

**Mahatma Gandhi University**  
of  
**Medical Sciences & Technology**  
**Jaipur**

**Syllabus**  
**Master of Occupational Therapy (MOT)**  
**Neurosciences**  
**(2 Years Postgraduate Degree Course)**

Edition 2020-21

## **Notice**

1. The University reserves the right to make changes in the Rules/Regulations/Syllabus/Books/Guidelines/Fees-Structure or any other information at any time without prior notice. The decision of the University shall be binding on all.
2. The Jurisdiction of all court cases shall be Jaipur Bench of Hon'ble Rajasthan High Court only.

**MASTER OF OCCUPATIONAL THERAPY (MOT)  
(2 Years Postgraduate Degree Course)**

**Name of the course:** Master of Occupational Therapy (M.O.T.)

**Specialization:** Master of Occupational Therapy in Neurosciences

**DURATION OF THE COURSE:** The duration of Master of Occupational Therapy (M.O.T) course shall be (2) two continuous academic years on a full time basis in each specialization.

MOT Part-I (1 <sup>st</sup> year)	0 to 12 Month
MOT Part-II (2 <sup>nd</sup> year)	13 to 24 Month

**Medium of Instruction:** English shall be the medium of instruction.

**Course Outline:**

- 1) The Master Degree in Occupational Therapy is a two year full time program consisting of classroom teaching, self-academic activities and clinical posting.
- 2) In Part-I MOT, theoretical basis of Occupational Therapy is refreshed along with research methodology, Education technology and biostatistics. The students are rotated in all areas of clinical expertise during this period. They are required to choose their study for dissertation and submit a synopsis.
- 3) In Part-II MOT, the students will be posted in their area of specialty.
- 4) They are required to complete and submit their dissertation. The learning program includes seminars, journal reviews, case presentations, case discussions and classroom teaching. Some of the clinical postings are provided at other reputed centres in the country in order to offer a wider spectrum of experience.
- 5) The students are encouraged to attend conference, workshop & seminar to enhance their knowledge during the course of study. University examinations are held at the end of first year and at the end of second year.

**Goals of the Course:**

The Master of Occupational Therapy course is intended to help prepare students for assumption of responsibility in positions of leadership in Occupational Therapy as:

- 1) Preparation of a postgraduate student towards his/her professional autonomy with self-regulating discipline at par with global standards.
- 2) Formation of base of the professional practice by referral as well as first contact mode using evidence based practice.
- 3) Imparting research basis in order to validate techniques & technology in practice to Occupational Therapy.

- 4) Acquainting a student with concept of quality care at the institutional as well as the community levels.
- 5) Inculcation of appropriate professional relationship in multidisciplinary set up, patient management and co-partnership basis.
- 6) Preparation of students to address problems related to health education and community Occupational Therapy.
- 7) Practising the concept of protection of rights of the community during referral as well as first contact practice.
- 8) Incorporation of concept of management in Occupational Therapy.
- 9) Experience in clinical training and undergraduate teaching partly.
- 10) Providing the honest, competent and accountable Occupational Therapy services to the community.

### **Eligibility**

Candidates who have passed B.Sc. (OT) or BOT degree from institutions where the mode of study is a full time program, with minimum 3½ years / 4 ½ years duration from in India or abroad as equivalent with not less than 50% of marks in aggregate and have completed 6 months of compulsory rotatory internship in Occupational Therapy.

OR

Candidates who have passed BOT through Bridge Course or through Lateral Entry after completing their Diploma in Occupational Therapy from institutions where the mode of study is a full time program in India or abroad as equivalent with not less than 50% of marks in aggregate and have completed 6 months of compulsory rotating internship in Occupational Therapy.

### **Intake of Students:**

The intake of students to the course shall be in accordance with the availability of the Guide. The guide and the student ratio should be 1:5

### **Registration**

A candidate admitted to this course shall register with this University by remitting the prescribed fee along with the application form for registration duly filled in and forwarded to the University through the Principal of the College within the stipulated time.

### **Enrolment:**

Candidates admitted to the Master of Occupational Therapy course shall be enrolled with the university by remitting the prescribed fee along with the application form for enrolment duly filled in and forwarded to the university through Principal of the College

within stipulated date. Candidate already enrolled with this University need not be enrolled again provided he/she has not taken migration certificate from this University.

**Syllabus:**

The curriculum and the scheme of examination for the course shall be as prescribed by the University from time to time.

**Commencement of the Course:**

The Course shall commence from the 1<sup>st</sup> August of every Academic year.

**Conduction of the University Examination:**

University examination shall be conducted twice in a year; that is main and Supplementary Examination.

**Attendance:**

1. No candidate shall be permitted to appear in M.O.T. Part-I/II university examination unless he/she has attended the course for the prescribed period and produces the necessary certificate of attendance and satisfactory conduct from the Principal of the College.
2. A candidate is required to compulsorily attend 75% of the theory classes and also 75% of the practical classes held annually in each of the prescribed subject(s) separately, those not fulfilling the above criteria will not be eligible to appear for the university examination in the concerned subject(s).

**Scheme of Examination:**

There shall be Internal Assessment Examinations in Theory as well as Practical at the College level. These shall carry 30% of total marks assigned to Theory as well as Practical Examination.

At the end of every academic year, after completion of the course of study there shall be University Theory & Practical Examination. These shall carry 70% of total marks assigned to Theory as well as Practical Examination.

**Internal Assessment Examination:**

1. Theory and practical paper(s): 30% of total marks shall be allotted to the Internal Assessment for each subject. Three internal assessment examinations will be held in each subject (Theory and Practical separately) before the commencement of the theory university examination (Main) in each academic year. Every candidate shall be required to obtain at least 40% marks in the aggregate of any best of two out of the three internal assessment tests in each subject. Candidates failing to secure 40% marks in the aggregate of best two internal assessment tests in any subject shall not be allowed to appear in concerned subject(s) in the ensuing university main examination. In case the examination forms have already been filled and submitted in the university, the Principal will detain such students from appearing in the University examination of concerned subject(s). Mode and number of internal assessment tests will be determined at the level of the Principal of the college. The candidates shall be required to obtain at least 40% marks in each subject in an improvement internal assessment test to qualify and appear in the university forthcoming supplementary examination.
2. A candidate may improve his/her internal assessment marks whenever he/she reappears. In case the candidate does not opt for improvement or doesn't improve, his/her earlier internal assessment marks would be conveyed by the Principal to the university.

### **University Examination:**

1. There shall be two examinations of MOT Part-I & Part-II Course in one academic year, the Main examination and subsequent Supplementary examination.
2. A candidate who has completed a regular course of study prescribed for MOT Part-I for one academic year shall be eligible to appear at MOT Part-I examination.
3. A candidate failing in any number of subjects at the main examination shall be allowed to appear in the failing subjects at the ensuing supplementary examination.
4. A candidate not passing MOT Part-I supplementary examination shall be allowed to clear his/her still un-cleared papers in the ensuing main/supplementary examination(s).
5. A candidate who has not passed even a single subject (theory & practical) of MOT Part-I supplementary examination shall not be promoted to MOT Part-II course.
6. A candidate who has passed one or more subject(s) of MOT Part-I main/supplementary examination will be promoted to MOT Part-II course. After completion of regular course of study for one academic year of MOT Part-II course he/she shall be eligible for MOT Part-II examination only after passing all the due papers of MOT Part-I i.e. a candidate shall be eligible to appear for MOT Part-II examination only when all the prescribed papers of MOT Part-I examination have been passed by him/her, even if he/she has attended all the theory and practical classes of MOT Part-II course.
7. A candidate will be permitted to avail any number of attempts to pass all the papers of MOT Part-I and Part-II course but he/she will be required to complete the entire MOT course within four years of his/her admission to MOT Part-I course.

### **Paper Setter/Examiner**

1. All the examiners, paper setters, Theory examination answer books evaluators, Internal and External Examiners for Practical examinations shall be appointed by the President of the University.
2. Qualification of the Paper setter / Examiner: Masters degree (MOT) with 3 years of full time teaching experience from recognized university. Distance Education Degree holder can not work as the faculty or Examiner.
3. Examiner / Paper setter: Paper setter can be an examiner

### **Duration, Distribution of marks and Pattern of Question papers**

1. The question paper shall cover the entire syllabus of the subject.
2. Each subject (Theory & Practical) shall carry 30% marks for internal assessment and 70% marks for the University examination.
3. Duration of Examination: Each written paper of University examination of 70 marks shall be of 3 hours duration.
4. Pattern of question papers:

All questions shall be required to be attempted. There may be internal choice(s) in the questions:

(a) Paper carrying 70 Marks:

Long answer (essay type) questions (2 out of 4)                      2x15= 30

Short answer questions (4 out of 6)                                      4x10= 40

### **Practical (including Viva)**

There will be internal assessment examinations spread over the academic year at the College level and University examination at the end of the academic year. These shall be related to assessments, investigations and occupational therapy management. Internal assessment examinations shall carry 30% and the University examination shall carry 70% of total marks assigned to practical including viva-voce.

Mode                      Long case assessment, Short case, written, Demonstration, Investigations & Viva

Duration                Up-to 120 minutes per candidate

Examiner                02 (One internal and one external from the panel of Examiners from University)

### **Dissertation**

Every candidate pursuing MOT degree course is required to carry out work on a selected research project under the guidance of a recognized postgraduate teacher. The results of such a work shall be submitted in the form of dissertation.

The dissertation is aimed to train a graduate student in research methods and techniques. It includes identification of a problem, formulation of a hypothesis search and review of literature getting acquainted with recent advances, designing of a research study, collection of data, critical analysis, and comparison of results and drawing conclusions.

Every candidate shall submit to the Registrar of university in the prescribed Performa, a synopsis containing particulars of proposed dissertation work within 6 months from the date of commencement of the course on or before the dates notified by the university. The synopsis shall be sent through the proper channel i.e. the Head of the Department and the Principal of the College. Before submitting the synopsis, it shall be ensured by the Principal of the College that it has been cleared by the Ethics Committee. The university will register the dissertation topic. No change in the dissertation topic or guide shall be made without prior approval of the university.

Guide will be only a facilitator, advisor of the concept and responsible in correctly directing the candidate in the methodology and not responsible for the outcome and results.

The dissertation should be written under the following headings.

1. Introduction
2. Aims or objectives of study
3. Review of literature
4. Material and methods
5. Results
6. Discussion

7. Conclusion
8. References
9. Appendices

The written text of dissertation shall not be less than 50 pages and shall not exceed 100 pages excluding references, tables, questionnaires and other annexure. It should be neatly typed in double line spacing on one side of paper (A4 size, 8.27" x 11.69") and bound properly maroon color with golden color typed. Spiral binding should be avoided. The Guide, Head of the Department and Principal of the College shall certify the dissertation.

- I. Three copies of dissertation thus prepared shall be signed by the candidate and the guide and then submitted for evaluation to the Principal of the college, one month before the commencement of final theory paper University examination.
- II. The dissertation shall be examined by minimum of two examiners one Internal and one External.
- III. Evaluation of the dissertation would be done jointly by the external and internal examiners, who will be appointed by the President of University.
- IV. The examiners appointed for the practical shall also evaluate dissertation and take viva-voce based on the dissertation of the candidate to assessing depth of knowledge, logical reasoning, confidence & oral communication skill. Special emphasis shall be given to dissertation work during the MOT Part-II course.
- V. The marks of viva-voce examination shall be included in the clinical examination.
- VI. A candidate will be required to secure minimum 50% marks to pass viva-voce examination of dissertation.
- VII. Even if the candidate fails in the Theory/Practical University Examination his / her dissertation marks shall still be carried over to the subsequent examinations.

### **Guide**

Criteria for recognition of MOT teacher / guide:

1. Guide should be at least Assistant Professor having qualification of M.Sc. (OT)/MOT in the concern subject/ Specialty.
2. The guide student ratio should be 1:5

### **Change of Guide**

In the event of registered guide leaving the college for any reason or in the event of death of guide, guide may be changed with prior permission from the University.

### **Criteria for Pass:**

1. In order to pass an examination a candidate must secure 50% marks in each theory subject (inclusive of internal assessment) and practical(inclusive of internal assessment) & viva-voce



separately. In case of Section A & Section B of a Paper, students will have to secure 50% marks combined to pass the paper.

- To pass MOT Part-II examination, a candidate will also be required to secure minimum 50% marks in dissertation & its viva-voce examination.

### **Grace Marks:**

No grace marks will be awarded in University Postgraduate examinations including Master of Occupational Therapy.

### **Revaluation/Scrutiny**

Revaluation of answer books is not permissible. Scrutiny of marks in any number of papers/subjects shall be permissible as per University Rules.

### **Migration/Transfer of Candidates:**

Migration/transfer of a candidate from another recognized University to this University or vice versa shall not be considered.

**Vacation:** The Principal of the College may declare vacation in an academic year to the students as per the academic calendar.

## **Selection of Generic Elective and skills Enhancement Courses**

Every student has to select any one elective subject out of seven elective subjects mentioned below at the beginning of the academic year during his/her course duration. The Examination of these subjects shall be conducted at the college level.

Sr. No.	Subject	Teaching hours		
		Theory	Practical	Total
1.	Information and Communication Technology in Health Education	45	15	60
2.	Clinical Nutrition	45	10	55
3.	Health Care	50	-	50
4.	Constitution of India	45	-	45

## **Distribution of marks**

S. No.	Subject	Theory	Internal Assessment	Total
1.	Information and Communication Technology in Health Education	70	30	100
2.	Clinical Nutrition	70	30	100
3.	Health Care	70	30	100

4.	Constitution of India	70	30	100
----	-----------------------	----	----	-----

A candidate can appear in the elective subject examinations to be conducted at the college level before the University examinations at the end of I year or II year. Only such candidates shall be eligible to fill University examination form of II year (final year) who have passed their elective subject. It shall be mandatory to obtain 50% marks in the aggregate of prescribed total marks (i.e. 50 out of 100) to pass the elective subjects. Marks of all such candidates who have passed their elective subject shall be sent in the following format by the Principal of the college to the University while sending their examination forms of II year (final year) :

S.No.	University Roll No.	Name of the student	Father's Name	Name of elective subject	Marks obtained	Result

Those candidates who do not pass their elective subjects shall not be eligible to submit their II year (final year) University examination form and accordingly they will not be permitted to appear in the University examination of II year (final year) of the course.

Marks obtained by the candidates in their elective subject shall be mentioned separately in the marks sheets of the University examinations. These marks shall not be counted for preparing the merit list.

**SUBJECTS OF STUDY**  
**Master of Occupational Therapy in Neurosciences**

**MOT Part –I (Common to all Branches)**

Sl. No	Subject	Teaching Hours	
		Theory	Clinical / Practical

			Hours
1	Basic Sciences – Anatomy & Physiology	75	25
2	Biostatistics and Research Methodology	100	50
3	Occupational Therapy Process and Practice-I	100	100
4	Occupational Therapy Process and Practice-II	100	100
5	Teaching Practice	-	100
6	Seminar / case presentation / Journal Review	-	100
7	Clinical Practice	-	1100
	<b>Total</b>	<b>375</b>	<b>1575</b>

### MOT Part –II

Sl. No	Subject	Teaching Hours	
		Theory	Clinical / Practical Hours
1	Advance Occupational Therapy in Neurosciences-I	100	650
2	Advance Occupational Therapy in Neurosciences-II	100	650
3	Dissertation	-	200
4	Seminar / case presentation / Journal Review	-	100
	<b>Total</b>	<b>200</b>	<b>1600</b>

**Total Hours, MOT- Part-I- 375+1575=1950 and Part- II- 200+1600=1800**

**Grand Total Hours – 1950+1800= 3750**

### Elective Papers- No- University Examination

Elective course is mandatory and a candidate can select any one of the four courses available in table. A candidates is declared to have passed non- university examination

Sr. No.	Subject	Theory	Practical	Total
1	Information and Communication Technology in Health Education	45	15	60
2	Clinical Nutrition	45	10	55
3	Health Care	50	-	50
4	Constitution of Indian	45	-	45
	<b>Total</b>	<b>185</b>	<b>25</b>	<b>210</b>

### Distribution of Marks Master of Occupational Therapy (MOT) MOT Part – I(Neurosciences)

Course Code	Subject	Written-100			Practical-100			Grand Total
		Theory	I.A	Total	Practical	I.A	Total	
<b>15010</b>	Basic Sciences – Anatomy	70	30	100	-	-	-	<b>100</b>

	& Physiology							
<b>15020</b>	Biostatistics and Research Methodology	70	30	100	-	-	-	<b>100</b>
<b>15030</b>	Occupational Therapy Process and Practice-I	70	30	100	70	30	100	<b>200</b>
<b>15040</b>	Occupational Therapy Process and Practice-II	70	30	100	70	30	100	<b>200</b>
<b>TOTAL</b>		<b>280</b>	<b>120</b>	<b>400</b>	<b>140</b>	<b>60</b>	<b>200</b>	<b>600</b>

**Distribution of Marks**  
**Master of Occupational Therapy (MOT)**  
**MOT Part – II (Neurosciences)**

Paper Code	Subject	Written			Practical			Grand total
		Theory	I.A	Total	Practical	I.A	Total	
16030	Advance Occupational Therapy in Neurosciences-I	70	30	100	70	30	100	200
16040	Advance Occupational Therapy in Neurosciences-II	70	30	100	70	30	100	200
	Dissertation & Viva	-	-	-	200		200	200
<b>TOTAL</b>		<b>140</b>	<b>60</b>	<b>200</b>	<b>340</b>	<b>60</b>	<b>400</b>	<b>600</b>

**Practical Examination Pattern**

**MOT-Part-I Occupational Therapy Paper**

<b>Long case</b>	-	Detailed OT evaluation, goal setting and Management.
<b>Short case</b>	-	To diagnose the patient with investigations.

**MOT-Part-II Clinical Specialty Paper – I**

<b>Long case</b>	-	For Discussion of differential diagnosis and conclusion of provisional diagnosis
<b>Short case</b>	-	Evaluation of performance components (higher cortical evaluation, voluntary control, sensory, balance, soft neurological signs etc...)

**Clinical Specialty Paper – II**

<b>2 short cases</b>	-	Evaluation of Occupational performance area (ADL, Hand function, vocational, Home making evaluation)
----------------------	---	--

**Master of Occupational Therapy Part-I**

**Paper-I**  
**COMMON TO ALL BRANCHES**

**BASIC SCIENCES – ANATOMY &PHYSIOLOGY (15010)**

Theory: 100 marks (University examination: 70, Internal Assessment: 30)

Theory – 75 Hrs

**Unit -I Neuro Anatomy**

1. Neuro anatomy of brain
2. Neuro anatomy of Spinal cord
3. Neuron anatomy of peripheral and cranial nerves.

**Unit -II Neuron Physiology**

1. Neuro Physiology of nervous system
2. Patho physiology of various conditions
3. Functions of nervous system

**Unit-III Work Physiology**

1. Principles of exercise
2. Energy expenditure for various activities.

**Unit IV Applied Anatomy &Applied Physiology**

1. Disorders of nervous system
2. Application in O.T

**Unit- V General Anatomy**

1. Anatomy of upper limb
2. Anatomy of lower limb
3. Anatomy of trunk

**Unit -VI General Physiology**

1. Physiology of respiratory system
2. Physiology of CVS
3. Patho Physiology of respiratory system & CVS

**PAPER-II  
BIOSTATISTICS &RESEARCH METHODOLOGY (15020)**

Theory: 100 marks (University examination: 70, Internal Assessment: 30)

Theory – 100 Hrs  
Practical – 50 Hrs

1. **SYLLABUS:**
  - 1.1 Theory

## **Part-A**

### **UNIT-1**

- (1) Introduction to – uses of statistical methods in Occupational Therapy – Measurement, measurement scales, variable and their measurement – Symbolising data and operations.

### **Unit-2**

- (1) Describe methods of presenting statistical data – Learn methods of tabulations; calculation of central tendency and dispersion; linear regression and correlation, presentation of data in diagrammatic and graphic form.

### **Unit-3**

- (1) Learn probability and sampling including probability as a mathematical system, population and samples; sampling distribution, sampling methods, surveys in research.

### **UNIT-4**

- (1) Learn research process and methods including - overviews of scientific methods steps in the research process selection and statement of problem – formulation of Hypothesis– basic principles and methods of research design.

### **UNIT-5**

- (1) Learn data collection methods, scales and techniques of psychological measures. Learn reliability, validity and criteria of assessing – measuring the tools; analysis and interpretation of research data, role of computers.

### **UNIT-6**

- (1) Qualitative Research Methods:
  - (a) Developing the instrument (Delphi technique)
  - (b) Focus groups
  - (c) Independent interview
  - (d) Key informant interview

## **PART – B**

- (1) Practical application of research process.
  - a) Selection and statement of problem & hypothesis
  - b) Review of literature
  - c) Selection of research approach
  - d) Selection of data gathering and developing the data gathering instrument.
  - e) Developing data analysis plan.
  - f) Selection of sample.
  - g) Identifying assumptions and limitations of the study
  - h) Designing the data gathering plan.
  - i) Pilot study.

### **UNIT-1**

- (1) Conducting the study – implementing the data gathering plan, implementing the data analysis plan.

## **UNIT-2**

- (1) Preparing the research report – writing the report – documenting findings– presentation of study for discussion.

## **PAPER – III OCCUPATIONAL THERAPY PROCESS AND PRACTICE-I (15030)**

Theory: 100 marks (University examination: 70, Internal Assessment: 30)

Practical: 100 marks (University examination: 70, Internal Assessment: 30)

Theory – 100 hours  
Practical – 100 hours

### **1. SYLLABUS**

#### **1.1 Theory**

## (1) Practice Issues in Occupational Therapy

1. Administration and leadership
2. Documentation
3. Fiscal management
4. Code of ethics
5. Quality assurance
6. Marketing
7. Entrepreneurship, ownership and private practice
8. Concepts of teaching learning and curriculum
  - a) Theories of teaching
  - b) Relationship between teaching and learning
  - c) Curriculum committee
  - d) Types of curriculum
  - e) Master rotation plan
  - f) Current trends in curriculum planning
9. Ergonomics
10. Guidance and counselling
11. Recent investigative and evaluation procedures.
12. Disability evaluation, applicability of law and legislation.
13. Clinical reasoning
14. Role of occupational therapist as a consultant
15. Advances in computer application in occupational therapy

## (2) Occupational Therapy Management Context.

1. Prevention of injuries and physical dysfunction
2. Specific clinical intervention to promote occupational functions in:

General conditions:



- a) Geriatrics and aging
  - b) Infections in adults
  - c) HIV , Cancer
  - d) Community based rehabilitation
  - e) Orthopedic conditions
  - f) Hand injuries
  - g) Burns
  - h) U/E Orthosis
3. Contemporary OT practice
- a) Client centered practice
  - b) Evidence based practice
  - c) Culture relevant practice
  - d) Occupation centered practice
4. Treatment approaches in OT
- a) Roods
  - b) PNF
  - c) NDT
  - d) Task oriented approach
  - e) Rehabilitation approach
  - f) Brunnstrom approach
  - g) Sensory integration
  - h) Biomechanical approach
  - i) MOHO
  - j) Allen's cognitive disability model
  - k) Developmental FOR

**PAPER – IV**  
**OCCUPATIONAL THERAPY PROCESS AND PRACTICE-II (15040)**

Theory: 100 marks (University examination: 70, Internal Assessment: 20)

Practical: 100 marks (University examination: 70, Internal Assessment: 20)

**Theory: 100 Hrs**  
**Practical: 100 Hrs**

**1. SYLLABUS**

**1.1 Theory**

(1) Cardio – respiratory rehabilitation related to :

1. Cardiac and pulmonary conditions

2. Industrial health
  3. Strength training and work fitness in athletics
  4. Energy conservation and work hardening
- (2) Neurosciences related to
1. Cognitive rehabilitation
  2. Neuropathological conditions
  3. Neurodegenerative disorders
- (3) Developmental disability
1. Neonatology
  2. Genetic conditions
  3. Paediatric neurological conditions
- (4) Mental health
1. Common psychiatric conditions
  2. Preventive and current practices in psychosocial conditions
  3. Therapeutic media and methods

**MOT-PART-I  
COMMON TO ALL BRANCHES**

**Seminar / Case presentation / Journal Review  
Master of occupational Therapy Part-II**

**Course Hours-100**

**MOT IN NEUROSCIENCES  
PAPER – I**

**ADVANCED OCCUPATIONAL THERAPY IN NEUROSCIENCES-I (16030)**

Theory: 100 marks (University examination: 70, Internal Assessment: 30)

Practical: 100 marks (University examination: 70, Internal Assessment: 30)

**Theory: 100 Hrs  
Practical: 650 Hrs.**

**1. SYLLABUS:**

**1.1 Theory**

**UNIT-1**

- (1) Review of Neurosciences: Neuro Anatomy and Neuro Physiology.
- (2) Some aspects of higher nervous function:

- a) The study of sensation in Physiology; Psychophysical and neurophysiologic connections.
  - b) Higher functions of the nervous system
  - c) Some special functions of human brain - Dominance, language, apraxia, memory and attention.
- (3) Neural control of posture and movement:
- a) The skeletal muscle and nervous system
  - b) Feedback signals from muscle and their efferent control
  - c) Organization of the motor neuron pool; the size principle
  - d) Input to motor neuron pools and its effects
  - e) Organizations of spinal cord and its reflexes
  - f) Motor functions of basal ganglia and brainstem
  - g) The role of the vestibular system in posture and movement
  - h) The cerebellum
  - i) Motor functions of the cerebral cortex
- (4) The hypothalamus and control of integrative processes.

#### **UNIT-2**

- (1) Evaluation of the somatosensory system – Treatment principles
- (2) Special tests in Neurology

#### **UNIT-3**

- (1) Evaluation of motor control; Motor control therapy
- (2) Evaluation –performance evaluation

#### **UNIT-4**

- (1) Neurophysiology of sensory motor approaches to treatment

#### **UNIT-5**

- (1) Neurophysiological and developmental treatment approaches
  - a) Rood
  - b) Bobath
  - c) Brunstrom
  - d) PNF
  - e) Carr and Shepherd

#### **UNIT-6**

- (1) Cognitive and perceptual evaluation and retraining frames of reference and treatment for cognitive and perceptual dysfunction (Affolter, cognitive disability frames of reference)

#### **UNIT-7**

- (1) Evaluation of reflexes and reactions

#### **UNIT-8**

- (1) Biomechanical approach and Task oriented approach

#### **UNIT-9**

- (1) Rehabilitative approach
- (2) Evaluation of Occupational performance tasks
- (3) ADL
- (4) Home making and child care
- (5) Leisure time activities
- (6) Work assessments and Programmes

#### **UNIT-10**

- (10 Activity selection and analysis

#### **UNIT-11**

- (10 Activity adaptation

#### **UNIT-12**

- (1) Orthosis in Neurological conditions

#### **UNIT-13**

- (1) Wheel chair measurement and prescriptions,
- (2) Wheel chair adaptations
- (3) Power wheelchair

#### **UNIT-14**

- (1) Dysphagia

#### **UNIT-15**

- (1) Vestibular stimulation and treatment of postural and related deficits

#### **UNIT-16**

- (1) Nervous system history taking and examination

#### **UNIT-17**

- (1) Neuropsychological evaluation

#### **UNIT-18**

- (1) Investigations: CT scan, MRI Scan, EEG, SSEP, EMG, NCV

#### **UNIT-19**

- (1) Classification of Neurological disorders

#### **UNIT-20**

- (1) Assistive technology and use of computer in patient care

#### **UNIT-21**

- (1) FES in retraining upper-extremity function

#### **UNIT-22**

- (1) Upper extremity & lower extremity motion analysis

**UNIT-23**

(1) Surgical management of Neurological conditions

**UNIT-24**

(1) Pain Assessment and Management

**3.2 Seminar / Case presentation / Journal Review**

**MOT IN NEUROSCIENCES**

**PAPER –II**

**ADVANCED OCCUPATIONAL THERAPY IN NEUROSCIENCES-II (16040)**

Theory: 100 marks (University examination: 70, Internal Assessment: 30)

Practical: 100 marks (University examination: 70, Internal Assessment: 30)

Theory: 100 Hrs

Practical: 650 Hrs

**1. Syllabus:**

**Theory**

Selection and implementation of appropriate treatment techniques in the following Neurological conditions:

**UNIT-1**

(1) Intracranial Neurological disease or disorder

- a) Developmental anomalies
- b) Hydrocephalus
- c) Head-injury

- d) Chronic subdural haematoma
- e) Intracranial Tumors
- f) Benign intracranial hypertension
- g) Intracranial abscess and infections
- h) Cerebro-vascular disease
- i) Movement disorders, extra-pyramidal system

#### **UNIT-2**

- (1) Disorders of Spinal cord and root:
  - a) Spinal cord and root compression including paraplegia and quadriplegia
  - b) Disc prolapsed and root compression
  - c) Spinal trauma
  - d) Vascular disease
  - e) Neural Tube Defects including Spinal dysraphism

#### **UNIT-3**

- (1) Disorders of Peripheral nerve and muscle:
  - a) Polyneuropathies
  - b) Plexus syndromes and mononeuropathies
  - c) The autonomic nervous system
  - d) Disease of skeletal muscle and various types of muscular dystrophy
  - e) Neuromuscular junction including Myasthenia gravis

#### **UNIT-4**

- (1) Multifocal Neurological disease:
  - a) Infections
  - b) Demyelinating disease.
  - c) Metabolic encephalopathy
  - d) Neurological complications of drugs and toxins
  - e) Nutritional disorders
  - f) Degenerative disorders
  - g) Motor neuron disease
  - h) Neurocutaneous syndrome

#### **UNIT-5**

- (1) Disorders of special senses

#### **UNIT-6**

- (1) Disorders of consciousness

#### **UNIT-7**

- (1) Pain and disorders of somatic sensation

#### **UNIT-8**

- (1) Neuropsychological disorders

#### **UNIT-9**

- (1) Developing trends in Occupational Therapy management in Neurological conditions.

### **3.2 Seminar / Case presentation / Journal Review**



This question paper contains 1 printed page

**MOT Part I  
15010**

**Bas. Sciences . I**

**Master of Occupational Therapy  
Part – I(Main) Examination Month year**

**Paper –I  
Basic Sciences- Anatomy & Physiology**

**Time: Three Hours**

**Maximum Marks: 70**

Student shall be allowed to take only one supplementary copy along with one main answer book

All the parts of one question should be answered at one place.

Different part of one question should not be answered at different places in the answer book.

Draw diagrams wherever necessary

**Long answer question** (Attempt any TWO Questions out of FOUR)

- |     |   |    |
|-----|---|----|
| Q1. | What are the types of synapses? Describe their properties.  | 15 |
| Q2. | Describe Co <sub>2</sub> carriage from tissues to lungs. Explain the chemical control of respiration. | 15 |
| Q3. | Describe boundaries and contacts of axilla. Describe brachial plexus in details.                      | 15 |
| Q4. | Describe right atrium of heart. Add a note on arterial.   | 15 |

**Short answer question** (Attempt any FOUR Questions out of SIX)

- |      |  |    |
|------|--|----|
| Q5.  | Nervous system                         | 10 |
| Q6.  | Muscles and nerve supply of lower limb | 10 |
| Q7.  | Respiratory system                     | 10 |
| Q8.  | Principal of exercise                  | 10 |
| Q9.  | Cranial nerves                         | 10 |
| Q10. | Work physiology                        | 10 |

This question paper contains 1 printed page

**Master of Occupational Therapy  
Part- I (Main) Examination Month year**

**Paper – II  
Biostatistics & Research Methodology  
Time: Three Hours  
Maximum Marks: 70**

Student shall be allowed to take only one supplementary copy along with one main answer book  
All the parts of one question should be answered at one place.  
Different part of one question should not be answered at different places in the answer book.  
Draw diagrams wherever necessary

**Long answer question (Attempt any TWO Questions out of FOUR)**

- |     |  |    |
|-----|--|----|
| Q1. | What is research? Discuss its importance in occupational therapy                         | 15 |
| Q2. | What is sampling? Explain the different types of sampling with examples.                 | 15 |
| Q3. | Discuss the research process in details.   | 15 |
| Q4. | Discuss the qualitative and quantitative research. Compare and contrast between the two. | 15 |

**Short answer question (Attempt any FOUR Questions out of SIX)**

- |      |                               |    |
|------|-------------------------------|----|
| Q5.  | Central tendency              | 10 |
| Q6.  | Random sampling with examples | 10 |
| Q7.  | Types of error                | 10 |
| Q8.  | Parametric test               | 10 |
| Q9.  | Non-parametric test           | 10 |
| Q10. | Co-relational studies         | 10 |

15030

**Master of Occupational Therapy  
Part- I (Main) Examination Month Year**

**Paper –III  
Occupational Therapy Process and Practice-I**

**Time: Three Hours**

**Maximum Marks: 70**

Student shall be allowed to take only one supplementary copy along with one main answer book

All the parts of one question should be answered at one place.

Different part of one question should not be answered at different places in the answer book.

Draw diagrams wherever necessary

**Long answer question (Attempt any TWO Questions out of FOUR)**

- |     |   |    |
|-----|---|----|
| Q1. | What is clinical reasoning? Discuss its various type and why it is important in occupational therapy. | 15 |
| Q2. | Discuss the role of occupational therapy is consultant.   | 15 |
| Q3. | What is documentation? And why it is important for occupational therapy.                              | 15 |
| Q4. | Discuss in detail about setting up of occupational therapy  | 15 |

**Short answer question (Attempt any FOUR Questions out of SIX)**

- |      |   |    |
|------|---|----|
| Q5.  | Clinical reasoning                      | 10 |
| Q6.  | Evidence based practice                 | 10 |
| Q7.  | Fiscal management                       | 10 |
| Q8.  | PWD's Act                               | 10 |
| Q9.  | Hospice care                            | 10 |
| Q10. | Occupational Therapy role in Geriatrics | 10 |

This question paper contains 1 printed page

**MOT Part I  
15040**

**OT. Proc. & Prac. II.-IV**

**Master of Occupational Therapy  
Part- I (Main) Examination Month Year**

**Paper –IV**

**Occupational Therapy Process and Practice-II**

**Time: Three Hours**

Maximum Marks: 70

Student shall be allowed to take only one supplementary copy along with one main answer book

All the parts of one question should be answered at one place.

Different part of one question should not be answered at different places in the answer book.

Draw diagrams wherever necessary

**Long answer question** (Attempt any TWO Questions out of FOUR)

- |     |  |    |
|-----|--|----|
| Q1. | What is myocardial infection? Discuss the role of occupational therapy in it | 15 |
| Q2. | What is bronchial asthma? Discuss the role of occupational therapy in it     | 15 |
| Q3. | Discuss the industrial rehabilitation in detail                              | 15 |
| Q4. | Discuss the role of occupational therapy in neurodegenerative conditions.    | 15 |

**Short answer question** (Attempt any FOUR Questions out of SIX)

- |      |   |    |
|------|---|----|
| Q5.  | Mood disorders- occupational therapy management | 10 |
| Q6.  | Role of occupational therapy in Parkinsonism    | 10 |
| Q7.  | Cognitive rehabilitation approaches             | 10 |
| Q8.  | Role of occupational therapy in NICU            | 10 |
| Q9.  | Spina bifida and its type                       | 10 |
| Q10. | Work hardening                                  | 10 |

**MODEL PAPER**

This question paper contains 1 printed page

**MOT Part II.  
16010**

**Adv. OT. Neu. I**

**Master of Occupational Therapy  
Neurosciences  
Part II (Main) Examination Month Year**

**Paper – I  
Advanced Occupational Therapy in Neurosciences-I  
Time: Three Hours  
Maximum Marks: 70**

Student shall be allowed to take only one supplementary copy along with one main answer book

All the parts of one question should be answered at one place.

Different part of one question should not be answered at different places in the answer book.

Draw diagrams wherever necessary

**Long answer question** (Attempt any TWO Questions out of FOUR)

- |     |  |    |
|-----|--|----|
| Q1. | Discuss the role of occupational therapy in extrapyramidal lesions | 15 |
| Q2. | Explain the theories of motor control                              | 15 |
| Q3. | Discuss the occupational therapy approaches used in neurosciences  | 15 |
| Q4. | Discuss the occupational therapy management of pain                | 15 |

**Short answer question** (Attempt any FOUR Questions out of SIX)

- |     |   |    |
|-----|---|----|
| Q5. | Structure and function of brain                     | 10 |
| Q6. | Orthosis in neurological conditions                 | 10 |
| Q7. | Dysphasia management                                | 10 |
| Q8. | Frame of reference used in cognitive rehabilitation | 10 |
| Q9. | Perception evaluation                               | 10 |
| Q10 | Activity analysis                                   | 10 |

This question paper contains 1 printed page

**MOT Part II.**

**Adv. OT. Neu. II**

16020

**Master of Occupational Therapy  
Neurosciences  
Part II (Main) Examination Month Year**

**Paper – II  
Advanced Occupational Therapy in Neurosciences-II**

**Time: Three Hours  
Maximum Marks: 70**

Student shall be allowed to take only one supplementary copy along with one main answer book  
All the parts of one question should be answered at one place.  
Different part of one question should not be answered at different places in the answer book.  
Draw diagrams wherever necessary

**Long answer question** (Attempt any TWO Questions out of FOUR)

- |     |   |    |
|-----|---|----|
| Q1. | Discuss the occupational therapy role in cerebral vascular disease                                    | 15 |
| Q2. | What are the different types of spinal cord injury? Discuss the occupational therapy management       | 15 |
| Q3. | Explain with diagrams, the various types of spina bifida. Discuss the occupational therapy management | 15 |
| Q4. | Explain the occupational therapy management of myasthenia gravis                                      | 15 |

**Short answer question** (Attempt any FOUR Questions out of SIX)

- |      |                         |    |
|------|-------------------------|----|
| Q5.  | Subdural hematoma       | 10 |
| Q6.  | Hydrocephalus           | 10 |
| Q7.  | Developmental anomalies | 10 |
| Q8.  | Nutritional disorders   | 10 |
| Q9.  | Motor neuron disease    | 10 |
| Q10. | Neurocutaneous syndrome | 10 |

**Elective Paper- Non – University Examination**

# **INFORMATION AND COMMUNICATION TECHNOLOGY IN HEALTH EDUCATION**

Theory Hours: 45hrs  
Practical 15hrs  
**Total =60 hrs**

## **Learning objectives**

Upon successful completion of this subject, students should

1. To obtain the basic knowledge on computer, devices used in computers.
2. To know the uses of computers like MS office, Power point Presentations, Excel documents.
3. To know about uses of internet, its advantages in regular updating the knowledge in Occupational therapy profession.

## **SYLLABUS**

### **Introduction**

1. Introduction to computers-History of Computer, Generation of Computer, Classification of Computers, Input Devices, Output Devices, Central Processing Unit, Components of CPU, Memory Unit, Peripheral Devices
2. Introduction to M.S. Windows
3. Internet and its applications
4. MGUMST web forum & portal
5. Google Applications
6. Introduction to M.S. Office - Word, Power Point, Excel,
7. Publisher

### **The Digital Age**

Computer and communications, the five operations of a computer-and communication system-input, processing, output, storage and communications as well as the corresponding categories of hardware, five major categories of computers, development I communication Technology.

### **Applications Software**

Applications and systems software, ethics of copying software, four types of applications software, entertainment education and reference, productivity and business and specialized, key functions of word processors, spreadsheets, database managers, graphics programs and suites, group-ware, and internet web browsers.

### **Storage Devices**

Units of storage capacity, primary and secondary storage, data compression, data storage on diskette, hard disks, optical disks, and magnetic tape and describe the purposes of storage media.

### **Communications**

Usage of communications technology, telephone-related services, online information services, the internet

## **Multimedia**

What is multimedia – Multimedia PC– Multimedia Hardware - Central processor – color display, Multimedia accessories – CD ROM – Digital Audio – Audio speakers  
– Digital video– MIDI – deodisc Read/write storage device- Multimedia software

## **Radio propagation:**

Use of computers in physical therapy – Application Packages used in statistical analysis.

## **Recommended books**

1. Free T. Hotstetter, —Multimedia Literacy|| M<egraw Hill,
2. Simon J. Gibbs, Dinoysios C. Tschritziz, —Multimedia programming||, Addison Wesley
3. John F.Koefgel Buford, —Multimedia Systems||, Addison Wesley
4. John Vince, —Virtual Reality Systems|| Addison Wesley.
5. AndressF.Molisch, —Wideband Wireless digital communication|| Pear Education Asia

## **CLINICAL NUTRITION**

Theory Hours: 45hrs  
Practical 10hrs  
**Total = 55 hrs**

### **COURSE OBJECTIVE:**

The objective of this course is that after 30 hours of L, D, P the student shall be able to understand the basic knowledge about Diet, balanced diet, metabolism, malnutrition, under nutrition, over nutrition, deficiency disease.

### **COURSE OUTCOME:**

1. Become familiar about the nutritive values of food.
2. Explain about the food sources from which we obtain vitamins.
3. Become familiar with various compositions of food.
4. Well versed with digestion at each stages of digestive system.
5. Become familiar with different cooking methodologies.
6. Know and explain about food preparations by food manufacturer.
7. Explain thoroughly about the advantages and disadvantages of various convenience foods.

### **UNIT ISOURCES OF FOOD**

1. Nutritive value of foods,
2. Food Sources from which key vitamins are derived

### **UNIT II DIGESTIVE SYSTEM**



1. Digestion and absorption –Digestion at each stage of the digestive system
2. Dietary guidelines- Factors affecting food requirements. Planning and serving of family meals. Meals for all ages and occupations.

### **UNIT III COMPOSITION OF FOOD**

Composition and value of the main foods in the diet - Milk, meat, fish, cheese, eggs, margarine and butter cereals (wheat, rice, maize, millets, oats) fruits and vegetables

### **UNIT IV PROCESSING OF FOOD**

1. Cooking of food -Transfer of heat by conduction, convection and radiation.
2. Principles involved in the different methods of cooking – boiling, stewing, grilling, baking, roasting, frying, steaming, pressure cooking, cooking in a microwave oven.

### **FOOD PREPARATION**

1. Convenience foods- Foods partly or totally prepared by a food manufacturer – dehydrated, tinned, frozen, ready to eat. Intelligent use of these foods.
2. Advantages and disadvantages

#### **Text Book:**

1. Agarwal, Textbook of human nutrition, JP, 1 Ed, 2014

#### **Reference:**

1. Kenneth F. Kiple, Kriemhild Coneè Ornelas, The Cambridge world history of food, Cambridge University Press, 1st ed, 2000

## **HEALTH CARE**

Theory Hours: 50hrs  
**Total = 50 hrs**

### **Introduction to Health**

1. Definition of Health, Determinants of Health, Health Indicators of India, Health Team Concept.
2. National Health Policy
3. National Health Programmes (Briefly Objectives and scope) Population of India and Family welfare programme in India

### **Introduction to Nursing**

1. What is Nursing? Nursing principles. Inter-Personnel relationships. Bandaging: Basic turns; Bandaging extremities; Triangular Bandages and their application.
2. Nursing Position, Bed making, prone, lateral, dorsal, dorsal re-cumbent, Fowler's positions, comfort measures, Aids and rest and sleep.
3. Lifting and Transporting Patients: Lifting patients up in the bed. Transferring from bed to wheel chair. Transferring from bed to stretcher.
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.
5. Methods of Giving Nourishment: Feeding, Tube feeding, drips, transfusion Care of Rubber Goods
6. Recording of body temperature, respiration and pulse, Simple aseptic technique, sterilization and disinfection. Surgical Dressing: Observation of dressing procedures

### **First Aid:**

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

### **Reference Books:**

1. Preventive and Social Medicine by J.Park
2. Text Book of P & SM by Park and Park
3. Counseling & Communicate skills for medical and health, Bayne- Orient Longman Pvt. Ltd.

## **Constitution of Indian**

Theory Hours: 40hrs

**Total = 40 hrs**

### **Unit-I:**

Meaning of the term 'Constitution' Making of the Indian Constitution 1946- 1950.

**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 Principles.

**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

**Reference Books:**

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, Allahbad, Central Law Agency, 1998.
3. Granville Austin: The Indian Constitution – Corner Stone of a Nation-Oxford, New Delhi, 2000.