Maharashtra University of Health Science, Nashik

Occupational Therapy Syllabus

III – B.O.Th.

[This syllabus is applicable form 2009 – 2010 i.e. from the batch who gets admitted to the first B. O. Th Course in the year 2007 - 08]

Subjects-		**Transcript Hours**
Medicine -		
	A) General Medicine	160 hrs
	B) Neurology	
Surgery –	General Surgery	160 hrs
	Orthopedics	
Psychiatry		85 hrs
Work physiology & Ergonomics		75 hrs
* O.T. in Medical Conditions		120 hrs
* O.T. in Surgical Conditions		120 hrs
Supervised Clinical Practice		680 hrs
Total		**1400 hrs**

* Total practice clinical skills under the supervision of clinical supervisor and to maintain folder in which prescribed case histories and written assignments are to be documented and to obtain signature from the respective section In-charge at the end of clinical assignment / posting.

MEDICINE

A- GENERAL MEDICINE

A- General Medicine - (Theory & Clinical 50 + 30 hrs)

B- Neurology - (Theory & Clinical 50 + 30 hrs)

Total hours - 160

Total marks - 100 (Theory – 80, Internal Assessment – 20)

Course Objectives :

The students will be able to fulfill with 75% accuracy as the following objectives measured by written evaluation. They should also be able to evaluate common medical condition that are routinely seen by occupational therapist

Section – I

1) Diseases of cardiovascular system :

Describe ischemic heart diseases their clinical features investigation and management. Explain management of hypertension Describe rheumatic heart diseases with their clinical features investigation and management Enumerate the cause of peripheral vascular disease and discuss its management Describe etiology classification investigation & management of congenital heart diseases. Describe basics in ECG as applicable to ischemic hear diseases.

2) Diseases of endocrine system:

Explain clinical features, investigations management and complication of diabetes Explain in brief hyperthyroidism, hypothyroidism and hypopitutarism, hypoadrenalism hyperadrenalism, calcium metabolism.

3) Diseases of respiratory system :

Describe the investigation and management of the following respiratory condition as bronchia asthma, bronchiectasis, pulmonary embolism, tuberculosisi, lung abscess, emphysema, lobar pneumonia, pleurisy, empyema & cor pulmonale.

4) Rhuematological diseases :

Describe the pathogenesis, clinical features, investigations, complications, and brief outline of management of the following diseases : RA, seronegative spondylosing arthritis, S.L.E., gout, still disease and polymyositis.

5) Diseases of digestive system

Discuss the management of gastric and duodenal ulcer, haematemesis, hepatitis, & malabsorption syndrome.

6) Deficiency diseases Describe the clinical features, investigation and management of rickets protein deficiency, beri beri & subacute combined degeneration.

7) Obesity : Describe the aetiology and management & complications is brief of obesity

8) Paediatrics

Explain normal process of growth and immunization schedule, importance of breast-feeding, birth injuries, nutritional deficiency, genetic anomalies and their management. Describe neuor-muscular, musculo-skeletal, & cardio- pulmonary conditions related to immunological conditions, nutritional deficiencies, infectious diseases, & genetically transmitte conditions.

Describe the management principles of intensive neonatological and paediatrics care.

9) Geriatrics

Describe the age-related problems in elderly and their management in health care and wellness clinics.

10) Dermatology :

Describe the clinical features, investigation and management of leprosy and HIV infections, in brief common skin infections : psoriasis and venereal diseases.

11) Nephrology :

Describe the clinical features and management of acute and chronic renal failure, glomerular nephritis, and urinary tract infection.

12) Haematology :

Describe the clinical features, and management of anaemias, haemophilia, thalassaemia, leukaemia, and Hodgkin's diseases.

13) Intensive medical care

14) Common Infectious Diseases :

Describe the causes, symptoms & management of malaria, rabies, leptospirosis, dengue.

COURSE CONTENTS

		Total hrs
1)	Diseases of cardio-vascular system : Ischaemic Heart Disease, Hypertensive Heart Disease, Rheumatic Heart Disease, Thyrotoxic Heart Disease, arrhythmias Vascular Disease, Thrombosis, Embolism and ECG reading.	6
2)	Diseases of Endocrine system : Emphasis on Diabetes mellitus – Definition, Diagnosis, classification & complications & management, outline of Hypopititutarism, Goitre, Hyperthyroidism & Hypothyroidism, hypoadrenalism & hyperadrenalism and calcium metabolism.	2

3)	Diseases of Respiratory system : Diseases of lungs, Bronchi, Bronchial Asthama, Bronchiectasis, Pulmonary Embolism, Pulmonary Tuberculosis, Lung Abscess, Emphysema, Lobar pneumonia, Bronchopneumonia, cor pulmonale, Fibroid lung.	6
4)	Rheumatic Disease : Rheumatic fever. Rheumatoid Arthritis, stills disease, SLE, polymyositis, seronegative arthritis gout --- aetiopathogenesis, clinical features, complications, diagnosis and brief outline of the management.	4
5)	Diseases of Digestive System : Gastric and Duodenal ulcers, haematemesis, hepatitis, malabsorption syndrome.	1
6)	Deficiency Diseases : Rickets, protein deficiency, beri beri, subacute combind degeneration	1
7)	Obesity : aetiology and management	2
8)	Paediatrics : Normal growth and development, immunization, breast feeding, Birth Injuries, C.N.S. involvement, nutritional deficiencies and associated systemic conditions, genetic anomalies, Intensive neonatological & paediatric care	12
9)	Geriatrics : Age related changes in human body & response, health care for elderly patients, wellness clinic.	3
10)	Dermatology : Common skin infections, Psoriasis, Leprosy, Venereal disease & infections diseases HIV infections.	6
11)	Nephrology : Acute and chronic renal failure, glomerular nephritis, urinary tract infection	2
12)	Haematology : Anaemia, haemophilia, thalassaemia, leukaemia, Hodgkin's disease.	2
13)	Intensive medical care	2
14)	Common Infectious Diseases : malaria, rabies, leptospirosis, dengue	1
15	Clinical	30

BOOK RECOMMENDED :

1) API – Text book of Medicine 5th edition
2) Golwalla's medicine for students
3) Davidson Principles and Practice of medicine
4) Essentials of Paediatrics – by O.P. Ghai-Inter Print publications
5) D.K. series in Paediatrics
6) Handbook of practical medicine – P.J. Mehta

B- NEUROLOGY

COURSE OBJECTIVES

Describe the clinical features, investigation and management of the following neurology conditions.

1) Disorders of cerebral circulation (CVA)

2) Disorders of cerebellar function : infections, tumors and hereditary conditions of cerebellum.

3) Hereditary and degenerative disorders, cerebral atrophy, multiple sclerosis, motorneuron diseases, syringomyelia & spinabifid.

4) Disorders of higher cortical function with respect to lobes and hemisphere (neuropsychological evaluation and treatment.)

5) Diseases of cranial nerves due to infections and entrapments and neuralgias.

6) Disorders of nerve roots & peripheral nerves – polyneuropathies, Gullain Barre Syndrome.

7) Disorders of muscles – types of dystrophies, & myasthenia gravis.

8) Disorders of extrapyramidal system – parkinsons, chorea, dystonia, athetosis, Hemiballimus.

9) Disorders of spinal cord and cauda equina mylopathies tumors and infections.

10) Infectionso f nervous system : meningitis, encephalitis, poliomyelitis, syphilis, tetanus.

11) Epilepsy.

12) Alzheimer's diseases.

COURSE CONTENTS :

		Total hrs
1.	Disorders of cerebral circulation	6
2.	Disorders of cerebellar function	5
3.	Hereditary and degenerative disorders	5
4.	Disorders of Higher Cerebral cortical function and behavioral neurology, Sp. areas of cerebral cortex, Neuro psychological syndromes, perceptions,	3
5	The Cranial Nerves & special senses	3
6	Disorders of nerve roots & peripheral nerves.	5
7	Disorders of muscle	5
8	Movement Disorders (Extra pyramidal syndrome)	6
9	Disorders of spinal cord & cauda equine	3
10	Infections of Nervous system	3
11	Epilepsy	4
12	Alzheimer's disease	2
	Clinical hrs	30

BOOK RECOMMENDED :

1) Disease of Nervous System Walton
2) Clinical neurology – Roger Bannister
3) Clinical examination in neurology – Bickerstaff

Clinical : A) Evaluation, interpretation, presentation and recording of one case each in :-
1) U.M.N. Lesions 2) L.M.N. lesion 3) Respiratory 4) Cardiological
5) Rheumatological conditions
B) Evaluation of neonatal / abnormal reflexes and examination of nervous system in paedtric cases.

} 60 hrs

Pattern of Examination ---- Theory ----- University Exam 80 marks

----- Internal assessment 20 marks

(Internal assessment – one exam at the end of each term)

----- Total 100 marks

Distribution of marks in university ---- 80 marks

Section A – MCQ Single best response --------- (1 x 20) 20 marks

General Medicine 10 MCQs

Neurology 10 MCQs

Section B - Medicine Q2 SAQ 3 out of 4 ------ (3 x 5) 15 marks

(based on cardiovascular & thoracic conditions)

Q3 SAQ 5 out of 6 ------ 15 marks

Based on general, medical and neurological conditions except cardio- thoracic

Section C - Compulsory Q 4 LAQ -- 15 marks (LAQ should give break up of 15 marks)

(based on central nervous system condition)

Q5 LAQ 1 out 2 --- 15 marks (LAQ should give break up of 15 marks)

(based on respiratory, cardiovascular conditions reheumatology, dermatology and paediatrics)

SURGERY

Total hours 160 (Gen. Surgery 80 hrs (40 theory + 40 clinical)

(Orthopaedics 50 theory and 30 clinical)

Total Marks 100 (Theory 80, Internal Assessment – 20)

COURSE OBJECTIVES :

Student should be able to fulfill with 75% accuracy as measured by written evaluation the following objectives. They should be able to evaluate common surgical conditions that are routinely seen by occupational therapist.

Section – I

A . General surgery

1) Describe classification of wound, stages of healing & their treatment
2) Describe importance of water – electrolyte balance in shock & hemorrhage & describe classification of shock in brief.
3) Describe acute & chronic infections of wound, ulcers, cysts & abscesses their clinical features and complications with brief knowledge of their management.
4) Explain in brief pre & postoperative management & its importance.
5) Describe in brief various surgeries of head & neck their indications, and complications.
6) Also explain indications for various surgeries of alimentary system and their post operative management.
7) Explain causes of burns, various classification their medical & surgical management with role of Burns rehabilitation team.
8) Describe Indications & causes of amputation, criteria for selection of site of amputation and pre & post operative management.
9) Explain in brief classification of tumours, clinical features and their pre & post operative management. Post operative management of mastectomy.
10) Describe the etiological & anatomical classification of head injuries, their clinical features a management.

B. Plastic surgery

1) Describe various Hand injuries, their surgical & post operative management with complications, (including tendon injuries and nerve injuries, tendontransfers)
2) Explain various skin grafts & flaps, their classification, criteria for selection and post operative management
3) Explain in brief various indications for cosmetic surgery, keloid and hypertrophic scar, their preoperative surgical & post operative management.
4) Describe in brief new techniques in microvascular surgeries their advantages and management

C. Neuro surgery

1) Describe common congenital and childhood disorders such as hydrocephalous, spina bifid their clinical features complications and their surgical management with post-operative care.
2) Describe first aid management of spinal cord injury and its importance and implications.
3) Classify and describe signs and symptoms of spinal & intra-cranial tumours

D. Cardiovascular and Thoracic surgery

Describe brief pathology, clinical features the indications, various operative procedures of surgery of cardiac and respiratory conditions and explain pre & post surgical management.

E. Describe problems of ear, nose throat and their management in brief U.R.T. infections, tracheostomy, 7th & 8th nerve palsy, vertigo & dysphagia.

F. Describe common opthalmological condition in brief and their management (diseases of conjunctiva, cateract, optic nerve tumour, keratoplasty 7 eye donation)

G. Describe common obstretrical and gynaecological conditions and their management in brief.

COURSE CONTENTS

Theory + Clinical

(12)

Section – I

A) GENERAL SURGERY :

1) Wounds classification, healing process and principles of treatment.
2) Haemorrhage, shock water & Electrolyte imbalance, effect of anesthesia and surgical traum
3) Infectious : acute and chronic, signs, symptoms and complications.
4) Preoperative and post operative management
5) Head & neck alimentary system
6) Burns : causes, classification & management.
7) Amputations : indications, site of election, management.
8) Tumours : classification & management, radical mastectomy and management.
9) Head injury : types, clinical features and management.

B) PLASTIC SURGERY : (9)

Hand injuries and tendon transfers, skin grafts & flaps, classification, criteria for selection, indications for management of cosmetic surgery, keloid and scar management, micro vascular surgery.

C) NEURO SURGERY : (4)

1) Congenital & child hood disorders : Hydrocephalus, Spinabifida
2) First aid management of spinal cord injury.
3) Intracranial tumours, : classification, signs & symptoms

D) CARDIO VASCULAR & TRORACIC SURGERY : (6)

Pathology, clinical features, and criteria for surgical intervention of cardio-respiratory disorders. Post operative complications and management in thoracotomy, thoracoplasty, lobectomy, pneumonectomy, decortication, CABG, valvular surgery, congenital heart disease surgeries, surgery for peripheral vascular disease.

E) Common problems of ear, nose & throat & their management. **(3)**

F) Common Opthalmological conditions and their management – surgeries for 3rd, 4th, and 6th cranial nerve palsies. **(3)**

G) Common obstetrical and gynaecological conditions – urogenital dysfunctions, neoplasms of female reproductive organs, surgical management, pre, peri and post menopause – physiology complications and management. **(3)**

CLINICAL :

Students will have to undergo outdoor and indoor clinical teaching for surgical case They have to evaluate, present and record one case in each of following and obtain signature teacher from time to time ;

A) Burns, head injury, amputation, post-thoracic surgery, post-tendon transfers, post-hand injury cases.
B) Auscultation and it's interpretation, with special emphasis to pulmonary function, reading and interpretation of X-ray chest, P.F.T. Blood – gas analysis.
C) Observation of one abdominal, one thoracic surgery, one surgery of skin graft/flap
D) Clinical 40 hrs

Books recommended :

1) Nan: Undergraduate Surgery
2) Bailey & Love's Short practice of surgery

Section – II

ORTHOPEDICS :

Course Objectives

1) Describe the pathology clinical manifestations and the management of trauma of bones, joints and soft tissues of upper and lower extremities including spine. Describe the classification of fracture, stages of fracture healing, various types of management and their complications of upper and lower limbs bones.
2) Explain various types of peripheral nerve injuries their clinical signs and surgical conservative management in detail including brachial plexus and lumbosacral plexus injuries.
3) Describe various deformities of spine and extremities, their clinical features, investigations and conservative, surgical management with postoperative care.
4) Describe congenital conditions such as congenital dislocation of hip, CTEV and Perthes' disease and describe its conservative and surgical management.
5) Explain reconstructive surgeries carried out in neuromuscular involvement for successful rehabilitation and their postoperative. Management (CP and Post polio deformities including limb lengthening surgeries).
6) Enumerate infections and tumors of musculoskeletal system and explain their etiology clinical features surgical procedures and postoperative management.
7) Explain various etiological factors of backache, its clinical features, and conservative and surgical management.
8) Enumerate common sports injuries; explain biomechanics, causes of these injuries and their management.
9) Explain classification of Arthritis, rheumatological conditions affecting musculoskeletal system Metabolic Bone disorders like osteoporosis, osteomalacia, Rickets, osteoarthritis with their clinical features, conservative and surgical management including replacement arthroplasties.
10) To comprehend radiological examination, various techniques used in radiological examination and its use in diagnosis.

COURSE CONTENTS : **Total marks**

1) Pathology, clinical manifestations, management of trauma of the bones & soft tissue involving musculoskeletal system (limb and spinal trauma.) Fractures – Classification, management complications of upper and lower limb bones. 10
2) Peripheral nerve injuries, BPI & management. 4
3) Deformities of spine, extremities and management 4
4) Congenital malformation & management. 4
5) Reconstructive surgeries for the rehabilitation of neuromuscular affection including limb lengthening. 5
6) Infections & tumors of the musculoskeletal system and management. 5
7) Backache – Surgical management 4
8) Sports injuries, biomechanics & management 4
9) Arthritis, rheumatic disease and Metabolic bone disease & their management 6
10) Radiological evaluation and diagnosis 4

CLINICAL :

Students will have to undergo outdoor and indoor clinical teaching for surgical cases.

A) Students have to evaluate, present and record one case in each of following and obtain signature of teacher from time to time ;
   1) Acute soft tissue lesions (including nerve injury)
   2) Osteoarthritis and rheumatoid arthritis
   3) Backache
   4) Post-operative fracture of extremities
   5) Traumatic paraplegia / quadriplegia

B) Observation of surgeries – Internal fixation, knee / hip replacement and reconstructive surgery of tendons one each

Clinical 30 hrs

BOOK RECOMMENDED :

1) Outline of orthopaedics by Adams
2) Orthopaedics by Dr. Maheswari
3) Orthopaedics by Dr. L.N. Vora
4) Outline of fractures by Adams.

Pattern of Examination -- Theory ---- University Exam 80 marks

------ Internal assessment 20 marks

(Internal assessment – one exam at the end of each term)

----- Total 100 marks

Distribution of marks in university --- 80 marks

Section A – MCQ Single best response ---- (1 x 20) 20 marks

Surgery 10 MCQs

Orthopedic 10 MCQs

Section B – Surgery Q2 SAQ3 out of 4 ---- (3 x 5) 15 marks

(based on plastic surgery, CVTS and other than the topics mentioned in LAQ)

Section C Q3 LAQ 1 out 2 -----15 marks (LAQ break up should be given of 15 marks)

(based on burns, amputation and head injury)

Section B – Ortho Q4 SAQ 3 out of 4 ----- (3 x5) 15 marks

Section C - Q5 LAQ 1 out of 2---- 15 marks (LAQ should give break up of 15 marks)

PSYCHIATRY

Total hours = 85 (Theory 50, Clinical – 35)

Total Marks – 50

Theory Exams – 40, Internal assessment: 10

COURSE OBJECTIVES :

The student will be able to fulfill with 75% accuracy (as measured by written evaluation) the following objective: They should be able to evaluate common psychiatric condition that are routinely seen by occupational therapist.

1) Explain purpose & types of classification of mental disorders.
2) Demonstrate techniques of psychiatric assessment viz. Interview & mental status examination
3) Describe the etiological factors, symptoms, management of psychiatric conditions such as schizophrenic disorder (all types), brief psychotic disorder, delusional disorder, mood disorders, conversion anxiety disorder, phobias, obsessive compulsive disorders, conversion dissociate reaction, substance related disorders, adjustment disorder, personality disorder, psychosomatic disorders, hypochondria's psychosexual disorders, disorders of infancy, childhood and adolescence, eating elimination disorders, mental retardation, psychiatric emergencies, - suicide, Organic Brain Syndromes psychiatric aspects of AIDS, pervasive mental disorders.
4) Explain, various treatment modalities & their indications viz. ECT, chemotherapy, group therapy, behavioural therapy, psychotherapy, cognitive behavioural therapy.

COURSE CONTENTS :

1) Psychiatric history, mental status examination (5)
2) Classification of mental disorders (5)
3) Schizophrenic disorders (all types) brief, psychotic disorder, delusional disorder, schizoaffective disorder, post partum psychosis (35)

Mood disorders other affective disorders.

Organic mental disorders, psychiatric aspects of aids.

Anxiety disorders, phobia, obsessive compulsive, dissociative, conversion disorders hypochondriasis, post traumatic stress disorders.

Personality disorders. Substance related disorders.

Adjustment & impulse control disorders

Psycho-sexual disorders.

Psychological factors affecting medical conditions (psychosomatic disorders)

Psychiatric emergencies – suicide

Stress management

Disorders of infancy, childhood & adolescence.

Disruptive behavior disorders, conduct disorder.

Attention deficit & hyperactivity disorder.

Eating disorders, tic disorders elimination disorders.

Affective disorders, child abuse, eneuresis.

4) Treatment : ECT, chemotherapy, group therapy, psychotherapy, cognitive behavioural therapy, behaviour therapy, Stress management. (5)

Clinical : 35 hrs

Students will have to undergo outdoor and indoor clinical teaching for psychiatric cases. They have to evaluate, present and prepare clinical record of minimum of three cases and obtain signature of teacher from time to time.

Clinics : Schizophrenia, Mood disorders, Anxiety disorders, Conversion, Obsessive compulsive disorders, Dementia, Substance abuse.

BOOK RECOMMENDED :

1) Ahuja N. – A short textbook of psychiatry (latest edn.) Jaypee brothers, medical publishers.
2) Shah L.P. : handbook of psychiatry
3) Gandhi & Gandhi – short text book of psychiatry.

Pattern of Examination ------ Theory --- University Exam 40 marks

---- Internal assessment 10 marks

(Internal assessment – one exam at the end of each them)

------ Total 50 marks

<u>Distribution of marks in university</u> ------ 40 marks

Section A – MCQ Single best response --- (1 x 10) 10 marks

Section B – SAQ 3 out of 4 --------- 15 marks

Section C – LAQ 1 out of 2 --- (3 x5) 15 marks (LAQ break up should give of 15 marks)

WORK PHYSIOLOGY & ERGONOMIC

Total hours : 75

Total Marks : 50 (Theory 40 marks , Int. Assessment 10 marks)

COURSE OBJECTIVE :

The student will be able to fulfill with 75% accuracy (as measured by written evaluation) the following objectives)

WORK PHYSIOLOGY (35hrs)

1) Explain the nature of aerobic & anaerobic processes. Describe physiology of anaerobic exercises.
2) Explain evaluation of physical performance by using various tests of maximum aerobic pow and anaerobic power.
3) Describe principles & methods of physical training.
4) Explain the concepts of energy expenditure at work, rest, leisure & fatigue.
5) Outline the effects of nutrition in physical performance capacity.
6) Explain the mechanism of temperature regulation
7) Describe factors which affect physical performance.

ERGONOMIC : (40 hrs)

1) Define & describe various areas of ergonomics
2) Define Anthropometry, enumerate facets – static & dynamic.
   Overview static anthropometry – differences in respect to gender ethnicity age occupational persons with disability, measurements, concept of 5th % 50th % and 95th %, limitations a uses of data, principles in it's application.
3) Environmental physiology – Understand the types of environment. Briefly outline the effects environmental factors such as temperature, humidity, noise, vibration, visual environmental pollution on human body
4) Skill psychology – Explain Skill learning, stages involved, characteristics of well learnt task.
5) Man-machine oriented topics – Describe functioning of man-machine system, information processing theory.
6) Explain the design of work space & work equipment
7) Explain layout of equipment design of seating & displays characteristics of controls & the compatibility.
8) Explain the safety factors, accidents & their prevention.

9) Describe concept of cognitive workload and organization of mental space.

10) Define & underline the assumptions of fundamental philosophy of time & motion stu…

Explain the cycle of managerial control & its application.

Outline the steps involved in scientific methods of solving problem.

Enumerate methods of man-product analysis.

11) Enumerate steps in work-site job analysis and design considerations.

12) Explain scope of ergonomics in modern industrial society

13) Apply the principles of ergonomics in occupational therapy.

COURSE CONTENTS :

WORK PHYSIOLOGY **(35 hrs)**

1) Physical performance : Aerobic & anaerobic processes, physiology of aerobic and anaerol exercises (4)
2) Evaluation of physical performance, tests of maximum aerobic power and anaerobic pow master step test tread mill bicycle ergometry, measurement of oxygen uptake (6)
3) Principles & methods of physical training (4)
4) Applied work physiology : energy expenditure at work, rest, leisure & fatigue. (6)
5) Nutrition and physiology performance (5)
6) Temperature regulation (5)
7) Factors affecting performance (5)

ERGONOMICS : **(40 hrs)**

1) Definition & areas of ergonomics (2)
2) Anthropometry – definition, facets viz, static & dynamic (2)

   Static anthropometry – differences in respect to gender, ethnicity, age, occupation, person with disability, measurements, concept of 5th %, 50% and 95th %, limitations, and uses data, principles in it's application.
3) Environmental physiology – types of environment, effects of environmental factors such as temperature, humidity, noise vibration, visual environment, pollution, on human body. (2)
4) Skill psychology – Skill learning, stages involved characteristics of well – learnt task (2)

5) Man-machine oriented topics – functioning of man-machine system, information-procession theory (2)
6) Design of work space and work equipment (5)
7) Layout of equipment, design of seating characteristics of display & control, their compatibility (5)
8) Safety factors – accidents and their prevention (2)
9) Cognitive workload and organization of mental space (4)
10) Time & motion study – definition, assumptions of fundamental philosophy of time & moti…. Study, cycle of managerial control & its application, steps invoved in scientific methods solving problem. Outline of methods of man product analysis. (4)
11) Work-site job analysis and design considerations (2)
12) Scope of ergonomics in modern industrial society (4)
13) Application of ergonomics in O.T. (4)

BOOKS RECOMMENDED :

1) Astrand P.A. Rodahe K. : Text book of work physiology
2) Fitts P.M. & Posner M.I. : Human performance
3) Mural K.F. – Ergonomics : man in his working environment
4) Mundel M.E. Motion & time study : principles & practices
5) Karen Jacobs : Ergonomics for therapists

Pattern of Examination --- Theory	---	University Exam	40 marks
	---	Internal assessment	10 marks
(Internal assessment – one exam at the end of each term)			
	---	Total	50 marks

<u>Distribution of marks in university</u> -- 40 marks

Section A – MCQ	Single best response ----- (1 x 10)		10 marks
	Work Physiology	5 MCQs	
	Ergonomics	5 MCQs	
Section B --- SAQ	3 out of 4 ----------		15 marks

(based on work physiology and ergonomics)

Section C – LAQ 1 out 2 ---(3 x 5)----15 marks (LAQ should give break up of 15 marks)

(based on work physiology or ergonomics)

O.T. IN MEDICAL CONDITIONS

Total hours: 460hrs (theory-60hrs, clinics-60hrs and clinical practice – 340hrs)

Total marks: 200, Theory: 100, Clinical: 100

Theory- University exam: 80, internal assessment: 20

Clinical- University exam: 80: Term work: 20

COURSE OBJECTIVES:

The student will be able to fulfill with 75 % accuracy as measured by written, oral & clinical evaluation the following objectives

1) Rheumatoid Arthritis

Define R.A., describe role of O.T. in treatment of R.A. & Collagen disorders with assessment explain in detail pathomechanics of hand deformities their prevention & splintage, describe rehabilitation in acute, subacute & chronic stage of R.A., explain joint protection techniques their implication in R.A. patients with work simplification & energy conservation techniques.

2) Gerontology

Describe biological & psychological theories of aging, explain the interrelation of aging & disease & concepts of death & dying.

Describe & understand O.T. assessment in geriatrics

3) Dermatology

Define leprosy

Explain the psychosocial implications of leprosy & need for intervention by O.T.

Describe O.T. treatment in acute & chronic dermatological conditions

4) HIV

Describe the stage of infection

Define physical psychological environmental needs of patient with HIV infection

Explain assessment processes & develop appropriate treatment planning

5) Pulmonary Conditions

Asses air entry and secretions by auscultation

Interpretation of pulmonary function tests and their application in rehabilitation.

State general approach of O.T in Pulmonary conditions such as chronic bronchitis, bronchitic asthama, emphysema, empyema, COPD, ILD, T.B., Lung abscess, occupational lung diseases. Explain postural deviations after thoracic surgery & O.T. management.

Assess functional performance- capacity to perform occupational activities including woleisure and self-care.

Assess motor performance-functional mobility, strength and endurance.

Prescribe activities to improve lung capacity using diapharmatic and pursed lip breathing patterns and incorporate correct breathing patterns in day-to-day living.

Energy conservation techniques and work assessment.

Development of pulmonary endurance & work capacity.

6) Cardiac Conditions

Describe clinical application of O.T. with respect to common cardiac conditions such ischaemic heart diseases, acute myocardial infarction, hypertension, cardiac myopathie congenital and acquired heart diseases, valvular diseases, and following interventions li CABG, angioplasties, valve replacements.

Understand the clinical presentations with respect to physical findings, pathophysiology a investigative reports.

Administer exercise protocol using modalities like treadmills, ergometers, step-equipments, walking brisk walking, spot jogging exercises.

State application of exercise with respect to risk stratification, indications, dose mode a methods.

Understanding application of exercise training effect for work, activity and sports prescription. Interpret from exercise performance based on parametric evaluation-ECG and haemodynamic responses.

Define METS & state its classification in brief.

Explain work simplification & energy conservation techniques based on ergonomic principles state use & application.

Assess and prescribe work simulation techniques in cardiac dysfunctions.

Understand & apply different components of work assessment in cardiac conditions.

Application of O.T. in controlling risk factor like obesity, smoking, hyperlipidemia, sedentary style, HT, diabetes and family history.

7) Hematological conditions

Explain the term hemophilia.

Describe its physical & psychological implications & O.T. management.

8) Obesity

COURSE CONTENT

1) Reumatiod Arthritis: (12)

Definition, O.T. treatment in R.A., pathomechanics of hand deformities, rehabilitation of R.A. in Acute stage, rehabilitation of R.A. in subacute stage, rehabilitation of R.A. in chronic stage joint protection techniques, work simplification techniques.

2) Gerontology: (6)

Theories of ageing, ageing & disease, death & dying, O.T. treatment in gerontology

3) Dermatology: (6)

Leprosy, O.T. in acute & chronic dermatological conditions with psychosocial implications.

4) HIV: (4)

Stages of infection, physical psychological & environmental consideration, O.T. assessment treatment.

5) Pulmonary conditions: (12)

Chronic bronchitis, bronchial asthma, emphysema, empyema, COPD, ILD, T.B., lung abscess occupational lung diseases, throcic surgeries, related postural deviations and their corrections. Assessment-auscultation or air entry and secretions. Interpretation of pulmonary function test and their application in rehabilitation.

Therapeutic intervention-Assessment of functional performance capacity to perform occupational activities including work, leisure and self-care.

Assessment of motor performance-functional mobility, strength and endurance.

Activities to improve lung capacity using diaphragmatic and pursed lip breathing patterns.

Incorporation of correct breathing patterns in day-to-day living.

Energy conservation techniques and work assessment.

Development on pulmonary endurance & physical work capacity.

6) Cardiac conditions (12)

Intervention in acute, convalescent and late phases of cardiac illnesses such as ischaemic heart diseases, acute myocardial infarction, hypertension, cardiac myopathies, congential and acquired heart diseases, valvular diseases, and following interventions like CABG, angioplasties, valve replacements.

Categorisation of cardiac patients on the basis of risk factors for exercise prescription. Indications and contra-indications for mobilization, exercise training, work prescription, activity and sports participation.

Prescription of exercise, work and activity based on METS.

Exercise dose and mode.

Cardiac conditioning using tredmill, ergo metre , step-apparatus, walking, jogging protocols. Interpretation of signs and symptoms during exercise training and work assessment. Effects

of drugs on exercise performance. Modification of exercise, work and activity programmes with respect to residual cardiac function. Assessment on work simulation. Work simplification & energy conservation techniques based on ergonomic principles, their us & application.

7) Haematological conditons **(6)**

O.T. in Haemophilia

8) Obesity. **(2)**

BOOKS RECOMMENDED

1) Occupational Therapy – Willard & Spackman's
2) O.T. Practice Skills for Physical Dysfunction – Pedretti
3) O.T. in physical Dysfunction – Tromby & Scott
4) Therapeutic Exercise – Kisner
5) Therapeutic Exercise Basmajian
6) Rehab Medicine – Goodgold
7) Rehabilitation of Hand – Wynn & Parry
8) Hand – Hunter
9) Hand splitting – Fees, Gettle & Strickland.
10) Pulmonary rehabilitation, guidelines to success – Hodgkin T.E.
11) Physical rehabilitation, assessment, treatment – O'Sullivan.

SCHEME OF EXAMINATION

SCHEME OF THEORY EXAMINATION FOR O.T. MEDICAL CONDITIONS

A) Distribution of maximum marks for the subject having 100 marks shall be as follows:

University exam–80 marks.

Internal assessment (one exam at the end of each term)- 20 marks.

Distribution of marks in university- 80 marks.

Section A- MCQ Single best response (1x20) ……. 20 marks

Section B- SAQ 3 out of 4 (3x5) …… 15 marks

SAQ 5 out of 6 (5x3) ……. 15 marks

Section C- LAQ compulsory ……15 marks

LAQ 1 out of 2 ……. 15 marks

(LAQ break up should be given of 15 marks.)

O.T. IN SURGICAL CONDITIONS

Total hours: 460 hrs (Theory– 60 hrs, clinical-60 hrs & supervised clinical practice– 340 hrs).

Total marks: 200, Theory: 100, Clinical: 100

Theory – University exam: 80, internal assessment: 20

Clinical – University exam: 80: Term work: 20

COURSE OBJECTIVES

The students will be able to fulfill with 75% accuracy as measured by written oral & clinical evaluation the following objectives:

1) 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.

2) Amputation

Define amputation & state an etiology in brief, briefly state surgical management, explain specific considerations & problems encountered after amputation, advise various ways of psychological adjustment in this problem, describe various levels of amputation & suggest functional prosthesis components or accessories – foot assembly & Terminal Devices, describe pre & post-prosthesis training program of upper & lower extremity amputations.

3) Tendon Injuries

Flexor & extensor tendon injury, state aetiology in brief, explain various surgical procedures in brief, describe O.T. treatment & splintage.

4) Crush Injuries of Hand

Assess using various tests for evaluation of hand function, grip, pinch, oedema, sensory examination. Enumerate causes & describe pre & post operative management of tendon & nerve injuries & their repair & describe various types of splints made. Describe various types of splint made with their uses in different conditions.

5) Cancer rehabilitation

Describe preventive, restorative, supportive and palliative aspects in radical masectomy and head and neck cancer.

Explain the concept of hospice, family systems and the need for treatment of the family as the unit care.

6) Vascular Condition

Explain peripheral vascular diseases their complications & role of O.T. in their management.

7) 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, explain preventive measures.

8) 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.

URSE CONTENTS

1) Burns: Definition, classification, stages of burns, O.T. in burns, pre-graft treatment, post-graft treatment, rehabilitation of burns. (10)

2) Amputation : Aetiology, surgical management, special consideration & problems, psychological adjustment, levels of amputation, accessories & component part of prosthesis, upper & lower extremity prosthetic training program for upper & lower extremity. (15)

3) Tendon Injuries: Aetiology, surgical Treatment, O.T. Treatment (8)

4) Crush injuries of hand, tendon & nerve injuries & their reconstruction, pre & post operative management in O.T. & splinting (7)

5) Cancer rehabilitation: Preventive, restorative, supportive and palliative aspects of radical masectomy, head and neck cancer (5)

6) Vascular Conditions: Peripheral vascular diseases and O.T. (5)

7) Occupational Therapy in blind: Definition and Classification, mobility techniques, communication skills, sensory re-education, emotional and psychological aspects of blindness facilities for blind, prevention of blindness. (5)

8) Occupational Therapy in deaf, dumb, Definition and classification, communication skills, types and uses of hearing aids, emotional and psychological aspects, facilities for deaf, prevention of deafness, vestibular affectations and re-training. (5)

BOOKS RECOMMENDED

1) Occupational Therapy – Wilard & Spackman
2) O.T. Practice Skills for Physical Dysfunction – Pedretti
3) O.T. in Physical Dysfunction – Scott
4) Therapeutic Exercise – Basmajian

5) Rehab Medicine – Goodgold

6) Rehabilitation of Hand – Wynn & Parry

7) Hand – Hunter

8) Hand splinting – Fees

9) Therapeutic exercise – Kissner

10) Physical rehabilitation, assessment & treatment – Suzan O' Sullivan.

SCHEME OF EXAMINATION

SCHEME OF THEORY EXAMINATION FOR THE SUBJECT- O.T. IN SURGICAL CONDITIONS.

A) Distribution of maximum marks for the subject having 100 marks shall be as follows:

University exam- 80 marks

Internal assessment (one exam at the end of each term)- 20 marks

Scheme of university exam to be conducted out of 80 marks –

Section-A: 1) M.C.Q.: Single best response ------- [1x20] ------ 20 marks

Section-B: 2) S.A.Q.- Short notes-3 out of 4-[3x5] ----------15 marks

3) S.A.Q.- Short notes-5 out of 6-[5x3]----------15 marks

Section-C:

4) L..A.Q.- one question compulsory ----15 marks (LAQ should give break up of 15 marks)

5) L.A.Q.- one question ----15 marks (LAQ should give break up of 15 marks)

OR

L.A.Q.- one question -------15 marks (LAQ should give break up of 15 marks)

SCHEME OF CLINICAL EXAMINATION

1) Occupational Therapy in Medical condition:- Total marks- 100

Term work: 20 Marks (internal assessment during clinical / ward exams

Attitude: assessment of on-going clinical performance – i.e. initiative, case reports, regularity etc.

University Examination:	80 marks
One long case of:	40 marks
One short case / Simulated case of:	20 marks
Viva Voce / Spots:	20 marks

Long case to include evaluation treatment & future planning of a single patient.

Short case / simulated case, Spots – 4 spots, identification, description & uses.

2) Occupational Therapy in Surgical condition:- Total marks – 100

Term work: 20 Marks (Internal assessment during clinical / ward exams

Attitude: assessment of on-going clinical performance- i.e. initiative, case reports, regularity etc.

University Examination:	80 marks
One long case of:	40 marks
One short case / Simulated case of:	20 marks
Viva Voce / Spots:	20 marks

Long case to include evaluation, treatment & future planning of a single patient.

Short case / simulated case, Spots – 4 spots, identification, description & uses.