



# All India Institute of Medical Sciences, Jodhpur

## Indicative Syllabus for the Post of Occupational Therapist

(Syllabus is only indicative. The questions can assess any aspect of knowledge, aptitude, attitude and practical skills, which is expected from a trained person to work efficiently at the advertised post)

### **Section A**

40% Questions covering the following topics:-

**General Intelligence & Reasoning:** It would include questions of non-verbal type.

The test will include questions on:-

- Similarities and differences,
- Space visualization,
- Problem solving,
- Analysis,
- Judgment,
- Decision making,
- Visual memory,
- Discriminating observation,
- Relationship concepts,
- Figure classification,
- Arithmetical number series,
- Non-verbal series etc.

The test will also include questions designed to test the candidate's abilities to deal with abstract ideas and symbols and their relationship, arithmetical computation and other analytical functions.

**Quantitative Aptitude:** This paper will include questions on problems relating to:-

- Number Systems,
- Computation of Whole Numbers,
- Decimals
- Fractions
- Relationship between Numbers,
- Fundamental arithmetical operations,
- Percentages,
- Ratio and Proportion,
- Averages,
- Interest,
- Profit and Loss,
- Discount,
- Use of Tables and Graphs,
- Mensuration,
- Time and Distance,
- Ratio and Time,
- Time and Work, etc.



**Computer Knowledge:** Candidates' understanding of the Basics of Computer Knowledge, its parts, functions, emails, MS office, etc.

## Section B (SUBJECT KNOWLEDGE)

60% Questions to be based on the subject specific to the post with following topics:-

### ANATOMY

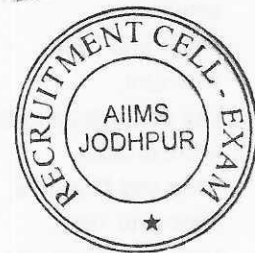
#### General Anatomy

- 1) Cell: Parts, Names of Cytoplasmic organelles and inclusion with their Functions.
- 2) Epithelium: Types with examples and light microscopic structure.
- 3) Connective Tissue: Classification with emphasis to tendon and ligament.
- 4) Cartilage: Types with example.
- 5) Bone: Types with example, types of Ossification (Stages of Ossification not required).
- 6) Joints: Classification with example, emphasis to synovial joints.
- 7) Muscles: Types (details of EM picture not required).
- 8) Nervous Tissue: Structure of Neuron, Synapse Reflex arc, Degeneration and Regeneration of Nerve, typical spinal nerve.
- 9) Embryology
  - a) Ovum, Spermatozoa, fertilization and formation of germ layers and their derivations.
  - b) Development of skin, fascia, blood vessels, lymphatic.
  - c) Development of bones, axial and appendicular skeletal and muscles.
  - d) Neural tube, development of spinal cord, Brain stem and brain (cerebrum, cerebellum)

#### Regional Anatomy

##### Superior Extremity

- 1) Pectoral region, Axilla, Brachial plexus, muscles of arm (front & back), muscles of forearm (front & back), palm (muscles, nerve, vessels) Synovial Bursae of hand and palmar spaces, nerves (axillary, median, ulnar, radial), Cutaneous distribution according to dermatomes, Related Clinical anatomy.
- 2) Joints: Shoulder girdle, shoulder, elbow, radial-ulnar, wrist, first carpo-metacarpal joints.



## **Inferior Extremity**

- (1) Front of thigh, femoral triangle, lumbar plexus, Inguinal group of lymph Nodes, gluteal region, back of thigh, leg (anterior, lateral, posterior compartments) foot (dorsum, plantar), Venous drainage of inferior Extremity, Nerve and their distribution (femoral, sciatic, tibial, common peroneal, obturator), Arches of foot, Cutaneous distribution according to dermatomes, Related clinical Anatomy.
- (2) Joint, hip, knee, ankle, sub-talar & mid-tarsal joints.

## **Abdomen & Pelvis**

- (1) Abdominal wall, inguinal canal, Stomach, Liver, spleen, pancreas, kidney with ureter, small Intestine, Large Intestine, Abdominal Aorta, Portal vein, Diaphragm, Sacral plexus, posterior abdominal wall.
- (2) Sacro-Iliac joint.

## **Thorax**

- (1) Thoracic wall, typical intercostals space, Mediastinum (boundaries, contents), Heart with its internal and external features, Blood vessels, Typical spinal Nerve, movement of ribs during Respiration, pleura, lungs.

## **Head & Neck**

- (1) Muscle of face, Cutaneous distribution of Trigeminal nerve, Triangles of neck (anterior & posterior) Sternocleidomastoid and Trapezius muscles, Muscle of mastication, Nasal cavity, Pharynx and Larynx (Parts, Sensory distribution).
- (2) Joints: Temporo-mandibular Joint, Atlanto-occipital and Atlanto-Axial joints.

## **Neuroanatomy**

- (1) General Introduction and classification, Autonomic Nervous system
- (2) Sympathetic and Para Sympathetic with their difference in distribution and function). Spinal cord, spinal Reflex, Pyramidal and extra-pyramidal tracts (Detail Nucleus not required), Blood supply; brainstem: gross features and blood supply; Cerebellum: gross features and functions; Cerebrum: gross features, functional areas, blood supply; Related clinical anatomy.

## **Cranial Nerves**

- (1) Names in order, Individual Cranial Nerve distribution, Idea about Upper Motor Neuron and Lower Motor Neuron, applied Anatomy.

## **Vertebral Column**

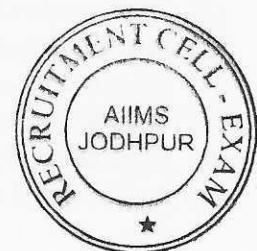
- (1) Identification of vertebrae of different regions.
- (2) Intervertebral joints
- (3) Intervertebral disc
- (4) Muscles of vertebral column
- (5) Weight transmission
- (6) Applied anatomy
- (7) Radiological anatomy



# PHYSIOLOGY

## General Physiology

1. Introduction and scope of Physiology
2. Cell and tissue-Its structure, principal constituents, properties and functions including cell division.
3. Body Fluid.
  - (a) Blood: Composition and general functions of plasma. Blood cells – structure and function - Red Blood cells, white Blood Cells – including numbers and approximate length of life – position, structure and function of cells of Reticulo endothelial system.
  - (b) Blood clotting including bleeding time and clotting time, factors accelerating or slowing the process. Blood groups and their significance, Rh-factor, Hemoglobin and E.S.R.
  - (c) Formation of Blood, tissue fluid and lymph.
4. Cardio-Vascular System.
  - (a) Structure and properties of Heart Muscles and nerve supply of Heart.
  - (b) Structure and functions of arteries, capillaries and veins.
  - (c) Cardiac cycle and Heart sound.
  - (d) Cardiac output measurements, factors affecting Heart Rate and its regulation.
  - (e) Cardio-vascular reflexes.
  - (f) Blood pressure, its regulation, physiological variation, peripheral resistance, Factors Controlling Blood Pressure, Hemorrhage.
  - (g) ECG study and stress test.
5. Respiratory System.
  - (a) Mechanism of Respiration, Changes in diameter of thorax, Intra-pleural and Intra-pulmonary pressure.
  - (b) Quantities of lung volume, tidal and residual volume, vital capacity.
  - (c) Gaseous inter-changes in lung and tissues.
  - (d) Control of respiration-Nervous and chemical significance of changes in rate and depth, transportation of oxygen and carbon dioxide.
  - (e) Respiratory states-anoxia, asphyxia, Cyanosis, Acclimatization.
6. Digestive System
  - (a) General arrangement of alimentary canal, liver, pancreas -position, structure and functions.
  - (b) Nutrition and Diet-carbohydrate, protein, fat, salts, water, vitamins and minerals digestion, absorption and Metabolism.



7. Reproductive System.

- (a) Sex determination and development of puberty, male sex hormones, spermatogenesis, Female sex hormones, menstrual cycle. Ovulation, pregnancy, Function of placenta, lactation.

8. Excretory System.

- (a) Gross and minute structures of kidney, renal circulation, Mechanism of formation of urine, Glomerular filtration rate and tubular function, renal function and renal tests. Physiology of micturition.

9. Endocrine System.

- (a) Structure and function of pituitary (anterior & posterior). Thyroid, Parathyroid, adrenal cortex, adrenal medulla, Thymus and pancreas.  
(b) Blood sugar regulation.

10. Skin-Structure and functions.

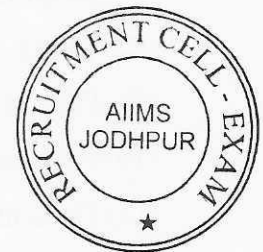
**Neuromuscular Physiology**

- (1) Cell membrane – Ionic and Potential gradient and transport.
- (2) Muscle – Types of muscular tissue – Gross and Microscopic structure – function. Basis of muscle contraction – changes in muscle contraction, Electrical – Biphasic and mono-phasic action potentials, chemical, Thermal and physical changes, Isometric and Isotonic contraction.
- (3) Motor units and its properties – clonus, tetanus, all or none law, Fatigue.
- (4) Nerve – Gross and microscopic structure of nervous tissue, one neuron – Generation of action potential – Nerve impulse condition.
- (5) Neuromuscular junction.
- (6) Degeneration – Regeneration of peripheral nerves, electro tonus and Pfluger's law.
- (7) Types and properties of receptors, types of sensations, synapse, reflex arc, its properties - occlusion, summation, sub minimal fatigue etc.
- (8) Tracts – Ascending and descending and extra-pyramidal tracts.
- (9) Functions of E.E.G.
- (10) Functions of Cerebral cortex, cerebrum, cerebellum, Basal ganglia.
- (11) Thalamus – connection and functions.
- (12) Reticular formation – tone posture & equilibrium, Autonomic nervous system.
- (13) Special Senses Eye-Errors of refraction, equilibrium, Autonomic nervous system.
- (14) Speech and its disorders.
- (15) Ear and Vestibular apparatus, taste, olfactory, somatic sensation



## BIO-CHEMISTRY

- (1) Bio-Physics: Concepts of Ph and buffers, Acid-base equilibrium, osmotic pressure and its physiological applications.
- (2) Cell: Morphology, Structure and functions of cell, cell membrane, Nucleus, Chromatin, Mitochondria, endoplasmic reticulum, ribosome.
- (3) Carbohydrates, Lipids & proteins & Metabolism: Definition, functions, sources, classification & metabolism
- (4) Vitamins: Classification, Fat soluble vitamins A,D,E,K Water soluble vitamins-B Complex and Vitamin 'C', Daily requirement physiological functions and disease of vitamin deficiency.
- (5) Bio-Energetic: Concept of free energy change, Energetic reaction and endergonic reactions, Concepts regarding energy rich compounds, Respiratory chain and Biological oxidation.
- (6) Water Metabolism: Fluid compartments, Daily intake and output, Dehydration, Sodium and potassium Metabolism.
- (7) Mineral Metabolism: Iron, Calcium, Phosphorous, Trace elements.
- (8) Nutrition: Nutritional aspects of carbohydrate, fat and proteins, Balanced diet, Metabolism in exercise and injury, Diet for chronically ill and terminally ill patients.
- (9) Connective Tissue: Mucopolysaccharides, Connective tissue proteins, Glyco-proteins, Chemistry and Metabolism of bone and teeth.
- (10) Nerve Tissue: Composition, Metabolism, Chemical mediators of nerve activities.
- (11) Muscle Tissue: Structure, Metabolism of muscles, Muscle contraction.
- (12) Hormones: General Characteristic and Mechanism of Hormone actions.



# FUNDAMENTAL OF OCCUPATIONAL THERAPY-I

## (1) Definition and scope of Occupational Therapy.

- (a) History & development of Occupational Therapy.
- (b) Philosophy of Occupational Therapy & Rehabilitation, Rehab team, referral mechanism, need of rehabilitation. Principles of physical medicine.
- (c) Application of Occupational Therapy-Occupational Therapy process.
- (d) Introduction to Models of Occupational Therapy

## (3) Theory of Occupation:

- (a) Forms of occupation, occupation as evolutionary trait, Biological dimensions.
- (b) Social dimensions, Psychological dimensions of occupation, Application of theory to Occupational Therapy.

## (4) Occupational Therapy practice frame work

- (a) Domain
- (b) Occupations
- (c) Client factors
- (d) Performance skills
- (e) Context and environment
- (f) Process

## (5) Principles of Therapeutic Exercise:

- (a) Generalized & specific principles.
- (b) Types of Movements, Muscle contraction used in exercise.
- (c) Exercise classification & application to activity.
- (d) Objective to develop i) Power ii) Endurance iii) Coordination iv) ROM
- (e) Progressive resistive exercise (PRE), Regressive resistive exercise (RRE), brief repetitive isometric exercise (BRIME)
- (f) Breathing Exercise

## (4) Therapeutic Modalities:

- (a) Purposeful activity & characteristics

## (5) Activity Analysis:

- (a) Principles of activity analysis
- (b) Biomechanical & sensory motor
- (c) Adapting & grading activity
- (d) Selection of activity



(6) Principles and methods of Assessment:

- (a) Joint range of motion
- (b) Muscle strength

(7) Definition, classification, variation in testing methods of following:

**Muscle Tone:**

- (a) Definition of tone.
- (b) Normal Muscle tone
- (c) Abnormal Muscle tone
- (d) Muscle tone assessment-
- (e) Modified Ashworth Scale

**Coordination:**

- (a) Definition
- (b) Characteristics of coordinated movements
- (c) Inco-ordination, Cerebellar signs, Extra pyramidal signs\
- (d) Assessment of co-ordination

**Sensation:**

- (a) Definition.
- (b) Classification of sensations.
- (c) Techniques and methods of Sensory evaluation. Specific sensory testing.

**Perception:**

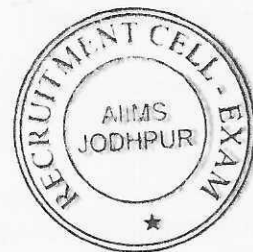
- (a) Definition.
- (b) Components and description of each component. Assessment methods

**Cognition:**

- (a) Definition.
- (b) Evaluation of cognitive Skills: Attention,
- (c) Orientation, Memory (Immediate, Short term and
- (d) Long term Memory), problem solving and
- (e) Executive functions.

**Endurance:**

- (a) Definition.
- (b) Importance of Endurance in performance.
- (c) Factors affecting endurance.
- (d) Relation to activity tolerance.





# FUNDAMENTAL OF OCCUPATIONAL THERAPY-II

## (1) Human Development:

- (a) Theories of development
- (b) Overview of motor, cognitive, psychosocial, language & Play development
- (c) Principal of maturation

## (2) Activities of daily living-

- (a) Definition
- (b) Classification
- (c) Evaluation of ADL
- (d) Various scales used in ADL (FIM, Barthel, Katz, Home management checklist )
- (e) Principles & specific techniques in ADL training for:
  - I. Weakness
  - II. Low endurance
  - III. Limited ROM
  - IV. In co-ordination
  - V. Loss of use of one side of body
  - VI. Limited vision
  - VII. Decreased sensation

## (f) Achieving access to home, community & work place.

- I. Environment modification
- II. Driver Rehab

## (g) Adaptation:

- i. Adaptation process
- ii. Principal of adaptation
- iii. Introduction to adapted devices
- iv. Designing of adaptive devices: Explain design and fabrication of common adaptive devices with knowledge of material and equipment used for the same. Briefly explain application of the same in occupational therapy.

## (3) Cultural & socio-economical deviations in ADL Occupational Therapy as diagnostic & prognostic procedure -

- (a) Definition of evaluation
- (b) Types of evaluation
- (c) Steps involved in evaluation

## (4) Preparing for return to work -

- (a) Prevocational capacity evaluation
  - i. Work capacity evaluation
  - ii. Physical capacity evaluation
  - iii. Functional capacity evaluation
  - iv. Discharge plan



(5) Crafts: Knowledge of tools, equipment, materials, their therapeutic values & uses.

(6) Hand function & evaluation methods:

- (a) Functional anatomy of hand
- (b) Prehension and grasp patterns.
- (c) Grip & pinch strength.

(7) Introduction to hand splints: Definition, Classification, principles, material used in designing & fabrication.

(8) Recreational Activities: Outline the use of the following recreational activities as a therapeutic medium. Plan the following activities for various patient groups.

- (a) Sports
- (b) Games
- (c) Picnic
- (d) Drama
- (e) Leisure & hobbies
- (f) Music
- (g) Play



# PATHOLOGY & MICRO BIOLOGY

## 1.1 Section

### A: Pathology

- (1) Aims and objectives of study of pathology.
- (2) Brief outline of cell injury, degeneration, necrosis and gangrene.
- (3) Inflammation: Definition, vascular and cellular phenomenon, difference between Transudate and exudates, Granuloma.
- (4) Circulatory disturbances: Hemorrhage, Embolism, Thrombosis, Infarction, shock, Volkmann's ischemic contracture.
- (5) Blood disorder: Anemia, Bleeding disorder.
- (6) CVS: Heart and Blood vessels, Coronary heart disease.
- (7) Respiratory System: Ch. Bronchitis, Asthma, Bronchiectasis, Emphysema, COPD etc.
- (8) Bones and Muscles: Arthritis & Spondyloarthropathy.
- (9) PNS and Muscles: Neuropathies, Poliomyelitis & Myopathies.
- (10) CNS: Infection, Demyelinating disease, Degenerative disease.
- (11) Neoplasia.
- (12) Growth and its disorders like hypertrophy, hyperplasia & atrophy.
- (13) Autoimmune diseases.
- (14) Healing and repair.
- (15) Diabetes mellitus and gout.

### Section B: Microbiology

- (1) Introduction and History of Microbiology
- (2) General lectures on Microorganisms (brief).
- (3) Sterilization and asepsis.
- (4) Infection- Source of infection and Entry and it's Spread
- (5) Immunity- Natural and Acquired
- (6) Allergy and hypersensitivity.
- (7) Outline of common pathogenic bacteria and diseases produced by them.
  - (a) Respiratory tract infections.
  - (b) Meningitis
  - (c) Enteric infections.
  - (d) Anaerobic infections.
  - (e) Urinary tract infections.
  - (f) Leprosy, tuberculosis and miscellaneous infections.
  - (g) Wound infections.
  - (h) Sexually transmitted diseases.
  - (i) Hospital acquired infections.
- (8) Virology- virus infections with special mention of Hepatitis.
- (9) Poliomyelitis & rabies



## PHARMACOLOGY

- (1) General Pharmacology:-Introduction and definitions, Nature and sources of drugs: Dosage forms of drugs. Routes of drug administration, Pharmacokinetics (Absorption, Bioavailability, Distribution, Metabolism Excretion, First order Zero order Kinetics); Pharmacodynamics (sites and mechanisms of drug action in brief, Adverse drug reactions, Margin of safety of drugs and factors influencing dosage and drug response)
- (2) Drugs Affecting ANS: - General Introduction, Drug affecting parasympathetic nervous system, Drug affecting sympathetic nervous systems.
- (3) Drugs Affecting Peripheral (Somatic) nervous System:- Skeletal Muscle Relaxants: Local Anesthetics.
- (4) Renal and CVS:- Diuretics; Renin-angiotensin system and its inhibitors, Drug treatment of Hypertension, Angina pectoris, Myocardial infarction Heart failure, and hypercholesterolemia.
- (5) Anti-inflammatory drugs and related autacoids:- Histamine, Bradykinin, 5-HT and their antagonists; Prostaglandin's and leukotrienes; Nonsteroidal-Anti-inflammatory drug, Antirheumatic drugs and drugs used in gout.
- (6) Drugs Affecting CNS:- General anesthetics, Anxiolytics and hypnotics; Alcohol, Opioid analgesis Drug dependence and abuse Antiepileptic drugs, Drug therapy for Neurodegenerative disorders.
- (7) Endocrines:- Parathyroid hormone, Vitamin D, calcitonin and drugs affecting Calcium balance, Thyroid and antithyroid drugs; Adrenocortical and anabolic steroids, Insulins and Oral Hypoglycaemic agents.
- (8) Drugs Affecting Respiratory System:- Drug therapy of bronchial asthma and chronic obstructive pulmonary disease.
- (9) Chemotherapy:- Introduction; sulfonamides, Fluoroquinolones, Penicillins, Cephalosporins, Newer B-lactam antibiotic, aminoglycosides, Macrolides and Newer antibiotics, Tetracyclines, Chloramphenicol, Chemotherapy of Tuberculosis and leprosy, antiseptics and disinfectants.
- (10) Miscellaneous Topics:- Management of stroke, Toxicology and heavy metal poisoning, special aspects of paediatric and geriatric pharmacology; Drug interactions with drugs commonly used by physiotherapists; Hematinics, vitamins and antioxidants.



## ERGOTHERAPEUTICS (12030)

### (1) Industrial Rehabilitation;

- (a) Evaluation and assessment of work process & factor that might bias assessment result
- (b) Occupational injuries of back, upper limb and evaluation and prevention of injuries.
- (c) Return to work
- (d) Job simulation
- (e) Work conditioning and work hardening
- (f) Job site analysis
- (g) On site therapy
- (h) Pre-vocational and vocation assessment
- (i) Employment and types of employment
- (j) Human engineering
- (k) Decision making
- (l) Laws: OSHA
- (m) Work samples: TOWER, WEST, BTE, VALPAR

### (2) Overview of Ergonomics:

- (a) Definition
- (b) Principals of ergonomics
- (c) Role of occupational therapy in ergonomics.

### (3) Ergonomics of computer.

### (4) Ergonomics of home for wheelchair bound patients.

### (5) Assistive technology: ADL, Seating and positioning devices, Transfer devices, Visual Aids, communication aids, Mobility aids, pointing and writing aids.

### (6) Clinical reasoning

### (7) Documentation

### (8) Consultation

### (9) Counseling



## SOCIOLOGY & PSYCHOLOGY (12040)

### Section-A-Sociology

#### (1) Introduction

- (a) Definition of Sociology. Sociology as a science, uses of the study of Sociology, application of knowledge of sociology in Occupational Therapy.

#### (2) Sociology and health

- (a) Social factors affecting health status, social consciousness and perception of illness, social consciousness and meaning of illness, decision making in taking treatment. Institutions of health, their role in the improvement of health and the people.

#### (3) Socialization

- (a) Meaning of socialization, influence of social factors on personality, socialization in hospital and socialization in rehabilitation of patients & the introductory anthropology.

#### (4) Social groups

- (a) Concepts of social groups & influence of formal and informal groups on health and sickness, the role of primary groups and secondary groups in the hospital and rehabilitation setting & knowledge of global social issues prevailing health.

#### (5) Family

- (a) Influence of family on human personality, discussion of changes in the functions of a family, influence of family on the individual's rehabilitation.

#### (6) Social problems of the disabled

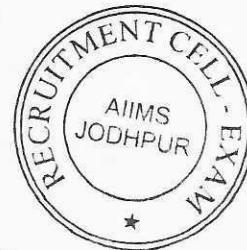
- (a) Consequences of the following social problems in relation to sickness and disability, remedies to prevent these problems:
- i. Population explosion
  - ii. Poverty and unemployment
  - iii. Beggary
  - iv. Juvenile delinquency
  - v. Prostitution
  - vi. Alcoholism
  - vii. Problems of women in employment



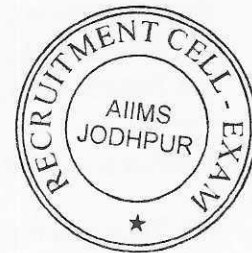
## Section-B-PSYCHOLOGY

### General Psychology

- (1) Definition of Psychology
  - (a) Science of mind, consciousness and behavior
  - (b) Scope and branches of Psychology
- (2) Methods of Introspection, observation and experimentation.
- (3) Concepts of normality and abnormality: Causes of abnormality, Criteria for abnormality. Broad classification of Current model of abnormal behaviour - Medical model, Psychodynamic model, Behaviouristic model & Humanistic model ,and Cognitive model
- (4) Hereditary and Environment
  - (a) Relative importance of heredity and environment
  - (b) Physical characteristics intelligence and personality.
  - (c) Nature vs. nurture controversy
- (5) Learning- Types of Learning
  - (a) Trial and error
  - (b) Classical Learning
  - (c) Instrumental learning
  - (d) Insight for Learning
- (6) Memory
  - (a) Steps of memory
  - (b) Measurement of memory
  - (c) Causes of forgetting
  - (d) Concept of STM and LTM
- (7) Perceptual Process
  - (a) Nature
  - (b) of perceptual process
  - (c) Structural and functional factors in perception
  - (d) Illusion and Hallucination
- (8) Emotion
  - (a) Emotion and feeling
  - (b) Physiological changes
  - (c) Theories of emotion (James-Lange and Cannon-Bard)
- (9) Reaction to loss: Reaction to loss, death and bereavement: shock and disbelief, development of awareness, restitution, and resolution. Stages of acceptance as proposed by Kubler-Ross.



- (10) Stress: Physiological and psychological changes, relation to health and sickness: Psychosomatics, professional stress, burnout.
- (11) Compliance: Nature, factors, contributing to non-compliance, improving compliance.
- (12) Motivation
  - (a) Motive: need and Drive
  - (b) Types of motive: Physiological, Psychological and Social
- (13) Intelligence Definition: theory and assessment
- (14) Personality: Definition: Types and measurements
- (15) Child Psychology
  - (a) Concept of child Psychology
    - i. Meaning: nature and subject matter of child Psychology
    - ii. Practical importance of studying child Psychology for rehabilitation professionals Methods of studying child development
    - iii. Baby Biography
    - iv. Case History
    - v. Behavior rating



### **Applied Psychology**

#### Rehabilitation Psychology:

- (a) Interpersonal Relationships, Family & Social relationships, acceptance about the disability – its outcome in relation to different diagnostic categories psychological aspects of multiple handicapped, contribution of psychology in Total Rehab.



## BIOMECHANICS & KINESIOLOGY

### (1) Essential Concepts:

- (a) Motion and forces, Axis and planes, Mechanical lever, lever in Human body.
- (b) Force distribution-linear force, resultant force & equilibrium, parallel forces in one plane concurrent force.
- (c) Newton's law – Gravity and its effects on human body
- (d) Forces and moments in action
- (e) Concepts of static equilibrium and dynamic equilibrium
- (f) Composition and resolution of forces
- (g) Friction
- (h) Pulleys

### (2) Joint Structure and Functions

- (a) Basic Principles of joint structure and function.
- (b) Tissues present in and around joints including fibrous tissue, bone cartilage, connective tissue, ligaments, tendons etc.
- (c) Classification of joints.

### (3) Muscle Structure and Functions

- (n) Mobility and Stability functions of muscle
- (d) Elements of muscle structures and its properties.
- (e) Types of muscle contraction and muscle work.
- (f) Classification of muscles and their functions
- (g) Group action of muscles, coordinated movement.

### (4) Kinematics and Kinetics- Concept of following joints:

- (a) Upper Extremity
  - i. Scapulo-shoulder Joint
  - ii. Elbow Joint
  - iii. Wrist Joint & Hand

- (b) Lower Extremity
  - i. Hip & pelvis
  - ii. Knee joint
  - iii. Patello femoral joint
  - iv. Ankle and foot

#### (C) Temporomandibular joint

#### (D) Biomechanics of Vertebral Column:

#### (E) Biomechanics of Gait:

- a. Gait cycle, Spatio-temporal parameters of gait, Kinematics and Kinetics of human gait, Determinants of gait, Gait deviations in various orthopedic /neurological conditions



### (5) Posture:

- (a) Anatomical aspects of posture, factors affecting posture, Assessment of posture, Types of posture, Postural deviation.

## COMMUNITY MEDICINE

- (1) General concepts of health diseases, with reference to natural history of disease with pro-pathogenic and pathogenic phases. The role of socio-economic and cultural environment in health and disease. Epidemiology, definition and scope.
- (2) Public health administration an overview of the health administration set up at Central and state levels.
- (3) The national health programme -highlighting the role of social, economic and cultural factors in the implementation of the national programme.
- (4) Health problems of vulnerable groups-pregnant and lactating women, infants and pre-school children, occupational groups.
- (5) Occupational Health-definition, scope occupational disease prevention of occupational disease and hazards.
- (6) Social security and other measurement for the protection from occupational hazard accident and diseases. Details of compensation acts.
- (7) Family planning – objectives of national family planning programmes and family methods. A general idea of advantage and disadvantages of the methods.
- (8) Mental health emphasis on community aspects of mental, role of Occupational Therapy in mental health problems such as mental retardation etc.
- (9) Communicable disease- an overall view of communicable disease, classification according to principle mode of transmission, role of insect and other factors.
- (10) International health agencies.
- (11) Community medicine and rehabilitation epidemiology, habitat, nutrition, environment anthropology.
  - (a) The philosophy and need of rehabilitation
  - (b) Principles of physical medicine
  - (c) Basic principles of administration or organization



## CLINICAL ORTHOPAEDICS (13010)

- (1) Fractures and dislocations of upper limb, lower limb and spine.
- (2) Deformities: Common congenital and acquired deformities of foot, knee, hip, shoulder, elbow and wrist including hand and spine. Infective conditions and lesion of joints and bones. Osteomyelitis, tuberculosis, pyogenic infection, T.B. Joints.
- (3) Arthritis – Osteoarthritis, Rheumatoid arthritis, cervical and lumbar spondylosis, Ankylosing spondylitis.
- (4) Soft tissue involvement – Sprains, strains, Tenosynovitis and contractures.
- (5) Operative Procedures, Amputation Common sites, causes & management, Arthroplasty of joints, joint replacement (total and partial), Osteotomy.
- (6) Bone and joint tumors- classification, clinical features and management of benign and malignant bone and joint tumors.
- (7) Peripheral nerve injuries-their management.
- (8) Trauma and trauma care.
- (9) Reconstructive surgeries for rehabilitation of Poliomyelitis, Leprosy, crush injuries
- (10) Principle of Tendon transfer and its procedure.
- (11) Pediatrics musculo-skeletal conditions and management.
- (12) Neck and Low back ache, Sciatica, PIVD , brachial neuralgia etc.
- (13) Sports injuries and its management.
- (14) Radiological examination.



## OCCUPATIONAL THERAPY IN ORTHOPAEDICS

- (1) Introduction- Brief review of orthopedic conditions.
- (2) Application of occupational therapy principles and techniques in evaluation and treatment of the following orthopedic conditions to include:-
  - (a) Fracture, dislocations and soft tissue injuries – Upper extremity, lower Extremity and spine.
  - (b) Deformities – Congenital and acquired deformities of Upper extremity, lower Extremity and spine.
  - (c) Inflammatory condition of joints and bones. – R.A., Ankylosing spondylitis & other major conditions.
  - (d) Metabolic diseases – Rickets, Osteomalacia Osteoporosis, gout etc.
  - (e) Amputations - Pre & Post operative occupational therapy treatment.
  - (f) Degenerative & Infective conditions-Osteoarthritis of major joints, Spondylosis, Spondylolisthesis, PID, periarthritis Shoulder, T.B. Spine Bone & Major joints, Perthe's disease , Cumulative Trauma Disorder.
  - (g) Supportive and corrective appliances in the rehabilitation of orthopedic cases.
  - (h) Adapted devices in the rehabilitation of orthopedic case.
  - (i) Activities of daily living, testing and training in A.D.L.
  - (j) Poliomyelitis: Post polio residual paralysis and post polio syndromes.
  - (k) Cerebral palsy reconstructive surgeries including limb lengthening procedure and orthotic management.
  - (l) Total Hip and Knee replacements occupational therapy treatment.
  - (m)Pain Management in Occupational Therapy.
- (3) Functional bracing: Definition, concept of functional bracing, objectives and scientific basis of functional fracture bracing, importance in healing of fractures, advantages over conventional bracing, materials used, indications & contraindication of functional bracing.



## GENERAL MEDICINE INCLUDING PEDIATRICS (13030)

### General Medicine

- (1) Introduction of Medicine.
- (2) Diseases of Respiratory System
- (3) Physiology, clinical presentation in relation to diseases, chronic obstructive pulmonary disease
  - (a) Bronchial asthma
  - (b) Pneumonia
  - (c) Bronchiectasis
  - (d) Pleural effusion & Emphysema thoraces
  - (e) Pneumothorax
- (4) Diseases of Kidney
  - (a) Physiology, clinical presentation in relation to
  - (b) ARF
  - (c) CRF
- (5) Hematological Diseases.
  - (a) Anemia
  - (b) Physiology, clinical presentation in relation to Hemophilia
- (6) Endocrine & Metabolic Diseases.
  - (a) Vit. D & Calcium metabolism, Parathyroid gland disorders
- (7) Nutritional Diseases
  - (a) Physiology, clinical presentation in relation to Obesity
- (8) Connective Tissue Diseases
  - (a) Physiology, clinical presentation in relation to Rheumatoid arthritis
  - (b) Gout & other connective tissue disorders
- (9) Infectious Diseases
  - (a) Tetanus
  - (b) Leprosy
- (10) HIV & AIDS
- (11) Cardiac Conditions
  - (a) Basic anatomy of heart, Coronary circulation and development of heart.
  - (b) Normal cardiac contraction and relaxation: mechanism and diagnosis.
  - (c) Physiology, clinical presentation in Ischemic heart disease.
  - (d) Physiology, clinical presentation in Congestive heart failure.
  - (e) Physiology, clinical presentation in Peripheral Vascular disease & Deep vein thrombosis.



## Pediatrics

- (1) Describe growth and development of child from birth to 12 year including physical, social, adaptive development.
- (2) List the maternal and neonatal factors contributing to high risk pregnancy. The neonate: inherited diseases.
- (3) Briefly describe community programmes: International (WHO), national and local for prevention of poliomyelitis, blindness, deafness, mental retardation and hypothyroidism. Outline the immunization schedule for children.
- (4) Cerebral palsy: Define and briefly outline etiology of prenatal, per-natal and postnatal causes, briefly mention pathogenesis, types of cerebral palsy (Classification), findings on examination, general examination of C.N.S, Musculoskeletal and respiratory system.
- (5) Briefly outline associated defects: Mental retardation, microcephaly, blindness, hearing and speech impairment, squint and convulsions.
- (6) Prevention: Appropriate management of high risk pregnancies, prevention of neonatal and postnatal infections, metabolic problems.
- (7) Muscular Dystrophy: Outline various forms, modes of inheritance and clinical manifestation, physical finding in relation to disabilities progression of various forms and prognosis. Describe treatment goals in forms which are fatal and which are not fatal.
- (8) Spinabifida, meningomyelocele: Outline development, clinical features lower limbs, bladder and bowel control, complications UTI & hydrocephalus.
- (9) Still's disease: Classification, pathology in brief, physical findings, course & prognosis. Outline treatment, prevention and correction of deformity.
- (10) Acute C.N.S. infections: Classify (Bacterial and viral) and outline the acute illness & Physiology, clinical presentation.
- (11) Normal diet of new born and child: List dietary calorie, fat, protein, mineral and vitamin requirement in a normal child and in a child with malnutrition.
- (12) Lung infections: Physiology, clinical presentation in relation to bronchiectasis, lung abscess and bronchial asthma, cystic fibrosis
- (13) Intensive pediatric care & Physiology, clinical presentation.



## REHABILITATION MEDICINE

1. Introduction to Rehabilitation medicine
2. Definition concerned in the phases of disability process, explanation of its aims & principles. Scope of rehabilitation.
3. Definition concerned with the causes of Impairment, Functional limitation and Disability
4. Disability Prevention. Limitation & Rehabilitation.
5. Present Rehabilitation Services
6. Legislations for rehabilitation services for the Disabled and P.W.D. acts & Recent Amendments.
7. Rehabilitation Team & its members, their role.
8. Community & Rehabilitation including C.B.R. Advantages of C.B.R. over I.B.R.
9. Contribution of Social Worker towards rehabilitation
10. Vocational evaluation & Goals for disabled, role of Vocational Counselor.
11. Rural rehabilitation incorporated with Primary Health Centre
12. Principles of Communication & its problems and management.
13. Behavioral problems in the Disabled its principle of management.
14. Architectural barriers possible modifications in relation to different disabled conditions.
15. Achieving functional independence
16. Occupational rehabilitation
17. Concepts in geriatric rehabilitation
18. Disability evaluation
19. Visual disability: Definition and classification, mobility techniques, communication skills, prevention of blindness.
20. Socio-economic Rehabilitation:
  - (a) Outline of Social and Vocational Counseling
  - (b) Outline the social implications of disability for the individual and for the community
  - (c) Pre-vocational Evaluation & Role of V.C. Govt. & NGO
  - (d) Discuss methods and team involvement in pre-vocational evaluation and training.
21. Functional Assessment scales & its clinical uses eg, functional independent measure, Sylvan index, PEDI, Gross Motor Function, VAS, ASIA, BBS, Modified Ashwarth.



22. Ethics

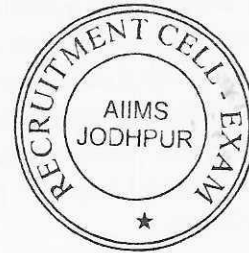
- (a) The implications of and confirmation to the roles of professional conduct
- (b) Legal responsibility for their actions in the professional context and understanding liability and obligations in case of medico legal action
- (c) A wider knowledge of ethics relating to current social and medical policy in the provision of health care

23. Prosthesis and Orthosis

- (a) Definition and Basic Principles
- (b) Designing and Construction of Upper & Lower extremity Orthosis & Spinal Orthosis.
- (c) Prescription and design of footwear & its modification
- (d) Ambulatory Aids & Assistive Devices
- (e) Measurement and P.O.P. cast techniques
- (f) Low cost thermo-labile material for construction of orthosis.

24. Wheelchair:

- (d) Type and modifications of wheelchair
- (e) Wheelchair Mobility
- (f) WHO Guideline
  - i. Assessment
  - ii. Prescription
  - iii. Training





## PSYCHIATRY (13050)

- (1) Introduction, A brief history of psychiatry, with two special references to India and to ancient Indian medicine and its relationship with psychiatry. History taking in psychiatry including mental examination and assessment.
- (2) Functional units of mind, Id ego and super ego - Their functions and interactions.
- (3) Role of defense mechanisms in normal and abnormal behavior.
- (4) Causes of mental disturbances:
  - (a) Hereditary factors.
  - (b) Embryonic development factors.
  - (c) Birth injury.
  - (d) Endocrine disease.
  - (e) Systemic diseases / accidents.
  - (f) Cerebral diseases.
  - (g) Emotional factors.
  - (h) Stresses related to cultural factors.
- (5) Preventive measures: In relation to consanguineous marriages, adequate ante-natal care, obstetric care, mother and child services, psychological services (eg. child guidance, counselling services)
- (6) Criteria for classification and definition of psychiatric illness.
- (7) Psychological reactions of a patient during admission and treatment: anxiety, shock, denial, suspicion, questioning, loneliness, regression, shame, guilt, rejection, fear, withdrawal, depression, egocentricity, concern about small matters, narrowed interests emotional over reactions, perceptual changes, confusion, disorientation , hallucinations, delusions, illusions, anger, hostility, loss of hope.
- (9) Description of the various clinical syndromes including etiology, clinical features, course, treatment, and prognosis.
  - (a) Schizophrenic and other Psychotic disorders
  - (b) Mood disorders
  - (c) Anxiety disorder including Phobias
  - (d) Somatoform disorders
  - (e) Dissociative disorders
  - (f) Factitious disorders
  - (g) Eating and sleep disorders
  - (h) Psychosomatic illness
  - (i) Personality disorders
  - (j) Substance related disorders
  - (k) Sexual dysfunction and gender identity disorders
  - (l) Organic Brain Syndrome
  - (m) Psychiatric disorders of childhood
  - (n) Psychiatric disorders of adolescence
  - (o) Psychiatric disorders of old age

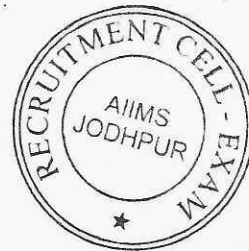


- (10) Legal aspects related to psychiatric patients.
- (a) Civil responsibility.
  - (b) Criminal responsibility.
  - (c) Testamentary capacity.
- (11) Symptoms of mental illness:
- (a) Disturbances of consciousness.
  - (b) Disturbances of reasoning and judgement.
  - (c) Disturbances of memory.
  - (d) Disturbances of thought and perception.
  - (e) Disturbances of volition.
  - (f) Disturbances of motor behaviour.
  - (g) Disturbances of speech.
  - (h) Disturbances of affect.
- (12) Methods of treatment:
- (a) Individual and group psychotherapy
  - (b) Physical Methods: ECT and related side effects, Psychosurgery.
  - (c) Psychopharmacology and related side effects,
  - (d) Social and rehabilitation.



## OCCUPATIONAL THERAPY IN PSYCHIATRY

1. History of psychiatric occupational therapy.
2. Frames of Reference & treatment techniques of psychiatric conditions :
  - (a) Cognitive behavior.
  - (b) Behavioural and behavior modification
  - (c) Psychoanalytical.
  - (d) Occupational behavior and Model of Human Occupation
  - (e) Therapeutic use of self.
  - (f) Projective techniques.
  - (g) Mosey's adaptive skills.
  - (h) Cognitive disability
3. List and describe the various attitudes applied by the therapist in different conditions.
4. Analyze activities with reference to psychiatry and psychodynamics of activities.
5. Describe in detail the assessment of a client including specific methods used in the following:
  - (a) Observation.
  - (b) Interest checklist.
  - (c) Interview.
  - (d) Personality questionnaire.
  - (e) ADL
  - (f) Vocational and Pre-vocational
  - (g) Social dysfunction rating scales – to learn any one scale
6. Help students to identify their client's psychiatric problems in relation to the practical situations observed in OT. Eg. Restlessness manifesting as decreased concentration and attention.
7. Counseling: Guidelines and practical demonstration.
8. Discuss OT assessment, treatment aims, plan and methods of treatment for the following conditions:



- (a) Schizophrenic and other Psychotic disorders
- (b) Mood disorders
- (c) Anxiety disorder including Phobias
- (d) Somatoform disorders
- (e) Factitious disorders
- (f) Dementia
- (g) Conversion and dissociate reaction
- (h) Obsessive Compulsive disorder.
- (i) Psychotic aspects of AIDS
- (j) Learning Disorder.
- (k) Autism
- (l) Eating and sleep disorders
- (m) Psychosomatic illness
- (n) Personality disorders
- (o) Substance related disorders
- (p) Seizure disorders
- (q) Organic Brain Syndrome
- (r) Mental Retardation
- (s) Down syndrome

9. Review psychiatric problems of childhood and apply OT principles and techniques.
10. Outline the types of therapeutic groups and briefly discuss the value of group therapy in psychiatry.
  - (a) Group Therapy.
  - (b) Arts & activity Therapy.
  - (c) Recreational Therapy.
  - (d) Attitude Therapy.
  - (e) Industrial Therapy.
  - (f) Music Therapy.
  - (g) Milieu Therapy
11. Explain precautions to be observed by the therapist in a psychiatric unit, with reference to each condition; including handling of tools and materials, grouping and attitude of the therapist.
12. Occupational Therapy as an adjunct to:
  - (a) Chemo Therapy
  - (b) Insulin Therapy
  - (c) E.C.T.
  - (d) Psycho Therapy
13. Outline the following psychiatric setups and the role of OT in each.
  - (a) Therapeutic community
  - (b) Half Way Homes
  - (c) Geriatric units.
  - (d) Sheltered workshops
  - (e) Day care centers.
  - (f) Government mental hospitals and psychiatric institutions
  - (g) Family therapy units
  - (h) Psychiatric rehabilitation



## OCCUPATIONAL THERAPY IN PEDIATRICS

### Psychological Aspects

- (1) Psychological reactions to disability in childhood and Occupational Therapy role.
- (2) Psychological aspects of hospitalization, and Occupational therapy role.

### Treatment Approaches

- (1) Play Therapy.
- (2) Creative activities.

### Frames of References

- (1) Bobath NDT.
- (2) Rood's neuromuscular facilitation.
- (3) Ayre's Sensory Integration Approach.
- (4) Biomechanical frame of reference
- (5) Developmental FOR
- (6) Peto's - conductive Education.
- (7) PNF

### Occupational Therapy Application

- (1) Cardio respiratory conditions of childhood.
- (2) Cerebral palsy
- (3) Visuo- perceptual and Visuo- motor dysfunction
- (4) Muscular dystrophy
- (5) Erb's palsy
- (6) Poliomyelitis
- (7) Spina bifida and hydrocephalus.
- (8) Arthrogyphsis and other congenital orthopaedic disorders.
- (9) Stills disease.
- (10) Early intervention for congenital neurological disorders (High risk infants)
- (11) Nutritional disorders,
- (12) Mental retardation and Down's syndrome.
- (13) Congenital Syndromes and Chromosomal abnormalities
- (14) Specific learning disabilities
- (15) Pervasive Developmental Disorder
- (16) Attention Deficit Hyperactivity Disorder
- (17) Behaviour disorders.
- (18) Visual / auditory loss.
- (19) Speech and communication disorders.
- (20) Acquired Immuno Deficiency Syndrome.
- (21) Seizure disorders
- (22) Haemophillia
- (23) NICU



## **Occupational Therapy Intervention for specific areas of dysfunction**

- (1) Oromotor dysfunction
- (2) Pre writing and writing skills
- (3) Psychosocial dysfunction
- (4) Postural Control



## **Pediatric Splinting and Adaptive Devices:**

- (1) Including, seating devices, Adaptations for feeding, Mobility and Ambulatory devices, Indication and use of splint for correction of CDH

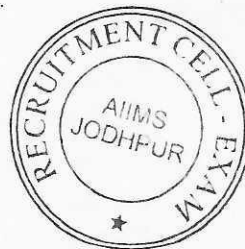
## NEUROLOGY AND NEUROSURGERY (14010)

### 1.1 Neurology

- (1) General principles of neuroanatomy and neurophysiology.
- (2) Diagnosis, assessment and principles of management of neurological patient.  
Cerebral vascular accident
- (3) Acute infection of CNS- Pyogenic meningitis and sequelae, TB infection of CNS, polio
- (4) Parkinsonism and other extra-pyramidal disorder.
- (5) Cerebral palsy
- (6) Seizure disorders.
- (7) MS & other demyelinating disease
  - (a) ALS (Amyotrophic Lateral Sclerosis) and other Motor neuron diseases.
  - (b) Diseases of Peripheral Nerves, cranial nerves, Myasthenia Gravis
  - (c) Diseases of muscles (Polymyositis, muscular dystrophy)
  - (d) Cervical and lumbar Spondylosis and disc prolapse.

### Neurosurgery

- (1) Head Injury – Causes and mechanism of head injury subdural, epidural and intracranial bleeding, types of neurological, disorders following head injury and their complete management.
- (2) Tumors of neurological system management.
- (3) Cranial & Spinal cord lesion management including Paraplegia, hemiplegia, quadriplegia management.
- (4) Neurogenic bladder-Classification-management.
- (5) Pediatric condition-meningocele, meningomyelocele.
- (6) Peripheral nerve lesions, management.
- (7) Surgical management of brain disease and CVA.
- (8) Neuro-surgical Intensive care



## OCCUPATIONAL THERAPY IN NEUROLOGY & NEUROSURGERY

### Neurology:-

#### A. Frame of references:

- (a) Brunnstrom
- (b) Motor relearning program
- (c) Motor control

#### B. Conditions:

- (1) Acute infection of nervous system-Encephalitis, meningitis, Transverse myelitis, neuro-syphilis, Tabes dorsalis.
- (2) Cerebral palsy, hydrocephalus.
- (3) Poliomyelitis
- (4) Cerebro – vascular accidents.
- (5) TBI
- (6) Epilepsy.
- (7) Common affection of peripheral, spinal & cranial nerves, Myasthenia gravis.
- (8) Myopathy & Muscular dystrophies.
- (9) Lesion- pyramidal and extra pyramidal, cerebellar systems, cortical lesion, vestibular.
- (10) Motor neuron diseases.
- (11) Degenerative Neurological conditions, Parkinsonism, syringomyelia, Choreo-athetosis.
- (12) Multiple sclerosis.
- (13) Peripheral N. injuries & Neuropathies.
- (14) Dysphagia
- (15) Spinal cord tumours & Spinal Cord Injury

### Neurosurgery:

- (1) Pre & post operative occupational therapy management of neurosurgery conditions and complications following nerve repairs / nerve grafting.
- (2) Pre & post operative occupational Therapy management in head injury, brain tumor, craniotomy.
- (3) Management of pain syndrome.





## GENERAL SURGERY INCLUDING CTVS AND OBSTETRICS & GYNAECOLOGY

### General Surgery

- (1) Principles of Pre and postoperative management of surgical patients.
- (2) Common pre and post operative complications.
- (3) Shock - definition, types, clinical features, pathology and management
- (4) Haemorrhage- common sites, complication, clinical features and management.
- (5) Surgical intensive care.
- (6) Description of events frequently accompanying in general anesthesia, blood transfusion and physiological response of the body to surgery.
- (7) Abdominal surgery: Incisions, complications and management of various abdominal surgeries.
- (8) Wounds and wound infections, Sinuses and ulcers.
- (9) Burns: Degrees of burns and, management and reconstructive surgery following burns and complications of Burns.

### Cardiothoracic Surgery

- (1) Incisions for cardiothoracic surgery – General pre and post operative management of cardio-thoracic surgery – Various surgical procedures for various chest and cardiac conditions/diseases.

### Obs and Gyn

- (1) Anatomy of pelvic organs- mechanism & physiology of pelvic floor sphincter muscles.
- (2) Pregnancy – stage of pregnancy – Labour – stage of Labour – delivery, Menopause effects in emotions and musculo-skeletal system & common gynecological disorders.

### Plastic Surgery

- (1) Principles of cineplasty, tendon transplant, cosmetic surgery, types of grafts, surgery of hand with emphasis on management of trauma and leprosy.



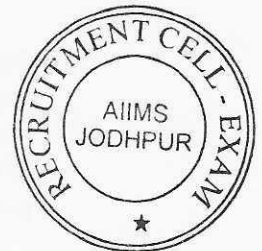
# OCCUPATIONAL THERAPY IN MEDICAL AND SURGICAL CONDITIONS

## Occupational Therapy in Medical Conditions

- (1) Introduction – Brief review of medical condition and treatment and role of Occupational Therapy in the rehabilitation of patient with various diseases.
- (2) Methods of evaluation in Occupational Therapy.
- (3) Therapeutic activities techniques & Frame of reference in Occupational Therapy.
- (4) Aims and Principal of Occupational Therapy.
- (5) Developmental aspects of childhood.
  - (a) Physical, emotional intellectual and social development of the child.
  - (b) Guide for development testing.
  - (c) Average development achievement. (From birth to 10 year age)
  - (d) Objective and function of Occupational Therapy in
    - i. Arthritic conditions
    - ii. Leprosy
    - iii. Cerebro-Vascular accidents.
    - iv. Cardiac – diseases (congenital and acquired)
    - v. Geriatric condition
    - vi. Cerebral palsy, minimal cerebral dysfunction – perceptual motor dysfunctions in a brain – damaged child
    - vii. HIV
    - viii. Pulmonary condition.
    - ix. Hemophilia.
- (6) Assessment and diagnostic functions of Occupational Therapy.
- (7) Home care programme in severely disabled and A.D.L. in adults.

## Occupational Therapy in Surgical Conditions

- (1) Introduction – Brief review of surgical conditions
- (2) Methods of evaluation in Occupational Therapy.
  - a) Role of Occupational Therapy
  - b) Hand injures – emphasis or rehabilitation of Hand and reconstruction.
  - c) Thoracic surgery – Pre and postoperative management in respect of rehabilitation.
  - d) Plastic surgery – basic principal and applications.
  - e) Radical Mastectomy & Role of Occupational Therapy in Obstetrics & Gynecology
  - f) Supportive and corrective application in the rehabilitation of surgical case.
  - g) Adaptive devices in the rehabilitation of surgical cases.
  - h) Activities of daily living testing and training in A.D.L.
  - i) Burns: Define the term “Burns”, classify burns depending on various aspect, describe stage of burns explain role of O.T. in burns patients including assessment, describe O.T. treatment in pregraft postgraft & rehab phase.
  - j) Cancer rehabilitation: Describe preventive, restorative, supportive and palliative aspects in radical mastectomy and head and neck cancer. Explain the concept of hospice, family systems and the need for treatment of the family as the unit care.
  - k) Vascular Condition: Explain peripheral vascular diseases their complications & role of O.T. in their management.



ADVANCES IN OCCUPATIONAL THERAPY AND REHABILITATION (14050)

- (1) Ethics in occupational therapy
- (2) Quality assurance and quality control
- (3) Fiscal management
- (4) Service program
- (5) Service delivery model
- (6) Hospice care.
- (7) Occupational therapy in health promotion and wellness programme.
- (8) Occupational therapy management in stress.
- (9) Occupational therapy role in cardiopulmonary dysfunction.
- (10) Adjunctive therapy,
  - (a) Biofeedback.
  - (b) Physical agent modalities.
  - (c) Yoga.
  - (d) Virtual reality & environment
  - (e) Robotics
  - (f) Functional electrical stimulation
- (11) Tele Rehabilitation
- (12) Role of occupational therapy in sports medicine.
- (13) Occupational Therapy in Blind: Describe the role that the senses play in person's life & in the process of rehabilitation, define the term blindness, refute common misconception about blindness, describe the emotional, physical & psychological needs of blind person and explain preventive measures.
- (14) Occupational Therapy in deaf, dumb: Explain development of auditory perception, define and classify deafness, Enumerate causes of deafness, types of hearing aids, communication skills, Facilities for the deaf-mute, functional and vocational rehabilitation, explain preventive measures, describe vestibular affections and re-training.
- (15) Setting of Rehabilitation centre
- (16) Discuss how occupational therapy & theory & sociopolitical climate influence practice.
- (17) Evidence Based Practice
- (18) Aquatic Therapy
  - (a) Properties of water and principles of aquatic therapy. Definition, Goals,
  - (b) Indications, Precautions & Contraindications of aquatic therapy.
  - (c) Types of aquatic exercises and clinical application
- (19) Kinesio-taping
  - (a) Introduction, basic functional concepts of Kinesio-taping and description of Kinesio- tape.
  - (b) Types of tapes and taping. Kinesio-taping application technique, indications, precautions and contraindications of Kinesio- taping technique and its clinical applications.
- (20) Myo-fascial Release.
  - (a) Introduction, concepts, anatomy and physiology of the fascia.
  - (b) Structural and Physiological effects of Myo-fascial release techniques.
  - (c) Various techniques of Myo- fascial release and interventions for the treatment of contractures, body posture and balance.
- (21) Marketing:
  - (a) Marketing plan.
  - (b) Consumer research
- (22) Disability Management in Occupational Therapy.

