronchitis, Bronchial asthma, Bronchiectasis, Pneumonias, Lung abscess, lung tumour, pulmonary tuberculosis, fibrosis, pneumoconiosis etc. Pleuritis, effusion, Pneumo, haemo and pyothorax, Interstitial Lung Disease, Cystic fibrosis, Acute and Chronic obstructive pulmonary disease (conditions leading to) Cor pulmonale, Acute respiratory failure, Adult respiratory distress syndrome, Pulmonary embolism and Pulmonary Hypertension.

Vascular disorders Disorders of arteries, Disorders of the aorta, Aortic Aneurysms, Aortic dissection, Raynaud's phenomenon, Peripheral arterial disease of the lower extremities, Venous thrombosis, Varicose veins, Chronic venous insufficiency and venous leg ulcers, Pulmonary embolism.

Congenital Heart Diseases : Etiology, clinical manifestations, diagnosis, prognosis, related pathophysiology, treatment modalities and nursing management of: Embryological development of heart, Classification – cyanotic and acyanotic heart disease, Tetralogy of Fallots, Atrial Septal Defect, Ventricular Septal Defect, Eisenmenger's complex, Patent ductus arteriosus, AP window, Truncus Arteriosus, Transposition of great arteries, Total Anomaly of Pulmonary Venous Connection, Pulmonary stenosis, atresia. Coarctation of aorta, Ebstein's anomaly, Double outlet right ventricle, Single ventricle and Hypoplastic left heart syndrome.

cardio thoracic surgery : Indications, selection of patient, Preoperative assessment and preparation; counselling. Intraoperative care: Principles of open heart surgery, equipment, anaesthesia, cardiopulmonary bypass. Surgical procedures for Coronary Artery Bypass Grafting, recent advances and types of grafts, Valve replacement or reconstruction, cardiac transplant, Palliative surgery and different Stents, vascular surgery, other recent advances.

Thoracic surgery: lobectomy, pneumonectomy, tumour excision etc. Immediate postoperative care: assessment, post operative problems and interventions : Bleeding, Cardiac tamponade, Low cardiac output, Infarction, Pericardial effusion, Pleural effusion, Pneumothorax, Haemothorax, Coagulopathy, Thermal imbalance, Inadequate ventilation/perfusion, Neurological problems, renal problems, Psychological problems, Chest physiotherapy. Nursing interventions- life style modification, complementary therapy /alternative systems of medicine. Intermediate and late post



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operative care after CABG, valve surgery, others and Follow up care.

Cardiac rehabilitation: Process, Physical evaluation, Life style modification, Physical conditioning for cardiovascular efficiency through exercise, Counseling and Follow up care.

Pain Management : Pain & Sedation in Critically ill patients, Theories of pain, Types of pain, Pain assessment, Systemic responses to pain, pain management-pharmacological and non-pharmacological measures and Placebo effect.

Burns : Clinical types, classification, pathophysiology, clinical features, assessment, diagnosis, prognosis, Management: Medical, Surgical & Nursing management of burns, Fluid and electrolyte therapy – calculation of fluids and its administration, Pain management, Wound care, infection control, Prevention and management of burn complications, Grafts and flaps, Reconstructive surgery and Rehabilitation.

Cancer Treatment Modalities and Nurse's Role: Surgery

Principles and classification of chemotherapeutics, Pharmacology of antineoplastic drugs- Mechanism of action, Absorption, protein binding, Bio-transformation, excretion, common side effects.



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Radiation Therapy: Physics of radiotherapy, Types of ionizing rays, Radiation, equipments: Linear accelerator, cobalt, Implants, Isotopes, Types of therapies: Oral, Brachy therapy, tele therapy, selectron therapy, Effects of radiation on the body tissue, Radiation biology – cell damage, hypoxic cells, alteration of tumor kinetics.

Bone Marrow Transplantation / stem cell Transplantation: **Palliative care:** Home care, Hospice care and Role of nurse in palliative care.

Pediatric malignancies: Leukemia, Lymphoma, Neuro- blastoma, Wilm's tumor, Soft tissue sarcoma, Retinoblastoma and Nursing Management of children with Paediatric Malignancies.

Physiological Conditions and Symptoms of Cancer Patient

Nutrition: effects of cancer on nutritional Status and its consequences:-Anemia, Cachexia, Xerostomia, mucositis, Dysphagia , nausea and vomiting, constipation, diarrhoea, electrolyte imbalances, taste alterations. Impaired mobility: Decubitus ulcer, pathologic fractures, thrombophlebitis, pulmonary embolism, contractures, footdrop. Other symptoms: Dyspepsia & hiccup, dyspnoea, intestinal obstruction, Fungating wounds, Anxiety & depression, insomnia and Lymph edema. Impact of cancer on sexuality; Effects of radiotherapy/ chemotherapy/surgery on sexuality of the cancer patient nursing management of cancer patients experiencing sexual dysfunction and Sexual counseling.

Cancer Emergencies: Disseminated intravascular coagulation (DIC), malignant pleural effusion, neoplastic cardiac tamponade and septic shock, spinal cord compression, Superior venacava syndrome. Metabolic emergency: hyper and hypocalcemia, Surgical emergency, Urological emergency, Hemorrhage, Organ obstruction, Brain metastasis and Nurses role in managing oncologic emergencies.

Cerebro vascular disorders : Causes, pathophysiology, clinical types, clinical features, diagnosis and prognosis. Management: medical, surgical and nursing management of Stroke & arterio venous thrombosis, Haemorrhagic embolus, Cerebro vascular accidents, Intracranial aneurysm, Subarchnoid Haemorrhage, Arterio venous fistula, Brain tumours, Diseases of cranial nerves; Trigeminal neuralgia, Facial palsy and Bulbar palsy.

Degenerating and demyelinating disorders : Causes, pathophysiology, Clinical types, clinical features, diagnostic, Prognosis, Management: medical, surgical and Nursing management of Motor neuron diseases, Movement disorders- Tics, dystonia, chorea, Wilson's disease, essential tremors, Dementia, Parkinson's disease, Multiple sclerosis and Alzheimer's disease.

Neuro infections: Causes, pathophysiology, clinical types, clinical features, diagnostic and prognosis.

Meningitis-types, Encephalitis, Poliomyelitis, Parasitic infections, Bacterial infections, Neurosyphilis, HIV & AIDS and Brain abscess.

Paroxysmal disorders:

Causes, pathophysiology, Clinical types, Clinical features, diagnosis, Prognosis, Management: medical, surgical and nursing management of Epilepsy and seizures, Status epilepticus, Syncope, Menier's syndrome and Cephalgia.

Developmental disorders :

Causes, pathophysiology, clinical types, clinical features, diagnostic, prognosis, management:



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medical, surgical and nursing management of Hydrocephalus, Craniosynostosis, spina bifida-Meningocele, Meningomyelocele, encephalocele, syringomyelia, Cerebro vascular system anomalies, Cerebral palsies and Down's syndrome.

Neuro muscular disorders : Causes, pathophysiology, Clinical types, Clinical features, diagnostic, Prognosis , Management: medical, surgical and Nursing management of Polyneuritis – G B Syndrome, Muscular dystrophy, Myasthenia gravis, Trigeminal neuralgia, Bell's palsy, Menier's disease, Carpal tunnel syndrome and Peripheral neuropathies.

Neoplasms – surgical conditions: Causes, pathophysiology, Clinical types, Clinical features, diagnostic, Prognosis, Management: medical, surgical and nursing management of Space occupying lesions –types and common tumors of CNS.

Renal immunopathy/Immunopathology

Urinary tract infections- pyelonephritis, lower urinary tract infections, Disorders for ureters, bladder and urethra, Urinary dysfunctions- urinary retention, urinary incontinence, urinary reflux, Bladder disorders- neoplasms, calculi, neurogenic bladder, trauma, congenital abnormalities, benign prostrate hypertrophy (BPH) Ureteral disorders: ureteritis, ureteral trauma, congenital anomalies of ureter, Urethral disorders- tumours, trauma and congenital anomalies of ureters.

Glomerular disorders and nursing management: Glomerular nephritis- chronic, acute, nephritic syndrome, Acute Renal failure and chronic renal failure. Renal calculi, renal tumours-benign and malignant, renal trauma, Renal abscess, Diabetic nephropathy, Vascular disorders, Renal tuberculosis, Polycystic, Congenital disorders and Hereditary renal disorders.

Management of Renal emergencies: Anuria, acute renal failure, poisoning, trauma, urine retention, acute graft rejection, hematuria and nurse's role.

Kidney transplantation, nursing management of a patient with kidney transplantation, kidney transplantations- immunology of graft rejections, the recipient of a renal transplant, renal preservations, Human leucocytic antigen (HLA) typing matching and cross matching in renal transplantation. Surgical techniques of renal transplantations, chronic renal transplant rejection, complication after KTP

Rehabilitation of patient with nephrological problems, risk factors and prevention, rehabilitation of patients on dialysis and after kidney transplant, rehabilitation of patients after urinary diversions, family and patient teaching.

Neuro – Muscular Disorders

Disorders of the spine Intervertebral disc prolapse, Fracture of the spine, Low back disorder – Low back pain, PND, spinal stenosis and spondylosis.

Infections of bones and Joints: Causes, pathophysiology, clinical types, clinical features, diagnosis, prognosis, management, medical surgical and nursing management of: Tuberculosis, Osteomyelitis, Arthritis and Leprosy.



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Nutritional/Metabolic and Endocrine Disorders : Rickets, Scurvy, Hyper vitaminosis A and D, Osteomalacia, Osteoporosis, Paget's disease, gout, Gigantism, Dwarfism, Acromegaly, and Therapeutic diets for various orthopedic disorders.

Chronic/Degenerative Diseases of Joints and Autoimmune Disorders: Causes, pathophysiology, clinical types, clinical features, diagnosis, prognosis – medical, surgical and nursing management of Osteo Arthritis, Rheumatoid Arthritis, Ankylosing spondylitis, Spinal disorders and Systemic Lupus Erythematosus.

Text book reference:

4. Alvord Alonso, David D Mc Manus. Text book of peripheral vascular disease. Canada: Jones and Barlett publishers; 2006.
5. Emile R Mahler. Alan T Hirsch. Peripheral arterial disease. Canada: Jones and Barlett publishers; 2006.
6. Joyce M Black, Jane Hawks. Text book of Medical surgical nursing. 7th Edition. New Delhi: Elsevier publication; 2005.

Reference Books:

4. Phips Wilma J. Shafer's Medical Surgical Nursing. 7th ed. Bangalore: B.T.Publication; 1995.
5. B.T.Basavanthappa. Medical Surgical Nursing. 3rded. New Delhi: Jaypee publishers; 2015.
6. Lewis Heitkemper, Dirksen O'Brien. Medical Surgical Nursing. 7th Edition. Missouri: Elsevier; 2008

SUB DISCIPLINE : OBSTETRIC AND GYNECOLOGICAL NURSING

Management of problems of women during pregnancy: Placenta Previa, Abruption placenta. Hypertensive disorders in pregnancy, pre-eclampsia, eclampsia, Rh and ABO incompatibility. Hematological problems in pregnancy, Hydramnios-oligohydramnios, prolonged pregnancy, post maturity, multiple pregnancies, Intra uterine infection, Intra Uterine Growth Retardation (IUGR), Premature Rupture of Membrane (PROM) and intra uterine death.

Pregnancies at risk-due to pre-existing health problems: Anemia, Hepatitis, essential hypertension and chronic renal failure. Psychiatric disorders, Infections: Toxoplasmosis Rubella cytomegalo virus Herpes (TORCH), Reproductive Tract Infection (RTI), STD; HIV/AIDS, Vaginal infections.

Abnormal labour, pre-term labour & obstetrical emergencies: Atony of uterus, precipitate labour, prolonged labour, abnormal lie, presentation, position, compound presentation. Contracted pelvis-CPD, dystocia, Obstetrical shock, vasa Previa, inversion of uterus, amniotic fluid embolism, rupture uterus, presentation and prolapse cord, Augmentation of labour, Medical and surgical induction, Version, Manual removal of placenta, Obstetrical operation: Forceps delivery, Ventouse, Caesarian section, Destructive operations, Genital tract injuries-Third degree perineal tear, VVF, RVF. Complications of third stage of labour: Postpartum Hemorrhage and Retained placenta.

Post-partum complications: Puerperal sepsis, urinary complications, puerperal venous thrombosis and pulmonary embolism. Sub involution of uterus and thrombophlebitis. Psychological complications, post-partum blues, depression, psychosis

High Risk Newborn : Small for gestational age, post-mature infant and baby of diabetic and



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substance use mothers. Asphyxia neonatorum, meconium aspiration syndrome, pneumo thorax, Icterus neonatorum, Hypoxic ischemic encephalopathy, Neonatal seizures, Neonatal hypocalcaemia, hypoglycemia, hypomagnesaemia. Neonatal heart diseases, Neonatal hemolytic diseases, Neonatal infections, neonatal sepsis, ophthalmia neonatorum, congenital syphilis, HIV/AIDS.

HIV/AIDS: Screening and Parent to child transmission (PTCT), Prophylaxis for mother and baby, Standard safety measures, Counseling, Breast feeding issues.

Gynecological problems and nursing management : Menstrual irregularities, Genital tract infections, Uterine displacement, Genital prolapsed, Genital injuries, Uterine malformation, Uterine fibroid, ovarian tumors, Breast carcinoma, Pelvic inflammatory diseases, reproductive tract malignancies, hysterectomy – vaginal and abdominal.

Administration and management of obstetrical and gynecological unit : Infection control; Standard safety measures, Quality Assurance:-Obstetric auditing –records /reports. Norms, policies and protocols.

Education and training in obstetrical and gynecological care: Staff orientation, training and development, In-service education program and clinical teaching programs.

Text book references:

5. I. M. Bobak, D. L. Lowdermilk & S.E. Perry. Maternity Nursing. 4th edition. St. Louis: Mosby; 1995.
6. D.C. Dutta. Textbook of obstetrics. 6th edition. Calcutta: New central book agency; 2004.
7. Diane M. Fraser. Myles textbook for midwives. 14th edition. Edinburgh: Churchill Livingstone; 2004.
8. Annamma Jacob. A comprehensive textbook of midwifery. New Delhi; Jaypee medical publishers 2005.

Reference Books:

5. James David K. High risk Pregnancy managements options. 2nd ed. London; W B Saunders; 1999.
6. Lee Richard V. Ed. Medical care of the pregnant patient. 1st ed. Philadelphia; American college; 2000.
7. Alexander J.O. Midwifery Practices care topics. 1st ed. London; Macmillan: 1996.
8. Kargar Ishbel Ed. Challenges in the Midwifery Care. 1st ed. London; Macmillan: 1997



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SUB DISCIPLINE : CHILD HEALTH NURSING: SYLLABUS

Child with respiratory disorders :

Child with upper respiratory tract & Lower respiratory tract:

Child with gastro-intestinal disorders

Child with Hepatic disorders

Child with renal/ urinary tract disorders

Child with cardio-vascular disorders: Acquired: Rheumatic fever, Rheumatic heart disease, Congenital: Cyanotic and acyanotic.

Child with endocrine/metabolic disorders: Diabetes insipidus, Diabetes Mellitus – IDDM, NIDDM, hyper and hypo thyroidism, phenylketonuria, galactosemia.

Child with Neurological disorders: Convulsions, Meningitis, encephalitis, guillian- Barre syndrome. Child with oncological disorders: Leukemias, Lymphomas, Wilms' tumor,

nephroblastomas, neuroblastomas, Rhabdomyosarcoma, retinoblastoma, hepatoblastoma, bone tumors,

Child with blood disorders

Child with skin disorders

Common Eye and ENT disorders and common Communicable diseases.

Gastrointestinal system : Cleft lip, cleft palate and conditions requiring plastic surgery, Tracheo esophageal fistula/atresia, Hirschsprungs' disease/megacolon, malrotation, intestinal obstruction, duodenal atresia, gastrochisis, exomphalus, anorectal malformation, omphalocele, diaphragmatic hernia.

Anomalies of the nervous system: Spina bifida, Meningocele, Myelomeningocele, hydrocephalus. Anomalies of the genito-urinary system: Hypospadias, Epispadias, Undescended testes, Exstrophy bladder.

Anomalies of the skeletal system

Eye and ENT disorders

Head injury, abdominal injury, poisoning, foreign body obstruction, burns & Bites.

Management of stomas, catheters and tubes, management of wounds and drainages.

Intensive care for pediatric client : Resuscitation, stabilization & monitoring of pediatric patients Anatomical & physiological basis of critical illness in infancy and childhood, Care of child requiring long-term ventilation

Nutritional needs of critically ill child

High Risk Newborn :

Post-mature infant and baby of diabetic and substance use mothers.

Respiratory conditions: Asphyxia neonatorum, neonatal apnoea, meconium aspiration syndrome, pneumo thorax, pneumo mediastinum. Icterus neonatorum,

Birth injuries, Hypoxic ischaemic encephalopathy,

Congenital anomalies.

Neonatal seizures, Neonatal hypocalcaemia, hypoglycemia, hypomagnesaemia.

Neonatal heart diseases

Neonatal hemolytic diseases

Neonatal infections, neonatal sepsis, ophthalmia neonatorum, congenital syphilis, HIV/AIDS, Advanced neonatal procedures, Calculation of fluid requirements.

Hematological conditions – erythroblastosis fetalis, hemorrhagic disorder in the newborn,



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Developmental disturbances and implications for nursing : Adjustment reaction to school, learning disabilities, Habit disorders, speech disorders, Conduct disorders, early infantile autism, Attention deficit hyperactive disorders (ADHD), depression and childhood schizophrenia.

Challenged child and implications for nursing : Physically challenged, causes, features, early detection & management. Cerebral palsied child, mentally challenged child, Training & rehabilitation of challenged children.

Crisis and nursing intervention : The hospitalized child, Terminal illness & death during childhood and Nursing intervention-counseling.

Drugs used in Pediatrics : Criteria for dose calculation: Administration of drugs, oxygen and blood, Drug interactions, Adverse effects and their management.

Text book references:

4. Wong. Whaley & Wong's Nursing care of Infants & Children. 5th ed. St. Louis; Mosby: 1995.
5. Meharban Singh. Care of the Newborn. 6thed. New Delhi; Sagar: 2004.
6. Marlow Dorothy. Textbook of Paediatric Nursing. 6th ed. Philadelphia; W.B.Saunders: 2001.

Reference books:

4. Gupte. Short Textbook of Peadiatrics. 10th edition. New Delhi: Jaypee; 2004.
5. Datta. Paediatric Nursing. 3rd edition. New Delhi: Jaypee publishers; 2014.
6. Guha. Practical Newborn Critical care Nursing. 1st edition. New Delhi: Jaypee publishers; 2015.



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SUB DISCIPLINE : MENTAL HEALTH NURSING: SYLLABUS

Schizophrenia and Other Psychotic Disorders (Check ICD10): Schizophrenia –Types: Disorganized Schizophrenia, Catatonic Schizophrenia, Paranoid Schizophrenia, Undifferentiated Schizophrenia and Residual Schizophrenia. Other Psychotic disorders: Schizoaffective Disorder, Brief Psychotic Disorder, Schizophrenic form Disorder, Psychotic Disorder Due to a General Medical Condition and Substance-Induced Psychotic Disorder, Treatment and Nursing Management.

Mood Disorders : The Grief Response, Maladaptive Responses To Loss, Types Of Mood Disorders, Depressive disorders, Bipolar disorders, Treatment and Nursing Management.

Neurotic, stress related and somatisation disorders :

- **Anxiety Disorders:** Types: Panic Disorder, Generalized Anxiety Disorder, Phobias, Obsessive-Compulsive Disorder, Posttraumatic Stress Disorder, Anxiety disorder due to a general Medical condition, substance-induced anxiety disorder, treatment modalities. Psychopharmacology & Nursing Management.
- **Adjustment and Impulse Control Disorders:** Adjustment Disorders, Impulse Control Disorders, treatment and nursing management.

Substance Use Disorders: Substance-Use Disorders, Substance-Induced Disorders, Classes of Psychoactive Substances and predisposing Factors the dynamics of Substance-related disorders, The Impaired Nurse, Codependency, Treatment Modalities for Substance-Related Disorders and Nursing Management.

Personality and Sexual Disorders:

- Types of Personality Disorders: Paranoid Personality Disorder, Schizoid Personality Disorder, Antisocial Personality Disorder, Borderline Personality Disorder, Histrionic Personality Disorder, Narcissitic Personality Disorder, Avoidance Personality Disorder, Dependent Personality Disorder, Obsessive-Compulsive Personality Disorder and Passive-Aggressive Personality Disorders. Identification, diagnostic, symptoms, psychopharmacology, treatment &



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nursing management.

- Eating Disorders: Predisposing Factors; Anorexia Nervosa And Bulimia Nervosa obesity, Psychopharmacology, Treatment & Nursing Management.
- Development of Human Sexuality, Sexual Disorders, Variation In Sexual Orientation and Nursing Management.

Behavioural & Emotional Disorders occurring during Childhood and Adolescence: Mentally Challenged, Autistic Disorders, Attention-Deficit Hyperactivity Disorder, Conduct Disorders, behavioural disorders, Oppositional Defiant Disorder, Tourette's Disorders, Separation Anxiety Disorder, Psychopharmacological Intervention and Nursing Management.

Organic Brain Disorders & Somatoform Disorders:

- Delirium, Dementia, Amnesia, Psychopharmacological Intervention and Nursing Management.
- Somatoform Disorders, Historical Aspects, Epidemiological Statistics, Pain Disorder, Hypochondriasis, Conversion Disorder, Body Dysmorphic Disorder, Sleep Disorder, Treatment Modalities and Nursing Management.
- **Dissociative Disorders and Management** :Historical Aspects, Epidemiological Statistics, Application of the Nursing Management Treatment Modalities and Nursing Management.

Psychiatric Emergencies and Crisis Intervention:

- **Suicide:** Risk Factors. Predisposing factors, Theories of Suicide-Psychological, Sociological, Biological and Nursing Management.
- **Anger/ Aggression Management:** Anger and Aggression, Types, Predisposing Factors, Management and Role of the Nurse.
- **Crisis Intervention** : Crisis, Definition, Phases In The Development of A Crisis, Types of Crisis; Dispositional Anticipated Life Transitions, Traumatic Stress, Maturational/ Development, Reflecting Psychopathology, Psychiatric Emergencies and their management, Grief and grief reaction, Crisis Intervention; Phases. Post traumatic stress disorder (PTSD) and role of the Nurse.

Community Mental Health Nursing: National Mental Health Program- Community mental health program, The Changing Focus of care, The Public Health Model, The Role of the Nurse, Case Management. The community as Client: Primary Prevention, populations at Risk, Secondary prevention, Tertiary Prevention and Community based rehabilitation.

Special Considerations in Mental Health Nursing:

- **Medical Conditions due to Psychological Factors**
- **The Aging Individual.**
- **The person living with HIV Disease.**
- **Problems Related to Abuse or Neglect**
- **Psychosocial rehabilitation.**
- **Counseling**

Text book references:

6. Townsend Mary. Psychiatric Health Nursing. 3rd edition. Philadelphia: F.A.Davis;2005.
7. StaurtSundeen. Principles & practices of psychiatric Nursing. 7th edition. New Delhi: Harcourt Mosby Inc; 2001.
8. Sreevani.R. A Guide to Mental health psychiatric nursing. 1st edition. New Delhi: Jaypee; 2004.
9. Kapoor Bimla. Textbook of Psychiatric Nursing. 1st edition. Delhi: Kumar publishers; 1998.
10. Ahuja Niraj. A Short Text Book of Psychiatry. 4th edition. Jaypee: New Delhi; 1999.



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Reference Books:

5. Prisch Noreen. Psychiatric Mental Health Nursing. 2nd edition. Australia: Thomson Delmer; 2002.
6. Fontaine. K.L. Mental Health Nursing. 1st edition. New York: Addison Wisley; 1999.
7. Vyas.J.N. Text book of Post Graduate Psychiatry. 2nd edition. New Delhi: Jaypee; 1999.
8. Boyd.Mary Ann. Psychiatric Nursing. 2nd edition. Philidelphia: Lippincott; 2002

SUB DISCIPLINE - COMMUNITY HEALTH NURSING: SYLLABUS

Epidemiology : Concept, scope, definition, trends, Contribution of epidemiology, Implications, Epidemiological methods, Measurement of health and disease: Health policies, Epidemiological approaches, Study of disease causatives, Health promotion, Levels of prevention, Epidemiology of Communicable diseases, Non-communicable diseases, Emerging and re-emerging diseases Epidemics, National Integrated disease Surveillance Programme, Health information system, Epidemiology study and reports, Role of Community health nurse

National Health and Family Welfare Programmes : Objectives, Organization/manpower/resources, Activities, Goals, inter-sectoral approach, implementation, item/purpose, role and responsibilities of community health nurse: National Vector Borne Disease Control Programme (NVBDCP), National Filaria Control Programme, National Leprosy Eradication Programme, Revised national TB Control Programme, National Programme for Control of Blindness, National Iodine Deficiency disorders Control Programme, National Mental Health Programme, National AIDS Control Programme, National Cancer Control Programme, RCH I and II, Non-communicable disease programmes and NRHM, Health Schemes: ESI, CGHS and Health insurance.

School Health: concepts, objectives, Health assessment, Screening, identification, referral and follow up, Safe environment, Services, programmes and plans- first aid, treatment of minor ailments, Inter-sectoral coordination, Adolescent health, Disaster, disaster preparedness, and management, Guidance and counseling, School health records - maintenance and its importance, Roles and responsibilities of community health nurse.

International health :Global burden of disease, Global health rules to halt disease spread, Global health priorities and programs, International quarantine, Health tourism, International cooperation & assistance, international travel and trade, health & food legislation, laws and adulteration of food, Disaster management, Migration, International health agencies –World Health organizations, World health assembly, UNICEF, UNFPA, UNESCO, ILO, CARE, SIDA, US AID, DANIDA, DFID. Aus AID etc. International health issues and problems, International nursing practice standards, International health vis-a vis national health, International health days and their significance

Education and administration : Quality assurance, Standards, Protocols, Policies and Procedures, Infection control; Standard safety measures, Nursing audit and Design of Sub-Centre/Primary Health Centre/Community health center, Staffing; Supervision and monitoring-Performance appraisal, Budgeting and Material management, Role and responsibilities of different categories of personnel in community health, Referral chain- community outreach services, Transportation, Public relations, Planning in-service educational programme and teaching, Training of various categories of health workers preparation of manuals.



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Geriatric: Concept, trends, problems and issues. Aging process, and changes, Theories of ageing, Health problems and needs, Psycho-physiological stressors and disorders, Myths and facts of aging, Health assessment, Home for aged-various agencies, Rehabilitation of elderly, Care of elderly, Elderly abuse, Training and supervision of care givers, Government welfare measures, Programmes for elderly- Role of NGOs, Roles and responsibilities of Geriatric nurse in the community.

Rehabilitation: Introduction: Concepts, principles, trends, issues, Rehabilitation team, Models, Methods. Community based rehabilitation, Ethical issues, Rehabilitation Council of India, Disability and rehabilitation- Use of various prosthetic devices, Psychosocial rehabilitation, Rehabilitation of chronic diseases, Restorative rehabilitation and Vocational rehabilitation. Role of voluntary organizations, Guidance and counseling, Welfare measures, Role and responsibilities of community health nurse.

Community mental health: Magnitude, trends and issues, National Mental Health Program-Community mental health program, The Changing Focus of care and The Public Health Model. case management- Collaborative care, crisis intervention, Welfare agencies and Population at Risk. The community as Client: Primary Prevention, Secondary prevention and Tertiary Prevention. Community based rehabilitation, Human rights of mentally ill, Substance use, mentally challenged groups and role of community health nurse.

Occupational health: Introduction: Trends, issues, Definition, Aims, Objectives and Workplace safety, Ergonomics and Ergonomic solutions. Occupational environment- Physical, social, Decision making and Critical thinking. Occupational hazards for different categories of people physical, chemical, biological, mechanical and Accidents. Occupational diseases and disorders. Measures for Health promotion of workers; Prevention and control of occupational diseases, disability limitations and rehabilitation. Women and occupational health. Occupational education and counseling. Violence at workplace: Child labour. Disaster preparedness and management. Legal issues: Legislation, Labour unions, ILO and WHO recommendations, Factories act, ESI act. Role of Community health nurse, Occupational health team.

Textbook references:

6. Park.J.E. Textbook of Preventive & Social Medicine. 18th edition. Jabalpur: BanarasidasBhanot; 2005.
7. Rao KasturiSundar. Introduction to Community Health Nursing. 3rd edition. Chennai: B.I.Publication; 2000.
8. Stanhope. Community Health Nursing. 1st edition. Philidelphia: Mosby; 2008.
9. Clement Stone, Susane. Comprehensive Community Health Nursing. 8th edition. New Delhi: B.I.Waverly; 1998.
10. Hatroberta. Introduction to Community based. 2nd edition. Philidelphia: Lippincott; 2001.

Reference Books:

4. Roa. Sridhar. Principles of Community Medicine. 3rd edition. New Delhi: A.I.T.B.S; 2002.
5. Gupta. M.C. and Mahajan. Textbook of Preventive and Social Medicine. 3rd edition. New Delhi: Jaypee brothers; 2003.
6. Park. K. Essentials of Community Health Nursing. 3rd edition. Jadel: BanarasidasBhanot ; 2000.