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**UNIVERSITY OF DELHI**

**SCHEME OF EXAMINATION  
AND  
COURSES OF READING  
FOR**

**BACHELOR OF SCIENCE (HONS.)  
OF OCCUPATIONAL THERAPY  
(4½ YEARS DURATION)  
W.E.F. 2000-2001**



*Syllabus applicable for the students seeking admission to the  
B.Sc.(Hons.) OCCUPATIONAL THERAPY course in the  
Academic year 2002-2003*

**Price : 30.00**

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## UNIVERSITY OF DELHI

(FACULTY OF SCIENCE)

### ORDINANCE FOR BACHELOR OF SCIENCE (HONS.) OCCUPATIONAL THERAPY

1. The name of Degree to be awarded shall be **Bachelor of Science (Hons.) Occupational Therapy B.Sc. (Hons.)** in the Faculty of Science.
2. The duration of the course shall be **Four and a half years**, inclusive of **Six months Internship**.
3. In addition to the conditions laid down in the Ordinance a candidate seeking admission to the B.Sc. (Hons.) OT Course must have passed one of the following examinations:-
  - (i) **Senior School Certificate Examination** (12 years course) of the Central Board of Secondary Education, Delhi.

Or

an examination recognised by the University of Delhi as equivalent thereto.

With the following subjects: Chemistry, Biology, Physics and English.

- (ii) The eligible candidates will be called for an Entrance test prescribed by the Academic Council of the University of Delhi.
4. **AGE :** No candidate shall be eligible for admission to the course unless he/she is 17 years of age before 1st day of October in the year in which he/she seeks admission provided that the Vice Chancellor may on the basis of individual merit relax the age requirement upto a maximum period of one year.



### EXAMINATION:

There shall be an examination at the end of first year after a regular course of study.

Following shall be the distribution of teaching hours for the course of study:

#### First Year:

S.No.	Subjects	Hours	
		Theory	Practical
1.	Anatomy	225	100
2.	Physiology	225	100
3.	Pathology & Micro Biology	200	-
4.	Pharmacology & Biochemistry	200	-
5.	Sociology	70	-
	English Qualifying	40	-
	Hindi Compulsory	40	-

As per the clause 2 A of Ordinance V of the University of Delhi.

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<b>TOTAL</b>	<b>1000 + 200 = 1200 hours</b>
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**Qualifying Subjects:**

English

Hindi

Hours as per University requirements.

Compulsory Hindi as per clause 2 A of Ordinance V of the University of Delhi.

**SECOND YEAR:**

There shall be an examination at the end of second year after regular course of study and the following shall be the distribution of teaching hours for the Course of Study.

No. Subjects	Hours	
	Theory	Practical
General & Health Psychology	150	-
Orthopaedics	200	-
Biomechanics & Kinesiology	150	50
Fundamentals of O.T. Part-I	125	200
Therapeutic Activities Modalities	125	200
<hr/> <b>TOTAL</b> 750 + 450 = 1200 hours <hr/>		

### THIRD YEAR:

There shall be an examination at the end of third year after a regular course of study and following shall be distribution of teaching hours for the course of study.

S.No.	Subjects	Hours	
		Theory	Practical
1.	General Medicine	100	-
2.	General Surgery	100	-
3.	Paediatrics & Geriatrics	100	-
4.	Fundamentals of O.T. Part II	100	200
5.	Occupational Therapy in environment and Occupational Health	100	200
6.	Clinical Training	-	300
TOTAL		500 + 700 = 1200 hrs.	

Third year students shall undergo clinical training in recognised Occupational Therapy Departments for a period not less than 3 hours per day for a total period of 300 hours during the third year.

#### FOURTH YEAR:

There shall be an examination at the end of fourth year after a regular course of study and the following shall be the distribution of teaching hours for the course of study.

S.No.	Subjects	Hours	
		Theory	Practical
1.	Neurology	150	
2.	Research Methodology and Biostatistics	150	
3.	Occupational Therapy in Medical & Surgical conditions	200	
4.	O.T. in Mentally disadvantaged & Mental Health	200	
5.	Rehabilitation, Organisation and Administration	100	
6.	Computer application in Occupational Therapy		50
7.	Field visits		50
8.	Clinical Training		300
TOTAL		800 + 400 = 1200 hrs.	

Fourth year students shall undergo clinical training in recognised Occupational Therapy Department for a period not less than 3 hours per day for a total period of 300 hours during the fourth year.

#### INTERNSHIP:

A candidate will have to undergo Internship for a period of six months (950 hours) under the supervision of a Senior Occupational Therapist in a recognised Occupational Therapy Department. The period should also include placement in a rural set up/C.B.R

There will be an Internal Assessment of the clinical performance of the candidate during the period of Internship



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5. (a) **Examination Main subjects:** During the entire course of study in Occupational Therapy, four annual examinations will be held. Annual examination will be held at the end of each year as stated below:

- (i) **First Year:** Only those candidates who have persued a regular prescribed course of study for the first Academic year will be allowed to appear in the Annual Examination of first year. The candidate will be promoted from first year to second year only when he/she is declared to have passed the examinations in at least three theory main subjects and in all the practicals. The candidate will have to pass the examinations in the subjects in which he/she fails in the supplementary and subsequent Annual Examination. If he/she fails in the Supplementary Examination he/she will not be allowed to continue the second year.
- (ii) **Second year:** Only those candidates who have persued a regular prescribed course of study for the second Academic year will be allowed to appear in the Annual Examination of second year. The candidate will be promoted from second year to third year only when he/she is declared to have passed the examinations in at least three theory subjects and all the practicals of second year. The candidate will have to pass the examinations in the subjects in which he/she fails in Supplementary and subsequent annual examination. If he/she fails in the Supplementary Examination he/she will not be allowed to continue in the third year.
- (iii) **Third year:** Only those candidates who have persued a regular prescribed course of study for the third Academic year will be allowed to appear in the Annual Examination of third year. The candidate will be promoted from third year to fourth year only when he/she is declared to have passed the examinations in at least three theory subjects and all the practicals of third year. The candidate will have to pass the examinations in the subjects in which he/she fails in supplementary and subsequent annual examination. If he/she fails in the Supplementary Examination he/she will not be allowed to continue in the fourth year.

(iv) **Fourth Year:** Only those candidates who have persued a regular prescribed course of study for the fourth Academic year will be allowed to appear in the Annual Examination of fourth year. The candidate shall be eligible for 'Internship' only when he/she is declared to have passed the examinations in at least three theory subjects and the practical examination of the 4th year and the qualifying and the compulsory subjects. The candidates will have to pass the examination in the subjects in which he/she fails in supplementary and the subsequent Annual Examination. If he/she fails in the Supplementary Examination he/she will not be allowed to continue Internship.

(b) **Qualifying Subjects:** Such a candidate who fails in English as qualifying subject and Compulsory Hindi may appear again at any subsequent examination in the subject he/she fails. No candidate shall be declared to have passed the fourth year examination unless he/she has passed in the qualifying and the compulsory subjects.

(c) **Internship:** The candidate seeking entry to the Internship period shall satisfy the following conditions:

- (i) He/she must have passed first year, second year and third year examinations in all subjects.
- (ii) He/she must have passed not less than three theory papers and the practical examination of fourth year and the qualifying and the compulsory subjects.
- (iii) During the Internship period, candidate shall have to undergo a full time (950 hours) supervised Occupational Therapy clinical practice for not less than six months in such Institutions/Hospitals/Centres recognised by the Institutions conducting the Bachelor of science Occupational Therapy Course. The candidate during internship will be evaluated on the basis of his/her clinical performance.
- (iv) He/she would be required to obtain minimum of 50% marks to be declared successful.



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(d) **Admission/Award of Degree:**

- (i) Admission to any examination shall be subject to the condition laid down vide Ordinance X of University of Delhi.
- (ii) The candidates will be awarded a Degree Certificate only on successful completion of the course including six months Internship.
- (iii) The **entire course of study** in Occupational Therapy for first, second, third and fourth year must be completed **within nine years** of the date of first admission, including the period of Internship.

(e) **Re-admission of students:**

- (i) A candidate having failed to pass any examination of the University may be registered for re-admission to class he/she studied last, at the discretion of the Head of the Deptt./Institute within the prescribed period of registration. No enrolment fee shall be charged in such cases and a remark in the University register shall be deemed as equivalent to fresh enrolment.
- (ii) If a candidate's name is struck off the roll of the college, he/she may be re-admitted to the same class at the discretion of the Head of the Deptt./Institute in the same Academic year or within the period of registration, if re-admission is sought in any subsequent year. No enrolment fee shall be charged in such a case and a remark in the University register shall be deemed as equivalent to fresh enrolment.

The re-admitted students will be governed by the same rules and regulations by which the other regular students of that year, will be governed.

**6. Attendance:**

- (i) A candidate admitted to Bachelor of Science (Hons.) of Occupational Therapy course shall not be deemed to have satisfied the required condition of attendance unless he/she has attended not less than three fourths of the Theory and



Practicals separately in each subject in each academic year. In addition, attendance at the study tour, wherever prescribed in the course shall also be compulsory.

A candidate will have to complete the prescribed number of 950 hours for successful completion of the Internship.

#### 7. Scheme of Examination:

Scheme of Examination for the course shall be as follow:

#### **PART-I Bachelor of Science (Hons.) of Occupational Therapy (B.Sc. (Hons.) O.T)**

Subject	Theory		Total (Th.)	Practical		Total (Pr)	Duration (Hrs)
	M.M.	M.M.		M.M.	M.M.		
	Annual	Internal		Annual	Internal		
1. Anatomy	75	25	100	75	25	100	3 hrs. each
2. Physiology	75	25	100	75	25	100	3 hrs. each
3. Pathology & Microbiology	75	25	100	-	-	-	3 hrs.
4. Pharmacology & Biochemistry	75	25	100	-	-	-	3 hrs.
5. Sociology	75	25	100	-	-	-	3 hrs.
<b>Total Marks</b>			<b>500</b>			<b>+</b>	<b>200 = 700</b>

Internal Assessment in each paper will be done by the teachers concerned. The assessment should be objective and based on performance in the periodical tests.

**PART - II Bachelor of Science (Hons.) of Occupational  
Therapy (B.Sc. (Hons.) O.T)**

Subject	Theory		Total (Th.)	Practical		Total (Pr)	Duration (Hrs)
	M.M.	M.M.		M.M.	M.M.		
	Annual	Internal		Annual	Internal		
1. General & Health Psychology	75	25	100	-	-	-	3 hrs.
2. Orthopaedics	75	25	100	-	-	-	3 hrs.
3. Biomechanics & Kinesiology	75	25	100	35	15	50	3 hrs each
4. Fundamental of O.T. (Part-I)	75	25	100	75	25	100	3 hrs. each
5. Therapeutic activity Modalities	75	25	100	75	25	100	3 hrs. each
<b>Total Marks</b>			<b>500</b>			<b>+</b>	<b>250 = 750</b>

Internal Assessment in each paper will be done by the teachers concerned. The assessment should be objective and based on performance in the periodical tests.

**Part-III Bachelor of Science (Hons.) of Occupational Therapy  
(B.Sc. (Hons.) O.T)**

Subject	Theory		Total (Th.)	Practical		Total (Pr)	Duration (Hrs)
	M.M.	M.M.		M.M.	M.M.		
	Annual	Internal		Annual	Internal		
1. Gen. Medicine	75	25	100	-	-	-	3 hrs.
2. Gen. Surgery	75	25	100	-	-	-	3 hrs.
3. Paediatrics & Geriatrics	75	25	100	-	-	-	3 hrs.
4. Fundamental of O.T. (Part-II)	75	25	100	75	25	100	3 hrs. each
5. O.T. in Env- ironment & Occupational Health	75	25	100	75	25	100	3 hrs. each
<b>Total Marks</b>			<b>500</b>		<b>+</b>	<b>200 = 700</b>	

Internal Assessment in each paper will be done by the teachers concerned. The assessment should be objective and based on performance in the periodical tests.



**PART - IV Bachelor of Science (Hons.) of Occupational Therapy (B.Sc. (Hons.) O.T)**

Subject	Theory		Total (Th.)	Practical		Total (Pr)	Duration (Hrs)
	M.M.	M.M.		M.M.	M.M.		
	Annual	Internal		Annual	Internal		
1. Neurology	75	25	100	-	-	-	3 hrs.
2. Research Methodology & Biostatistics	75	25	100	-	-	-	3 hrs.
3. Occupational Therapy in Medical and Surgical Cond.	75	25	100	-	-	-	3 hrs.
4. O.T.-in Mentally Disadvantaged & Mental Health	75	25	100	-	-	-	3hrs.
5. Rehabilitation, Organisation & Administration	75	25	100	-	-	-	3 hrs.
6. O.T. Clinical Exam.				150	50	200	3 hrs.
<b>Total Marks</b>			<b>500</b>		<b>+</b>	<b>200 = 700</b>	

Internal Assessment in each paper will be done by the teachers concerned. The assessment should be objective and based on performance in the periodical tests.

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<b>INTERNSHIP</b>	<b>300</b>
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**Grand total of I, II, III, IV &**

<b>Internship</b>	<b>300</b>	<b>+</b>	<b>2850</b>	<b>=</b>	<b>3150</b>
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8. **Minimum Pass Marks:** The minimum pass marks in the main theory and practical papers each shall be 50% and 33% each for the qualifying subject and the compulsory subject.

9. **Classification of Results:** The candidates who qualify for the award of the Degree in Bachelor of Physio Therapy will be put into following categories:

- (i) Passed with honours - 80% and above
- (ii) Passed with distinction - 75% and above
- (iii) Passed with first division - 60% and above
- (iv) Passed - 50% and above

For award of the Degree and categorisation of results, the total marks obtained in main subjects of first, second, third and fourth year examinations and internship period assessment will be considered for calculation of percentage of marks.

9. **Other Conditions:**

- (i) The candidate who has failed to pass the examination in any subject will retain the internal assessment marks obtained in the previous examination in that subject.
- (ii) Candidates must pass the first year examination within two years of their first admission to the course.
- (iii) Candidates must pass the 4th year examination within eight years of their admission to the first year of the course.
- (iv) The internship must be completed within nine years from the date of first admission to the course.
- (v) The entire course inclusive of Internship should be completed within a period of nine years from the date of first admission to the course.

**BACHELOR OF SCIENCE OF OCCUPATIONAL THERAPY (HONS.)**

**DETAILED SYLLABUS**

**FIRST YEAR**

**ANATOMY**

*Section - I*

General Introduction:

1. Histology - Cell, tissues of the body, epithelium, connective tissue, cartilage, bone, lymph, muscle, nerve, etc.
2. Osteology - Formation, function, growth & repair of bones.
3. General Embryology - Ovum, spermatozoas, fertilisation, differentiation, development of various systems and foetal circulation.

*Section-II*

Systems of the Human body:

1. Blood Vascular System - Arteries, capillaries, veins, heart, lymphatic system.
2. Respiratory System - Anatomy of upper & lower respiratory tract including nose, larynx, trachea, bronchi, pleura & lungs.
3. Digestive System - Anatomy of the gastrointestinal tract.
4. Urogenital System - Anatomy of Urinary system, male and female reproductive system.
5. Endocrine System - The various organs and production of hormones including definition, structures in general, control of secretions and role of hypothalamus.
6. Integumentary System
7. Surface Anatomy



### Section-III

Neuro-anatomy : Microscopic and gross study of:-

- |                            |                                 |
|----------------------------|---------------------------------|
| 1. Peripheral Nerves       | 2. Neuromuscular Junction       |
| 3. Sensory End Organs      | 4. Spinal Cord-segments & Areas |
| 5. Brainstem               | 6. Cerebellum                   |
| 7. Inferior colliculi      | 8. Superior colliculi           |
| 9. Diencephalon            | 10. Hypothalamus                |
| 11. Epithalamus            | 12. Thalamus                    |
| 13. Cerebral hemispheres   | 14. Corpus straitum             |
| 15. Rhinencephalon         | 16. Lateral ventricles          |
| 17. Meninges.              | 18. Blood supply of the brain   |
| 19. Internal capsule       | 20. Visual radiation            |
| 21. Auditory radiation     | 22. Thalamocortical radiations  |
| 23. Pyramidal system       | 24. Extra-pyramidal systems     |
| 25. Anatomical integration | 26. Intra-cortical integration  |
| 27. Sympathetic system     | 28. Para-sympathetic system     |
| 29. Crainal nerves         |                                 |

### Section - IV

#### Musculo Skeletal System

##### (A) Myology :

1. The fasciae and muscles of head, neck & face.
2. The fasciae and muscles of trunk.
3. The fasciae and muscles of upper limb.
4. The fasciae and muscles of lower limb.
5. Muscles of the eye.

##### (B) Osteology & Arthrology:

1. General structure and forms of all bones of skeleton and its attachments.

- PHYSIOLOGY
2. Classification of Joints.
  3. Movements of Joints.
  4. Factors permitting and limiting movements of Joints.
  5. Joints of Head & Neck and T.M. Joints.
  6. Joints of Trunk.
  7. Joints of Upper Limb.
  8. Joints of Lower Limb.
  9. Shoulder girdle
  10. Pelvic girdle

*Section - V*

*Radiological Anatomy:* Radiographic appearance of Musculo skeletal system of Upper limb, Lower limb & Spine.

**ANATOMY PRACTICAL**

1. Surface Anatomy: To study, identify and mark the surface land marks on human Body.
2. To study the muscles of trunk, lower and upper extremities and face on a dissected human body.
3. To study the Bones of Human body with special emphasis on origin and insertion of muscles & ligaments.
4. To study the anatomy of joints of upper and lower extremities and vertebral column on a dissected human body.
5. To study the anatomy of C.N.S. and P.N.S. on a dissected human body.
6. To study the gross anatomy of Respiratory, Digestive, Endocrine, Urinary and Genital system on a dissected human body.

## PHYSIOLOGY

### Section - I

#### General Introduction:

1. Cell Introduction:- Outline of basic concepts of cell structure, functions of components, transport across membranes.
2. Skin:- Functions, blood flow and temperature regulation.
3. Blood and Lymph:- Cell renewal system, haemoglobin, erythrocyte granulocyte, lymphocyte, coagulation, regulation of hydrogen within concentration of body fluids, fluid distribution and exchange.

### Section - II

#### Physiology of the systems of the body:

1. Digestion:- Control of food and water intake and secretion and absorption, movements of the alimentary canal.
2. Circulation:- Cardio-vascular system, mechanical and electrophysiological activity of the heart, regulation of heart, coronary circulation, haemodynamics, circulation through brain, skin and skeletal muscle.
3. Excretion:- Renal functions including formation of Urine & Micturition.
4. Respiration:- Respiratory gases, pulmonary gas exchange, control and mechanics of breathing, hypoxia, asphyxia, dyspnoea, oxygen therapy and resuscitation.
5. Endocrine system:- Outline of various hormones and their actions, pituitary gland, thyroid, parathyroid, adrenal glands & gonads.
6. General Metabolism:- Carbohydrate, Protein & Fat Metabolism.



### Section-III

#### Neuro-physiology

1. Neuron :- Properties and functions.
2. Action Potential.
3. Special properties of nerve trunks and tracts.
4. Motor units
5. Reflex physiology
6. Synapse and synaptic transmission :
7. Supraspinal control
8. Cerebellum and basal ganglia
9. Autonomic nervous system
10. Somatic sensation
11. Pain
12. Taste, Olfaction, Auditory and Vision
13. Neuro physiological psychology

### Section-IV

#### Muscle Physiology:

##### Gross and Microscopic

1. Structure and function of Muscle tissue - skeletal and cardiac
2. Chemical processes involved in muscle contraction.
3. Physiology of muscle contraction.

### Section-V

#### Physiology of exercise and work

1. Neuromuscular activity, human movement, physiological mechanism in movement behavior, strength, endurance, analysis of movement.
2. Circulatory and respiratory response to exercise including effects on the heart, blood circulation, body fluid changes, pulmonary ventilation, gas exchange and transport, etc.

3. Effects of exercise and work on other body functions.
4. Metabolic and environmental aspects of exercise and work-metabolism, energy requirement, efficiency of muscular work, nutritional aspects, heat and body temperature regulation & environmental factors.
5. Effects of Exercise training - endurance, fatigue and recovery.
6. Fitness and health - age, sex, body type, race, stress and medical aspects of exercise.

### PHYSIOLOGY PRACTICAL

To study the following Physiological Phenomena:-

1. Identification of blood cells and differential counts
2. W.B.C. Count
3. R.B.C. Count
4. Haemoglobin percentage and color index
5. E.S.R. and Blood groups
6. Bleeding time and clotting time
7. Respiratory efficiency tests
8. Artificial respiration and C.P.R.
9. Pulse rate, Heart rate and measurement of Blood Pressure
10. Respiratory rate and Auscultation
11. Normal E.C.G.
12. Reflexes-Superficial and Deep
13. Sensations
14. Tests for functions of Cerebrum
15. Tests for functions of Cerebellum

## **PATHOLOGY AND MICROBIOLOGY**

### **Section-I    PATHOLOGY**

1. Introduction: Concepts of diseases, classification of lesions.
2. Bacterial, viral and parasitic infections - a general out line.
3. Inflammation and repair, degeneration, necrosis and gangrene.
4. Haemorrhage, shock, embolism, thrombosis.
5. Tuberculosis, Leprosy, Typhoid.
6. Deficiency diseases.
7. Tumours: Aetiology & spread, common tumours.
8. Blood: Anaemia, Heart and blood vessels common congenital anomalies, Rheumatic & Coronary heart diseases.
9. Respiratory system: Pneumonias, Bronchiectasis, Emphysema, Chronic bronchitis, Asthma.
10. Bone and Joints; Autoimmune diseases, septic arthritis, Osteomyelitis.
11. Skin: Leprosy
12. Urinary system
13. Central nervous system: CNS infections, vascular disorders.
14. Rheumatoid Arthritis
15. Sclerodema and Psoriasis
16. Diseases of muscle including poliomyelitis, Myopathies
17. Volkmann's Ischaemia

### **Section - II    MICROBIOLOGY**

1. Introduction and history of microbiology.
2. Micro-organisms:
  - a) Classification
  - b) Shape and arrangement
  - c) Special characteristics - spores, capsules, enzymes, motility, reproduction.



3. Disinfection and antiseptics.
4. Sterilization and asepsis.
5. Antibacterial agents -fundamental aspect, susceptibility tests.
6. Infection - source of infection, portals of entry, spread of infection
7. Non-specific immunity
8. Immunity -natural and acquired
9. Allergy and hypersensitivity
10. Outline of common pathogenic bacteria and diseases produced by them. Treatment and prevention.
  - i) Respiratory tract infections.
  - ii) Meningitis
  - iii) Enteric infections
  - iv) Anaerobic infections
  - v) Urinary tract infections
  - vi) Leprosy, tuberculosis and miscellaneous infections
  - vii) Wound infections
  - viii) Sexually transmitted diseases
  - ix) Hospital acquired infections
11. Pathogenic yeasts and fungi
12. Virology - Virus infections, with special mention of Hepatitis, Poliomyelitis & Rabies.

## PHARMACOLOGY AND BIOCHEMISTRY

### Section - I PHARMACOLOGY

1. General action of drugs.
2. Drug allergy and idiosyncrasy.
3. Drug toxicity.
4. Metabolic fate of drug.
5. Methods of administration.

6. Chemical character of drugs.
7. Drugs acting on Central nervous system-anaesthetics, alcohols, alkaloids, narcotics, antiphertics, hypnotics, sedatives, anticonstructives, stimulants, psychotherapeutics.
8. Drugs acting on peripheral nervous system-stimulating and inhibiting cholenergic and anti-cholenergic activity.
9. Drugs acting on Neuromuscular junction and muscles.
10. Drugs acting on cardiac vascular system.
11. Drugs acting on respiratory system.
12. Chemotherapeutic agents.
13. Hormones and drugs affecting endocrine functions.
14. Vitamins
15. Metabolic and other inorganic compounds.
16. Immunologic agents.
17. Diagnostic agents.

*Section - II*      **BIOCHEMISTRY**

1. Biochemical characteristics of living matter.
2. Biochemistry morphology of cell.
3. Nucleic acids.
4. Proteins.
5. The enzymes.
6. Metabolism.
7. Hormones.
8. Nutritions.
9. Biochemistry of connect tissues, nerve tissue and muscle.
10. Water, electrolyte and acid base balance.
11. Chemistry of biological materials.
12. Physico chemistry phenomenon.
13. Common procedures used in biochemistry.

## **SOCIOLOGY**

### **1 INTRODUCTION**

Definitions of sociology, sociology as a science of society, uses of the study of sociology, application of knowledge of sociology in physiotherapy and occupational therapy.

### **2 SOCIOLOGY AND HEALTH**

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

### **3 SOCIALIZATION**

Meaning of socialization, influence of social factor on personality, socialization in hospitals, socialization in the rehabilitation of patients.

### **4 SOCIAL GROUPS**

Concept of social groups, influence of formal and informal groups on health and sickness, the role of primary groups and secondary groups in the hospitals and rehabilitation settings.

### **5 FAMILY**

Influence of family on human personality, discussion of changes in the functions of a family, influence of the family on the individual's health, family and nutrition, the effects of sickness on family, and psychosomatic disease.

### **6 COMMUNITY**

Concept of community, role of rural and urban communities in public health, role of community in determining beliefs, practices and home remedies in treatment.

### **7 CULTURE**

Components of culture, impact of culture on human behavior, cultural meaning of sickness, response of sickness & choice of treatment (role of culture as social consciousness in moulding the perception of reality), culture induced symptoms and disease, sub-culture of medical workers.



8 CASTE SYSTEM

Features of the modern caste system and its trends.

9 SOCIAL CHANGE

Meaning of social change, factors of social change, human adaption and social change, social change and stress, social change and deviance, social change and health programmes, the role of social planning in the improvement of health and in rehabilitation.

10 SOCIAL CONTROL

Meaning of social control, role of norms, folkways, customs, morals, religion law and other means of social control in the regulation of human behavior, social deviance and disease.

11 SOCIAL PROBLEMS OF THE 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

12 SOCIAL SECURITY

Social security and social legislation inrelation to the disabled.

13 SOCIAL WORKER

## ENGLISH

### 1. *Grammar*

Students will be expected to use the following grammatical features correctly in context:

*Verbs* : The following forms: simple present, simple past, simple future, present continuous, past continuous, future continuous, present perfect, present perfect continuous, past perfect, future perfect.

*Adverbs*: Their formation: The position of certain types.

*Prepositions*: The more common uses of simple prepositions, selected verb-preposition (or verb-adverbial particles).

- Articles
- Conjunctions
- Subject-verb agreement
- Direct and reported speech
- Transformation of sentences: including Active and Passive Voice.

Recommended Books:

- i) Bhaskaran and Horsburgh, *Strengthen your English* (O.U.P., 1973).
- ii) S.Pit Corder, *Intermediate English Practice Book*.
- iii) Standard Allen, *Living English Structure* (Longman, 1974).
- iv) F. T. Wood, *A Remedial English Grammar for Foreign Students* (Machmillan, 1965).
- v) CD. Sidhu, *An Intensive Course an English: A Remedial Workbook* (Orient Longman, 1978).

### 2. *Comprehension*

Students will be expected to answer questions on language and content of the prescribed book. Questions will be related to the

text, and will aim at testing students comprehension of standard English. Questions will be framed in such a way as to discourage cramming.

**Prescribed Book:**

A choice of Short stories, ed. By shakti Batra and P.S.Sidhu  
Oxford University Press.

3. **Vocabulary:**

Students will be expected to expand their vocabulary through prescribed and general reading.

**Recommended Books:**

- i) G.A. Pitman Activating Vocabulary.
- ii) Longman's Simplified English Series by late Nineteenth century and twentieth century writers.
- iii) Michael West Series.

4. **Composition:**

Students will be expected to produce guided compositions, totalling about 200 words, on a variety of subjects within their experience.

## HINDI

Compulsory Hindi as per clause 2 A of Ordinance V of the University of Delhi.



## SECOND YEAR GENERAL & HEALTH PSYCHOLOGY

### *Section I*      **General Psychology**

#### **1. DEFINITION OF PSYCHOLOGY**

Definition of psychology, basic information in relation to following schools methods and branches.

- a. Schools: Structuralism, functionalism, behaviorism psychoanalysis, Gestalt psychology.
- b. Methods: Introspection, observation, inventory and experimental method.
- c. Branches: General, child social, abnormal, industrial, clinical, counseling, educational.

#### **2. HEREDITY AND ENVIRONMENT**

Twins, Relative importance of heredity and environment, their role in relation to physical characteristics, intelligence and personality, nature - nature controversy.

#### **3. DEVELOPMENT AND GROWTH BEHAVIOUR**

Infancy, childhood, adolescence, adulthood, middle age, old age.

#### **4. INTELLIGENCE**

Definitions: IQ, Mental Age, List of various intelligence testes - WAIS, WISC, Bhatia's performance test, Raven's Progressive Matrices test.

#### **5. MOTIVATION**

Definitions: Motive, drive, incentive and reinforcement, Basic information about primary needs: hunger thirst, sleep, elimination activity, air, avoidance of pain, attitude to sex.

Psychological needs: Information, security, self-esteem, competence, love and hope.

## 6. EMOTIONS

Definition: Differentiate from feelings, physiological changes of emotion, Role of RAS, hypothalamus, cerebral cortex, sympathetic nervous system, adrenal gland, heredity and emotion" Nature and control of anger, fear and anxiety.

## 7. PERSONALITY

- a) Definitions:- List the components: Physical characteristics, character, abilities, temperament interest and attitudes.
- b) Discuss briefly the role of heredity, nervous system, physical characteristics, abilities, family and culture on personality development.
- c) Basic concepts of Freud: unconscious, conscious, Id, ego and superego List and define the oral, anal and phallic stages of personality development List and define the 8 stages as proposed by Erickson, 4 concepts of learning as proposed by Dollard and Miller; drive, cue, response and reinforcement.
- d) Personality assessment: interview, standardised, non-standardised. Exhaustive and stress interviews, List and define inventories BAI, CPI and MMPI. Projective test: Rorschach, TAT and sentence completion test.

## 8. LEARNING

Definition, List the laws of learning as proposed by Thorndike. Types of learning: Briefly describe, classical conditions, operant conditioning, insight, observation and Trial and Error type List the effective ways to learn: Massed Vs. Spaced, Whole Vs. Part, Recitation Vs. Reading, Serial Vs. Free recall, knowledge of results, Association, Organization, Mnemonic methods, incidental Vs. Intentional learning, role of language.

## 9. THINKING

Definition, concepts, creativity, steps in creative thinking, list the traits of creative people, delusions.

## 10. FRUSTRATION

Definition, sources, solution. Conflict; Approach - approach, Avoidance - avoidance, and approach - avoidance, solution.



## 11. SENSATION, ATTENTION AND PERCEPTION

- a) List of senses: Vision, Hearing, Olfactory, Gustatory and cutaneous sensation, movement, equilibrium and visceral sense. Define attention and list factors that determine attention: nature of stimulus intensity, colour, change, extensity, repetition, movement size, curiosity, primary motives.
- b) Define perception and list the principles of perception: Figure ground, constancy, similarity, proximity, closure, continuity values and interests, past experience context, needs, moods, religion, sex and age, perceived susceptibility perceived seriousness, perceived benefits, and socioeconomic status.
- c) Define illusion and hallucination.
- d) List visual, auditory, cutaneous, gustatory and olfactory hallucination.

## 12. DEMOCRATIC AND AUTHORITARIAN LEADERSHIP

Qualities of leadership: Physical factors, intelligence, self-confidence, sociability, will and dominance. Define attitude. Change of attitude by: Additional information, changes in group-affiliation, enforced modification by law and procedures that affect personality. (psychotherapy, Counseling and religious conversion).

## 13. DEFENCE MECHANISMS OF THE EGO

Denial, rationalization, projection, reaction formation, identification, repression, emotional insulation, undoing, interjection, acting out depersonalization.



## HEALTH PSYCHOLOGY

### Section II

#### 1. PSYCHOLOGICAL REACTIONS OF A PATIENT

Psychological reactions of a patient during admission and treatment: anxiety, shock, denial, suspicion, questioning, loneliness, regression, shame, guilt, rejection fear, withdrawal, depression, egocentricity, concern about small matters, narrowed interests, emotional over reactions, perpetual changes, confusion, disorientation, hallucinations, delusions, illusions, anger, hostility, loss of hope.

#### 2. REACTIONS TO LOSS

Reactions to loss, death and bereavement shock and disbelief, development of awareness, restitution, resolution. Stages of acceptance as proposed by Kubler-Ross.

#### 3. STRESS

Physiological and psychological relation to health and sickness: Psychosomatic, professional stress burnout.

#### 4. COMMUNICATIONS:

- a) Types verbal, non-verbal, elements in communication, barriers to good communication, developing effective communication, specific communication techniques.
- b) Counseling: Definition, Aim, differentiate from guidance, principles in counseling and personality qualities of counsellors.

#### 5. COMPLIANCE

Nature, factors, contributing to non-compliance, improving compliance.

#### 6. EMOTIONAL NEEDS

Emotional needs and psychological factors in relation to unconscious patients, handicapped patients, bed-ridden patients, chronic pain, spinal cord injury, paralysis, cerebral palsy, burns, amputations, disfigurement, head injury, degenerative disorders, parkinsonism, leprosy, incontinence and mental illness.

**7. GERIATRIC PSYCHOLOGY**

Specific psychological reactions and needs of geriatric patients.

**8. PAEDIATRIC PSYCHOLOGY**

Specific psychological reactions and needs of paediatric patients.

**9. BEHAVIOUR MODIFICATION**

Application of various conditioning and learning principles to modify patient behaviors.

**10. SUBSTANCE ABUSE**

Psychological aspects of substance abuse: smoking, alcoholism and drug addiction.

**11. PERSONALITY STYLES**

Different personality styles of patients.



## ORTHOPAEDICS

### Section I

#### 1. INTRODUCTION TO ORTHOPAEDICS

Introduction to orthopedic terminology. Types of pathology commonly dealt with, clinical examination, common investigations X-rays & imaging techniques and outline of non-operative management.

#### 2. PRINCIPLES OF OPERATIVE TREATMENT

List indications, contraindication and briefly outline principles of : Arthrodesis, Arthroplasty, Osteotomy, Bonegrafting, Tendon-Transfers and Arthroscopy.

#### 3. SPRAINS AND MUSCLE STRAINS

List common sites of sprains and muscle strains and describe the clinical manifestations and treatment. viz tennis elbow, golfer's elbow, Dequervan's disease, tenovaginitis, trigger finger, carpal tunnel syndrome and plantar fascitis.

#### 4. SPORTS INJURIES

Injuries related to common sports their classification and management

### Section II

#### 1. FRACTURES & DISLOCATIONS: General Principles, outline the following

1. Types of Fractures including patterns. Open and closed fractures and fracture-dislocations.
2. Differences between dislocation subluxation.
3. General & Local signs & symptoms of fractures dislocation.
4. Principle of management of fractures & dislocations.
5. Prevention & treatment of complications including: Fracture-disease, Volkamnn's ischaemic contracture, Sudek's Atrophy, Carpal Tunnel syndrome, Myositis ossificans, and shoulder-hand syndrome.
6. Fracture healing.



## 2. UPPER LIMB FRACTURES & DISLOCATIONS

1. Enumerate major long bone fractures and joint injuries.
2. Briefly describe their clinical features. Principles of management and complications.

## 3. LOWER LIMB FRACTURES & DISLOCATIONS

1. Enumerate major long bone fractures and joint injuries.
2. Briefly describe their clinical features, principles of management and complication.

## 4. SPINAL FRACTURES AND DISLOCATIONS

Out line the mechanism, clinical features, principles of management and complications of spinal injuries.

## 5. RECURRENT DISLOCATIONS

Outline the mechanism, clinical features principles of management and complications of recurrent dislocation of the shoulder and patella.

### Section III

## 1. AMPUTATIONS

- a) Classify amputations. List indication for surgery.
- b) Outline pre-operative, operative and prosthetic management.
- c) Outline prevention and treatment of complications.

## 2. BONE & JOINT INFECTIONS

Outline the etiology, clinical features management and complications of: septic arthritis osteomyelitis, Tuberculosis (including spinal T.B.)

## 3. BONE JOINT TUMORS

Classify and outline the clinical features, management and complications of the following (benign/malignant bone and joint tumours, osteomas, osteosarcomas, osteoclastomas, Ewing's sarcoma multiplemyeloma.

#### Section IV ✓

##### 1. CHRONIC ARTHRITIS

Outline the pathology, clinical features, mechanism of deformities, management and complications of: Rheumatoid arthritis. Osteoarthritis of major joints and spine, Ankylosing spondylitis

##### 2. Neck & Back Pain, Painful Arc Syndrome, Tendonitis Facitis & Spasmodic Torticollis.

Outline the above including clinical features and management.

##### 3. SPINAL DEFORMITIES

Classify spinal deformities and outline the salient clinical features, management and complications of Scoliosis, Kyphosis and Lordosis.

#### Section V ✓

##### 1. POLIOMYELITIS

Describe the pathology, microbiology, prevention, management and complications of polio. Outline the treatment of residual paralysis including use of orthoses. Principles of muscle transfers and corrective surgery.

##### 2. CONGENITAL DEFORMITIES

Outline the clinical features and management of CTEV, CDH, Flat foot, vertical talus, limb deficiency (Radial club hand and femoral, tibial and tibular deficiencies meningomyelocele Arthrogryposis multiplex congenita and Osteogenesis imperfecta

##### 3. PERIPHERAL NERVE INJURIES

Outline the clinical features and management. including reconstructive surgery of:

- a) Radial, median and ulnar nerve lesions.
- b) Sciatic and lateral popliteal lesions.
- c) Brachial Plexus injuries including Erbs. Klumpke's and crutch palsy.



4. **HAND INJURIES**

Outline of clinical features, management and complications of:  
Skin and soft tissue injury, Tendon injury, Bone and joint injury.

5. **LEPROSY**

Outline of clinical features, management and complications of  
neuritis, muscle paralysis, tropic ulceration and hand & feet  
deformities.

**BIO-MECHANICS & KINESIOLOGY**

**Section I Mechanics:**

- a) Introduction to mechanics including motion, forces, parallel forces system.
- b) Newton's law of motion, concurrent force systems - composition forces, muscle action line etc.
- c) Centre of Gravity, line of gravity, stability and equilibrium.
- d) Introduction to Biomechanics and terminology.

**Section II Joint Structure and function:**

- a) Basic principles of Joint design and a human joint.
- b) Tissues present in human joint including dense fibrous tissue, bone, cartilage and connective tissue.
- c) Classification of joints.
- d) Joint function, Kinematics chains and range of motion.
- e) Recall anatomy and study the biomechanics of the spine, shoulder girdle, joints of the upper extremity, pelvic girdle and the joints of the lower extremity.

**Section III Muscle structure and function:**

- a) Mobility and stability functions of muscle.
- b) Elements of muscle structure and its properties.



- c) Types of muscle contractions and muscle work.
- d) Classification of muscles and their functions.
- e) Group action of muscles, Co-ordinated movement.

#### **Section IV Posture & gait**

- a) Posture - Definition, factors responsible for posture, relationship of gravity on posture.
- b) Postural imbalance - factors responsible for imbalance in Static and dynamic positions including ergonomics.
- c) Description of Normal gait, determinants of gait, spatio temporal features, and analysis.
- d) Gait deviations - Types, Causative factors and analysis.

#### **PRACTICAL**

1. To study the effects of forces on objects.
2. To find out the C.G. of an object.
3. To identify axes and planes of motion at the joints of spine, shoulder girdle, joints of upper extremity, Pelvic girdle and joints of lower extremity.
4. To study the different types of muscle contraction, muscle work, group action of muscles and co-ordinated movement.
5. Analysis of Normal posture respect to L.O.G. and the optimal position of joints in Antero posterior and lateral views.
6. Analysis of normal gait and measurement of spatio temporal features.

#### **FUNDAMENTAL OF OCCUPATIONAL THERAPY (PART I)**

1. General objectives of the course to give the students familiarity with and understanding of the profession of which he/she will become a member.
2. Specific objectives of the course:

- (a) Various definitions and functions of Occupational Therapy.
- (b) To survey the history and development of the profession.
- (c) To relate Occupational Therapy to:
  - (i) Medical & Surgical conditions.
  - (ii) Psychiatric conditions.
  - (iii) Mentally impaired & developmentally Handicapped.
  - (iv) Orthopedic disorders.
  - (v) Pediatric disorders.
  - (vi) Geriatrics disorders.
  - (vii) Deaf & Dumb disorders
  - (viii) Leprosorium.
  - (ix) Cardiac disorders.

3. Therapeutic activities:

To give a comprehensive view of the Therapeutic activities:-

- a) Principles in choosing Therapeutic Activities.
- b) Types of activities depending upon the movement analysis i.e. passive, assistive, active, resistive.
- c) Selection of activities.
- d) Adaptabilities.
- e) Prescription of activities.
- f) Classification: Educational, Prevocational, recreational.
- g) Introduction to Exercise therapy, Principles, techniques and general areas of its application. Assessment & its importance.

4. Occupational Therapy as Diagnostic & Prognostic Procedure.



12. Fatigue:

Definition, Patho-mechanics, prevention, treatment and recovery from fatigue.

13. Neurological disorders:

Definitions, types, signs & symptoms of various neurological disorders along with their treatment.

**PRACTICALS:** Adaptation of activities, case evaluations on models, testing of co-ordination/in co-ordination, detection of fatigue.

### **THERAPEUTIC ACTIVITY MODALITIES**

1. Classification of therapeutic activities.
2. Knowledge of different machines and equipments used in Occupational Therapy.
3. Handicrafts in relation to Occupational Therapy.
4. Difference between Craft Teacher and an Occupational Therapist.
5. Therapeutic activities analysis of :-
  - a) Paper Punching
  - b) Braid weaving
  - c) Sawing
  - d) Doll making.
6. Pre-vocational and vocational values of activity modalities.
7. Knowledge of tools, equipment, materials and their therapeutic values in Occupational Therapy.
8. Definitions materials, equipments and therapeutic values of the following activities modalities:
  - i) Loom weaving. Tablet Weaving. Braid Weaving. Card, Loom weaving. Circular braid Weaving frame making and circular braid weaving. Rug weaving.



5. Dosage in Occupational Therapy.
6. Importance of interest in Occupational Therapy.
7. Occupational Therapist.
  - (a) Duties of an Occupational Therapist.
  - (b) Personality of an Occupational Therapist.
  - (c) Ethics & Etiquettes.
8. Application of Occupational Therapy in various disability fields, institutions & curative workshops, vocational centres. Sheltered Workshops and Defence services.
9. Different types of Evaluations and their importance:
  - a) Physical Evaluation
  - b) Motor Evaluation
  - c) Sensory Evaluation
  - d) Educational Assessment
  - e) Pre-Vocational, Vocational exploration
  - f) Psychological Exploration.
10. Co-ordination:
  - a) Introduction, definition. Physiology and Tests for assessing a co-ordinated movement. Criteria of a co-ordinated movement, significance of co-ordination in daily activities.
  - b) In co-ordination, Introduction, Definition. Pathology Testing of incoordination characteristics of in co-ordinate movement factors leading to inco-ordination with neuropathology, role of an Occupational Therapist in Inco-ordinated patterns.
11. Contracture & Deformities:
 

Basic Pathology, definition, structures involved, types, testing, Operative procedures adapted to correct contractures, Provision of orthopaedic appliances to prevent such anomalies.

- iii) Spray painting, pull the Thread painting, Finger Painting.
- iv) Printing stick making & stick printing, Chair caning frame making & chair caning, Braid weaving, frame making, cord knotting frame making and cord knotting.
- v) Wire work, paper work, wooly toy & stuff toy making.
- vi) Demonstrations of chalk making, Candle making, Tie & Dye & Batik painting.

**PRACTICALS :** Of all above activities.

### **THIRD YEAR**

#### **General Medicine**

##### *Section-I*

1. Introduction to modes of transfer of communicable diseases & general preventive measures.
2. Bacterial Diseases:- Tuberculosis, Leprosy, Rheumatic fever, Tetanus, Typhoid fever, Diphtheria, Pneumonia, Bacillary Dysentery and Measles.
3. Viral Diseases:- Herpes -simplex and zoster, Varicella, Measles, Mumps, Hepatitis B & C, AIDS & influenza.
4. Metabolic and Deficiency Diseases:- Diabetes, Anaemia, Vitamin & Nutritional Deficiency diseases, diseases of the endocrine glands.

##### *Section-II*

1. Diseases of Respiratory System:- Asthma, Bronchitis, Massive collapse of lungs, Bronchiectasis Bronchial pneumonia, lung abscess, Emphysema, Empyema, Paralysis of diaphragm & vocal cords, chronic infection of larynx and trachea, Abnormalities of trachea, infarct of lungs, chronic passive congestion, chronic obstructive pulmonary disease, chest wall deformities.
2. Diseases of Circulatory System:- Thrombosis, Embolism, Gangrene, Valvular diseases, Hemorrhage, Heart Malformation,



various diseases of arteries, diseases of blood forming organs, Anaemia, Leukemia, Leucocytosis, Peripheral Vascular diseases, diseases of the lymphatic system. Diseases of the heart - Hypertension, Hypotension, Aortic aneurism, Endocarditis, Pericarditis, Aortic Regurgitation, Cardiac failure, coronary heart diseases, congenital heart malformation and its manifestation.

### *Section-III*

1. Diseases of Digestive System:- Pharyngitis, spasm of the Oesophagus, Diverticulum stenosis, Gastric ulcer, Haematemesis, Pyloric stenosis, Dyspepsia, Vomiting, Diarrhoea, Duodenal ulcer, etc.
2. Disease of Liver:- Jaundice, Cirrhosis of liver, Abscess of liver, Acsitis.
3. Diseases of Kidney :- Polyuria, Haematuria, Uremia, Anuria, Nephritis, Urinary infections, Urinary calculi.

### *Section-IV*

#### *Diseases of Skin:-*

1. Characteristics of normal skin, abnormal changes, types of skin lesions.
2. Conditions - Leprosy, Acne, Boil, Carbuncles, Impetigo, Infections of skin, Herpes, Urticaria, Psoriasis, Skin disorders associated with circulatory disturbances, Warts, Corn, Defects in pigmentation, Psoriasis, Leucodenna, Fungal infections, Alopecia, Dermatitis, Eczema, Skin-allergies, Venereal diseases.

### *Section-V*

#### *Psychiatry:*

1. Introduction: Definition, defense mechanism, symptomatology, types & causes of mental disorders, psychosomatic disorders.
2. Disorders:- a) Psychosis - Schizophrenia (including paranoid), maniac depressive psychosis, involemental psychosis  
b) Psychoneurosis - Anxiety, hysteria, anxiety states, neurasthesis, reactive depression, obsessive compulsive neurosis.



- c) Organic reaction to -toxins, trauma, & infection.
- d) Senile dementia.
- 3. Mental retardation - definition, causes manifestation and management.
- 4. Therapies - (a) Psychotherapy - Group therapy, Psychodrama, behavior modification, family therapy, play therapy, psychoanalysis, hypnosis.
- (b) Drug therapy, (c) Electro convulsive therapy

## GENERAL SURGERY

### *Section-I*

- 1. Introduction to principles of surgery and its procedure.
- 2. Shock-Definition types, clinical feature, pathology & management.
- 3. Haemorrhage - common sites, complication, clinical features & management.
- 4. Blood Transfusion - Blood group matching, indication & complication.
- 5. Anaesthesia - Principles of anaesthesia, types & procedure.

### *Section-II*

- 1. Wounds, Tissue repair, Classification - Acute Wounds, Chronic wounds, Scars & their Management.
- 2. Wound infections:- Physiology and manifestation, Types of Infections & their Management.
- 3. Tumours and Ulcers:-
  - (a) Tumours - Types & Management
  - (b) Ulcers - Types & Management
- 4. Burns - Causes, Classification Clinical features & Management.
- 5. Skin Grafting - Indications, Types & procedures.

6. Hand infections - Types & Management.
7. General Injuries - Types & Management.

#### *Section-III*

1. Complications of Surgery.
2. Abdominal Surgery - Types of incisions & common surgical procedures.
3. Thoracic and Cardiac Surgery - Types of incisions & common surgical procedures.

#### *Section-IV*

### OBSTETRICS AND GYNECOLOGY

1. Pregnancy, stages of labour & its complications, indications & types of surgical procedures.
2. Gynecological disorders - Salpingitis, parametritis, retro-uterus, prolapse of uterus, pelvic inflammatory diseases, urinary incontinence.

#### *Section-V*

### OPHTHALMOLOGY

1. Common inflammations and other infections of eye.
2. Ptosis.
3. Blindness - common causes & management.
4. Refractions - testing, errors & remedies.
5. Strabismus - types, features & corrective measures.

#### *Section-VI*

### EAR, NOSE & THROAT (ENT)

1. Introduction - Outline, mechanism of audition, olfaction & speech.
2. Classify causes of hearing impairment, assess its techniques, conservative & surgical management.



3. Hearing aids - types & indications.
4. Outline common ENT infections & lesions, which affect hearing, breathing, speech & their management.
5. Outline the function of vestibular organ, its common disorders & their management.

## PAEDIATRICS AND GERIATRICS

### *Section-I*

#### **PAEDIATRICS:**

1. Review normal foetal development & child birth, including assessment of a neonate.
2. Development of a normal child - neuromotor, physical growth, cognitive, intellectual, social, etc.
3. The examination & assessment of a Paediatric patient.
4. Congenital & acquired musculo skeletal disorders -etiology, clinical manifestation & principles of management.
5. Congenital & acquired Cardio-pulmonary disorders -etiology, clinical manifestation & principles of management.
6. Congenital & acquired neurological disorders (CNS & PNS) - etiology, clinical manifestation & Principles of management.
7. Hereditary disorders - etiology, clinical manifestation & Principles of management.
8. Nutritional Vitamins Deficiency & development disorders - etiology, clinical manifestation & Principles of management.
9. Burns, injuries & accident - Types & principles of management, including preventive care.
10. Surgical intervention - Indications & common surgical procedures.

### *Section-II*

#### **GERIATRICS**

1. Normal aging - definition, the anatomical, physiological and cognitive changes related to aging.



2. Epidemiology and socio-economic impact of aging.
3. The examination & assessment of a geriatric patient.
4. Musculo skeletal disorders -etiology, clinical manifestation & principles of management.
5. Cardio pulmonary disorders - etiology, clinical manifestation & principles of management.
6. Neurological disorders (CNS & PNS) - etiology, clinical manifestation & principles of management.
7. Diet & Nutritional requirement of the elderly. Nutritional disorders & their management.
8. Burns, injuries & accident as related to the elderly & preventive care.
9. Dementia - types & principle of management.
10. Overview of depressive disorders in the elderly.

#### **FUNDAMENTALS OF OCCUPATIONAL THERAPY (PART II)**

##### **1. Posture:**

Introduction, concept, definition, types, evaluation from different views, factors leading to improper posture, faulty posture, maintenance of good posture.

##### **2. Dynamic & Realistic approach to Occupational Therapy.**

##### **3. Ward & Bed side Occupations.**

##### **4. Establishment of Occupational Therapy Deptt. in a Hospital inclusive of organisation, and administration of Deptt.**

##### **5. Wheel Chair:**

Definition, parts of a wheel chair, maintenance & Evaluation for consideration, wheel chair activities.

##### **5. Orthopedic appliances:**

Definition of different appliances commonly used, terminology, their prescription and mechanics.

6. Orthopedic appliances:

Definition of different appliances commonly used, terminology, their prescription and mechanics.

7. Contraction:

Types of contraction and Occupational Therapy activities, movement analysis.

8. Mobility and Limitations:

Normal ranges. Definition of joint limitations, principles of occupational therapy in treating patients with joint limitations.

9. Goniometry or Arthorometry:

Definition, Types of Goniometers, Points to be kept in mind during goniometry, methods of assessing joint range by apparatus, indications, contra-indication, recording.

10. Muscle Weakness:

a) Norms, causes of muscles weakness, testing and muscular recording.

b) Points of difference between Joint Limitation and muscular weakness.

c) Muscular re-education:- Principles of re-educating muscles, indication, therapeutic application to achieve the aim.

11. Motivation in Occupational Therapy.

12. Assistive apparatus for U.E. & L.E.

13. Occupational Therapy as a supportive measure in General Hospital.

14. Motivation in Occupational Therapy.

15. Occupational Therapy as a supportive measure in General Hospital.

16. Definition, scope. Importance of A.D.L., Goals of Self Help Devices, Teaching A.D.L. in the following areas:

i) Wheel Chair Activities,

ii) Bed Activities,

iii) Self Care Activities:-

a. Toilet

b. Eating

c. Dressing

d. Miscellaneous Hand activities.

Principles of Design materials used, A.D.L. Form, A.D.L. Room, Relationship of A.D.L. to Occupational Therapy and Physical Therapy., Practicals., Practicals:

Eating Device, Bathing Device, Shoe Wearing adapted device. Brushing Device, Combing Device, Writing Device, Leather cuff for Amputee, Helping hand. Socking device.

**PRACTICALS :** Of above devices, Goniometry & Muscle Testing.



## OCCUPATIONAL THERAPY IN ENVIRONMENT AND OCCUPATIONAL HEALTH

Environment: Definition, types, what is an environment, Cultural and religious thought of environment, environment area and its future, India and environment around, increasing population, education and environment results, land, water, Air and Sound pollution, causes of environment pollution, prevention and legal management procedures, contamination of environment and basic rights, environment education and preservation of forests, environment and world opinion, family pollution & its prevention for healthy living, measure in healthy living throughout Occupational Therapy. Curbing measures in Occupational Therapy in population explosion. Resources to preserve and to stop corruption in environment, ethics in environmental health.

Occupational Health: Definition O.T. measures in work and health, Social context of Occupational Health as applied to O.T, How to recognise Occupational diseases and prevent them, epidemiology & Occupational Hygiene, Occupational safety as applied to O.T., prevention of accidents and overt trauma, Occupational ergonomics through work designs, Govt. regulation of Occupational Health and safety, workers compensation aspects in O.T., Ability to work and disability evaluation, Ethics in Occupational Health, Hazardous work-place exposures - Toxins and their effects, carcinogens, ionizing radiations, noise & hearing impairments, other Physical hazards and their effects, infectious agents Occupational Stress, Shift-work, building related factors for free access of workers, skin & eye, disorders, reproductive, cardio-vascular, Hematologic, Hepatic disorders, renal and urinary tract disorders and applied O.T. measures, selected groups of workers-women, minority labour unions and Occupational Therapy approaches to prevent work-place health and injuries in agriculture and construction workers in various industries, types of industries. Evaluation, management and prevention of Occupational Injuries in relation to technological advance.

#### FOURTH YEAR

### NEUROLOGY

#### Section-I

1. Neuroanatomy:- Review the basic anatomy of the brain and spinal cord including:

Blood supply of the brain and spinal cord, anatomy of the visual pathway, connections of the cerebellum, and extrapyramidal system, relationship of the spinal nerves to the spinal cord segments, long tracts of the spinal cord, the brachial and lumbar plexuses, and cranial nerves.

2. Neurophysiology:- Review in brief the Neurophysiological basis of: tone and disorders of tone and posture, bladder control, muscle contraction, movement and pain
3. Assessment and evaluative procedures for the neurological patient.
4. Review of the principles of management of a neurological patient.

#### Section-II

Briefly outline the etiology, clinical features and management of the following Neurological Disorders:

1. Congenital and childhood disorders - Cerebral palsy, Hydrocephalus, and Spina Bifida.
2. Cerebrovascular accidents - General classification, thrombotic, embolic, haemorrhagic & inflammatory strokes, gross localisation and sequelae.
3. Trauma - localisation, first aid and management of sequelae of head injury and spinal cord injury.
4. Diseases of the spinal cord - Craniovertebral junction anomalies, Syringomyelia, Cervical and lumbar disc lesions, Tumours and Spinal arachnoiditis.
5. Demyelinating diseases (central and peripheral) - Guillain - Barre syndrome, Acute disseminated encephalomyelitis, Transverse myelitis and Multiple sclerosis.



### *Section-III*

Briefly outline the etiology, clinical features and management of the following Neurological Disorders:

1. Degenerative disorders - Parkinson's disease and Dementia.
2. Infections - Pyogenic Meningitis sequelae, Tuberculous infection of central nervous system and Poliomyelitis.
3. Diseases of the muscle - Classification, signs, symptoms, progression and management.
4. Peripheral nerve disorders - Peripheral nerve injuries, Entrapment neuropathies and, Peripheral neuropathies.

### *Section-IV*

1. Epilepsy - Definition, classification and management.
2. Myasthenia Gravis - Definition, course and management.
3. Intracranial tumours - Broad classifications, signs and symptoms.
4. Motor neuron disease - Definition, classification and management.
5. Cranial nerve - Types of disorders, clinical manifestation & management.

### *Section-V*

1. Introduction to neuropsychology.
2. General assessment procedures and basic principles of management.



types of lesions, medical management, principles of activity, education in Occupational Therapy, Functional Training of self care, ambulation and travelling. Prescription of wheel chair, crutches and sticks. Management of complications.

**7. Occupational Therapy in Cerebral Palsy:**

Introduction, history, definition, clinical varieties with Clinical features, etiology and pathology, medical management of such cases, prevention and correction of deformities. Occupational Therapy Management with P.N.F. details. Normal Child Development upto the age of five years.

**8. Occupational Therapy in Visually Handicapped:**

Causes and Types of blindness with special reference to Neurological Blindness, Newly blind person, selection of activities of blind patient. Training in A.D.L., Treatment of various age groups. Special Workshop, Homework programme. Vocational Rehabilitation, needs for Occupational Therapy service. Braille Training.

**9. Occupational Therapy in Extra-Pyramidal Disorders:**

Definition, etiology & Pathology, Clinical features. Medical Management, Management in Occupational Therapy with emphasis on functional rehabilitation.

**10. Occupational Therapy in Communication Disorders:**

(Speech & Writing)

- A. Evaluation, different writing problems, disabilities which present us with this problem and Occupational Therapy programme consisting of adaptation in Writing implements/writing Boards, levels, writing devices and writing patterns.

Speech defects: Definition, types, etiology, and pathology. Clinical features, Medical Management, Occupational Therapy Management with emphasis on Speech Training and Home Care Management of such cases.

- B. Dominance: Definition, theory of dominance, significance of handedness, Neurophysiology, double handedness (Ambidexterus) and the role of Occupational Therapy in changing the dominance, retraining they dominant hand with devices to facilitate frictions of day to day life.

**11. Occupational Therapy in Occupational Cramps:**

Definition, causes, Clinical features, Medical Management, Occupational Therapy Management with emphasis on rehabilitation with or without writing devices.

**12. Occupational Therapy in Neuritis & Polyneuritis:**

Definition, causes, Clinical features, Medical Management Occupational Therapy Management with emphasis on rehabilitation with or without devices and splints, Definition, causes, pathology, Clinical features, treatment and Occupational Therapy Management of :

- a) Subacute Combined degeneration.
- b) Syringomyelia.
- c) Tabes Dorsalis.
- d) Multiple sclerosis.
- e) Spina Bifida:
- f) Motor Neurone disorders.

**13. Occupational Therapy in Tuberculosis:**

Tuberculosis with all necessary details, trends in the treatment of Tuberculosis with all the tuberculosis implication for Occupational Therapy activities, classification of T.B. Medical & Surgical treatment. Activities for ambulatory patients, prognosis.

**14. Occupational Therapy in Cardiac Conditions:**

Common Cardiac conditions. Occupational capacity, cardiac catheterisation, cardiac Surgery and the role of Occupational Therapy in cardiac conditions with emphasis on Functional Rehabilitation.

**15. Occupational Therapy in Crush Injuries:**

Common accidents occurring in Industry, definition, causes, types of Injuries, treatment. Occupational Therapy aims and activities, splinting, functional aids and devices if any.



## **OCCUPATIONAL THERAPY IN MENTALLY DISADVANTAGED & MENTAL HEALTH**

- a) General Orientation and definition of Psychiatric Conditions, Occupational Therapy, General and specific Objectives, Prescription of Occupational Therapy, activity analysis, orientation to Psychiatric Occupational Therapy, Meaning of activities. Utilization of activities. Occupational Therapy as a treatment process, Occupational therapy in relation to Mental Health process, Psychotherapy in relation to Occupational Therapy & Industrial Therapy. Habit training, Occupational Therapy Programming for the chronic patients, personality of Occupational Therapist dealing with the Psychiatric patient, personality of Occupational Therapist dealing with the Psychiatric patient, colour therapy, Occupational Therapy programme for anxiety neurosis. Hysteria, Schizophrenia, Manic-depressive psychosis Reactive depression, Obsessive-compulsive neurosis, psychosomatic disorders, psychopathic personalities, Involution melancholia senile dementia. Epilepsy, etc. Organisation and administration of psychiatric Unit in a general hospital, role of Occupational Therapy in the Rehabilitation of the psychiatric patients.

- b) History of Occupational Therapy in Mental Retardation.

Aims and objectives of Occupational Therapy in Mental subnormality. Evaluation of mentally retarded and training techniques in Occupational therapy. Exploration in (a) a prevocation (b) Vocation.

Various assessment modalities in Occupational therapy.

Activity modification in mental retardation with aids and appliances in case of multiply handicapped with mental retardation.

Training of mentally sub-normals in Occupational therapy in the areas of

(a) Self care

(b) Eating

(c) Dressing

(d) Combing



(e) Transferring from place to place.

(f) Mobility training i.e. with wheel chairs. Canes, Sticks etc.

Training and employment possibilities as

a) Training for specific employment

b) Training for processes of an industrial type

c) Further employment avenues

d) Intensive training in community living

e) Educational training with emphasis on the integration of the mentally retarded wherever possible.

f) Attitudinal barriers in the rehabilitation of the mentally retarded as

i) of family members

ii) of class fellows

iii) of teachers

iv) of office

v) of colleagues

vi) at public places like-Cinemas

- Restaurants

- Hospitals

- Shopping centres

- Bars, etc.

Definition and discussions on

a) Temperamental instability

b) Social inadequacy

c) Security

d) Self confidence

c) Good work habits

f) Concentration

g) Perseverance

h) Consistency

## REHABILUATION, ORGANISATION AND ADMINISTRATION

### *Section-I*

1. Conceptual framework of rehabilitation, roles of rehabilitation team members, definitions and various models of rehabilitation.
2. Epidemiology of disability with emphases on locomotor disability its implications- individual, family, Social, economic and the state.
3. Preventive aspects of disability and organisational skills to manage it.
4. Community Based Rehabilitation and out reach programmes to rehabilitate persons with disabilities living in rural areas.
5. Statutory provisions, Schemes of assistance to persons with disability.
6. Role of N.G.Os in rehabilitation of the persons with disabilities.
7. Basic principles of Administration and finance including personnel management and budget preparation and procurement etc.

### *Section-II*

1. Principles of Orthotics, types, indications, contra-indications, assessment (check out), uses and fitting-regionwise.
2. Fabrication of simple splints and self help devices for upper and lower extremity- indications, and application.
3. Principles of Prosthetics - types, indications, contra-indications, assessment (check out), uses and fitting-upper and lower extremity.

### *Section-III*

1. Principles and mechanisms of Communication including speech and hearing.
2. Common disorders of speech and hearing-etiology, clinical features, assessment and principles of management.



3. Principles in the management of vocational problems, including evaluation and vocational goals for people with disability.
4. Principles of Rehabilitation Nursing, including function of Nursing personnel and Nursing practice in rehabilitation.

#### *Section-IV*

1. Identification, assessment and classification of mentally subnormal.
2. Etiogenesis and principles of management including prevention.
3. Rehabilitation of the mentally subnormal, including vocational training & a home education programme.
4. Organisation and administration of Day Care Centres for Mentally Retarded, Hostel for Mentally Retarded, Sheltered workshop for Mentally Retarded, Schools for Mentally Retarded other institutions for Mentally Retarded, Design for buildings for the Rehabilitation of the Handicapped. Integration of MR into the society.

#### *Section-V*

1. Definition, scope & importance of Activities of Daily Living (ADL).
2. The teaching and training of (a) wheel chair activities, (b) bed activities (c) transfer activities (d) Locomotor activities, (e) self care activities, such as toilet, eating, dressing etc.

#### **PRACTICAL : COMPUTER APPLICATION**

1. To study the various components of a personal computer.
2. To have a working knowledge of hardware & software.
3. To practice the operational skills of common computer applications, including word processing & spread sheet software.
4. To have a basic knowledge of utility of multi media.
5. To learn skills of web surfacing - For literatures, researches relevant to the field of medicine and rehabilitation of the handicapped.

## OCCUPATIONAL THERAPY PRACTICAL EXAMINATION

To examine, assess and evaluate a patient.

To set Occupational Therapy Treatment goals.

To devise and implement treatment plan.

Examination & Assessment should include the following and additional evaluative procedures should be applied as required.

a) Motor:

- Muscle Tone
- Muscle Strength
- Measurement of girth

b) Range of Motion:

c) Sensory :

- Touch, pain, Temperature, Pressure and Kinesthetic sense.

d) Neurological:

- primitive Reflexes, Motor development, Superficial and deep tendon reflexes.
- Involuntary movements.
- Inco-ordination.
- Gait.

e) Respiratory System:

- Measurement of chest expansion.
- Patter of Breathing, Diaphragmatic, localized costal breathing.

f) Eunctional evaluation of A.D.L. :



- i) The aims and plan of treatment of the patients suffering from the diseases as per Theory syllabus.
- ii) To operate the therapeutic and mechanio-therapeutic equipments for treatment of patients as per practical syllabus.