

RAJASTHAN PUBLIC SERVICE COMMISSION, AJMER

SCHEME & SYLLABUS FOR THE POST OF OCCUPATIONAL THERAPIST COMPETITIVE EXAM, 2022 MEDICAL & HEALTH SERVICES DEPARTMENT

- **ANATOMY-**

GENERAL ANATOMY- Cell, epithelium, connective tissue, cartilage, bone, joints, muscles, nervous tissue, embryology.

REGIONAL ANATOMY- Upper limb, lower limb, thorax, head & neck, nervous system, cranial nerves.

- **PHYSIOLOGY: GENERAL PHYSIOLOGY**

Cell and tissue & Body Fluid, Cardio-Vascular System, Respiratory System, Digestive System, Reproductive System, Excretory System, Endocrine System, Skin-Structure and functions, Neuromuscular physiology, Physiology of exercise and work.

- **BIO-CHEMISTRY:**

Bio-Physics, Cell, Carbohydrates, Lipids & Protein Metabolism, Vitamins, Water And Electrolytes, Mineral Metabolism, Nutrition, Connective Tissue, Nerve Tissue, Muscle Tissue, Hormones

- **FUNDAMENTALS OF OCCUPATIONAL THERAPY:**

Definition & Scope of occupational therapy, Principles & techniques of Therapeutic Exercises and its relation with the development of appropriate therapeutic activities, Principles & methods of assessment & variations in testing & recording, Hand functions & its evaluation technique and splinting, Concept & principles of adaptation & assistive technology, Designing of appropriate aids, appliances for the above said needs, Basic concepts of Human Development; Principles of maturation- a. Cephalo-caudal patterns of development, b. Proximal distal patterns of development, c. Medial-lateral patterns of development, d. Mass to specific patterns of development, e. Gross motor to fine motor patterns of development.

Activities as a basis of Occupational Therapy- a. Therapeutic Activities- Definition, classification, characteristics & scope, b. Activities of daily living- Definition, classification, evaluation, various scales used & principles of training, c. Remedial activities for physical & intellectual needs, Muscle strengthening JROM, Coordination, education, memory, perception, d. Pre-vocational and vocational activities, e. Therapeutic Modalities, f. Purposeful activities, g. Crafts & play and adaptive tools, equipment materials, Therapeutic values & uses h. Recreation (i) Group (ii) Individual, I. Activity analysis- Principles, components, selection criteria.

Occupational therapy in industrial rehabilitation: a. Pre-vocational capacity evaluation- (i) Work capacity evaluation, (ii) Physical capacity evaluation, (iii) Functional capacity evaluation, b. Job analysis (i) On Job or work site evaluation (ii) Work samples (iii) Introduction, work hardening & work conditioning,

Selection & designing of basic manipulative and sensory appreciation activities for the normal child,

The selection or designing of activities/exercises in relation to the appropriate development level for the child to develop co-ordination, activities of daily living, body image concept muscle strengthening, joint mobility, maintenance of tone etc.

- **SOCIOLOGY:**

Definition of Sociology. Sociology as a science, uses of the study of Sociology, application of knowledge of sociology in Occupational Therapy, Sociology and health, Socialization and social groups, Family, Social problems of the disabled.

- **PATHOLOGY:**

Aims and objectives of study of Pathology, Brief outline of cell injury, degeneration, necrosis and gangrene, Inflammation, Circulatory disturbances, Blood disorder: Anemia, Bleeding disorder, CVS: Heart and Blood vessels, Respiratory System: Chronic Bronchitis, Asthma, Bronchiectasis, Emphysema, COPD etc., Bones and Joint, PNS and Muscles: Neuropathies, Poliomyelitis & Myopathies etc., CNS: Infection, Demyelinating disease, Degenerative disease etc., Growth and its disorders like hypertrophy, hyperplasia & atrophy, Autoimmune diseases, Healing and repair, Metabolic disorders.

- **MICROBIOLOGY:**

Introduction and History of Microbiology, Sterilization and asepsis, Infection-Source of infection and Entry and its Spread, Immunity-Natural and Acquired, Allergy and hypersensitivity, Virology, Outline of common pathogens.

- **PHARMACOLOGY:**

General Pharmacology, Drugs affecting Peripheral (Somatic) nervous system, Anti-inflammatory drugs, Drugs affecting CNS and ANS: General anesthetics, Anxiolytics and hypnotics; Alcohol, Opioid analgesic Drug dependence and abuse Antiepileptic drugs, Drug therapy for Neurodegenerative disorders, Drugs affecting respiratory system, Drugs affecting exercise therapy and ADLs.

- **OCCUPATIONAL THERAPY & INDUSTRIAL REHABILITATION:**

History of Occupational Therapy in industrial setup, Definition, concept, classification of work, work process, Definition, Concept & Principles of- Ergonomics, Principles & process of ergonomic analysis & designing of work set ups, Evaluation & assessment of work process Concept of body mechanics in industrial injuries, Occupational injuries of back, upper-limb & its evaluation & prevention program.

Preparation of patient to return to job-various aspects; Job simulation, work conditioning & work hardening, Job site analysis and on the job evaluation, Standardized & non-standardized evaluative tools in industrial rehabilitation, Prevocational assessment & principles of training, Vocational education, training & rehabilitation, Classification of employment, Human engineering, Importance of human engineering, Development of human engineering, Problems in human engineering, Decision Making, Process and steps in decision making, Individual decision-making, Decision making in organization, Employees, Compensation Act, PWD Act, 1995 & provisions for Employees & Employers.

- **OCCUPATIONAL THERAPY & MENTAL HEALTH**

I. Basic Techniques: Principle & Frame of reference, Occupational therapy in mental health. Types of therapy and Activities of Daily Living (ADL) in mentally challenged patients. Occupational therapy evaluation in mental health.

II. Occupational Therapy in common mental disorders e.g., schizophrenia, psychosis, substance abuse, attention deficit etc.

- **PSYCHOLOGY**

General Psychology, Methods of introspection, observation and experimentation, Learning, Memory, Emotion, Motivation, Intelligence, Personality, Child Psychology and development, Applied Psychology including industrial and rehabilitation psychology.

- **PSYCHIATRY**

Definition/criteria of Normality and Abnormality contributing to normal mental health, Occupation therapy: scope and practices in common psychiatric disorders, Therapies: psychotherapy – group therapy, psychodrama, behavior modification, family therapy, play therapy, psychoanalysis, hypnosis.

- **COMMUNITY MEDICINE**

General concepts of health diseases etc., CBR and Institutional based rehabilitation and strategies intervene in rural health system, CBR in relation to different medical & surgical condition, Biostatistics and research methodology.

- **BIOMECHANICS & KINESIOLOGY**

Essential Concepts of Movement, Kinetic Aspects of Limb Movement: Biomechanics of Upper Extremity, lower extremity and spine, Biomechanics of normal GAIT and posture.

- **ORTHOPEDECS IN OCCUPATIONAL THERAPY**

Fractures, dislocations and regional orthopedic disorders in relation to orthopedic management. Deformities, Inflammatory conditions and lesions of joints and bones. Osteomyelitis, tuberculosis, pyogenic infections, Osteoarthritis, T.B. Joints, Tenosynovitis etc., Peripheral nerve injuries – their management, Role of occupational therapy in reconstructive surgeries, Principle of Tendon transfer and its occupational therapy concepts, Pediatrics musculo-skeletal conditions and occupational therapy.

- **SURGERY INCLUDING OBSTETRICS & GYNAECOLOGY IN OCCUPATIONAL THERAPY**

General Surgery: Principles of Pre and post operative occupational therapy of surgical patients including surgical conditions. Physiological response of the body to surgery.

Burns: Degrees of burns and management and reconstructive surgery following burns and complications of Burns and occupational therapy in burn. Principles of tendon transplant, cosmetic surgery, types or grafts, surgery of hand with emphasis on relative occupational therapy.

- **MEDICINE INCLUDING PEDIATRICS IN OCCUPATIONAL THERAPY**

Disease of Respiratory System e.g., COPD, bronchial asthma etc., Physiology, clinical presentation and occupational therapy in CRF, Physiology, clinical presentation in relation to metabolic disorders, Joint and connective disorder in relation to occupational therapy, HIV & AIDS and primary prevention and its effect on occupation, Physiology, clinical presentation of various vascular disorders.

- **PAEDIATRICS**

Growth and development of a child from birth to 12 year including physical, social and adaptive development. Cerebral palsy, etiology of prenatal, peri-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. Associated defects: Mental retardation, microcephaly, blindness, hearing and speech impairment, squint and convulsions.

Muscular Dystrophy: forms, modes of inheritance and clinical manifestation physical finding in relation to disabilities progression of various forms and prognosis, Neural tube defects: development, clinical features affecting lower limbs, bladder and bowel control and complications.

Normal diet of new born and child: dietary calorie, fat, protein, mineral and vitamin requirement in a normal child and in a child with malnutrition. Respiratory disorders in relation to occupational therapy.

- **NEUROLOGY & NEUROSURGERY IN OCCUPATIONAL THERAPY**

- I. Neurology-**

General principles of neurological and neuro physiological diagnosis, Cerebro-vascular disease, Parkinsonism and other extra-pyramidal disorder, MS & other Demyelinating disease, Peripheral nerve disorders, Diseases of muscles (polymyositis, muscular dystrophy, Tumor, Epilepsy, Dysphagia,

- II. Neurosurgery -**

Head Injury- Causes-and mechanism of head injury, subdural, epidural and intracranial bleeding types, neurological disorders following head injury
Paraplegia, hemiplegia, quadriplegia and occupational therapy management etc.

- **FUNCTIONAL ASSESSMENT & OUTCOME MEASURES**

Occupational therapy approaches on the basis of Assessment-

- I. Introduction to Approaches: Behavioral Approach, Biomechanical Approach, Cognitive Disability Approach, Developmental Approach, Neuro Developmental Approach, Sensory Integration Approach, Human Occupation Approach, Rehabilitation Approach, Psychodynamic Approach, Spatiotemporal Approach. Occupational Adaptation: an Integrative approach.
- II. Clinical Decision Making
- III. Rationale of Plan of Occupational Therapy Management
 1. Functional Assessment scales.
 2. Clinical reasoning and evidence based practice.

- **CLINICAL REHABILITATION**

Introduction to Rehabilitation medicine. Definition concerned in the phases of disability process, explanation of its aims & principles. Scope of rehabilitation. Definition concerned with the causes of Impairment Functional limitation and Disability. Disability Prevention. Limitation & Rehabilitation. Present Rehabilitation Services in India. Legislations for rehabilitation services for the Disabled and P.W.D. Act. Rehabilitation. Team & its members, their role and Functions. Community & Rehabilitation including C.B.R. Architectural barriers possible modifications in relation to different disabled conditions. Achieving functional independence.

Basic concepts of prosthetics and orthotics and wheelchair prescription. Assistive devices and ADL. Rehabilitation and disaster management, Environmental control and home modification, Functional capacity evaluation, Driving assessment and modification, Disabled and vocational assessment and rehabilitation.

- **OCCUPATIONAL THERAPY IN ORTHOPAEDIC CONDITIONS**

Methods of Evaluation in Occupational Therapy- Objectives and functions of occupational therapy in following:

Deformities, joint and bone disorders including trauma. Inflammatory conditions of joints. Metabolic bone diseases. Amputations. Supportive and corrective appliances in the rehabilitation of orthopaedic cases. Adapted devices in the rehabilitation of orthopaedic cases. Activities of daily living, testing and training in A.D.L. Occupational Therapy in Neurotrauma and hand injury etc.

- **OCCUPATIONAL THERAPY IN SURGICAL CONDITIONS INCLUDING OBSTETRICS & GYNAECOLOGY**

Objectives and functions of Occupational Therapy in:

Burns- emphasis on management in respect of rehabilitation. Thoracic surgery- Pre and post operative management in respect of rehabilitation. Plastic surgery- Basic principles and applications. Radical Mastectomy and role of occupational therapy.

- **OCCUPATIONAL THERAPY IN MEDICAL CONDITIONS INCLUDING PEDIATRIC**

Review of medical conditions and treatment and role of occupational therapy in the rehabilitation of patients with various diseases.

Methods of evaluation in Occupational Therapy. Concept of occupational therapy in Developmental disorders of childhood. Objective and functions of Occupational Therapy in- Rheumatoid arthritis, Leprosy, Cerebro-Vascular accidents, Cardiac-diseases (Congenital and acquired), Geriatric conditions, Cardio-pulmonary condition.

Home care programme in severely disabled and A.D.L. in adults and children

- **OCCUPATIONAL THERAPY IN NEUROLOGICAL & NEUROSURGICAL CONDITIONS**

Brief review of following Medical conditions, aims, various modalities, appropriate frame of reference, objectives and functions of Occupational Therapy in following:

I. Neurology:

Acute infections of nervous system-Encephalitis, meningitis, transverse myelitis neuro syphilis. Cerebral palsy, Hydrocephalus. Poliomyelitis. Cerebra-vascular accidents. Common affections

of peripheral, spinal & cranial nerves. Myopathy & Muscular dystrophies. Lesion of pyramidal, extra pyramidal, cerebellar systems. Motor neuron diseases. Degenerative Neurological conditions, Parkinsonism syringomyelia etc. Multiple sclerosis. Peripheral nerve injuries & Neuropathies. Other common neurological disorders- dysphasia, tumors, dysphagia. Cognitive impairment and Occupational Therapy intervention.

II. Neurosurgery:

1. Pre & post operative Occupational Therapy management of neurosurgical conditions and complications, nerve repairs / nerve grafting etc.
2. Pre & post operative Occupational Therapy management in various neurosurgical conditions.

<u>Scheme of Examination</u>				
S.No.	Subject	No. of Questions	Total Marks	Examination Duration
1	Concerned Subject	150	150	2.30 Hours
	Total	150	150	

1. The competitive examination shall carry 150 marks and 150 questions of Multiple Choice Type questions.

2. There shall be one paper. Duration of Paper will be Two hours and Thirty Minutes.

3. Negative marking shall be applicable in the evaluation of answers. For every wrong answer one-third of the marks prescribed for that particular question shall be deducted.

Explanation: - Wrong answer shall mean an incorrect answer or multiple answers.