Rajiv Gandhi University of Health Sciences, Karnataka
4th "T" Block, Jayanagar, Bangalore – 560041
Ph.No: 080-26961937

Ref:RGU/AUTH/170th SYN/38/2022-23 Date: 14/06/2022

REVISED NOTIFICATION

Sub: Revised ordinance Pertaining to Regulation and Curriculums of Bachelors in Occupational Therapy

Ref:
1. Notification No. RGU/AUTH/140-SYN/117-8/DCD/2018-19 Dated: 09/04/2019.
2. Proceedings of BOS Meeting held on:18/11/2021
3. Proceedings of Faculty AHS Meeting held on:14/12/2021
4. Proceedings of 170th Syndicate Meeting held on: 07/06/2022

****

In exercise of the powers vested under section 35(2) of RGUHS Act. 1994 the Revised Ordinances Pertaining to Regulation and the curriculums of Bachelors in Occupational Therapy is notified herewith as per annexure.

The above Regulation shall be applicable to the students to the said courses from the academic year 2019-2020 onwards.

The previous Notification No.RGU/AUTH/140-Syn/117-8/DCD/2018-19 shall apply only for the 1st Semester of Student with Register No.20E0146.

By order,

REGISTRAR

To,

The principals of all affiliated allied Health Sciences course college of RGUHS. Bangalore

Copy to:

1. The Principal Secretary to Government, Raj Bhavan, Bangalore-560 001.
2. The Principal Secretary Medical Education, Health & Family Welfare Dept, M.S Building Dr. B R Ambedkar Veedhi, Bangalore -560 001
3. Pa to Vice-Chancellor/PA to Registrar/PA to Registrar (Eva)/ Finance Officer Rajiv Gandhi University Health Sciences, Bangalore
4. All officers of the University Examination Branch/ Academic Section.
5. Guard File/Office Copy

Regulations and Curriculum

BACHELORS IN OCCUPATIONAL THERAPY

Rajiv Gandhi University of Health Sciences, Karnataka
4th 'T' Block, Jayanagar, Bangalore - 560 041

Rajiv Gandhi University of Health Sciences, Karnataka, Bangalore

THE EMBLEM

The Emblem of the Rajiv Gandhi University of Health Sciences is a symbolic expression of the confluence of both Eastern and Western Health Sciences. A central wand with entwined snakes symbolizes Greek and Roman Gods of Health called Hermis and Mercury is adapted as symbol of modern medical science. The pot above depicts Amrutha Kalasham of Dhanvanthri the father of all Health Sciences. The wings above it depict Human Soul called Hamsa (Swan) in Indian philosophy. The rising Sun at the top symbolises knowledge and enlightenment. The two twigs of leaves in western philosophy symbolises Olive branches, which is an expression of Peace, Love and Harmony. In Hindu Philosophy it depicts the Vanaspathi (also called as Oushadi) held in the hands of Dhanvanthri, which are the source of all Medicines. The lamp at the bottom depicts human energy (kundalini). The script “Devahitham Yadayahu” inside the lamp is taken from Upanishath Shanthi Manthram (Bhadram Karnebhi Shrunuyanadev…), which says “May we live the full span of our lives allotted by God in perfect health” which is the motto of the Rajiv Gandhi University of Health Science

Rajiv Gandhi University of Health Sciences, Karnataka

VISION STATEMENT

The Rajiv Gandhi University of Health Sciences, Karnataka, aims at bringing about a confluence of both Eastern and Western Health Sciences to enable the humankind "Live the full span of our lives allotted by God in Perfect Health"

- It would strive for achievement of academic excellence by Educating and Training Health Professionals who
  - ❖ Shall recognize health needs of community,
  - ❖ Carry out professional obligations Ethically and Equitably and in keeping with National Health Policy
- It would promote development of scientific temper and Health Sciences Research.
- It would encourage inculcation of Social Accountability amongst students, teachers and Institutions.
- It would Support Quality Assurance for all its educational programmes.

MOTTO

"RIGHT FOR RIGHTFUL HEALTH SCIENCES EDUCATION"

CONTENTS

SECTION I

REGULATIONS

COURSE TITLE & SUMMARY:

The course shall be called the **"BOT - Bachelors in Occupational Therapy".**

The prescribed course will be an intensive full time program, which will include classroom lectures and practical training in various departments in a Hospital or any healthcare organization.

The programme will be conducted at a College/ Institution recognized by the Rajiv Gandhi University of Health Sciences, Karnataka. Candidates shall abide by the stipulated timings, discipline, rules and regulations of the University.

1. **ELIGIBILITY**:

1.1 Qualifying examination –

A candidate seeking admission to first semester bachelor of Occupational Therapy (BOT)

i) Should have passed two year Pre University examination conducted by Department of Pre-university Education, Karnataka State, with English as one of the subjects and Physics, Chemistry and Biology.
The candidate shall have passed subjects of English, Physics, Chemistry and Biology as optional subject. The candidate shall have passed subjects of English, Physics, Chemistry and Biology individually also.

OR
ii) Shall have passed any other examination conducted by Boards/ Councils/ Intemediate examination established by State Government/ Central Government and recognized as equivalent to a two year Pre University Examination by RGUHS/ Association of Indian Universities (AIU) with English as one of the subjects and Physics, Chemistry and Biology as optional subjects. The candidate shall have passed subjects of English, Physics, Chemistry and Biology as optional subject. The candidate shall have passed subjects of English, Physics, Chemistry and Biology individually also.

1.2 Marks

The selection of students to a course of Occupational Therapy shall be based on merit provided that: a) in case of admission on the basis of qualifying examination, a candidate for admission to BOT course must have passed individually in the subjects of Physics, Chemistry, Biology and English and must have obtained not less than 45% taken together in Physics, Chemistry and Biology in the qualifying examination. With respect to candidates belonging to Scheduled castes, Scheduled Tribes or Category I, the marks obtained in Physics, Chemistry and Biology together in qualifying examination is not less than 40% instead of 45% as above

2. MEDIUM OF INSTRUCTION:

English shall be the medium of instruction for the subjects of study as well as for the examination.

3. DURATION OF THE COURSE:

The Course shall extend over a period of four and half years. The duration of the course shall be on full time basis for a period of four and half years consisting of eight semesters and internship involving compulsory rotatory posting of six months from the commencement of the academic term. Each semester would be of minimum twenty weeks.

4. SCHEME OF EXAMINATION:

There shall be eight examinations one each at the end of each semester.

The Examination will be of 6340 marks divided into 8 parts as per details given below:

BOT Sem I Aggregate marks 780
BOT Sem II Aggregate marks 880
BOT Sem III Aggregate marks 680
BOT Sem IV Aggregate marks 780
BOT Sem V Aggregate marks 880
BOT Sem VI Aggregate marks 880
BOT Sem VII Aggregate marks 780
BOT Sem VIII Aggregate marks 680

5. DISTRIBUTION OF TYPE OF QUESTIONS AND MARKS FOR MAIN SUBJECTS

TYPE OF QUESTIONS	NUMBER OF QUESTIONS	NO. OF QUESTIONS TO BE ANSWERED	MARKS FOR EACH QUESTION	TOTAL
Long Essay	3	2	10	20

Short Essay	12	10	5	50
Short Notes	12	10	3	30
Internal Assessment				20
TOTAL				120

DISTRIBUTION OF TYPE OF QUESTIONS AND MARKS FOR SUBSIDIARY SUBJECTS

TYPE OF QUESTIONS	NUMBER OF QUESTIONS	NO. OF QUESTIONS TO BE ANSWERED	MARKS FOR EACH QUESTION	TOTAL
Long Essay	3	2	10	20
Short Essay	8	6	5	30
Short Notes	12	10	3	30
Internal Assessment				20
TOTAL				100

6. ATTENDANCE

Every candidate should have attended 80% of the total number of classes conducted in an academic year from the date of commencement of the term to the last working day as notified by university in each of the subjects prescribed for that year separately in theory and practical. Only such candidates are eligible to appear for the university examinations in their first attempt. Special classes conducted for any purpose shall not be considered for the calculation of percentage of attendance for eligibility. A candidate lacking in prescribed percentage of attendance in any subjects either in theory or practical in the first appearance will not be eligible to appear for the University Examination in that subject .

7. **Internal Assessment (IA):**

Theory (IA) - 20 marks

Practical (IA) - 20 marks.

- There shall be a minimum of two periodical tests for each subject in every Semester. The average marks of the two tests, assignments, seminars etc will be calculated and reduced to 20. The marks of IA shall be communicated to the University at least 15 days before the commencement of the University examination. The University shall have access to the records of such periodical tests etc.
- The marks of the internal assessment must be displayed on the notice board of the respective colleges with in a fortnight from the date test is held.
- If a candidate is absent for any one of the tests due to genuine and satisfactory reasons, such a candidate may be given a re-test within a fortnight.

8. Subjects and hours of Teaching

The number of hours for teaching theory and practical for main subjects in first year are shown in Table-1

Table - I Distribution of Teaching Hours in Subjects

Main Subjects:

SEMESTERS	MAIN SUBJECTS	NO OF THEORY HOURS	NO OF PRACTICAL HOURS	TOTAL
SEMESTER 1	Human Anatomy I	70	30	
	Human Physiology I	70	30	
	Introduction to Occupational therapy	70	30	400
	Biochemistry	100	--	
SEMESTER 2	Human Anatomy II	70	30	
	Human Physiology II	70	30	
	Basics of Occupational Therapy I	70	30	
	Basics of First Aid	70	30	400
SEMESTER 3	Basics of Occupational Therapy II	70	30	
	Biomechanics (General and UE) and Ergotherapeutics	70	30	
	Pathology – Microbiology	100	--	
	Pharmacology	100	--	400
SEMESTER 4	Biomechanics (LE) and Ergotherapeutics	70	30	
	Basics of Medical Disorders	70	30	
	Basics of Surgical Disorders	70	30	
	Psychology	100	--	400
SEMESTER 5	Occupational Therapy in Medical conditions	70	30	
	Occupational Therapy in Surgical conditions	70	30	
	Basics of Orthopaedics	70	30	
	Basics of Paediatrics	70	30	400
SEMESTER 6	Occupational Therapy in Orthopaedic conditions	70	30	
	Occupational Therapy in Paediatric conditions	70	30	
	Basics of Psychiatry	70	30	
	Basics of Neurology	70	30	400
SEMESTER 7	Occupational Therapy in Mental Health	70	30	
	Occupational Therapy in Neurological conditions	70	30	
	Basics of Orthotics and Assistive Technology	70	30	400
	Preventive and Social Medicine	100	--	

SEMESTER 8	Community Based Rehabilitation	70	30	
	Practise Issues in Occupational Therapy	70	30	
	Biostatistics and Research Methodology	100		
	Ergonomics	100	--	400
	TOTAL HOURS			3200

Subsidiary Subjects:

Semester	Subject	No of Hours Theory	Total
I Semester	English	30	330
I Semester	Kannada	30	
II Semester	Constitution of India	30	
II Semester	Sociology	30	
III Semester	Computer Fundamentals	30	
III Semester	Health Care	30	
IV Semester	Environment Science & Health	30	
V Semester	Medical ethics	30	
VI Semester	Radiodiagnosis	30	
VII Semester	Disability Assessment and Certification	30	
VIII Semester	Basics of SPSS software	30	

Clinical postings

Semester	Clinical posting	Hours per posting	Total hours each semester
I	OT OPD	120	120
II	General Surgery General and Neuro Medicine Orthopaedics	40	120
III	OT OPD General and Neuro Medicine Orthopaedics	40	120

IV	General and Neuro Medicine General and Plastic Surgery Orthopaedics	40	120
V	OT OPD General and Plastic surgery General Medicine and CTVS	40	120
VI	Orthopaedics Paediatric and NICU Psychiatry	40	120
VII	OT OPD Psychiatry Neuro Medicine and Neuro Surgery	40	120
VIII	OT OPD/ CBR Orthopaedics and Plastic surgery General and Neuro Medicine	40	120

9. Scheme of Examination

There shall be eight university examinations, one each at the end of I, II, III, IV, V, VI, VII and VIII SemesterDistributions of marks are shown in the Table – II.

BOT FIRST SEMESTER							
Sr. No.	Subject	Theory			Practical		
		Written		Internal Assessment	Practical	Internal Assessment	Total
		Time	Maximum Marks	Maximum Marks	Maximum Marks	Maximum Marks	Maximum Marks
1	Human Anatomy I	3 hours	100	20	80	20	220
2	Human Physiology I	3 hours	100	20	80	20	220
3	Introduction to Occupational Therapy	3 hours	100	20	80	20	220
4	Bio-chemistry	3 hours	100	20	--	--	120
	TOTAL						780

BOT SECOND SEMESTER							
Sr. No.	Subject	Theory			Practical		
		Written		Internal Assessment	Practical	Internal Assessment	Total
		Time	Maximum Marks	Maximum Marks	Maximum Marks	Maximum Marks	Maximum Marks
1	Human Anatomy II	3 hours	100	20	80	20	220
2	Human Physiology II	3 hours	100	20	80	20	220
3	Basics of Occupational Therapy I	3 hours	100	20	80	20	220
4	Basics of First Aid	3 hours	100	20	80	20	220
	TOTAL						880

BOT THIRD SEMESTER							
Sr. No.	Subject	Theory			Practical		
		Written		Internal Assessment	Practical	Internal Assessment	Total
		Time	Maximum Marks	Maximum Marks	Maximum Marks	Maximum Marks	Maximum Marks
1	Basics of Occupational Therapy II	3 hours	100	20	80	20	220
2	Biomechanics (General and UE) and Ergotherapeutics	3 hours	100	20	80	20	220
3	Pathology and	3 hours	50	20	------	-----	120
	Microbiology		50				
4	Pharmacology	3 hours	100	20	-------	------	120
	TOTAL						680

**Pathology and Microbiology theory paper will be combined.*

BOT FOURTH SEMESTER							
Sr. No.	Subject	Theory			Practical		
		Written		Internal Assessment	Practical	Internal Assessment	Total
		Time	Maximum Marks	Maximum Marks	Maximum Marks	Maximum Marks	Maximum Marks
1	Biomechanics (LE) and Ergotherapeutics	3 hours	100	20	80	20	220
2	Basics of Medical disorders	3 hours	100	20	80	20	220
3	Basics of Surgical disorders	3 hours	100	20	80	20	220
4	Psychology	3 hours	100	20	-----	-----	120
	TOTAL						780

BOT FIFTH SEMESTER							
Sr. No.	Subject	Theory			Practical		
		Written		Internal Assessment	Practical	Internal Assessment	Total
		Time	Maximum Marks	Maximum Marks	Maximum Marks	Maximum Marks	Maximum Marks
1	Occupational Therapy in Medical Conditions	3 hours	100	20	80	20	220
2	Occupational Therapy in Surgical Conditions	3 hours	100	20	80	20	220
3	Basics of Orthopaedics	3 hours	100	20	80	20	220
4	Basics of Paediatrics	3 hours	100	20	80	20	220
	TOTAL						880

BOT SIXTH SEMESTER							
Sr. No.	Subject	Theory			Practical		
		Written		Internal Assessment	Practical	Internal Assessment	Total
		Time	Maximum Marks	Maximum Marks	Maximum Marks	Maximum Marks	Maximum Marks
1	Occupational Therapy in Orthopaedic Conditions	3 hours	100	20	80	20	220
2	Occupational Therapy in Paediatric Conditions	3 hours	100	20	80	20	220
3	Basics of Psychiatry	3 hours	100	20	80	20	220
4	Basics of Neurology	3 hours	100	20	80	20	220
	TOTAL						880

BOT SEVENTH SEMESTER

Sr. No.	Subject	Theory			Practical		
		Written		Internal Assessment	Practical	Internal Assessment	Total
		Time	Maximum Marks	Maximum Marks	Maximum Marks	Maximum Marks	Maximum Marks
1	Occupational Therapy in Mental Health Conditions	3 hours	100	20	80	20	220
2	Occupational Therapy in Neurological Conditions	3 hours	100	20	80	20	220
3	Basics of Orthotics and Assistive Technology	3 hours	100	20	80	20	220
4	Preventive and Social Medicine	3 hours	100	20	----	----	120
	TOTAL						780

BOT EIGHTH SEMESTER							
Sr. No.	Subject	Theory			Practical		
		Written		Internal Assessment	Practical	Internal Assessment	Total
		Time	Maximum Marks	Maximum Marks	Maximum Marks	Maximum Marks	Maximum Marks
1	Community Based Rehabilitation	3 hours	100	20	80	20	220
2	Practice issues in Occupational Therapy	3 hours	100	20	80	20	220
3	Biostatistics and Research Methodology	3 hours	100	20	---	----	120
4	Ergonomics	3 hours	100	20	-----	-----	120
	TOTAL						680

Note * I A = Internal Assessment

· Main Subjects shall have University Examination.

Subsidiary subjects: Examination for subsidiary subjects shall be conducted by respective colleges.

Distribution of marks for subsidiary subjects is as follows-

Semester	Subject	Duration	Total marks (only theory)		
			Max marks	Theory	IA
I Semester	English	3 hours	100	80	20
I Semester	Kannada	3 hours	100	80	20
II Semester	Constitution of India	3 hours	100	80	20
II Semester	Sociology	3 hours	100	80	20
III Semester	Computer Fundamentals	3 hours	100	80	20
III Semester	Health Care	3 hours	100	80	20
IV Semester	Environment Science & Health	3 hours	100	80	20
V Semester	Medical ethics	3 hours	100	80	20
VI Semester	Radiodiagnosis	3 hours	100	80	20
VII Semester	Disability Assessment and Certification	3 hours	100	80	20
VIII Semester	Basics of SPSS software	3 hours	100	80	20

Clinical postings – Students will be placed in OT OPD and hospital wards (under the supervision of an OT staff) for clinical postings to gain hands on experience on evaluation and treatment planning and execution. Students will be graded out of 50 marks for all postings together by college for the overall performance in the posting.

10. Eligibility for Examination

A candidate shall be eligible to appear for first University examination at the end of six months from the commencement of the course and for subsequent Semester University examinations at an interval of six months provided He/She has satisfactorily completed the prescribed course and fulfilled the prescribed attendance at the end of each semester.

11. Declaration of pass

a. **Main Subjects:** A candidate is declared to have passed the examination in a subject, if

He /She secures 50% of marks in University Theory exam and Theory Internal assessment added together and 50% of marks in University Practical exam and Practical Internal assessment added together separately.

b. **Subsidiary Subjects:** The minimum prescribed marks for a pass in subsidiary

subject shall be 35% of the maximum marks prescribed for a subject. The marks obtained in the subsidiary subjects shall be communicated to the University before the commencement of the University examination.

12. Declaration of Class

a. A candidate having appeared in all the subjects in the same examination and passed that examination in the first attempt and secures 75% of marks or more of grand total marks prescribed will be declared to have passed the examination with Distinction.

b. A candidate having appeared in all subjects in the same examination and passed that examination in the first attempt and secures 60% of marks or more but less than 75% of grand total marks prescribed will be declared to have passed the examination in First Class.

c. A candidate having appeared in all the subjects in the same examination and
passed that examination in the first attempt and secures 50% of marks or more but less than60% of grand total marks prescribed will be declared to have passed the examination in Second Class.

d. A candidate passing the university examination in more than one attempt shall be placed in Pass class irrespective of the percentage of marks secured by him/her in the examination.

e. The marks obtained by a candidate in the subsidiary subjects shall not be
considered for award of Class or
Rank.
[Please note, fraction of marks should not be rounded off clauses (a), (b) and (c)]

13. Carry over benefit

A candidate can carry over only two subjects from any of the semester at a time. It is to be noted that He/She shall clear all subjects of first to seventh semester to become eligible to appear for the final semester examination.

13.1 Maximum duration for completion of course.

A candidate shall complete the course within eight years from the date of admission

failing which the candidate will be discharged.

14. Eligibility for the award of Degree

A candidate shall have passed in all the subjects of first to sixth semester to be eligible for award of degree.

15. Internship

There shall be six months of compulsory rotational postings after the final year examination for candidates declared to have passed the examination in all the subjects. Internship should be done in a teaching hospital recognised by the University limited to within Karnataka only.

No candidate shall be awarded degree certificate without successfully completing six months of internship.

The internship should be rotatory and cover clinical branches concerned with Occupational Therapy such as -

1. OPD and CBR
2. Orthopaedics
3. General and Plastic surgery
4. Neuro-medicine and Neuro-surgery
5. Psychiatry
6. Paediatrics and NICU

Successful Completion – the student must maintain a logbook. On completion of each posting, the same will have to be certified by the faculty in charge of the posting for both attendance as well as work done. On completion of all six postings, the duly completed log book will be submitted to the Principal/ Head of program to be considered as having successfully completed the internship program.

15. Course of Study:

The course shall be pursued on full time basis. No candidate shall be permitted to work in a health care facility or a related organization or laboratory or any other organizations outside the institution while studying the course. No candidate shall join any other course of study or appear for any other examination conducted by this university or any other university in India or abroad during the period of study.

COURSE CONTENT

SEMESTER I

HUMAN ANATOMY 1

Hours-

Theory – 70 hours

Practical- 30 hours

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +20 internal assessment)

Goal – to provide students with necessary knowledge of technical terminology used, related to human body and understanding of anatomical structures necessary to practice as an Occupational Therapist

Contents –

Theory –

A. General Anatomy (20 hours)

1. Introduction

Subdivisions of anatomy

Language of anatomy – Positions, planes, terms used in relation to human body and movements, terms used in describing Muscles, Vessels, Bones

2. Histology

- General histology, study of basic tissues of the body, microscope, cell, epithelium, connective tissue. Cartilage, bone, muscular tissue, nerve tissue – TS and LS, Circulatory system – large sized artery, medium sized artery, large sized vein, lymphoid tissue, skin and its appendages

3. Embryology

- Ovum, spermatozoa, fertilization and formation of the germ layers and their derivations
- Development of skin, Fascia, blood vessels, lymphatic
- Development of bones, axial and appendicular skeleton and muscles

- Neural tube, brain vessels and spinal cord
- Development of brain and brain stem structures

4. Skeleton

- Classification of bones
- Gross structure of adult long bone
- Parts of young bone
- Cartilage – synonyms, definition, type, general features, clinical anatomy

5. Joints –definition, classification, syanovial joints (classification, characters), Hinge joints, Pivot joint, condylar joint, Ellipsoidal joint, Saddle joint, Ball and socket joint, clinical anatomy

6. Muscles – definition, types, parts, actions, clinical anatomy

7. Cardiovascular system – components, types of circulation of blood, arteries and veins (characteristic features and comparison)

8. Connective Tissue and Ligaments

- Connective tissue- introduction, constituent elements, types, functions, clinical anatomy
- Ligaments- definition, types, blood and nerve supply, functions, clinical anatomy

B. Radiography (5 hours)

Principles of radiography- properties of X-ray, Radiographic views, Radiographic procedures, special procedures

C. Thorax (20 hours)

1. Bones of thorax – Ribs, Costal Cartilages, Sternum, the vertebral column

- Joints of thorax
- Respiratory movements

2. Walls of thorax- muscles, nerves and vessels, clinical anatomy

3. The Lungs – introduction, features, fissures and lobes. Roots of lung, difference between right and left lung, blood supply, nerve supply, Bronchopulmonary segments, clinical anatomy

4. Mediastinum- superior, inferior,middle, posterior

5. Heart – Introduction, atrium and ventricles, valves of heart, blood supply and clinical anatomy

6. Trachea and Oesophagus-

Trachea- introduction, structure, blood supply, clinical anatomy

Oesophagus- introduction, blood supply nerve supply and clinical anatomy

D. Abdomen (25 hours)

1. Osteology – intervertebral joints

2.Abdominal part of oesophagus and stomach – introduction, stomach- definition, location, shape and position, size, external features, blood supply, nerve supply, function, clinical anatomy

3. Intestine - Small intestine – duodenum, Jejunum and ileum, large intestine, appendix

4. Spleen- location, features, blood supply, nerve supply, function, clinical anatomy

5. Pancreas- definition, location, size and shape, head of pancreas, body of pancreas, tail of pancreas, blood supply, nerve supply, function, clinical anatomy

6. Liver – definition, location, external features, blood supply, nerve supply, functions and clinical anatomy

7. Kidney – definition, external features, location, structure, blood supply, nerve supply, clinical anatomy

8. Ureters- definition, dimensions, course, normal constrictions, blood supply, nerve supply, clinical anatomy

9. Reproductive organs (male and female) features, function, blood supply, nerve supply and clinical anatomy

Practical (30 hours)

1. Journal containing flow charts and diagrams of relevant topics

2. Student should be able demonstrate positions, movements and planes related to human body

3. Should be able to identify and describe the characteristic features of organs related to thorax and abdomen

4. Should be able to identify gross anatomical features in plain radiographs of abdomen, thorax, head, neck and face, upper and lower limb

Recommended text books-

1. Human Anatomy by Chaursia (all volumes)

2. Hand Book of General Anatomy by B.D.Chaurasia

3. Gray`s Anatomy by Susan Standring (reference book)

SCHEME OF EXAMINATION- Human Anatomy 1

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +20 internal assessment)

University exam duration – three hours

Distribution of theory marks (out of 100)

Section A: Long essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any ten out of twelve (5 X 10) 50 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

Distribution of practical marks (out of 80)

A. Demonstration by student related to general anatomy 10 marks

B. Spotters – Cardiovascular system, Respiratory system, Gastrointestinal system, Urinary system, Reproductive system 40 marks

C. Radiographs 10 marks

D. Viva Voce + Journal 20 marks

HUMAN PHYSIOLOGY 1

Hours-

Theory – 70 hours

Practical- 30 hours

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +20 internal assessment)

Goal – The goal of Physiology for Occupational Therapy course is to comprehend the functions of human body in view of integration with other subjects, to be able to apply in terms holistic management of the patients as a qualified Occupational Therapist.

Contents –

Theory –

1. General physiology (5 hours)

- Cell
- Transport through cell membrane
- Homeostasis
- Acid-base Balance

2. Blood (11 hours)

- Blood
- Plasma proteins
- Red blood cells
- Erythropoiesis
- Hemoglobin and iron metabolism
- Erythrocyte Sedementation rate
- Anemia
- White blood cells
- Immunity
- Platelets
- Hemostasis
- Coagulation of blood
- Blood groups
- Tissue fluid and edema

3. Digestive system (12 hours)

- Introduction and functional anatomy
- Mouth and salivary gland
- Stomach – functional anatomy, functions of stomach, properties, composition and functions of gastric juice, applied physiology
- Pancreas – functional anatomy, functions of pancreatic juice, applied physiology
- Liver and gall bladder – functional anatomy, functions of bile, functions of liver, gallbladder, applied physiology
- Small intestine – functional anatomy, functions, applied physiology
- Large intestine – functional anatomy, functions, dietary fibre, applied physiology

4. Renal physiology and skin (12 hours)

- Kidney- introduction, functions
- Nephron
- Juxtaglomerular apparatus
- Renal circulation – introduction, renal blood vessels
- Urine formation
- Renal failure
- Micturation
- Structure of skin
- Function of skin
- Glands of skin
- Body temperature

5. Cardiovascular system (15 hours)

- Introduction
- Properties of cardiac muscle
- Cardiac cycle
- Heart sounds
- ECG
- Arrhythmia
- Cardiac output
- Heart rate
- Hemodynamics
- Arterial blood pressure
- Venous pressure
- Capillary pressure
- Arterial pulse
- Venous pulse
- Coronary circulation
- Hemorrhage
- Circulatory shock and heart failure
- Cardiovascular adjustments during exercise

6. Respiratory system (15 hours)

- Physiological anatomy of respiratory tract
- Pulmonary blood circulation
- Mechanics of respiration
- Pulmonary function tests
- Ventilation
- Disturbances of respiration
- High altitude and space physiology
- Deep sea physiology
- Effects of exposure to heat and cold
- Effects of exercise on respiration

Practical – (30 hours)

1. Journal containing procedures

2. Hematology (demonstration only)

- Study of microscope and its uses
- Determination of RBC count
- Determination of WBC count
- Estimation of haemoglobin

- Determination of blood groups
- Determination of bleeding and clotting time
- Determination of ESR and PCV

3. Graphs- Normal ECG

4. General examination of patient

5. CVS – Auscultation, BP recording pre and post a simple exercise

6. Respiratory system examination

7. Bicycle ergometry (demonstration only)

Recommended text books-

1. Essentials of medical physiology by K. Sembulingam

2. A.K.Jain, Human Physiology and Biochemistry for physical therapy and occupational Therapy

3. A.K.Jain, Text book of Physiology for medical students (reference book)

4. Guyton (Arthur) Text Book of Physiology. (reference book)

SCHEME OF EXAMINATION- Human Physiology 1

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +20 internal assessment)

University exam duration – three hours

Distribution of theory marks (out of 100)

Section A: Long essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any ten out of twelve (5 X 10) 50 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

Distribution of practical marks (out of 80)

A. Spotters- Haematolgy equipments, graphs, examination equipments 30 marks

B. Examination – General examination, CVS and Respiratory system 30 marks

C. Viva voce and Journal 20 marks

INTRODUCTION TO OCCUPATIONAL THERAPY

Hours-

Theory – 70 hours

Practical- 30 hours

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +20 internal assessment)

Goal – to introduce students to occupational therapy as a profession, it also provides knowledge of how to use basic concepts of anatomy and physiology for clinical practice and relate to human dysfunction

Contents –

Theory –

1. Definition and evolution of Occupational Therapy (15 hours)

- History and development of OT
- History of OT in India
- Roots of Occupational therapy – moral treatment, Arts and crafts , scientific management
- Expansion and specialization – the rehabilitation model
- Moral treatment vs medical model, rehabilitation model vs social model

2. Theory of Occupation (10 hours)

- Form of occupation
- Occupation as evolutionary trait, Occupation as evolutionary trait, biologic dimensions, social dimensions, psychological dimensions of occupation, occupation and therapy

3. Introduction to ICF (International Classification of Functioning, Disability and Health)

(6 hours)

- Introduction
- Need for ICF
- Who will use ICF
- How to use ICF
- Model of ICF
- Domains of ICF

4. Occupational Therapy Practice Framework (15 hours)

- History of the evolution of OTPF
- Need for OTPF
- Fit between the OTPF and ICF
- OTPF (4^{th} edition) – domain (Occupations, Contexts, Performance patterns, Performance skills and client factors) and process (overview of process, evaluation, intervention and outcomes)

5. Methods of client profile development - overview of methods and importance of history taking. (2 hours)

6. The Occupational Therapy Process (application of OTPF to physical dysfunction)

(10 hours)

- Referral, Screening, evaluation, Intervention process, intervention implementation, intervention review, overview
- Clinical reasoning in intervention process
- Clinical reasoning in context
- Client centered practice

7. Basic evaluation - Principals and methods of Assessment

- Range of motion (6 hours)
    - Definition and types of ROM
    - Methods of joint measurement
    - Goniometer
    - End feels
    - Precautions and contraindications
    - Principles and procedure of ROM measurement
    - Recording range of motion
- Muscle strength (6 hours)
    - Definition
    - Causes of muscle weakness
    - Screening tests
    - Manual muscle test (MMT)– Purposes, methods of assessment, muscle grade
    - Relationship between Joint range of motion and muscle weakness
    - Limitations of MMT
    - Contraindications and precautions
    - General principles of MMT- preparation, gravity influencing muscle function, grades, substitutions, procedure for testing

Practical – (30 hours)

1. Learning format of patient history taking

2. Assessment of Joint ROM of UE and LE on normal subjects

3. Assessment of group muscle strength of UE and LE on normal subjects

Recommended text books-

1. Willared & Spackman's Occupational Therapy
2. O.T. Practice skills for Physical Dysfunction by L.V. Pedretti
3. Occupational Therapy for Physical Dysfunction by C.A. Trombly
4. Therapeutic exercise: Foundation and techniques by Carolyn Kisner and Lynn Allen Colby
5. Muscle Testing & function by F.P. Kendall
6. Daniel's & Worthingham's Muscle testing.

SCHEME OF EXAMINATION- Introduction to Occupational Therapy

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +20 internal assessment)

University exam duration – three hours

Distribution of theory marks (out of 100)

Section A: Long essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any ten out of twelve (5 X 10) 50 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

Distribution of practical marks (out of 80)

A. Goniometry (on normal subjects) 30 marks

B. Muscle testing (on normal subjects) 30 marks

C. Viva Voce 20 marks

BIOCHEMISTRY

Hours-

Theory – 100 hours

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Goal – The goal of the teaching aims to provide comprehensive knowledge of the Human Biochemistry to provide a basis for understanding the clinical correlation & diagnosis of biochemical disorders.

Contents –

Theory –

1. Carbohydrates (10 hours)
Chemistry, Definition, classification with examples, functions.
Digestion and Absorption,
glycolysis, TCA cycle. Cori cycl, HMPshunt patnway, & gluconeogenesis,
Hormonal regulation of blood glucose, diabetes mellitus.

2. Lipid (8 hours)
Introduction, classification of lipids,
digestion of lipids,
β-oxidation of fatty acids and its energetic, functions of cholesterol , lipoproteins, phospholipids,and ketone bodies.

3. Amino acids and Proteins (10 hours)
Definition, classification, of amino acids and proteins, functions, digestion and absorption, transamination, deamination, urea cycle

4. Nucleic acid (5 hours)
Nucleoside and Neucleotides, composition,
structure and functions of DNA and tRN,,mRNA, and rRNA

5. Enzymes (8 hours)
Definition, Modern Classification, active sites , cofactors,
Factors affecting enzymes Action, regulation of enzymr activity.
enzyme inhibitors, diagnostic enzymes, iso-Enzymes.

6. Vitamins (14 hours)
Definition, Classification, Fat(A&D,) & water(Vitamin C, Folic acid, Thiamine, Niacin, pyridoxine, and cobalamine) soluble vitamins, functions, Deficiency manifestations sources & RDA

7. Minerals (10 hours)
Ca, P, Fe, I, Zinc, Magnesium, Function, normal serum level, sources,
& Deficiency manifestations

8. Hormones (6 hours)
Definition with mechanism of action, classification

9. Nutrition (5 hours)
Introduction, composition of food, calorific values of food, balanced diet, energy requirement of a person, RDA, nitrogen balance, nutritional disorder (Marasmus and Kwashiorkor).

10. Muscle Contraction (4 hours)
Mechanism & Biochemical, events

11. Cell biology (9 hours)
Cell structure and function, transportation mechanism and acid base balance(blood, respiratory and renal mechanism) and its disorders.

12. Clinical Biochemistry (8 hours)
Liver function test, kidney function test, Lipid profile in serum, TFT

13. Heme metabolism (3 hours)
Heme synthesis and degradation
Jaundice.

Recommended text books-

1. Medical Biochemistry : U. Satyanarayan
2. Biochemistry : Dr. Vasudevan
3. Manipal manual of clinical biochemistry
4. Text book of medical biochemistry -6th edition by MN Chatterjea and Rana shinde.

SCHEME OF EXAMINATION- Biochemistry

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Exam duration – three hours

Distribution of theory marks (out of 100)

Section A: Long essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any ten out of twelve (5 X 10) 50 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

ENGLISH

Hours-

Theory – 30 hours

Total marks

Theory - 80 marks

COURSE DESCRIPTION: This course is designed to help the student acquire a good command and comprehension of the English language through individual papers and conferences.

BEHAVIOURAL OBJECTIVES:

The student at the end of training is able to

1. Read and comprehend English language
2. Speak and write grammatically correct English
3. Appreciates the value of English literature in personal and professional life.

1. INTRODUCTION:

Study Techniques

Organisation of effective note taking and logical processes of analysis and synthesis Use of the dictionary

Enlargement of vocabulary Effective diction

2. APPLIED GRAMMAR:

Correct usage

The structure of sentences, The structure of paragraphs Enlargements of Vocabulary

3. WRITTEN COMPOSITION:

Precise writing and summarizing Writing of bibliography Enlargement of Vocabulary

4. READING AND COMPREHENSION:

Review of selected materials and express oneself in one's words. Enlargement of Vocabulary.

5. THE STUDY OF THE VARIOUS FORMS OF COMPOSITION:

Paragraph, Essay, Letter, Summary, Practice in writing

6. VERBAL COMMUNICATION:

Discussions and summarization, Debates, Oral reports, use in teaching

SCHEME OF EXAMINATION- English

Written (Theory): Maximum Marks: –80 marks. No Practical or Viva voce examination

Section A: Essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any six out of eight (5 X 6) 30 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

This is a subsidiary subject, examination to be conducted by respective colleges. Marks required for a pass is 35%

REFERENCE

1. English Grammar Collins, Birmingham University, International Language Data Base, Rupa & Co. 1993
2. Wren and Martin - Grammar and Composition, 1989, Chanda & Co, Delhi
3. Letters for all Occasions. A S Myers. Pub - Harper Perennial
4. Spoken English V. Shasikumar and P V Dhanija. Pub. By: Tata Mcgraw Hill, New Delhi
5. Journalism Made Simple D Wainwright
6. Writers Basic Bookself Series, Writers Digest series
7. Interviewing by Joan Clayton Platkon
8. Penguin Book of Interviews.

KANNADA

Hours-

Theory – 30 hours

Total marks

Theory - 80 marks

ಕನ್ನಡ : ಒಂದು
ಪಠ್ಯಕ್ರಮದ ರೂಪರೇಖೆ

ಸ್ತರ : ಬೇಸಿಕ್ ಬಿ.ಎಸ್ಸಿ. (ನರ್ಸಿಂಗ್) ಮೊದಲ ವರ್ಷ

ಸಮಯ : 15 ಘಂಟೆಗಳು (ಪದಿನೈದು ಘಂಟೆಗಳು)

ಪಠ್ಯಕ್ರಮದ : ವಿದ್ಯಾರ್ಥಿ/ವಿದ್ಯಾರ್ಥಿನಿಯರು ದಿನನಿತ್ಯ ಸಂಪರ್ಕಿಸಬಹುದಾದ ಜನಸಾಮಾನ್ಯರೊಡನೆ ಶುಶ್ರೂಷೆಗೆ ಸಂಬಂಧಿಸಿದಂತೆ ಕನ್ನಡದಲ್ಲಿ ಸಂಭಾಷಣೆ ಮಾಡಲು ಹಾಗೂ ಶಿಕ್ಷಣಕ್ಕೆ ನೀಡಲು ಸಹಕಾರ ವಾಗುವಂತೆ ಪಠ್ಯಕ್ರಮದ ಮಾದರಿಯನ್ನು ಅಳವಡಿಸುವುದು.

ಉದ್ದೇಶ : 1. ದಿನ ಬಳಕೆಯ ವ್ಯವಹಾರದಲ್ಲಿ ಶುಶ್ರೂಷೆಗೆ ಸಂಬಂಧಪಟ್ಟಂತೆ ಕನ್ನಡ ಭಾಷೆಗೆ ಅಳವಾಡಿಕೆ

2. ಕನ್ನಡೇತರರಿಗೆ ಕನ್ನಡ ಭಾಷೆಯ ಪರಿಚಯ ಮಾಡಿಕೊಡುವುದು.

ಪಠ್ಯಕ್ರಮದ ವಿವರ

ಘಟಕ ಒಂದು : (ಅ) ಅಕ್ಷರಮಾಲೆ, ಸ್ವರಗಳು, ವ್ಯಂಜನಗಳು

(ಆ) ಪದ, ಪದಪುಂಜ, ವಾಕ್ಯ ರಚನೆ, ಪತ್ರಲೇಖನ ಪ್ರಾಬಂಧರಚನೆ

ಎರಡು : ಶುಶ್ರೂಷಾ ಪದಗಳು (ಇಂಗ್ಲೀಷಿನಿಂದ ಕನ್ನಡಕ್ಕೆ ಶುಶ್ರೂಷೆಯಲ್ಲಿ ಸಾಮಾನ್ಯ ಬಳಕೆಗೆ ಸಂಬಂಧಪಟ್ಟಿರಂತೆ)

ಮೂರು : ರೋಗಿ ಹಾಗೂ ಶುಶ್ರೂಷಕರ ಮಧ್ಯೆ ಸಾಮಾನ್ಯವಾಗಿ ನಡೆಯುವ ಸಂಭಾಷಣೆ

(ಅ) ಪ್ರಾಸ್ತಾವಿಕ ಸಲಹೆ ಕೊಡುವ ವಾಕ್ಯಗಳು

(ಆ) ವೈದ್ಯರೊಂದಿಗೆ ಹಾಗೂ ಇತರ ಸಹಚರರೊಂದಿಗೆ ವ್ಯವಹರಿಸಲು, ಸಂಭಾಷಣೆ ನಡೆಸಲು ಬೇಕಾದ ವಾಕ್ಯಗಳು.

ಅಧ್ಯಯನಕ್ಕೆ ಶಿಫಾರಸ್ಸು ಮಾಡಲಾಗಿರುವ ಗ್ರಂಥಗಳು

1. ಕನ್ನಡ ವ್ಯಾಕರಣ (8, 9 ಮತ್ತು 10ನೇ ತರಗತಿಗಳಿಗೆ ಕರ್ನಾಟಕ ಸರ್ಕಾರ, ಪಠ್ಯಪುಸ್ತಕಗಳಾಧಾರಿತ)
2. ವ್ಯವಹಾರಿಕ ಕನ್ನಡ : ಎಜ್ಜೆಗೆ
3. ಪತ್ರ ಲೇಖನ : ಕನ್ನಡ ಸಾಹಿತ್ಯ ಪರಿಷತ್ತು
4. ರೇಖನ ಕಲೆ : ಎನ್. ಪ್ರಹ್ಲಾದರಾವ್
5. ಆರೋಗ್ಯ ಮತ್ತು ಇತರೆ ಪ್ರಬಂಧಗಳು : ಡಾ॥ ಪಿ. ಎನ್. ಶಂಕರ್
6. ವೈದ್ಯ ಪದಗಳ ಪುಟ್ಟ ರಚನೆ : ಡಾ॥ ಡಿ.ಎನ್. ಶಿವಪ್ಪ

ಕನ್ನಡ : ಎರಡು

ಪಠ್ಯಕ್ರಮದ ರೂಪರೇಷೆ

ಸ್ಥಾನ : ಬೇಸಿಕ್ ಬಿ.ಎಸ್ಸಿ. (ನರ್ಸಿಂಗ್) ಮೊದಲ ವರ್ಷ

ಸಮಯ : 15 ಘಂಟೆಗಳು (ಹದಿನೈದು ಘಂಟೆಗಳು)

ಉದ್ದೇಶ : ಜನಾರೋಗ್ಯದ ಬಗ್ಗೆ ಜನಸಮುದಾಯಕ್ಕೆ ತಿಳುವಳಿಕೆ ಕೊಡುವುದು.

ಪಠ್ಯಕ್ರಮದ ವಿವರ

ಘಟಕ ಒಂದು : ಜನಾರೋಗ್ಯದ ಶುಶ್ರೂಷೆಯಲ್ಲಿ ಸಂದೇಶಗಳು ವ್ಯಕ್ತಿ ಸಂದರ್ಶನ ಮತ್ತು ಸಂದರ್ಶನದ ಗುಣಗಳು.
ಅನುಸರಿಸಬೇಕಾದ ನಿಯಮಗಳು
ಅವಶ್ಯ ಮಾಹಿತಿಗಳ ಸಂಗ್ರಹ, ಸಂದೇಹಗಳು (ಶಂಕೆಗಳು)
ಕುಟುಂಬ ಸಂಪರ್ಕ, ಸಂದರ್ಶಕ ಭಾಷೆಯಾಗಿ ಕನ್ನಡ ಬಳಕೆ

ಎರಡು : ವೈಯಕ್ತಿಕ ಆರೋಗ್ಯ

ಮೂರು : ನೈಸರ್ಗಿಕ ನೈರ್ಮಲ್ಯ

ನಾಲ್ಕು : ಸಾಂಕ್ರಾಮಿಕ ರೋಗಗಳು ಮತ್ತು ಅವುಗಳ ತಡೆಗಟ್ಟುವಿಕೆ

ಐದು : ಆಹಾರ ಮತ್ತು ಆರೋಗ್ಯ

ಆರು : ತಾಯಿ ಮತ್ತು ಮಗುವಿನ ಆರೋಗ್ಯ

ಏಳು : ಕುಟುಂಬ ಕಲ್ಯಾಣ ಯೋಜನೆ

ಅಧ್ಯಯನಕ್ಕೆ ಶಿಫಾರಸ್ಸು ಮಾಡಲಾಗಿರುವ ಗ್ರಂಥಗಳು

1. ಸಮಾಜ ಆರೋಗ್ಯ : ಡಾ॥ ಎಸ್. ಎ. ನಾರಾಯಣ್
2. ತಾಯಿ ಮಗು : ಡಾ॥ ಅನುಪಮಾ ನಿರಂಜನ್
3. ರೋಗನಿವಾರಕ : ಡಾ॥ ಎಸ್. ಆರ್. ಕಾವಳ (ಸೆಂಟ್ ಜಾನ್ ಅಂಬ್ಯುಲೆನ್ಸ್ ಅಸೋಸಿಯೇಷನ್)
4. ಪರಿಸರ ಸಂರಕ್ಷಣ
5. ಪರಿಸರ ಮಾಲಿನ್ಯ : ಕರ್ನಾಟಕ ರಾಜ್ಯ ವಿಜ್ಞಾನ ಪರಿಷತ್ತಿನ ಪ್ರಕಟಣೆಗಳು
6. ಆರೋಗ್ಯ ಶಿಕ್ಷಣ ಮತ್ತು ಶಾಲಾ ಮಕ್ಕಳ ಆರೋಗ್ಯ (ಆರೋಗ್ಯ ಮತ್ತು ಕುಟುಂಬ ಯೋಜನೆ ಇಲಾಖೆ, ಬೆಂಗಳೂರು ಪ್ರಕಟಿಸಿರುವ ಪ್ರಸ್ತುತ ಪುಸ್ತಕಗಳು)

Written (Theory): Maximum Marks: –80 marks. No Practical or Viva voce examination

Section A: Essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any six out of eight (5 X 6) 30 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

This is a subsidiary subject, examination to be conducted by respective colleges. Marks required for a pass is 35%

CLINICAL TEACHING

Total hours- 120 hours

Number of postings – 1 (Occupational Therapy OPD)

- Students are expected to observe general working of OT department. Get familiar with the materials, tools, activities and variety of patients seen in the department
- An attempt will be made to initiate the development of clinical attributes like communication skills, interpersonal skills, problem solving skills for aiding professional practice
- Topics of discussion – general anatomical concepts needed for OT evaluations, client – therapist interaction skills development, client profile development and presentation, discussion of basic assessments

MARKS FOR CLINICAL POSTING

Total marks – 50

Student will be evaluated on overall performance in clinical posting and in assignments allotted to them during posting

SEMESTER II

HUMAN ANATOMY 2

Hours-

Theory – 70 hours

Practical- 30 hours

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +20 internal assessment)

Goal – to provide students with necessary knowledge of technical terminology used related to human body and understanding of anatomical structures necessary to practice as an Occupational Therapist

Contents –

Theory –

A. Upper limb (20 hours)

- The axilla – Boundaries, contents, the brachial plexus (branches and clinical anatomy), Axillary artery and vein,
- The back – muscles of the back with blood supply and nerve supply
- Dermatomes of upper limb- embryological basis, important features, clinical anatomy
- The arm –
- Compartments of the arm
- Anterior compartment of the arm
    - Muscles
    - Musculocutaneous nerve,
    - Brachial artery
    - Large nerves in the arm (median nerve, ulnar nerve, radial nerve)
    - Cubital fossa (Boundaries, contents, clinical anatomy)
- Posterior compartment of arm
    - Triceps muscle
    - Radial nerve

Forearm and hand

Components

- Front of forearm
    - Superficial muscles of the front of forearm
    - Deep muscles of the front of forearm
    - Arteries in front of forearm - Radial artery, ulnar artery
    - Nerves of the front of forearm- median nerve, ulnar nerve, radial nerve
- The palmar aspect of the wrist and hand
- Intrinsic muscles of the hand
- Arteries of hand
- Nerves of hand
- Back of the forearm and hand
    - Extensor retinaculum
    - Superficial and deep muscles of back of the forearm
- Joints of upper extremity – shoulder, elbow, superior and inferior radio-ulnar joint, wrist joint, first carpometacarpal joint, metacarpophalangeal joint, interphalangeal joint

- Articular surface, Ligaments, Blood supply, nerve supply, movements and muscles causing the movements , clinical anatomy, any special features related to particular joint

B. Lower limb (20 hours)

- Front of the thigh
  - Lumbar plexus
  - Femoral triangle
  - Femoral artery
  - Femoral nerve
- Muscles of the front of thigh
- Medial side of the thigh – Muscles, obturator nerve obturator artery
- Gluteal region
  - Muscles, nerves, arteries
  - Structures under gluteal maximus
  - Applied anatomy
- Popliteal fossa
- Back of thigh- muscles, sciatic nerve,
- Muscles, nerves and arteries of anterior, lateral and medial compartment of the leg
- Back of the leg- superficial and deep muscles, posterior tibial artery, peroneal artery, tibial nerve
- Joints of lower limb- Hip, knee, tibiofibular, ankle, joints of the foot
  - Articular surface, Ligaments, Blood supply, nerve supply, movements and muscles causing the movements, clinical anatomy, any special features related to particular joint

C. Muscles of the trunk (5 hours)

- Parts of bones (vertebral column and ribs, sternum) and soft tissues (origin, insertion, nerve supply, blood supply of pre and para vertebral muscles, intervertebral disk, intercostals muscles, abdominal and back muscles) of trunk
- Pelvic girdle and muscles of the pelvic floor

D. Head and neck (10 hours)

- Side of the neck- posterior triangle, sternocleidomastoid muscle
- Back of the neck- suboccipital triangle
- Contents of vertebral canal
- The cranial cavity- cranial nerves
- Contents of the orbit – extraoccular muscles, optic nerve, Occulomotor nerve, Trochlear nerve, Abducent nerve
- Anterior triangle of the neck –
- The parotid region- facial nerve
- Temporal and intratemporal fossa – muscles of mastication, temporomandibular joint
- Deep structures in the neck- thyroid gland, Glossopharangeal nerve, Vagus nerve, Accessory nerve, Hypoglossal nerve, trachea
- Prevertebral region

- The mouth and pharynx- pharynx and muscles of pharynx
- The nose and paranasal sinuses
- The larynx
- The tongue
- The ear – vestibulochochlear nerve

E. Brain (15 hours)

- Introduction to brain
- Meninges of the brain
- The spinal cord
- The brainstem
- Nuclei of cranial nerves and the reticular formation
- The cerebellum
- The fourth ventricle
- The cerebrum
- The third and lateral ventricles and limbic system
- Neural pathways
- Blood supply of spinal cord and brain

Practical – (30 hours)

Journal containing flow charts and diagrams of relevant topics

1. Should be able to identify bones and name attachments of UL, LL and Skull (includes identification of muscles and important nerves)

2. Identify parts of brain

Recommended text books-

1. Human Anatomy by Chaursia (all volumes)

2. Hand Book of General Anatomy by B.D.Chaurasia

3. Gray`s Anatomy by Susan Standring (reference book)

4. Clinical Anatomy by regions by Snell RS

SCHEME OF EXAMINATION- Human Anatomy 2

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +20 internal assessment)

University exam duration – three hours

Distribution of theory marks (out of 100)

Section A: Long essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any ten out of twelve (5 X 10) 50 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

Distribution of practical marks (out of 80)

A. Spotters – bones and muscle attachment of UL, LL, trunk and skull, brain (50 marks)

B. Viva Voce 20 marks

C. Journal 10 marks

HUMAN PHYSIOLOGY 2

Hours-

Theory – 70 hours

Practical- 30 hours

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 + 20 internal assessment)

Goal – The goal of Physiology for Occupational Therapy course is to comprehend the functions of human body in view of integration with other subjects, to be able to apply in terms holistic management of the patients as a qualified Occupational Therapist.

Contents –

Theory –

A. Muscle physiology (15 hours)

- Classification of muscles
- Features of skeletal, cardiac and smooth muscles
- Structure of muscle
- Properties of muscle
- Changes during muscular contraction
- Neuromuscular junction
- Smooth muscle
- Electromyogram and disorders of skeletal muscle
- Endurance of muscle

B. Endocrinology (15 hours)

- Introduction
- Hormones – Hormonal action, mechanism of hormonal action
- Pituitary gland- introduction, anterior pituitary or adenohypophysis, posterior pituitary or neurohypophysis, applied physiology
- Thyroid gland – introduction, hormones, functions of thyroid hormones, mode of action of thyroid hormones, regulation of secretion of thyroid hormones, applied physiology
- Parathyroid glands – introduction, parathormone, actions of parathormone, applied physiology; calcitonin- actions
- Endocrine functions of pancreas
- Adrenal cortex- importance of adrenal glands, functional anatomy, hormones, mineralocorticoids- source and function; Glucocorticoids – source, function; applied physiology
- Adrenal medulla- introduction, hormones, actions; dopamine; applied physiology
- Endocrine functions or other organs – pineal gland – situation and structure, function, thymus- situation and function, kidneys, heart
- Local hormones – introduction

C. Reproductive system (10 hours)

- Male reproductive system- introduction, functional anatomy of testis, functions of testis, Gametogenic functions of testis (Spermatogenesis), Endocrine functions of testis (introduction and functions of hormones), Applied Physiology
- Seminal Vesicles – structure of seminal vesicles, properties and composition of seminal fluid, functions of seminal fluid
- Prostate Gland – structure, properties and composition of prostatic fluid, functions of prostatic fluid, applied physiology
- Semen- Introduction, properties, composistion, applied physiology
- Female reproductive system- female sex organs, sexual life in females
- Ovary- introduction, functional anatomy, ovarian hormones (introduction and functions of hormones)
- Menstrual cycle- Introduction, ovarian and uterine changes during menstrual cycle, applied physiology
- Ovulation – introduction, process, determination of ovulation time

- Menopause – Climacteric and menopause, Cause for menopause, changes during menopause
- Infertility – definition, infertility in males and females
- Pregnancy and parturition – introduction, fertilization of the ovum, sex chromosomes and sex determination, implantation, development of placenta and embryo, maternal changes during pregnancy, Gestation period, Parturition
- Placenta – introduction, functions, fetoplacental unit
- Mammary glands and lactation – development of mammary glands, role of hormones, lactation, breast milk
- Fertility control – introduction, rhythm control, mechanical barriers, chemical methods, OC pills, IUCD, MTP, surgical method

D. Nervous system (20 hours)

- Introduction to nervous system
- Neuron
- Classification of nerve fibers
- Properties of nerve fibers
- Degeneration and Regeneration of nerve fibers
- Neuroglia
- Receptors
- Neurotransmitters
- Reflex activity
- Spinal cord
- Somatosensory system and somatomotor system
- Physiology of pain
- Brainstem
- Thalamus
- Internal capsule
- Hypothalamus
- Cerebellum
- Basal ganglia
- Cerebral cortex
- Limbic system
- Reticular Formation
- Proprioceptors
- Posture and equilibrium
- Vestibular Apparatus
- Electroencephalogram (EEG)
- Physiology of sleep
- Epilepsy
- Higher intellectual functions
- Cerebrospinal fluid (CSF)
- Autonomic nervous system (ANS)

E. Special senses (10 hours)

- Structure of the eye
- Visual process
- Field of vision
- Visual pathway
- Papillary reflexes
- Colour vision
- Errors of refraction
- Structure of the ear
- Auditory pathway
- Mechanism of hearing
- Auditory defects
- Sensation of taste
- Sensation of smell

Practical – (30 hours)

Journal containing procedures of following –

- Clinical examination of higher functions, memory, time, orientation, reflexes, motor and sensory system (10 hours)
- Cranial nerve examination (10 hours)
- Skeletal muscle graphs (10 hours)

Recommended text books-

1. Essentials of medical physiology by K. Sembulingam

2. A.K.Jain, Human Physiology and Biochemistry for physical therapy and occupational Therapy

3. A.K.Jain, Text book of Physiology for medical students (reference book)

4. Guyton (Arthur) Text Book of Physiology. (reference book)

SCHEME OF EXAMINATION- Human Physiology 2

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +20 internal assessment)

University exam duration – three hours

Distribution of theory marks (out of 100)

Section A: Long essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any ten out of twelve (5 X 10) 50 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

Distribution of practical marks (out of 80)

A. Spotters- graphs and instruments used for CNS clinical examination 20 marks

B. Clinical examination of higher functions, memory, time, orientation, reflexes, motor and sensory system 20 marks

C. Cranial nerve testing 20 marks

D. Viva Voce + Journal 20 marks

BASICS OF OCCUPATIONAL THERAPY I

Hours-

Theory – 70 hours

Practical- 30 hours

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +20 internal assessment)

Goal – to introduce students to history and scope of occupational therapy as a profession, it also provides knowledge of basic concepts and evaluations used in occupational therapy practice

Contents –

Theory –

1. Tools of practice in Occupational therapy (5 hours)

- Work programs
- Use of crafts and exercise
- Adjunctive treatment of Vision and visual perceptual deficits
- Physical agent modalities
- Adaptive equipment
- Orthotics
- Neurorehabilitation techniques

2. Practice settings for physical disabilities (6 hours)

- Inpatient settings
- Community based settings
- Outpatient settings

3. Communication in Occupational therapy (6 hours)

- Team and teamwork
- Team and team interaction models
- Creating shared meaning and a common language

4. Basic concepts of Human development (15 hours)

- Definition
- Reasons to acquire knowledge base about human growth and development
- Factors influencing growth and development
- Principles of maturation
- Theoretical foundations- Learning theory, Behavioural theory, Social learning theory, Cognitive theory, Psychoanalytical theory, Social-emotional theory, Motivational Theory, Humanistic theory, Maturational Theory, Ecologic theory

5. Play in child development – (10 hours)

- Definition
- Functions of play
- Content and structure of play
- Play theories (Erikson, Freud, Piaget, Reilly)
- Role of play in therapy

6. Activities of Daily living (6 hours)

- Definitions
- Classification of ADLs
- Evaluation of ADL – general procedures and recording of results
- Scales used in ADL – Barthel index, Katz, Klein and Bell, FIM, AMPS
- Principles and specific techniques in ADL training for:
    - Weakness, low endurance, limited ROM, in-coordination, loss of use of one side of the body, limited vision, decreased sensation

7. Teaching activities in Occupational therapy (8 hours)

- Why teach activities
- Phases of learning
- Learning capacities
- Procedural and declarative learning
- Principles of teaching and learning

8. Therapeutic Modalities: Purposeful activity and characteristic (4 hours)

9. Activity analysis (10 hours)

- Definition of activity analysis
- Occupation as end and Occupation as means
- Selection of activities
- Adaptation and grading of activity
- Analysis – activity focused and performance focused

Practical – (30 hours)

1. Activity analysis of shoulder wheel, ball kicking, eating and writing

2. Evaluating ADL using different scales for mock cases (Weakness, low endurance, limited ROM, in-coordination, loss of use of one side of the body, limited vision, decreased sensation)

Recommended text books-

1. Willard & Spackman's Occupational Therapy
2. O.T. Practice skills for Physical Dysfunction by L.V. Pedretti
3. Occupational Therapy for Physical Dysfunction by C.A. Trombly

SCHEME OF EXAMINATION- Basics of Occupational Therapy I

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +10 internal assessment)

University exam duration – three hours

Distribution of theory marks (out of 100)

Section A: Long essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any ten out of twelve (5 X 10) 50 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

Distribution of practical marks (out of 80)

A. Activity analysis 30 marks

B. ADL Analysis on mock cases 30 marks

C. Viva Voce 20 marks

BASICS OF FIRST AID

Hours-

Theory – 100 hours

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Goal – The goal of the teaching aims to understand basics of first aid which can be helpful for occupational therapy practice

Contents –

Theory –

1. Introduction – Definition of first aid, importance of first aid, Golden rules of the first aid, scope and concept of emergency (5 hours)

2. First aid in Skeletal injuries- Definition, types of fractures of various parts of the body, causes, signs and symptoms, rules of treatment, transport of patients with fracture, first aid measures in dislocation of joints, treatment of muscle injuries (10 hours)

3. Respiratory emergencies (6 hours)

- Asphyxia – Etiology, signs and symptoms, rules of treatment
- Drowning – definition and management
- Artificial respiration – types and techniques

4. Shock and Unconsciousness (8 hours)

- Definition
- Types of shock
- Common causes of shock
- Signs and symptoms of shock (assessment of established shock)
- General and special treatment of established shock

5. Transportation of the injured (8 hours)

- Methods of transportation – single helper, hand seat, stretcher, wheeled transport (ambulance)
- Precautions taken – blanket lift, air and sea travel

6. Community emergencies (5 hours)

- Role of first aider (immediate and later) in fires, explosions, floods, earthquakes, famine

7. Bandages (8 hours)

- Bandaging
- Basic turns
- Bandaging extremities
- Triangular bandages and their application

Practical – (30 hours)

1. First Aid Emergencies (4 hours)

- Burns and Scalds
- First Aid treatment in trauma due to foreign body insertion in eye, ear, nose, throat, stomach and lung

2. Skeletal Injuries (4 hours)

- Transport of patient with fracture, first aid measures in dislocation of joints, treatment of muscle injuries

3. Respiratory injuries (4 hours)

- Artificial Respiration – Types and techniques

4. Wounds and Hemorrahge (4 hours)

- Wound management
- First Aid in Haemorrhage

5. Transportation of injured (5 hours)

- Methods of transportation- single helper, hand seat, stretcher, wheeled transport (ambulance)
- Precautions taken: Blanket lift, air and sea travel

6. Bandages (5 hours)

- Bandaging, basic turns, bandaging extremities, triangular bandages and their application

7. Positions (4 hours)

- Environment safety, prone, lateral, dorsal, dorsal recumbent position, Fowler's position, comfort measures

Recommended text books-

1. First Aid Manual for Nurses by Sanju Sira
2. First Aid (Handbook of St. John Ambulance Association, Karnataka State Centre)

SCHEME OF EXAMINATION- Basics of First Aid

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Exam duration – three hours

Distribution of theory marks (out of 100)

Section A: Long essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any ten out of twelve (5 X 10) 50 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

Distribution of practical marks (out of 80)

A. Practical demonstrations 60 marks

B. Viva Voce 20 marks

CONSTITUTION OF INDIA

Hours-

Theory – 30 hours

Total marks

Theory - 80 marks

Contents-

Theory-

Unit-I:

Meaning of the team 'Constitution' making of the Indian Constitution 1946-

1940. Unit-II:

The democratic institutions created by the constitution Bicameral system of Legislature at the

Centre and in the States.

Unit-III:

Fundamental Rights and Duties their content and

significance. Unit – IV:

Directive Principles of States Policies the need to balance Fundamental Rights with Directive

Princ

iples.

Unit

– V:

Special Rights created in the Constitution for: Dalits, Backwards, Women and Children and the

Religious and Linguistic

Minorities. Unit-VI:

Doctrine of Separation of Powers - legislative, Executive and Judicial and their functioning in

India.

Unit – VII:

The Election Commission and State Public Service

commissions. Unit – VIII:

Method of amending the

Constitution. Unit – IX:

Enforcing rights through

Writs. Unit – X:

Constitution and Sustainable Development in India.

BOOKS FOR REFERENCE

1. J.C. Johari: The Constitution of India- A Politico-Legal Study-Sterling Publication, Pvt.

   Ltd. New Delhi

2. J.N. Pandey: Constitution Law of India, Allahabad, Central Law Agency, 1998.

3. Granville Austin: The Indian Constitution – Corner Stone of a Nation-Oxford, New Delhi,

   2000.

SCHEME OF EXAMINATION- Constitution of India

Written (Theory): Maximum Marks: –80 marks. No Practical or Viva voce examination

Section A: Essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any six out of eight (5 X 6) 30 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

This is a subsidiary subject, examination to be conducted by respective colleges. Marks required for a pass is 35%

SOCIOLOGY

Hours-

Theory – 30 hours

Total marks-

Theory – 80 marks

Contents –

Theory –

Unit 1:

Introduction - meaning, definition and scope of sociology, its relation to anthropology, psychology, social psychology - methods of sociological investigations – case study, social survey, questionnaire, interview and opinion poll methods. - Importance of its study with special reference to health care professionals

Unit 2:

Social factors in health and disease: meaning of social factors - role of social factors in health and disease

Unit 3:

Socialization: meaning and nature of socialization- primary, secondary and anticipatory socialization - agencies of socialization

Unit 4:

Social groups: concepts of social groups influence of formal and informal groups on health and sickness. Roles of primary groups and secondary groups in the hospital and rehabilitation setups.

Unit 5:

Family: the family, meaning and definitions - functions of types of family, changing family patterns - influence of family on individual's health, family and nutrition, the effects of sickness in the family and psychosomatic disease and their importance to physiotherapy

Unit 6:

Community: rural community: meaning and features, health hazards to rural communities, health hazards to tribal community, urban community, meaning and features, health hazards of urbanities.

Unit 7:

Culture and health: concept of health, concept of culture, culture and health, culture and health disorders

Unit 8:

Social change: meaning of social changes, factors of social changes, human adaptation and social change- social change and stress, Social change and deviance - social change and health programme, the role of social planning in the improvement of health and rehabilitation

Unit 9:

Social problems of disabled: consequences of the following social problems in relation to sickness and disability remedies to prevent these problems. Population explosion, poverty and unemployment, beggary, juvenile delinquency, prostitution, alcoholism, problems of women in employment

Unit 10:

Social security: social security and social legislation in relation to the disabled social work: meaning of social work - the role of a medical social worker

SCHEME OF EXAMINATION- Sociology

Written (Theory): Maximum Marks: –80 marks. No Practical or Viva voce examination

Section A: Essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any six out of eight (5 X 6) 30 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

This is a subsidiary subject, examination to be conducted by respective colleges. Marks required for a pass is 35%

CLINICAL POSTINGS

Total hours- 120 hours

Number of postings – 3

Clinical teaching will include

- Demonstration of skills to retrieve information from medical records
- Discussion and demonstration of basic testing methods like vital signs testing, higher function testing, Reflex testing, Cranial nerve examination
- ADL testing on cases using FIM scale

Students are expected to attend clinical ward posting for observation of hospital work and medical history taking

5 cases per posting should be evaluated for history taking and submitted to the concerned Occupational therapy staff

Postings are as follows:

1. Orthopaedics
2. General surgery
3. General/ Neuro medicine

SCHEME OF EXAMINATION FOR CLINICAL POSTING

Total marks – 50

Student will be evaluated on overall performance in clinical posting and marks will be given as a part of internal assessment

SEMESTER III

BASICS OF OCCUPATIONAL THERAPY II

Hours-

Theory – 70 hours

Practical- 30 hours

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (800 +20 internal assessment)

Goal – to introduce students to concepts of biomechanics to understand human body and use this knowledge in occupational therapy practice

Contents –

Theory –

1. Definition, classification and demonstration for testing for (10 hours)

- Muscle tone
- Coordination
- Sensation
- Perception
- Cognition

2. Theories, Models of Practice and Frames of reference (6 hours)

- Models of practice(Briefly) – MOHO, Ecology of human performance, Person environment occupation model
- Frames of reference- Biomechanical, Rehabilitation, Sensorimotor

3. Basics of Work evaluation in OT (12 hours)

- Definition of work, work skills, work behaviour, work aptitudes
- Classification of work levels
- Role of work
- Role of occupational therapy
- Services – job analysis, job description, task analysis, methods, formal measurement
- Job analysis - Job analysis for tailoring, data entry on computer, carpentry, driving

4. Introduction to therapeutic exercises (11 hours)

- Definition of therapeutic exercise
- Definition of key terms – balance, cardiopulmonary fitness, coordination, flexibility, mobility, muscle performance, neuromuscular control, postural control, postural stability, equilibrium, stability,

- Types of muscle contractions-
    - Isometric exercises – rationale for use, types
    - Dynamic concentric, dynamic eccentric – rationale for use
- Concept of open and close chain exercises
- Exercise classification and application to activity
- Definition and training for strength, power and endurance
- Progressive resistive exercise (PRE), Regressive resistive exercise (RRE), brief repetitive isometric exercise (BRIME)

5. Hand function and evaluation methods (8 hours)

- Functional anatomy of hand
- Prehension and grasp patterns
- Grip and pinch strength testing
- Functional evaluation of hand
- Edema-
    - Definition, assessment
    - Difference between edema and swelling

6. Hand Function test – (10 hours)

- Jebson Taylor
- Crawford Small part dexterity test
- Box and Block test

7. Therapeutic tools and equipments (5 hours)

- Knowledge of tools (required to fabricate splints and orthosis), equipments, materials and therapeutic uses

8. Introduction to hand splints (6 hours)

- Definition
- Classification
- Materials used in design and fabrication

9. Functional Cast Bracing- (2 hours)

- Definition, concept of FCB, Objectives and scientific basis of FCB, advantages over conventional bracing, materials used, indications and contra-indications of functional bracing

Practical (30 hours)

1. Journal writing – Tools and equipments used in splinting – name and diagram, classification if any, uses

2. Demonstrated standardized procedure for hand function test – Jebson Taylor, Crawford small part dexterity test and Box and Block Test

3. Designing paper pattern for following splints (20 hours)

- Finger gutter
- Resting pan/ functional cock up
- Radial nerve splint/ Dynamic cock up
- Half cock-up
- Ankle foot Orthosis

Recommended text books-

- Therapeutic exercise – Foundations and Techniques – C. Kisner . L. A. & Colby
- Occupational Therapy : Practice skills for Physical Dysfunction by L.V. Pedretti
- Occupational Therapy for Physical Dysfunction by C.A. Trombly.
- Willard & Spackman's Occupational Therapy

SCHEME OF EXAMINATION- Basics of Occupational Therapy II

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +20 internal assessment)

University exam duration – three hours

Distribution of theory marks (out of 100)

Section A: Long essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any ten out of twelve (5 X 10) 50 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

Distribution of practical marks (out of 80)

A. Making a paper pattern of splint (20 marks)

B. Using therapeutic tools and equipments (20 marks)

C. Job analysis (20 marks)

D. Viva Voce + Journal (20 marks)

BIOMECHANICS (GENERAL AND UPPER EXTREMITY) AND ERGOTHERAPEUTICS

Hours-

Theory – 70 hours

Practical- 30 hours

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +20 internal assessment)

Goal – to introduce students to concepts of biomechanics to understand human body and use this knowledge in occupational therapy practice

Contents –

Theory –

1. General concepts of Biomechanics (15 hours)

- Definition of kinetics and kinematics
- Kinetics – description of motion – types of displacement, location of displacement in space, direction of displacement
- Definition of forces – internal and external forces
- Force of gravity, center of mass of human body, center of mass, line of gravity and stability
- Introduction to statics and dynamics- Newton's law of inertia, Newton's law of acceleration, Newton's law of reaction
- Linear, Parallel, comcurrent and general force system, gravitational and contact forces, tensile forces
- Determining resultant forces in linear and concurrent force system
- Torque or moment of force
- Lever systems, classes of lever with example in human body
- Mechanical advantage and trade-offs of mechanical advantage

2. Describe the biomechanics of upper extremity joints

- The shoulder complex (15 hours)
- The elbow complex (15 hours)
- The wrist and hand complex (10 hours)

3. Posture (10 hours)

- Static and dynamic postures- postural control
- Major goals and basic elements of control- absent or altered inputs and outputs, muscle synergies
- Actors affecting posture
- Normal and abnormal curvature of spine
- Abnormal postures

4. Vicarious movements (5 hours)

Practical – (30 hours)

1. Assessment of Joint ROM of UE patients (10 hours)

2. Assessment of individual muscle strength of UE on patients (10 hours)

3. Facial muscle strength testing (5 hours)

3. Identification of abnormal postures (5 hours)

Recommended text books-

- Joint Structure and Function – A Comprehensive Analysis by C.C. Norking, P.K, Levangie
- Physiology of joint & joint motion by Kapanji I. A.
- Willard & Spackman's Occupational Therapy
- Measurement of joint motion : a guide to goniometry by C.C. Norkin & D.J. White
- Therapeutic exercise – Foundations and Techniques – C. Kisner . L. A. & Colby
- Muscle testing and function by F.P. Kendall
- Daniel's & Worthingham's Muscle testing.
- Occupational Therapy : Practice skills for Physical Dysfunction by L.V. Pedretti
- Occupational Therapy for Physical Dysfunction by C.A. Trombly.

SCHEME OF EXAMINATION- Biomechanics (General and Upper extremity)

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +20 internal assessment)

University exam duration – three hours

Distribution of theory marks (out of 100)

Section A: Long essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any ten out of twelve (5 X 10) 50 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

Distribution of practical marks (out of 80)

A. Goniometry only UE (on patients) 20 marks

B. Muscle testing- UE and facial muscles (on patients) 20 marks

C. Posture 20 marks

D. Viva Voce 20 marks

PATHOLOGY

Hours-

Theory – 50 hours

Total marks-

Theory – 60 marks (50 +10 internal assessment)

Goal – The goal of Pathology is to gain basic knowledge of cell injury and changes, healing process, pathogenesis, pathological effects and clinic-pathological correlation of common infections and non-infectious diseases and understanding its application in clinical practice

Contents –

Theory –

1. Cell injury, Cellular adaptations and cellular ageing – (10 hours)

- Cell injury- causes, mechanisms, Pathogenesis of chemical and physical injury
- Reversible cell injury – types, morphology, swelling, hyaline, fatty changes
- Irreversible cell injury- types of necrosis, apoptosis- calcification-dystrophic and metastasis
- Intracellular accumulation
- Extracellular accumulation-
- Changes after cell death
- Adaptive disorders- atrophy, hypertrophy, hyperplasia, metaplasia, dysplasia
- Ageing

2. Inflammation and healing (10 hours)

- Definition and causes
- Acute inflammation- features, causes, vascular and cellular events
- Mediators of inflammation
- The inflammatory cells
- Chronic inflammation- definition, causes, features, effects, types
- Healing
- Regeneration and repair
- Healing of skin wounds- primary union, secondary union, complications of wound healing, factors influencing healing (local and systemic)
- Healing of specialized tissues – fracture healing, nervous tissue healing, muscle

3. Neoplasia (10 hours)

- Nomenclature and classification
- Characteristics of tumour
- Grading and staging of tumour
- Epidemiologic factors
- Carcinogens and its types
- Effects of tumour on host

4. Environmental and Nutritional Diseases (10 hours)

- Environmental diseases
    - Environmental pollution
    - Chemical and drug injury
    - Injury by physical agents
- Nutritional diseases
    - Nutritional requirement
    - Pathogenesis of deficiency diseases
    - Obesity
    - Starvation
    - Protein energy malnutrition
    - Metals and trace elements
    - Disorders of vitamins
    - Diet and caner

5. Genetic and Paediatric diseases (10 hours)

- Genetic diseases
- Developmental defects- pathogenesis, classification, examples
- Cytogenetic (Karyotypic) abnormalities- numerical abnormalities, structural abnormalities
- Single-gene defect (Mendelian disorder)
- Multifactorial inheritance
- Storage diseases
- Other paediatric diseases
- Tumours of infancy and childhood

Recommended text books-

1. Text book of Pathology - by Harsh Mohan
2. Pathologic basis of desease by Cotran, Kumar, Robbins
3. General Pathology – by Bhende

MICROBIOLOGY

Hours-

Theory – 50 hours

Total marks-

Theory – 60 marks (50 + 10 internal assessment)

Goal – The goal of the teaching aims to provide comprehensive knowledge of microbiology

Contents –

Theory –

1. General Microbiology – introduction and scope (2 hours)

2. Classification of Microorganisms and morphology of bacteria (4 hours)

3. Sterilization and disinfection (basic concepts)- hospital acquired infections, universal safety precautions, Biomedical waste disposal (6 hours)

4. Immunology (8 hours)

- Antigen-antibody reaction and application for diagnosis
- Immune response – normal and abnormal
- Innate immunity and acquired immunity

5. Laboratory diagnosis and infection (4 hours)

6. Bacteriology (10 hours)

- Infection caused by gram +ve cocci, Gas gangrene- clostridium, diphtheria
- Infection caused by gram –ve cocci, Septicemia- cholera- shock, thyphoid, diarrhoea
- Syphilis – morphology and pathogenesis (VDRL)

7. Viruses (6 hours)

- Introduction and general properties
- HIV
- Hepatitis
- Polio, measles, Congenital viral infections, Rubella, CMV Herpes

8. Mycology (4 hours)

- Mycetoma, Aspegilosis, Candidiasis

9. Parasites affecting CNS (6 hours)

- Malaria, Filaria, Toxoplasma, Cystiasarcosis and echinococcus

Recommended text books-

Text books of Microbiology – by R. Ananthnarayan & C.K. Jayram Panikar

SCHEME OF EXAMINATION- (Theory only)

Total marks-

Theory – 100 marks (50 Pathology+ 50 microbiology + 20 internal assessment)

Internal assessment- 10 marks pathology + 10 marks microbiology

Exam duration – three hours

Distribution of theory marks (out of 100)

Section A: Long essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any ten out of twelve (5 X 10) 50 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

PHARMACOLOGY

Hours-

Theory – 100 hours

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Goal – The goal of the teaching aims to provide knowledge about commonly used drugs by patients referred for occupational therapy, their side effects, and precautions to be taken and contraindications to be followed.

Contents –

Theory-

Must know –

- **Names of drugs**
- **Route of administration**
- **Pharmacological effects**
- **Adverse reactions**
- **Uses**
- **Precautions and contra-indications**

1. General Pharmacology- pharmacodynamics, Pharmacokinetics, Adverse drug reactions (4 hours)

2. Drugs acting on Autonomic Nervous System (8 hours)

- Cholinergic drugs
- Anticholinergic drugs
- Adrenergic drugs
- Antiadregenic drugs

3. Autocoids and Related Drugs (8 hours)

- Histamine and Antihistaminics
- Drug therapy of Migraine
- Nonsteroidal Anti-inflammatory Drugs and Antipyeretic- Analgesics
- Antirheumatoid and antigout drugs

4. Respiratory system - Drugs for cough, Bronchial asthma, COPD (4 hours)

5. Hormones and related drugs (4 hours)

- Anterior pituitary
- Thyroid
- Insulin
- Steroids

6. Drugs acting on Peripheral nervous system (4 hours)

- Skeletal muscle relaxants
- Local Anaesthetics

7. Drugs acting on central nervous system (16 hours)

- General anaesthetics
- Alcohols
- Sedatives and Hypnotics
- Antiepileptic
- Antiparkinsonian
- Antispychotics and antimaniac
- Antidepressants and antianxiety
- Opiod analgesics and antagonists

8. Cardiovascular drugs (8 hours)

- Drugs for heart failure
- Antiarrhythmic drugs
- Anti-anginal and other anti-ischaemic drugs
- Antihypertensive drugs

9. Drugs acting on kidney (4 hours)

- Diuretics and antidiuretics

10. Drugs affecting blood and blood formation (4 hours)
    - Drugs affecting coagulation, bleeding and thrombosis

11. Gastrointestinal drugs (4 hours)
    - Drugs for peptic ulcer, constipation and diarrhoea

12. Antimicrobial drugs (8 hours)
    - Sulfonamides, Cotrimoxazole, Quinolones
    - Antitubercular
    - Antifungal
    - Antiviral (antiretroviral and non-antiretroviral)
    - Antimalarial

13. Anticancer drugs (6 hours)

14. Miscellaneous Drugs (18 hours)
    - Immunosuppressant drugs
    - Drugs acting of Skin and Mucous Membranes
    - Antiseptics, disinfectants and ectoparasiticides
    - Chelating agents
    - Vitamins
    - Vaccines antisera and immunoglogulins
    - Drug interactions

Recommended text books-

1. Essentials of medical Pharmacology by KD Tripathi
2. Pharmacology by Gaddum
3. Medical Pharmacology by Drill
4. Pharmacology principle of Medical practice – by Krantx, & Carr
5. Pharmacological basis of Therapeutics – by Goodman, L.S. Gilman A

SCHEME OF EXAMINATION- Pharmacology

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Exam duration – three hours

Distribution of theory marks (out of 100)

Section A: Long essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any ten out of twelve (5 X 10) 50 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

COMPUTER FUNDAMENTALS

Hours-

Theory – 30 hours

Total marks-

Theory – 80 marks

Contents –

Theory –

Unit – 1:

General features of a computer - generation of computers - personal computer – workstation - mainframe computer and super computers. Computer applications – data processing, information processing, commercial, office automation, industry and engineering, healthcare, Education, graphics and multimedia.

Unit – 2:

Computer organization, Central processing unit, Computer memory primary memory and secondary memory. Secondary storage devices – magnetic and optical media. Input and output units. OMR, OCR, MICR, scanner, mouse, Modem.

Unit – 3:

Computer hardware and software, Machine language and high level language, Application software. Computer program, Operating system, Computer virus, antivirus and computer security. Elements of ms dos and windows os, Computer arithmetic, Binary, octal and hexadecimal number systems, Algorithm and flowcharts - Illustrations. Elements of database and its applications.

Unit – 4:

Word processing and electronic spread sheet, An overview of ms word, ms excel and ms PowerPoint, Elements of basic programming - Simple illustrations.

Unit – 5:

Network of computers- Types of networks, LAN, intranet and internet. Internet applications, World Wide Web, E-mail, browsing and searching. Search engines. Multimedia applications.

List of practical assignments: (12 sessions of 2 hours each)

1. System use, keyboard, mouse operations. Word pad and paint brush. Creating a folder and saving a document – 2 sessions.
2. Simple MS. Dos commands – 1 session
3. Windows operating system – icons, menus and submenus, my computer – 2 sessions
4. Desktop publishing – preparation of a document using ms.word – 2 sessions
5. Installation of software, virus scanning – illustrations – 1 session.
6. Spreadsheet calculations using ms.excel – 1 session.
7. Basic programming – illustrations – 1 session.
8. Internet use. Surfing, browsing, search engines, e-mail. – 2 sessions.

BOOKS FOR REFERENCE:

1. Alexis leon and mathews leon (1999): fundamentals of information technology, leon techworld pub.
2. Jain, s.k. (1999): information technology "o" level made simple, bpb pub.
3. Jain, v.k. (2000): "o" level personal computer software, bpb pub.
4. Rajaraman, v. (1999): fundamentals of computers, prentice hall india.
5. Hamacher, computer organisation, mc graw.

SCHEME OF EXAMINATION- Computer Fundamentals

Written (Theory): Maximum Marks: –80 marks. No Practical or Viva voce examination

Section A: Essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any six out of eight (5 X 6) 30 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

This is a subsidiary subject, examination to be conducted by respective colleges. Marks required for a pass is 35%

HEALTH CARE

Hours-

Theory – 30 hours

Total marks-

Theory – 80 marks

Contents –

Theory –

UNIT 1:

Introduction to Health- Definition of Health, Determinants of Health, Health Indicators of India, Health Team Concept, National Health Policy, National Health Programmes (Briefly Objectives and scope), Population of India and Family welfare programme in India

UNIT 2:

Introduction to Nursing - What is nursing? Nursing principles. Inter-Personnel relationships. Bandaging - Basic turns, Bandaging extremities, Triangular Bandages and their application.

UNIT 3:

Nursing Position, Bed making, prone, lateral, dorsal, dorsal recumbent, Fowler's positions, comfort measures, Aids and rest and sleep. - Lifting and Transporting Patients: Lifting patients up in the bed, transferring from bed to wheel chair, transferring from bed to stretcher.

UNIT 4:

Bed Side Management: Giving and taking Bed pan, Urinal: Observation of stools, urine. Observation of sputum, Understand, use and care of catheters, enema giving.

UNIT 5:

Methods of Giving Nourishment: Feeding, Tube feeding, drips, transfusion - Care Of Rubber

Goods - Recording of body temperature, respiration and pulse, - Simple aseptic technique, sterilization and disinfection - Surgical Dressing: Observation of dressing procedures

UNIT 6:

First Aid: Syllabus as for Certificate Course of Red Cross Society of St. John's Ambulance Brigade.

SCHEME OF EXAMINATION- Health Care

Written (Theory): Maximum Marks: –80 marks. No Practical or Viva voce examination

Section A: Essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any six out of eight (5 X 6) 30 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

This is a subsidiary subject, examination to be conducted by respective colleges. Marks required for a pass is 35%

CLINICAL POSTINGS

Total hours- 120 hours

Number of postings – 3

Students are expected to attend clinical ward posting for observation of hospital work and medical history taking and basic assessment related to the case

5 cases per posting should be evaluated for history taking and basic assessment and submitted to the concerned Occupational therapy staff

Postings are as follows:

1. OT OPD
2. Orthopaedics
3. General/ Neuro medicine

SCHEME OF EXAMINATION FOR CLINICAL POSTING

Total marks – 50

Student will be evaluated on overall performance in clinical posting and marks will be given as a part of internal assessment

SEMESTER IV

BIOMECHANICS (LOWER EXTREMITY) AND ERGOTHERAPEUTICS

Hours-

Theory – 70 hours

Practical- 30 hours

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +20 internal assessment)

Goal – to introduce students to concepts of biomechanics to understand human body and use this knowledge in occupational therapy practice

Contents –

Theory –

1. Describe the biomechanics of lower extremity joints
    - Hip joint (12 hours)
    - Knee and patellar-femoral joints (12 hours)
    - Ankle and sub-talar joint (11 hours)

2. Biomechanics of vertebral column (10 hours)
    - General structure and function

3. Gait (15 hours)
    - Normal human gait cycle
    - Terminologies related to gait
    - Stair and running gait
    - Effects of age, gender, assistive devices and orthoses on gait
    - Common gait deviations
    - Types of crutch and cane
    - Types of crutch and cane gaits

4. Mobility and transfer skills (10 hours)
    - Basics of ambulation
    - Functional ambulation
    - Transfer techniques
    - Stand pivot transfers
    - Sliding board transfers
    - Dependent transfers
    - Transfer to household surfaces
    - Car transfers

Practical (30 hours)

1. Assessment of Joint ROM of LE patients (10 hours)
2. Assessment of individual muscle strength of LE on patients (10 hours)
3. Demonstration of types of crutch gaits, identification and analysis of pathological gaits (10 hours)

Recommended text books-

- Joint Structure and Function – A Comprehensive Analysis by C.C. Norking, P.K, Levangie
- Physiology of joint & joint motion by Kapanji I. A.
- Measurement of joint motion : a guide to goniometry by C.C. Norkin & D.J. White
- Therapeutic exercise – Foundations and Techniques – C. Kisner . L. A. & Colby
- Muscle testing and function by F.P. Kendall
- Daniel's & Worthingham's Muscle testing.

- Occupational Therapy : Practice skills for Physical Dysfunction by L.V. Pedretti
- Occupational Therapy for Physical Dysfunction by C.A. Trombly.
- Willard and Spackman's Occupational Therapy

SCHEME OF EXAMINATION- Biomechanics (Lower extremity) and Ergotherapeutics

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +20 internal assessment)

University exam duration – three hours

Distribution of theory marks (out of 100)

Section A: Long essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any ten out of twelve (5 X 10) 50 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

Distribution of practical marks (out of 80)

A. Goniometry- LE (20 marks)

B. Muscle testing- LE (20 marks)

C. Gait (20 marks)

D. Viva Voce (20 marks)

BASICS OF MEDICAL DISORDERS

Hours-

Theory – 70 hours

Practical- 30 hours

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +20 internal assessment)

Goal – to provide basic knowledge of the common medical conditions dealt by occupational therapist

Contents –

Theory –

Following should be included in each section-

- **Definition, classification (if any), Clinical features**
- **Investigations (enumeration)**
- **Brief outline of Management**
- **Complications**

1. Diseases of Cardio-Vascular System (12 hours)

- Ishaemic Heart disease, Hypertensive heart disease, Rheumatic Heart disease, Thyrotoxic Heart disease, Arrythmias, Vascular disease, Embolism and ECG reading

2. Diseases of Endocrine system (8 hours)

- Diabetes Mellitus, Hypopititutarism, Hyperthyroidism and Hypothyroidism, Hypoadrenalism and hyperadrenalism and calcium metabolism

3. Diseases of respiratory system (14 hours)

- Diseases of lungs, Bronchi, Bronchial Asthama, Bronchiectasis, Pulmonary embolism, Pulmonary Tuberculosis, Lung Abscess, Emphysema, Lobar Pneumonia, Bronchopneumonia, Cor pulmonale, Fibroid lung

4. Rheumatic diseases (8 hours)

- Rheumatic fever, Rheumatoid Arthritis, Stills disease, Systemic Lupus Erythematous, Poliomyelitis, Seronegative arthritis gout

5. Diseases of Digestive system (4 hours)

- Gastric and Duodenal ulcers, Haematemesis, Hepatitis, Malabsorption syndrome

6. Deficiency diseases (5 hours)

- Vitamin deficiency disorders

7. Obesity (2 hours)

8. Dermatology (2 hours)

- Common skin infections, Psoriasis, Leprosy

9. Venereal disease and infectious diseases- HIV infection (2 hours)

10. Nephrology (4 hours)

- Acute and chronic renal failure, Urinary tract infection

11. Haematology (5 hours)

- Anaemia, Haemophilia, Thalessemia, Leukaemia, Hodgkin's disease

12. Common infectious diseases (4 hours)

- Malaria, Rabies, Leptospirosis, Dengue

Practical –

1. History taking and basic clinical examination of patient having medical condition

Recommended text books

1. Davidson's Principles and Practice of Medicine - Elsevier Publications
2. Harrison's Principle of Internal Medicine
3. API textbook of Medicine

SCHEME OF EXAMINATION- Basics of Medical Disorders

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +20 internal assessment)

University exam duration – three hours

Distribution of theory marks (out of 100)

Section A: Long essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any ten out of twelve (5 X 10) 50 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

Distribution of practical marks (out of 80)

A. Case discussion 60 marks

- Long case 40 marks
- Short case 20 marks

B. Viva Voce 20 marks

BASICS OF SURGICAL DISORDERS

Hours-

Theory – 70 hours

Practical- 30 hours

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 + 20 internal assessment)

Goal – The goal is to acquaint the students with basic concepts and evaluations of surgical conditions to deal with related cases referred for occupational therapy management

Contents –

Theory –

1. Wound classification, healing process and principles of treatment (3 hours)

2. Haemorrhage, shock, water and electrolyte balance (3 hours)

3. Infections- Acute and Chronic – signs, symptoms and complications (2 hours)

4. Preoperative and post-operative management (2 hours)

5. Ulcers, cysts and abscesses – causes, features, management methods, complications (3 hours)

6. Amputations- causes, Indications, site of election, pre and post operative management (10 hours)

7. Burns- causes, classification, management, complications, hypertrophic and keloid scars (10 hours)

8. Tumours – Classification, management and complications (10 hours)

Radical mastectomy – introduction, indications, management and complications

9. Hand injuries – zones of hand, classification of injuries, management, complications (6 hours)

10. Congenital and childhood disorders – hydrocephalus and spina bifida – features, management, complications (6 hours)

11. Head injury – types, clinical features, management and complications (5 hours)

12. CTVS - CABG, Congenital heart disease, Valvular surgeries – features, post op management (6 hours)

13. ENT – Tracheostomy, Laryngectomy (4 hours)

Practical –

1. History taking and basic clinical examination of patient having surgical disorder

Recommended text books-

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

SCHEME OF EXAMINATION- Basic of Surgical disorders

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +20 internal assessment)

University exam duration – three hours

Distribution of theory marks (out of 100)

Section A: Long essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any ten out of twelve (5 X 10) 50 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

Distribution of practical marks (out of 80)

A. Case discussion 60 marks

- Long case 40 marks
- Short case 20 marks

B. Viva Voce 20 marks

PSYCHOLOGY

Hours-

Theory – 100 hours

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Goal – The goal of the teaching aims to understand basic concepts of psychology which can be helpful for occupational therapy practice

Contents –

Theory –

1. Introduction to Psychology (5 hours)

Definition of psychology, Scope of Psychology, evolution of psychology, Branches of psychology, Concept of normality and abnormality

2. Concept of Id, Ego and Superego (2 hours)

3. Introduction to Psychological disorders (clinical features and management) (10 hours)

Anxiety disorder, panic disorder, phobia, OCD, PTSD

4. Stress and its management (8 hours)

Definition, sources, Stress, disease and health, management techniques

5. Learning (10 hours)

Definition, Theories or learning, Classical and operant conditioning

6. Thinking (5 hours)

Thinking process, concepts, problem solving, decision making and creative thinking

7. Perception (5 hours)

Types of perception, brief assessment methods

8. Motivation (5 hours)

Theories of motivation, different types of motives, and sources of conflicts and adjustment

9. Personality (5 hours)

- Types, theories of personality, types of assessment of personality

10. Intelligence (5 hours)

- Nature and theories of intelligence, individual differences and types of assessments

11. Memory and attention (5 hours)

- Theories of memory, short and long term memory, forgetting, amnesia, methods of improving memory

12. Developmental Psychology (10 hours)

- Introduction
- Individual differences in behaviour
- Influence of heredity and environment
- Infancy, early childhood, middle childhood, puberty (physiological and psychological changes), adolescent state
- Early and middle adulthood
- Old age

13. Industrial Psychology (10 hours)

- Introduction, goals, fundamental concepts
- Herzberg Job satisfaction, factors affecting job satisfaction
- Leadership styles and approaches to leadership
- Organizational Culture – definition, levels, characteristics, types, functions
- Job analysis in brief
- Introduction to consumer psychology and consumer decision making

14. Common techniques in psychology (10 hours)

- Counselling, introspection, cognitive therapies, psychotherapy, relaxation techniques, projective techniques, use of questionnaires and rating scales (with reference to three commonly used scales in psychology)

15. Sports and Exercise Psychology (5 hours)

- Introduction
- Techniques in sports psychology
- Psychological factors in sports and exercise

Recommended text books-

1. Introduction to Psychology by Morgen and King
2. Textbook of stress coping and management by CP Khopkar
3. Psychology in context by S.M Kosslyn
4. Abnormal Psychology by C R Carson

SCHEME OF EXAMINATION- Psychology

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Exam duration – three hours

Distribution of theory marks (out of 100)

Section A: Long essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any ten out of twelve (5 X 10) 50 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

ENVIRONMENTAL SCIENCE AND HEALTH

Hours-

Theory – 30 hours

Total marks-

Theory – 80 marks

Contents –

Theory –

Unit – 1

General meaning of environment, relevance of the subject environment, ecology for hospital administrators.

Unit – 2

Brief outline of the environment (protection) act 1986 & its importance for hospital administration, Legislation vs. Social obligation of hospitals, Role of ngo's like green peace in environmental protection.

Unit – 3

Ecology - brief outline on elements of ecology; brief discussion on ecological balance and consequences of change, principles of environmental impact assessment. Environmental impact assessment report (eia).

Unit – 4

Air pollution and control - factors responsible for causing air pollution in hospitals, sources & effects of air pollutants in the hospital context. Primary & secondary pollutants, green house effect, depletion of ozone layer. Brief discussion on the air (prevention & control of pollution) Act 1989.

Unit – 5

Water pollution and control - brief discussion on hydrosphere, natural water, pollutants: their origin and effects, river/lake/ground water pollution, the financial implication of water pollution control and steps required to be taken e.g. Sewerage treatment plant, water treatment plant.

Standards and control in Relation to the effect of legislation by central and state boards for prevention and control of water pollution.

Unit – 6

Land pollution- Brief understanding of lithosphere, pollutants, municipal, industrial, commercial, agricultural, hospital, hazardous solid waste); their original effects, collection and disposal of solid waste, recovery & conversion methods in relation to an hospital enterprise with discussion about the financial implication.

Unit – 7

Noise pollution - Sources, effects, standards & control

BOOKS FOR REFERENCE

1. Environmental science, cunningham,tmh
2. Environmental studies, a.k.de & a.k.de, new age international
3. Environmental pollution control engineering, c.s.rao, new age international
4. Environmental management, n.k. oberoi, excel books
5. Ecosystem principles &sustainable agriculture, sithamparanathan, scitech
6. Text book of environmental studies for under gradute courses by erach bharucha reprinted in 2006, orient longman private limited /universities press india pvt. Ltd

SCHEME OF EXAMINATION- Environmental Science and Health

Written (Theory): Maximum Marks: –80 marks. No Practical or Viva voce examination

Section A: Essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any six out of eight (5 X 6) 30 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

This is a subsidiary subject, examination to be conducted by respective colleges. Marks required for a pass is 35%

CLINICAL POSTINGS

Total hours- 120 hours

Number of postings – 3

Students are expected to attend clinical ward posting for observation of hospital work and medical history taking and basic assessment related to the case

5 cases per posting should be evaluated for history taking and basic assessment and submitted to the concerned Occupational therapy staff

Postings are as follows:

1. General/ Plastic surgery
2. General/ Neuro-medicine
3. Orthopaedics

SCHEME OF EXAMINATION FOR CLINICAL POSTING

Total marks – 50

Student will be evaluated on overall performance in clinical posting and marks will be given as a part of internal assessment

SEMESTER V

OCCUPATIONAL THERAPY IN MEDICAL CONDITIONS

Hours-

Theory – 70 hours

Practical- 30 hours

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +20 internal assessment)

Goal – to introduce students to various assessments and treatment planning for cases related to medical disorders which are referred for Occupational therapy management

Contents –

Theory –

1. Arthritis (10 hours)

- Overview of Rheumatic diseases
- Osteoarthritis- clinical features, Diagnostic criteria, Medical and surgical management in brief
- Rheumatoid arthritis- clinical features, diagnostic criteria, medical and surgical management in brief
- OT evaluation and intervention in detail
- Occupational performance training

2. Gerontology (8 hours)

- Ageing as a complex process
- Changes in various systems of the body with ageing
- Areas of occupation
- Interventions for older adults, coping, care giving, wellness and ageing

3. OT in Peripheral Neuropathys (4 hours)

- Clinical features, assessment and management

4. Obesity – Causes, impact on occupational performance, assessments and intervention (4 hours)

5. Pulmonary conditions (15 hours)

Chronic bronchitis, bronchial asthma, emphysema, empyema, COPD, ILD, T.B., lung abscess occupational lung diseases, throcic surgeries

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 (15 hours)

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.
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 treadmill, 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 conditions (4 hours)

Haemophilia – clinical features, functional problems, OT assessment and management

8. HIV (4 hours)

Stages of infection, Physical, psychological and environmental considerations, OT assessment and intervention

9. Occupational Therapy in deaf, dumb (6 hours)

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.

Practical – (30 hours)

1. History taking, evaluations related to medical and neurological disorders and treatment planning

2. Presentations of short and long cases related to medical or neurological conditions with emphasis on evaluation and planning of therapy goals

Recommended text books-

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. Pulmonary rehabilitation, guidelines to success – Hodgkin T.E.
6. Physical rehabilitation, assessment, treatment – O'Sullivan.

SCHEME OF EXAMINATION- Occupational Therapy in Medical conditions

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +20 internal assessment)

University exam duration – three hours

Distribution of theory marks (out of 100)

Section A: Long essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any ten out of twelve (5 X 10) 50 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

Distribution of practical marks (out of 80)

A. Long case presentation (complete history, evaluation and goal planning) 40 marks

B. Short case presentation (brief history taking and evaluating the given component) 20 marks

C. Viva Voce 20 marks

OCCUPATIONAL THERAPY IN SURGICAL CONDITIONS

Hours-

Theory – 70 hours

Practical- 30 hours

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +20 internal assessment)

Goal – – to introduce students to various assessments and treatment planning for cases related to surgical disorders which are referred for Occupational therapy management

Contents –

Theory –

1. Post-operative management in OT (12 hours)

- Introduction and Indications for surgical intervention
- Guidelines for pre-operative and post-operative management
    - Considerations for pre and post operative management
    - Considerations of complications and risk reduction
    - Dealing with DVT and pulmonary embolism
- Overview of common post op management
    - Surgical approaches- open, arthroscopic and arthroscopically assisted procedures
    - Use of tissue grafts
    - Repair, reattachment, reconstruction or transfer of soft tissues
    - Release, lengthening or decompression of soft tissues

2. Management of Peripheral nerve disorders and injuries (12 hours)

- Structure of nerve
- Common sites of injury to peripheral nerves
- Nerve injury and recovery
    - Management guidelines for recovery of injury nerve
- Neural tension disorder
    - Signs and symptoms, causes of symptoms, management
    - Precautions and contraindications to neural tension testing and treatment
    - Neural testing and mobilization techniques
- Thoracic outlet syndrome
    - Related diagnosis
    - Etiology of symptoms
    - Sites of compression or entrapment
    - Common structural and functional impairments in TOS
    - Common activity limitations and participation restrictions
    - Non- operative management

3. OT in Burns Management - (10 hours)

Definition, skin anatomy and function in brief, Mechanism of injury and burn depth, burns classification, percentage of burns calculation, severity of injury, phases of wound healing,

medical management, associated complications, burns rehabilitation, OT intervention, return to work, special consideration of hand burns

4. OT in Oncology (10 hours)

Prevention, Mechanism of cancer, post op management, chemotherapy, radiation therapy, rehab care, Palliative care, effects of treatment on functional capacities and abilities, expected course of recover or decline, psychosocial adjustment issues, treatment team, overview of OT evaluation and intervention process

5. OT in management of Amputation (10 hours)

Causes and incidence of amputation, surgical management in brief, psychological aspects of amputation, post surgical management

Upper extremity – levels of amputation, prosthesis and pre, peri, post prosthetic training program

Lower extremity - levels of amputation, causes, prosthesis and pre, peri, post prosthetic training program

6. OT management of Hand and upper extremity injuries (10 hours)

Introduction, zones of hand, Common diagnosis (Fractures, Nerve injuries, Tendon injuries, complex injuries, Edema, Pain syndromes, Joint stiffness, Cumulative trauma disorders) basic examination and evaluation, Intervention, Psychosocial effects of hand injuries

7. OT management of Varicose veins (6 hours)
Clinical features, impact on life, management methods

Practical –

1. Evaluation and treatment planning of various surgical cases referred for occupational therapy management

Recommended text books-

1. Occupational Therapy – Wilard & Spackman
2. O.T. Practice Skills for Physical Dysfunction – Pedretti
3. O.T. in Physical Dysfunction – Trombly
4. Hand splinting – Fees
5. Therapeutic exercise – Kisner
6. Physical rehabilitation, assessment & treatment – Suzan O' Sullivan.

SCHEME OF EXAMINATION- Occupational Therapy in Surgical disorders

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +20 internal assessment)

University exam duration – three hours

Distribution of theory marks (out of 100)

Section A: Long essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any ten out of twelve (5 X 10) 50 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

Distribution of practical marks (out of 80)

A. Long case presentation (complete history, evaluation and goal planning) 40 marks

B. Short case presentation (brief history taking and evaluating the given component) 20 marks

C. Viva Voce 20 marks

BASICS OF ORTHOPAEDICS

Hours-

Theory – 70 hours

Practical- 30 hours

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +20 internal assessment)

Goal – The goal of this subject is to teach the students concepts of orthopaedics and about various orthopaedic traumas and disorders for helping them in treating orthopaedic cases referred for OT management

Contents –

Theory –

1. Orthopaedic Trauma (2 hours)
   - Classification of fractures, Fractures with eponyms, pathological fractures, Injuries to joints, injuries to ligaments, injuries to muscles and tendons

2. Fracture healing and complications of fractures (2 hours)
   - Stages in fracture healing in cortical bone, healing of cancellous bone, factors affecting fracture healing
   - Complications of fractures all possible complications to be covered

3. Treatment of fractures and recent advances in treatment of fractures (4 hours)
   - Emergency care, definitive care, rehabilitation of a fractured limb, management of open fracture

- AO method of fracture treatment (in brief), Functional bracing, Ilizarov's technique

4. Splints and tractions (2 hours)
   - Splints – objectives, types, care of patient in a splint
   - Traction – objective, types, methods of applying traction, daily care of a patient in traction

5. Dislocations and subluxations (2 hours)
   - Definitions, diagnosis, management in brief, complications

6. Fractures in children (2 hours)
   - Relevant anatomy, types of fractures, diagnosis, treatment, complication

7. Peripheral Nerve injuries (4 hours)
   - Relevant anatomy, pathology, mechanism of injury, classification, diagnosis, treatment methods in brief, prognosis (include Brachial plexus injuries)

8. UE injuries (10 hours)
   - Around shoulder – fracture of clavicle, dislocation of shoulder, fractures of humerus
   - Around elbow- supracondylar fracture of humerus, fracture of lateral condyle, medical epicondyle and intercondylar fractures of humerus, dislocation of elbow joint, pulled elbow, fracture of olecranon, head of radius, neck of radius, capitulum
   - Injuries around forearm and wrist – fracture of forearm bones, monteggia fracture dislocation, Galeazzi fracture dislocation, colles fracture, smiths farcture, bartons fracture, scaphoid and lunate fracture
   - Hand injuries- bennett's fracture-dislocation, Rolando's fracture, Metacarpal and phalanges fracture, dislocation of MCP joints

9. LE injuries- (10 hours)
   - Pelvic fractures- relevant anatomy, classification, diagnosis, management in brief and complications
   - Around hip – dislocation of hip, fractures of femur, intertrochanteric fracture
   - Femur fractures- pathoanatomy, diagnosis, treatment in brief and complications
   - Injuries around knee- condylar fractures of femur, fractures of patella, injury to knee ligaments, meniscal injuries, fractures of shaft of tibia and fibula, ankle injuries, fractures of tarsal, metatarsal and phalanges

10. Infections of bones and joint (2 hours)
    - Acute, secondary and chronic osteomyelitis

11. Tuberculosis of bones and joints (3 hours)
    - General considerations, TB of spine, hip, potts paraplegia

12. Congenital Talipes quino Varus (2 hours)
    - Pathoanatomy, clinical features and treatment in brief

13. Congenital dislocation of hip and other malformations (2 hours)

14. Neuromuscular disorder (2 hours)
    - Poliomyelitis, peripheral neuropathies

15. Prolapsed intervertebral disc (2 hours)
    - Pathology, diagnosis, investigations, treatment in brief

16. Low back pain (2 hours)
    - Causes, physical examination, examination, Treatment
    - Sciatica

17. Spinal injuries (3 hours)
    - Biomechanics of injury, classification, clinical features, examination, investigation, treatment in brief

18. Spinal deformities (2 hours)
    - Scoliosis, Kyphosis, Spondylolisthesis

19. Affectations of soft tissues (6 hours)
    - Bursistis, tenosynovitis, Dupuytrens Contracture, Tennis elbow, Golfer's elbow, de Quervain's tenovaginitis, Trigger finger and thumb, Ganglion, Carpal tunnel syndrome, Frozen shoulder, plantar fasciitis, Fibrosis, Painful arc syndrome, Meralgia Paraesthetica, Fibromyalgia

20. Metabolic bone disorders (2 hours)
    - Osteoporosis, Rickets and osteomalacia

21. Miscellaneous regional disorders (2 hours)
    - Flat foot
22. Overview of joint replacement surgeries (2 hours)

Practical – (30 hours)

Learning history taking and clinical evaluation of the orthopaedic cases

Recommended text books-

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

SCHEME OF EXAMINATION- Basics of Orthopaedics

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +20 internal assessment)

University exam duration – three hours

Distribution of theory marks (out of 100)

Section A: Long essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any ten out of twelve (5 X 10) 50 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

Distribution of practical marks (out of 80)

A. Case discussion 60 marks

- Long Case 40 marks
- Short case 20 marks

B. Viva Voce 20 marks

BASICS OF PAEDIATRICS

Hours-

Theory – 70 hours

Practical- 30 hours

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +20 internal assessment)

Goal – The goal of the teaching aims to teach knowledge of common paediatric disorders encountered in occupational therapy practice

Contents –

Theory –

1. Normal Growth and its disorders (2 hours)
   - Factors affecting growth, Assessment of physical growth, disorders of growth, abnormalities of head size and shape

2. Development (2 hours)
   - Normal development – rules of development, factors affecting development, domains of development, developmental assessment, behavioural disorders, habit disorders and tics

3. Adolescent health and development (2 hours)
   - Physical aspects, Cognitive and social development, problems faced by adolescents

4. Nutrition (4 hours)

- Normal diet – breastfeeding, complementary feeding, balanced diet, factors to be considered while planning food for the child

5. Newborn infants (5 hours)
   - Definitions, Evaluation of newborn, kangaroo mother care, breastfeeding, Growth monitoring of LBW infants, Perinatal asphyxia, Respiratory distress, Jaundice, Congenital malformations, Effects of maternal conditions on fetus and neonates

6. Disorders of Respiratory System (8 hours)

   - Common respiratory symptoms
   - Common investigations
   - Respiratory tract infections
   - Bronchial Asthma
   - Acute respiratory distress syndrome

7. Disorders of Cardiovascular system (12 hours)

   - Congestive Cardiac failure
   - Congenital Heart disease
   - Acyanotic Congenital Heart defects
   - Rheumatic fever and rheumatic heart disease
   - Infective endocarditis
   - Systemic hypertension
   - Pulmonary arterial hypertension
   - Rhythm disorders
   - Preventing adult cardiovascular disease

8. Central nervous system (12 hours)
   - Approach to neurological diagnosis, seizures, status epilepticus, epilepsy, coma, acute bacterial meningitis, tuberculosis meningitis, encephalitis, encephalopathies, intra-cranial space occupying lesions, brain tumors, subdural effusion, hydrocephalus, neural tube defects, acute hemiplegia of childhood, paraplegia and quadriplegia, Cerebral palsy, degenerative brain disorders, mental retardation, neurocutaneous syndrome, Arnold-chiary malformation, Dandy walker syndrome

9. Neuromuscular disorders (4 hours)
   - Disorders affecting anterior horn cells, peripheral neuropathies, acute flaccid paralysis, neuromuscular junction disorders, Muscle disorders

10. Genetic disorders (4 hour)
   - Chromosomal disorders, single gene disorders, polygenic inheritance, prevention of genetic disorders

11. Rheumatological Disorders (5 hours)

   - Arthritis, systemic Lupus erythmatosus, Juvenile dermatomyositis, Scleroderma, mixed connective tisse disease, Vasculitides

12. Eye disorders (4 hours)

- Paediatric eye screening, Congenital and developmental abnormalities, acquired eye diseases

13. Paediatric Critical Care (4 hours)

- Assessment and monitoring
- Nosocomial infections in PICU

14. Rights of Children (2 hours)

- Child abuse and neglect

Practical – (30 hours)

- Learning history taking and clinical evaluation of the Paediatric cases

Recommended text books-

1. Ghai- Essential Pediatrics by Vinod Paul and Arvind Bagga

SCHEME OF EXAMINATION- Basics of Paediatrics

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Exam duration – three hours

Distribution of theory marks (out of 100)

Section A: Long essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any ten out of twelve (5 X 10) 50 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

Distribution of practical marks (out of 80)

A. Case discussion 60 marks

- Long Case 40 marks
- Short case 20 marks

B. Viva Voce 20 marks

MEDICAL ETHICS

Hours-

Theory – 30 hours

Total marks-

Theory – 80 marks

Goal – The goal of the teaching aims to promote ethical professional practice

Contents –

Theory –

1. Medical Ethics – Introduction

2. Core of medical ethics – Best interest, Autonomy, rights

3. Special consideration of medical ethics

- Consent
- Confidentiality
- Genetics
- Reproductive Medicine
- Mental Health
- End of life and organ transplantation
- Research and clinical trials

4. Medical ethics in Research in Allied health sciences

SCHEME OF EXAMINATION- Medical Ethics

Written (Theory): Maximum Marks: –80 marks. No Practical or Viva voce examination

Section A: Essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any six out of eight (5 X 6) 30 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

This is a subsidiary subject, examination to be conducted by respective colleges. Marks required for a pass is 35%

CLINICAL POSTINGS

Total hours- 120 hours

Number of postings – 3

Students are expected to attend clinical ward posting for observation of hospital work and medical history taking and basic assessment related to the case

5 cases per posting should be evaluated for history taking and basic assessment and submitted to the concerned Occupational therapy staff

Postings are as follows:

1. General/ Plastic Surgery
2. General medicine and CTVS
3. OT OPD

SCHEME OF EXAMINATION FOR CLINICAL POSTING

Total marks – 50

Student will be evaluated on overall performance in clinical posting and marks will be given as a part of internal assessment

SEMESTER VI

OCCUPATIONAL THERAPY IN ORTHOPAEDIC CONDITIONS

Hours-

Theory – 70 hours

Practical- 30 hours

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +10 internal assessment)

Goal – to learn evaluations and treatment planning for orthopaedic cases referred for occupational therapy management

Contents –

Theory –

1. History taking and detailed orthopaedic evaluation (5 hours)

2. General management of upper extremity and lower extremity fractures with management of associated complications (10 hours)

3. Shoulder, hip and knee joint replacements- overview, OT management (10 hours)

4. Spinal cord injuries- overview and management (10 hours)

5. Adult brachial plexus injury – overview and management (10 hours)

6. Low Back Pain management in occupational therapy (5 hours)

7. Cumulative trauma disorders- overview and management (10 hours)

8. Return to work – (10 hours)

- Definition of work
- Services provided by OT
- Functional Capacity evaluation
- Pre-placement assessment
- Work hardening and work conditioning programs
- Settings – on site rehab and injury management, work clinics, hospital-based and freestanding clinics, community work programs, training programs, place and train programs, sheltered workshops and supported employment
- Workers compensation act in India

Practical – (30 hours)

1. History taking, evaluations related to medical and neurological disorders and treatment planning

2. Presentations of short and long cases related to medical or neurological conditions with emphasis on evaluation and planning of therapy goals

Recommended text books-

1. Occupational Therapy practice skills for physical dysfunction – L. Pedretti, B Zoltan.
2. Occupational Therapy for Physical Dysfunctions – C. Trombly,
3. Therapeutic exercise – Foundations and Techniques – Kisner
4. Willard and Spackman's Occupational Therapy –
5. Treatment and Rehabilitation of Fractures- S.Hoppenfield andV.L. Murthy
6. Rehabilitation of the Hand by Wynnparry CB Published by Butterworths
7. Orthopaedic Physical Assessment – David Magee Published By WB Saunders
8. Clinical Orthopaedic Rehabilitation – Brent Brotzman Published by Mosby

SCHEME OF EXAMINATION- Occupational Therapy in Orthopaedic conditions

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +20 internal assessment)

University exam duration – three hours

Distribution of theory marks (out of 100)

Section A: Long essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any ten out of twelve (5 X 10) 50 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

Distribution of practical marks (out of 80)

A. Case discussion 60 marks

- Long Case 40 marks

- Short case 20 marks

B. Viva Voce 20 marks

OCCUPATIONAL THERAPY IN PAEDIATRIC CONDITIONS

Hours-

Theory – 70 hours

Practical- 30 hours

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +20 internal assessment)

Goal – to provide students with necessary knowledge of evaluation and treatment planning of common paediatric conditions encountered by occupational therapist

Contents –

Theory –

1. History taking and detailed paediatric evaluation (5 hours)

2. Working with families of children with special needs (5 hours)
- Reasons to study about family
- Family subsystems
- Family resources and child with special needs
- Supporting participation in family life
- Role of family in decision making
- Communication strategies

3. Sensory problems in paediatrics and sensory integration – introduction, evaluation methods and introduction to the concept of sensory integration (5 hours)

3. Developmental Problems (25 hours)
- NICU- Environment of NICU, basic evaluations, management, Kangaroo mother care
- Developmental delay- Overview, assessment and management
- Autism spectrum disorder – Overview of condition, Assessments, management methods
- Cerebral palsy -Definition, causes, classification, evaluations, management methods
- Mental retardation -Definition, classification, assessments and management
- Seizure disorders-Overview of condition, assessments and management
- Common genetic disorders: Down's syndrome, Neural tube defects-Overview of condition, assessments and management

4. Orthopaedic conditions in paediatrics (20 hours)
(Overview of condition, assessment and management)

- Obstetric Brachial plexus palsy
- Congenital conditions – Radial club hand, syndactyly, arthrogryposis
- Osteogenesis imperfect
- Torticollis
- Congenital Dysplasia of hip
- Muscular dystrophy
- Juvenile RA

5. Neurological conditions (4 hours)
(Overview of conditions, assessment and management)

- Spinal muscular atrophy
- Hydrocephalus

6. Mental health disorders (4 hours)
(overview of conditions, assessment and management)

- Conduct disorder
- ADHD

7. Learning disorders – overview and management (2 hours)

Practical – (30 hours)

1. History taking, evaluations related to medical and neurological disorders and treatment planning

2. Presentations of short and long cases related to medical or neurological conditions with emphasis on evaluation and planning of therapy goals

Recommended text books-

- Occupational Therapy and Physical Dysfunction: Principles, Skills and Practice by A. Turner
- Willard and Spackman's Occupational Therapy
- Neurological Rehabilitation- A. U. Darcy
- Occupational Therapy for children: J. Case-Smith and A Pratt
- Occupational Therapy practice skills for physical dysfunction – L. Pedretti, B Zoltan.
- Occupational Therapy for Physical Dysfunctions – C. Trombly
- Treatment for Cerebral palsy and motor delay by Sophie Levitt

SCHEME OF EXAMINATION- Occupational therapy in Paediatric conditions

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +10 internal assessment)

University exam duration – three hours

Distribution of theory marks (out of 100)

Section A: Long essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any ten out of twelve (5 X 10) 50 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

Distribution of practical marks (out of 80)

A. Case discussion 60 marks

- Long Case 40 marks
- Short case 20 marks

B. Viva Voce 20 marks

BASICS OF PSYCHIATRY

Hours-

Theory – 70 hours

Practical- 30 hours

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +20 internal assessment)

Goal – The goal of this subject is to provide knowledge about common disorders of mental health encountered in occupational therapy practice

Contents –

Theory –

(Overview of clinical condition, classification, clinical features, diagnosis, predisposing factors, management)

1. Psychiatry history taking and mental state examination (4 hours)

2. Diagnosis and classification in psychiatry (4 hours)

3. Organic mental disorders – (2 hours)
   - Delirium, dementia

4. Psychoactive substance use disorder- (8 hours)
   - Overview, alcohol use disorder, opiod use disorder, cannabis use disorder, cocaine use disorder, amphetamine use disorder, LSD use disorder, barbiturate use disorder, other use disorders

5. Schizophrenia (5 hours)

6. Mood disorders (5 hours)

7. Neurotic, stress related and somatoform disorders- (6 hours)
   - Anxiety disorder, Phobic disorder, Obsessive-compulsive disorder, Dissociative and conversion disorders, somatoform disorder

8. Disorders of adult Personality and behaviour- specific personality disorder (4 hours)

9. Sexual disorders (5 hours)
   - Gender identity disorders, psychological and behavioural disorders associated with sexual development and maturation, paraphilias, sexual dysfunctions

10. Sleep disorders (2 hours)
   - Dyssomnias, Parasomnias

11. Eating disorders (4 hour)

12. Psychosomatic disorders, grief (4 hours)

13. Mental retardation (4 hours)

14. Child psychiatry (5 hours)

15. Non-pharmacological treatment in psychiatry – Electroconvulsive therapy, Psychosurgery (4 hours)

16. Psychological Treatments- Psychotherapy (4 hours)

Practical – (30 hours)

Learning history taking and clinical evaluation of the stable Psychiatry cases

Recommended text books-

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.

SCHEME OF EXAMINATION- Basics of Psychiatry

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +20 internal assessment)

University exam duration – three hours

Distribution of theory marks (out of 100)

Section A: Long essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any ten out of twelve (5 X 10) 50 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

Distribution of practical marks (out of 80)

A. Case discussion 60 marks

- Long Case 40 marks
- Short case 20 marks

B. Viva Voce 20 marks

BASICS OF NEUROLOGY

Hours-

Theory – 70 hours

Practical 30 hours

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +20 internal assessment)

Goal – The goal of this subject is to provide knowledge of common neurological conditions referred for Occupational therapy management

Contents –

Theory –

(Discuss overview of condition and its causes, classification if any, clinical features, relevant investigations and evaluations in brief, management in brief, complications if any)

1. Classification of neurological involvement depending on level of lesion (2 hours)

2. Investigations in neurology – principles, methods, common procedure (skull X-ray, CT, MRI, lumbar puncture, CSF examination, EMG, NCV) (3 hours)

3. Cranial nerves – functions, related disorders and assessment (6 hours)

4. Neuro-opthalmology – assessment of visual functions- field, colour vision, visual acquity, reflexes, disorders of optic nerve, disorders of pupil, disorders related to eye movements (2 hours)

5. Hearing and vestibular disorders – disorders of hearing, examination in brief, vertigo, peripheral vestibular disorders (2 hours)

6. Cerebro vascular accident (6 hours)

Definition and classification stroke, Transient Ischaemic attack, risk factors and causes, common symptoms, medical and surgical management

7. Head Injury (3 hours)

Types, causes, signs and symptoms, relevant investigations, differential diagnosis, medical and surgical management, complications

8. Cerebellar disorders (4 hours)

Etiology, pathophysiology, classification, signs and symptoms, investigations and clinical testing, differential diagnosis, medical and surgical management.

Definition and types of ataxia, clinical testing and management

9. Movement Disorders (4 hours)

Definition, etiology, pathophysiology, risk factors, clinical signs and symptoms, investigations, differential diagnosis, medical and surgical management, complications and prognosis of Athetosis, Chorea, Ballism, Parkinson's Disease, Tics disorder, Myoclonus and Wilsons Disease

10. Spinal Cord disorders (4 hours)

Tracks and its functions, Definition, etiology, pathophysiology, risk factors, clinical signs and symptoms, investigations, differential diagnosis, medical and surgical management, complications and prognosis of spinal cord injury, intervertebral disk prolapsed, transverse myelitis, Syringomyelia, Spina bifida, progressive encephalomyelitis, Conus medularis syndrome, Radiation myelopathy, bladder bowel dysfunction

11. Brain tumors and spinal cord tumors (3 hours)

Classification, clinical features, investigations, medical and surgical management

12. Infections of Brain and spinal cord (4 hours)

Definition, etiology, pathophysiology, risk factors, clinical signs and symptoms, investigations, differential diagnosis, medical and surgical management, complications and prognosis of Meningitis, Encephalitis, Poliomyelitis and Post polio syndrome, septic encephalopathy, Rheumatic Fever, Tetanus, Pertusis, AIDS, Brucellosis

13. Motor Neuron Disease (4 hours)

Definition, etiology, pathophysiology, risk factors, clinical signs and symptoms, investigations, differential diagnosis, medical and surgical management, complications and prognosis of ALS. SMA, post-irradiation Lumbosacral polyradiculopathy, bulbar palsy, Neuromyotonia

14. Disorders of Neuromuscular junction (3 hours)

Definition, etiology, pathophysiology, risk factors, clinical signs and symptoms, investigations, differential diagnosis, medical and surgical management, complications and prognosis of Myasthenia Gravis, Lambert-Eaton syndrome, Botulism

15. Disorders of Muscles (4 hours)

Definition, etiology, pathophysiology, risk factors, clinical signs and symptoms, investigations, differential diagnosis, medical and surgical management, complications and prognosis of muscular dystrophy, myopathy, non-dystrophic myotonia

16. Focal peripheral neuropathy (4 hours)

Definition, etiology, pathophysiology, risk factors, clinical signs and symptoms, investigations, differential diagnosis, medical and surgical management, complications and prognosis of Reflex sympathetic dystrophy, thoracic outlet syndrome, nerve palsies (Median, ulnar, radial ,musculocutaneous, anterior and posterior interosseous, Axillary, long thoracic, suprascapular, sciatic, tibial common peroneal, femoral, obturator, pudental)

17. Multiple Sclerosis (2 hours)

Definition, etiology, pathophysiology, clinical signs and symptoms, investigations, differential diagnosis, medical and surgical management, complications and prognosis

18. Toxic, metabolic and environmental disorders (4 hours)

Definition, etiology, pathophysiology, risk factors, clinical signs and symptoms, investigations, differential diagnosis, medical and surgical management, complications and prognosis of alcohol toxicity, Recreational drug abuse, toxic gases and asphyxia, metal toxicity, pesticide poisoning

19. Introduction, indications and complications of common neurological surgeries (4 hours)

Craniotomy, cranioplasty, stereotactic surgery, deep brain stimulation, Shunting, Burr-hole, Laminectomy, Hemilaminectomy, Rhizotomy, embolization, ablative surgery – thalamotomy, pallidotomy, coiling of aneurysm, clipping of aneurysm

20. Epilepsy (2 hours)

Definition, classification, etiology, pathophysiology, clinical signs and symptoms, investigations, differential diagnosis, medical and surgical management, complications and prognosis

Practical – (30 hours)

- Learning history taking and clinical evaluation of the Neurological cases

Recommended text books-

- Davidson's Principles and Practice of Medicine
- Textbook of neurology – Victor Adams
- Brains clinical Neurology
- Disease of Nervous System Walton
- Clinical neurology – Roger Bannister
- Clinical examination in neurology – Bickerstaff

SCHEME OF EXAMINATION- Basics of Neurology

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 + 20 internal assessment)

Exam duration – three hours

Distribution of theory marks (out of 100)

Section A: Long essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any ten out of twelve (5 X 10) 50 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

Distribution of practical marks (out of 80)

A. Case discussion 60 marks

- Long Case 40 marks
- Short case 20 marks

B. Viva Voce 20 marks

RADIO-DIAGNOSIS

Hours-

Theory – 30 hours

Total marks-

Theory – 80 marks

Goal – The goal of this elective is to teach students the basic concepts of radiology which will further help them in proper evaluation and therapy planning of OT cases

Contents –

Theory –

1. Introduction to Radiology and reading routine X-rays
   - Different types of Radio-diagnostic methods – X-rays, CT scans, Ultrasound and MRI
   - Basic views in Radiology – chest, spine, extremities
   - Demonstration or normal and abnormal X-rays – chest, spine, extremities (fractures, dislocations, abnormalities, tumours)
   - Guidelines for interpreting abnormal X-rays
   - Basic guidelines for radiation protection

2. Introduction to CT scan

- Introduction and Indications to do CT scan
- Basics of CT scan interpretation – interpreting bleed, infarcts, hydrocephalous, space occupying lesions
- Identifying normal anatomy and commonly seen abnormalities in brain and spinal cord

3. Introduction to MRI

- Introduction and indications to perform MRI scan
- Basics of MRI interpretation
- Identifying normal anatomy and commonly seen abnormalities in brain and spinal cord

Recommended text books-

1. Radiology for residents and Technicians by Satish Bhargava

2. Radiological Patient care by Jensen Chesney

SCHEME OF EXAMINATION- Radiodiagnosis

Written (Theory): Maximum Marks: –80 marks. No Practical or Viva voce examination

Section A: Essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any six out of eight (5 X 6) 30 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

This is a subsidiary subject, examination to be conducted by respective colleges. Marks required for a pass is 35%

CLINICAL POSTINGS

Total hours- 120 hours

Number of postings – 3

Students are expected to attend clinical ward posting for observation of hospital work and medical history taking and basic assessment related to the case

5 cases per posting should be evaluated for history taking and basic assessment and submitted to the concerned Occupational therapy staff

Postings are as follows:

1. Paediatrics including NICU
2. Orthopaedics
3. Psychiatry

SCHEME OF EXAMINATION FOR CLINICAL POSTING

Total marks – 50

Student will be evaluated on overall performance in clinical posting and marks will be given as a part of internal assessment

SEMESTER VII

OCCUPATIONAL THERAPY IN MENTAL HEALTH

Hours-

Theory – 70 hours

Practical- 30 hours

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 + 20 internal assessment)

Goal – to provide an understanding of the theoretical concepts and approaches that guide Occupational therapy assessment and intervention used in Mental health which will guide assessment and treatment planning for cases related to mental health disorders which are referred for Occupational therapy management

Contents –

Theory –

1. History taking and assessment in metal health for occupational therapy practice (5 hours)

2. Frames of reference used in mental health – Model of human occupation, Behavioural, Developmental, Sensory integrative and cognitive disability and psychoanalytical (10 hours)

3. Mental health and well being – health and wellbeing, defining well being, well being and mental health, occupational therapy perspective of wellbeing (5 hours)

4. Methods of evaluation of psychiatric patients in occupational therapy (include Canadian Occupational performance measure) (5 hours)

5. Therapeutic media and their application in Psychiatric occupational therapy (10 hours)
   - Behavioural therapy, projective techniques, arts and creative activities, social skills, group therapy, sensory integrative therapy

6. Long term and short term OT intervention in (30 hours)
   - Schizophrenia
   - Mood disorders
   - Dementia
   - Generalised anxiety and phobias

- Conversion disorder
- Obsessive compulsive disorder
- Substance related disorder
- Psychosomatic conditions
- Eating disorders
- Mental Retardation
- Personality disorders

7. Role of Occupational therapist as a team member in (5 hours)
   - Community based rehabilitation
   - Half way homes
   - Day care centers
   - Sheltered workshops
   - Long term care
   - Child guidance clinic

Practical – (30 hours)

1. History taking, evaluations related to mental health disorders and treatment planning

2. Presentations of short and long cases related to mental health disorders with emphasis on evaluation and planning of therapy goals

Recommended text books

- Willard and Spackman's Occupational Therapy
- Occupational Therapy in Short Term Psychiatry by M. Wilson
- Occupational Therapy in Long Term Psychiatry by M. Wilson.
- Occupational Therapy a communication process by G.S. Fidler and J.W. Fidler
- Quick reference to Occupational Therapy by K. Reed.
- Occupational therapy and Mental Health by J. Creek
- Mental Health concepts and techniques for occupational therapy assistant by M. B. Early
- Occupational therapy in Psychiatry and Mental Health by Rosemary Crouch and Vivyan Alers

SCHEME OF EXAMINATION- Occupational Therapy in Mental health

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +20 internal assessment)

University exam duration – three hours

Distribution of theory marks (out of 100)

Section A: Long essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any ten out of twelve (5 X 10) 50 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

Distribution of practical marks (out of 80)

A. Case discussion 60 marks

- Long Case 40 marks
- Short case 20 marks

B. Viva Voce 20 marks

OCCUPATIONAL THERAPY IN NEUROLOGICAL CONDITIONS

Hours-

Theory – 70 hours

Practical- 30 hours

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +20 internal assessment)

Goal – – to introduce students to various assessments and treatment planning for cases related to neurological disorders which are referred for Occupational therapy management

Contents –

Theory –

1. Overview of sensory motor approaches (20 hours)
   - Development of motor control, Assumptions of neurophysiological approaches, Reflex-Hierarchial model of motor control, Neuromaturational theory of motor development, motor dysfunction caused by CNS lesions, View of recovery after CNS lesions
   - Sensory-motor-sensory processing
   - Rood's approach
   - Bobath approach
   - Brunnstom's approach
   - Sensory integrative approach
   - Motor relearning program
   - Proprioceptive neuromuscular facilitation approach

2. Cognitive perceptual skills- evaluations, scales used and therapy (5 hours)

3. Occupational therapy assessment and intervention planning for common neurological conditions (35 hours)

- Stroke
- Traumatic head injury
- Parkinsons's disease
- Amyotrohic lateral sclerosis
- Multiple sclerosis
- Huntington's disease
- Alzeimer's disease
- Motor neurone disease
- Myasthenia gravis
- Cerebellar dysfunctions

5. Dysphagia (5 hours)

- Normal physiology of swallowing, disease process resulting into dysphagia, guidelines for assessment and treatment

6. 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 hours)

Practical – (30 hours)

1. History taking, evaluations related to neurological disorders and treatment planning

2. Presentations of short and long cases related to medical or neurological conditions with emphasis on evaluation and planning of therapy goals

Recommended text books-

1. Occupational Therapy – Wilard & Spackman
2. O.T. Practice Skills for Physical Dysfunction – Pedretti
3. Occupational therapy for physical dysfunction by Catherine Trombly
4. Physical rehabilitation, assessment & treatment – Suzan O' Sullivan
5. A manual for evaluation and treatment of perceptual and cognitive deficits by B. Zoltan, E Siev, B Frieishtat
6. Neurological Rehabilitation by A U Darcy

SCHEME OF EXAMINATION- Occupational Therapy in Neurological conditions

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +20 internal assessment)

University exam duration – three hours

Distribution of theory marks (out of 100)

Section A: Long essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any ten out of twelve (5 X 10) 50 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

Distribution of practical marks (out of 80)

A. Case discussion 60 marks

- Long Case 40 marks
- Short case 20 marks

B. Viva Voce 20 marks

BASICS OF ORTHOTICS AND ASSISTIVE TECHNOLOGY

Hours-

Theory – 70 hours

Practical- 30 hours

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +20 internal assessment)

Goal – The goal of this subject is to teach students about basic principles of designing and fabrication of splinting and assistive devices commonly used in Occupational therapy practice

Contents –

Theory –

1. Assistive technology (10 hours)
   - Definition, universal technology, Role of assistive technology in Occupational participation, human interface assessment, types of electronic enabling technologies, control technologies

2. Basics of splinting and tissue remodelling (10 hours)
   - Definition and purposes of splinting

Tissue remodeling
- Biologic basis for hand and upper extremity splinting
- Biomechanics, splinting and tissue remodeling
- Soft tissue remodeling

Classification and nomenclature of splints and splint components
- Historical splint classification
- ASHT splint classification system
- Splint component technology

3. Principles of splinting (10 hours)

- Mechanical principles
- Principles of using outriggers and mobilization assists
- Design principles
- Construction principles
- Principles of fit

4. Analysis of splints (5 hours)

5. Splints in specific condition: rheumatoid arthritis, burns, hand injuries, LE conditions (10 hours)

6. Spinal braces (10 hours)

7. Adaptive devices (5 hours)

- Overview of adaptive devices and discuss devices and modifications used for BADL activities

8. Wheelchair selection (10 hours)

- Introduction, wheel chair assessment , wheel chair ordering considerations, Wheelchair selection, Wheelchair measurement procedures, seating and positioning considerations, wheelchair accessories, Wheelchair safety.

Practical – (30 hours)

- Designing and fabrication of following splints and adaptive devices
- Ankle foot orthosis (AFO), Resting pan (thermoplastic), Half-cock up (thermoplastic), Finger gutter (metal), Dynamic cock up (metal), opposition strap (cotton tape), buddy strap (cotton tape), flexion straps – palm based and finger based (cotton tape)
- Built up handles, long handled scrubber, writing device.
- Demonstration of spinal braces
- Demonstration of Wheelchair measurement and transfer techniques

Recommended text books-

- Hand and Upper extremity Splinting: principles and methods 3rd edition – Fess, Gettle, Philips, Janson
- Occupational Therapy practice skills for physical dysfunction – L. Pedretti.
- Occupational Therapy for Physical Dysfunctions – C. Trombly

SCHEME OF EXAMINATION- Basics of Orthotics and Assistive technology

Total marks-

Theory – 100 marks (80 + 20 internal assessment)

Practical – 50 marks (40 + 10 internal assessment)

University exam duration – three hours

Distribution of theory marks (out of 100)

Section A: Long essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any ten out of twelve (5 X 10) 50 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

Distribution of practical marks (out of 80)

A. Splint fabrication 30 marks

B. Assistive device fabrication 30 marks

C. Viva Voce and Journal 20 marks

PREVENTIVE AND SOCIAL MEDICINE

Hours-

Theory – 100 hours

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Goal – The goal of this subject is to provide knowledge about diseases and its cure from preventive and social perspective

Contents –

Theory –

1. Man and medicine (5 hours)
   - Medicine in antiquity, Dawn of scientific medicine, modern medicine, medical revolution, health care revolution

2. Concept of health and disease
   - Concept of health – (12 hours)
     Changing concept (biomedical, ecological, psychosocial, holistic), definition of health, dimensions of health, positive health, Health- a relative concept, concept of well-being, spectrum of health determinants of health, Ecology of health, right to health, responsibility for health, indicators of health, the urban-rural divide in health and development, health service philosophies, developed and developing regions

- Concept of disease- (12 hours)
  Introduction, Concept of causation, natural history of disease, concepts of control, concepts of prevention, modes of intervention, changing pattern of disease, population medicine, hospitals and community, disease classification

3. Principles of epidemiology and epidemiologic medicine (12 hours)
   - Definition and components, basic measurements in epidemiology, measurement of mortality, mortality rates and ratios, direct and indirect age standardization, measurement of morbidity, incidence, prevalence, epidemiologic methods, descriptive epidemiology, analytical epidemiology, case control study, cohort study, elements of cohort study, relative risk, attributatble risk, experimental epidemiology, study designs, randomized control trials, non-randomized trials, association and causation, uses of epidemiology, infectious disease epidemiology, dynamics of disease transmission, modes of transmission, susceptible host, host defences, adverse events following immunization, the cold chain, disease prevention and control, investigation of an epidemic, disinfection

4. Screening for disease (5 hours)
   - Iceberg Phenomenon of disease, Concept of screening, screening and diagnostic tests, concept of "lead time", aims and objectives, uses of screening, types of screening, criteria for screening, evaluation of a screening test, evaluation of screening programs

5. Health programmes in India (12 hours)
   - Universal immunization program
   - National health mission (urban and rural)
   - Reproductive and child health program
   - National Mental health program
   - Ayushman Bharat programme
   - National Programme for control and treatment of occupational diseases
   - Minimum needs Programme
   - 20-point programme

6. Demography and Family planning (5 hours)
   - Demographic cycle, fertility, Family planning-objectives of national family planning programme and family planning methods, advantages and disadvantages of the methods

7. Preventive medicine in Obstetrics, Paediatrics and Geriatrics (8 hours)
   - MCH problems, Antenatal care, Post natal care
   - Neonatal care (early neonatal care, immediate care, neonatal examinations), Measuring the baby, Feeding of infants
   - Growth and Development – definition, normal growth, growth chart
   - Child health problems
   - Preventive medicine and geriatrics – health problems of the aged, potential for disease prevention in elderly

8. Nutrition and health (8 hours)

- Classification of foods, nutrients, proteins, fats, carbohydrates, dietary fibre, vitamins (types, functions, sources and deficiency), Minerals (types, functions, sources and deficiency), nutritional requirements, balanced diet, nutritional problems in public health

9. Hospital waste management (5 hours)
   - Definition, sources of health-care waste, health-care waste generation, health hazards of health-care waste, treatment and disposal technologies for health-care waste

10. Occupational health (5 hours)
   - Introduction, health of the worker, occupational hazards, occupational disease (classification and enumeration only), health problems due to industrialization, measures for health protection of workers. Prevention of occupational diseases
   - Legislations- The factories act 1948, the employees state insurance act 1948
   - Occupational health in India

11. Mental health (4 hours)

   - Characteristics of a mentally healthy person, types of mental illness, causes of mental ill health, prevention, mental health services, alcohol and drug dependence.
   - Community aspects of mental health

12. Communication for Health Education (2 hours)

   - The communication process, types of communication, health communication

13. Health Education (5 hours)

   - Concepts, aims and objectives, approaches to health education, models of health education, contents of health education, principles of health education, practice of health education

Recommended text books-

1. Park's textbook of preventive and social medicine by K. Park

SCHEME OF EXAMINATION- Preventive and Social Medicine

Total marks-

Theory – 100 marks (80 + 20 internal assessment)

University exam duration – three hours

Distribution of theory marks (out of 100)

Section A: Long essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any ten out of twelve (5 X 10) 50 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

DISABILITY ASSESSMENT AND CERTIFICATION

Hours-

Theory – 30 hours

Total marks-

Theory – 80 marks

Goal – The goal of this subject is make the students aware of evaluation and certification procedures involved in disability evaluation.

Contents –

Theory –

1. Definitions related to disability assessments and certification

2. Team members involved

3. Disability evaluation guidelines and format

SCHEME OF EXAMINATION- Disability Assessment and Certification

Written (Theory): Maximum Marks: –80 marks. No Practical or Viva voce examination

Section A: Essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any six out of eight (5 X 6) 30 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

This is a subsidiary subject, examination to be conducted by respective colleges. Marks required for a pass is 35%

CLINICAL POSTINGS

Total hours- 120 hours

Number of postings – 3

Students are expected to attend clinical ward posting for observation of hospital work and medical history taking and basic assessment related to the case

5 cases per posting should be evaluated for history taking and basic assessment and submitted to the concerned Occupational therapy staff

Postings are as follows:

1. Psychiatry (stable cases)
2. Neuro medicine and neuro surgery
3. OT OPD

SCHEME OF EXAMINATION FOR CLINICAL POSTING

Total marks – 50

Student will be evaluated on overall performance in clinical posting and marks will be given as a part of internal assessment

SEMESTER VIII

COMMUNITY BASED REHABILITATION

Hours-

Theory – 70 hours

Practical- 30 hours

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 + 20 internal assessment)

Goal – to learn concepts of community rehabilitation relevant to occupational therapy practice

Contents –

Theory –

1. Introduction to CBR – (10 hours)

- Important definitions- (health, community, community based practice, community health promotion, community level intervention, community centered initiatives)
- Role descriptions –(community health advocate, consultant, case manager, private practice owner/ entrepreneur, supervisor, program managers)
- Characteristics of effective community-based Occupational therapy practitioners
- Community practice paradigm, characteristics of the community practice paradigm
- Improving health and well-being through occupation
- Role of occupational therapy practitioner in health promotion and community health
- Differentiation between CBR and IBR

2. Theoretical Frameworks for community based practice (10 hours)

- Terminologies – concepts and constructs, principle, model, theory, paradigm, conceptual model of practice
- Theories related to community based practice – community organization approaches
- Occupational therapy models- Model of human occupation, Ecology of human performance, person-environment-occupation model

3. Community- based program development (10 hours)

- Program planning-
- Environmental scanning and trend analysis
- Program planning principles

4. Entrepreneurship and innovation in occupational therapy (5 hours)

- Occupational therapy entrepreneurship
- Starting a new business- for profit and non-profit

5. Children and youth (10 hours)

- Occupational therapy services in early intervention program- evaluation and intervention
- Evaluation of children and youth in community-based settings
- Considerations in designing interventions for children and youth
- Intervention approaches for community based programming
- After school programs

6. Role of occupational therapy in older adults (5 hours)

- Maintaining and maximizing independence, managing chronic conditions, enhancing quality of life, Safety, security and support for caregivers and community

7. Health Promotion and wellness for people with physical disabilities– (10 hours)

- Introduction, health promotion principles and practice, models of health promotion practice, Occupational therapy involvement in health promotion and prevention, health promotion and occupational participation, secondary conditions and people with disabilities, evaluation and intervention

8. Work and career transitions (5 hours)

- Role of occupational therapy in school to work transition
- Community based school to work transition programs
- Transitioning to retirement

9. Accessibility and community integration (5 hours)

- Accessibility issues, home accessibility, community accessibility
- Community mobility- personal transportation, public transportation, transportation safety
- Community integration

Practical – (30 hours)

Project work taking up any one topic of CBR

Designing evaluation and therapy for 4 mock cases (2 cases related to surgery and 2 cases related to orthopaedics) with keeping in mind CBR approach

Recommended text books-

- Occupational therapy in Community based practice settings by Marjorie E. Scaffa and S. Maggie Reitz

- Occupational Therapy for Physical Dysfunctions by C..A.Trombly.
- Willard and Spackman's Occupational Therapy by H.Hopkins & H. Smiths
- National Health programs in India Kishor J

SCHEME OF EXAMINATION- Community based Rehabilitation

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +20 internal assessment)

University exam duration – three hours

Distribution of theory marks (out of 100)

Section A: Long essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any ten out of twelve (5 X 10) 50 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

Distribution of practical marks (out of 80)

A. Short case presentation- Ortho/surgery mock case using CBR approach (20 marks)

B. Long case presentation- Ortho/surgery mock case using CBR approach (40 marks)

C. Viva Voce 20 marks

PRACTISE ISSUES IN OCCUPATIONAL THERAPY

Hours-

Theory – 70 hours

Practical- 30 hours

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +20 internal assessment)

Goal – to provide students with necessary knowledge of professional conduct and ethics in occupational therapy practice

Contents –

Theory –

1. Ethics in Occupational therapy (10 hours)

- Key terms, ethical jurisdiction of standards and codes of ethics of AIOTA, current ethical dilemmas in OT practice, issues and conflicts involved and solutions to the dilemmas

2. Management of occupational therapy services (10 hours)

- Managers, administrators and supervisors, managerial functions, financial management, technology and management, marketing, qualities of manager

3. Supervision of practice (10 hours)

- Supervision in practice, formal supervision, informal supervision, mentoring, supervisory process, performance evaluation- a supervisory responsibility, supervision of occupational therapy personnel, types of supervision, methods of supervision, frequency of supervision

4. Hospice care in occupational therapy (10 hours)

5. Home care and private practice: (10 hours)

- Home care delivery model, its implementation, parameters of home care, delivery service, skills required for effective practice, constraints, influence of various issues that shape home care practice, role of practitioner in private practice

6. Evidence based practice for Occupational Therapy (5 hours)

- Introduction, model of EBP, SOTP model

7. Documentation in Occupational Therapy practice (10 hours)

- Purposes, fundamental elements, clinical reasoning in documentation, legal liability, initial evaluation, intervention plan, progress report, types of documentation reporting formats, confidentiality

8. Virtual Reality in Occupational Therapy practice (5 hours)

- Basic terminologies, necessity of technology, basic and advancing Information communication technology (ICT) in day to day practice, in health care, virtual therapeutic games and activities, limitations, Virtual consultation and follow up

Practical – (30 hours)

- Project work on a related topic
- Designing evaluation and therapy for 4 mock cases (2 cases related to neurology and 2 cases related to psychiatry) with keeping in mind advances in OT

Recommended text books-

- Occupational Therapy practice Skills for Physical Dysfunction – L. Pedreti, Barbara Zoltan
- Occupational Therapy for Physical Dysfucntions – C.A. Trombly
- Willard and Spackman's Occupational Therapy

SCHEME OF EXAMINATION- Practise Issues in Occupational Therapy

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Practical – 100 marks (80 +20 internal assessment)

University exam duration – three hours

Distribution of theory marks (out of 100)

Section A: Long essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any ten out of twelve (5 X 10) 50 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

Distribution of practical marks (out of 80)

A. Short case presentation-Neurology mock case using current trends of practice in OT (20 marks)

B. Long case presentation- Neurology mock case using current trends of practice in OT (40 marks)

C. Viva Voce 20 marks

BIOSTATISTICS AND RESEARCH METHODOLOGY

Hours-

Theory – 100 hours

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Goal – The goal of this subject is to provide knowledge of statistics and research methodologies to conduct studies in occupational therapy practice

Contents –

Theory –

1. Introduction (4 hours)

2. Sources and presentation of data (6 hours)

- Sources for collection of medical statistics
- Statistical data
- Methods of presentation
- Presentation or illustration of quantitative and qualitative data

3. Measures of Location – Averages and Percentiles (calculations included) (8 hours)

- Measures of central tendency- averages
- Measures of location – percentiles
- Application and use of percentiles

4. Variability and its Measures (calculations included) (8 hours)

- Types of variability
- Measures of variability

5. Normal Distribution and Normal Curve (calculations included) (6 hours)

- Introduction
- Demonstration of normal distribution
- Normal curve
- Relative or standard normal deviate or variate (calculations included)
- Asymmetrical distributions
- Normal probability distribution

6. Sampling (calculations included) (6 hours)

- Introduction and characteristics
- Sampling Techniques

7. Probability (calculations included) (8 hours)

- Introduction and laws of probability
- Probability from shape of normal distribution or normal curve
- Terminologies related to probability
- Binomial probability distribution function

8. Sampling variability and significance (calculations included) (8 hours)

- Introduction
- Sampling distribution
- Significance and tests of significance

9. Significance of difference in means (calculations included) (10 hours)

- Introduction
- Standard error of mean
- Standard error of difference between two large samples
- Significance of difference between means of small samples by student's t- test
- ANOVA test

10. Significance of Difference in Proportions of large samples (calculations included) (5 hours)

- Introduction
- Standard error of proportion

11. The Chi-square test (calculations included) (5 hours)

- Introduction and application
- Calculations

12. Correlation and Regression (calculations included) (6 hours)

- Measures of relationship between continuous variables

- Types of correlation
- Calculation of correlation coefficient from ungrouped and grouped series
- Regression-introduction and calculation of regression coefficient

13. Designing and methodology of an experiment or a study (5 hours)

- Introduction and steps in methodology and designing

14. Demography and Vital statistics (6 hours)

- Introduction and collection of demographic data
- Medical certificate in case of death
- Compilation and presentation

15. Measures of Population and Vital Statistics (calculations NOT included) (5 hours)

- Introduction and measures of population
- Measures of vital statistics

16. Life table (calculations NOT included) (2 hours)

- Introduction, uses and application

17. Computers in Medicine (2 hours)

Recommended text books-

1. Methods in Biostatistics – B.K . Mahajan
2. Biostatistics and Research Methodology – Nageshwara Rao
3. Research Methodology and Biostatistics – Suresh Sharma

SCHEME OF EXAMINATION- Biostatistics and Research Methodology

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

University exam duration – three hours

Distribution of theory marks (out of 100)

Section A: Long essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any ten out of twelve (5 X 10) 50 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

ERGONOMICS

Hours-

Theory – 100 hours

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

Goal – The goal of the teaching aims to teach basic concepts of ergonomics and its use in Occupational Therapy practice

Contents –

Theory –

1. Introduction to Ergonomics and therapy (5 hours)
   - Brief introduction
   - Definition
   - Why use ergonomics
   - Interrelationship between therapist and ergonomists
   - Concept of universal design

2. Client centered Framework for therapists in ergonomics (5 hours)
   - Introduction
   - Participation and ergonomic approaches
   - Client centered practice in ergonomics
   - The PEO model and its application to ergonomic process

3. Macroergonomics (5 hours)
   - Definition
   - Macroergonomic process
   - Role of OT

4. Ergonomics and work Assessments (10 hours)
   - Selection of work related assessments
   - Functional Capacity Evaluation
   - Work capacity evaluation devices
   - Lifting assessments
   - Assessment of physical ergonomics of jobs
   - General ergonomic assessment and job analysis checklists
   - Whole body postural assessment
   - Upper limb postural assessment

5. Anthropometry (5 hours)
   - Introduction
   - Static anthropometry
   - Static anthropometric measurements and its limitations
   - Uses

6. Cognitive and Behavioural Demands of work (6 hours)

- Introduction, understanding cognitive and behavioural work demands
- Contextual influences on cognitive and behavioural work demands and worker performance
- Measuring the cognitive and behavioural demands of work

7. Psychosocial factors in Work-Related MSK disorders (6 hours)

- Introduction
- Psychosocial risk factors
- Psychosocial factors and work related MSK disorders
- Assessment – the occupational stress inventory
- Interventions

8. Physical Environment (6 hours)

- Vibration
- Sound
- Lighting
- Structural features
- Chemicals and toxins
- Air and water quality

9. Human factors in Medical Rehabilitation Equipment: product development and usability testing (8 hours)

- Introduction
- Considerations
- Process
- Product development, efficacy testing and comparison testing of an assistive walker

10. Lifting Analysis (8 hours)

- The biomechanics of lifting
- Lifting techniques
- Critique of lifting techniques
- Other considerations
- Manual lifting analysis (theory only)

11. Seating (8 hours)

- Considerations
- Ergonomic chair design and selection
- Seating standards
- Ergonomic workstation considerations
- Employee education and management considerations

12. Computers and assistive technology (10 hours)

- Cumulative trauma disorder- Risk factors
- Evaluation of work capacity of keyboard users
- Solutions related to workstation set up
- Issues related to desktop and notebook computers
- Issues related to keyboard layout
- Solutions related to keyboard structure
- Solutions related to alternate input methods

13. Ergonomics for children and youth in the educational environment (6 hours)
    - The learning environment
    - Questions to ask about the seated learning environment
    - Carrying schoolbags

14. Ergonomics in Disability Management (6 hours)
    - Introduction
    - Participatory ergonomics
    - Return to work

15. Economics and Marketing of Ergonomic Services (6 hours)
    - Introduction
    - Marketing in the new economy
    - Definition of marketing
    - Marketing Approach

Recommended text books-

- Ergonomics for Therapists –Karen Jacobs

SCHEME OF EXAMINATION- Ergonomics

Total marks-

Theory – 120 marks (100 + 20 internal assessment)

University exam duration – three hours

Distribution of theory marks (out of 100)

Section A: Long essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any ten out of twelve (5 X 10) 50 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

BASICS OF SPSS SOFTWARE

Hours-

Theory – 30 hours

Total marks-

Theory – 80 marks

Goal – The goal of the subject is to teach data entry and analysis for conducting research

Contents –

Theory –

1. What is SPSS software? Its features and uses

2. Data entry in SPSS

3. Conducting various analysis in SPSS

SCHEME OF EXAMINATION- Basics of SPSS software

Written (Theory): Maximum Marks: –80 marks. No Practical or Viva voce examination

Section A: Essay question – answer any two out of three (10 x2) 20 marks

Section B: Short essay questions-answer any six out of eight (5 X 6) 30 marks

Section C: Short answer questions- answer any ten out of twelve (3 X10) 30 marks

This is a subsidiary subject, examination to be conducted by respective colleges. Marks required for a pass is 35%

CLINICAL POSTINGS

Total hours- 120 hours

Number of postings – 3

Students are expected to attend clinical ward posting for observation of hospital work and medical history taking and basic assessment related to the case

5 cases per posting should be evaluated for history taking and basic assessment and submitted to the concerned Occupational therapy staff

Postings are as follows:

1. OT OPD/ CBR
2. Orthopaedics and Plastic surgery
3. General and Neuro medicine

SCHEME OF EXAMINATION FOR CLINICAL POSTING

Total marks – 50

Student will be evaluated on overall performance in clinical posting and marks will be given as a part of internal assessment