SGT UNIVERSITY
FACULTY OF PHYSIOTHERAPY
M.P.T SYLLABUS
MASTERS OF PHYSIOTHERAPY IN COMMUNITY REHABILITATION

PREAMBLE

Our modern lifestyle – with all its perks and benefits – has started to take a toll on our bodies. Back pain, knee pain, and neck strains have become everyday problems.

Physiotherapy is one of the popular courses in modern medicine worldwide. This deals with the human movements as central to the health and well being of individual. Physiotherapists are trained professionals who help their injured patients get back to the highest possible range of movement. In addition to their role in maintenance and restoration of physical function& health, Physiotherapists are also responsible for promotion of health, life style, quality of life and prevention of physical dysfunction and disability

This holistic approach incorporates a broad range of physical and physiological therapeutic interventions and aids.

The core skills used by Physiotherapy include manual therapy, therapeutic exercise and the application of electro therapeutic modalities.

Specifically, physiotherapists improve client's quality of life by:

- Promoting optimal mobility, physical activity and overall health and wellness;
- Preventing disease, injury, and disability;
- Managing acute and chronic conditions, activity limitations, and participation restrictions;
- Improving and maintaining optimal functional independence and physical performance;
- Rehabilitating injury and the effects of disease or disability with therapeutic exercise programs and other interventions; and
- Educating and planning maintenance and support programs to prevent re-occurrence, re-injury or functional decline.
- Students studying physiotherapy learn about the clinical sciences such as the musculoskeletal, cardiovascular, pulmonary, gastrointestinal, and neuromuscular systems. They also learn about biomechanics, neuro-anatomy, human growth and development, and the various manifestations of disease. They learn to diagnose patients based on observations and taking personal histories. They also study how to collaborate with patients and family members to determine a plan of care that will be effective for all concerned. In addition to clinical practice, other activities encompassed in the physical therapy profession include research, education, consultation, and administration. At present, in our country very few Universities are generating Health professionals specialized in Physiotherapy.

The Masters of Physiotherapy (MPT) programme introduced by SGT University promises to generate professionals having extensive and elaborated knowledge in the field of their specialization.

Practical training to students are imparted at state of the art Physiotherapy and Rehabilitation centre where students gets hands on training under the expert faculty of 665 bedded multi

disciplinary SGT Hospital, which is located within the premises of SGT University. Students expand their horizons of therapeutic and rehabilitative concepts through involvement in community based rehabilitation programs and other "outreach" programs. Thus the students have the advantage of excellent clinical training, besides highest level of academic activity which bridges the gap between theoretical knowledge and its practical application.

GOALS

The specific goal of the educational program is to prepare individuals to undertake the roles of a Physiotherapist in India and abroad as well. These roles include clinical practitioner, communicator, collaborator, manager, advocate, scholarly practitioner, and professional. With critical enquiry and evidence-based practice as the foundation, our program promotes the acquisition of advanced academic knowledge, skills and behaviors that are essential for a primary health care provider in a complex and continually evolving health care environment.

The Master of Physiotherapy (MPT endorsed) programme endorsed in one of the specialist areas (Orthopaedic, Neurology, Cardiopulmonary, Sports Physiotherapy, Community Rehabilitation and Obstetrics & Gynecology) aims to advance the student's clinical reasoning and patient management skills beyond that of the entry level practitioner and provide one of the prerequisites necessary to achieve specialisation.

The Faculty of Physiotherapy has a strong postgraduate research programme currently supporting numerous master's research students working on topics that range from neurological disorders to anatomical studies. We aim to provide students with a high level of knowledge and experience in order to help them develop their own research skills whether using qualitative or quantitative methodologies for statistical analysis, lab-based studies or community work, prevalence studies or intervention trialing – our aim is to have students complete their master's confident in their abilities to conduct research and assess relevant literature and practices, whether this leads to PhD study in the future or to more assured clinical practice.

OBJECTIVES

- To provide comprehensive clinical and research experience in Physiotherapy.
- To provide holistic health care services to all and to produce Competent, Skilled and Dedicated Physiotherapists.
- To provide an outstanding learning environment for the education of future physical therapy professionals.
- Systematically understand and be critically aware of the theory underpinning physiotherapy and its application in the clinical settings
- Demonstrate skills in the critical appraisal of research and the evaluation of

interventions in relation to the current evidences.

- Demonstrate the ability to critically evaluate current research and show originality in applying techniques of research and enquiry to purpose, create and interpret knowledge for insightful development of the profession

- Engage in self-evaluation, critical reflection and critical appraisal, which promotes clear professional judgment individually and in groups.

- Demonstrate the ability to deal with complex issues creatively and systematically.

- Integrate prior and current life experiences, knowledge and skills into the development of independent learning strategies in university based and practice based health settings.

- Analyze and synthesize information relating to the patient's holistic needs and show ability to make sound judgments.

- Demonstrate an autonomous problem solving approach to the management of the patients within the context of both physiotherapy and inter professional practice.

- Show ability initiate to exercise, show personal responsibility and manage themselves and others.

- Show aptitude for continuing to advance professional development and their lifelong learning.

COURSE

Masters in Physiotherapy

- Is a 2 year course
  Eligibility Criteria- 55% aggregate marks in BPT
  Fee Structure-Rs--------- per annum

- **Specialties :**
  1. **MASTER OF PHYSIOTHERAPY IN ORTHOPEDICS**
  2. **MASTER OF PHYSIOTHERAPY IN NEUROLOGY**
  3. **MASTER OF PHYSIOTHERAPY IN CARDIO PULMONARY**
  4. **MASTER OF PHYSIOTHERAPY IN SPORTS**
  5. **MASTER OF PHYSIOTHERAPY IN COMMUNITY REHABILITATION**
  6. **MASTER OF PHYSIOTHERAPY IN OBSTETRICS AND GYNAECOLOGY**

- **Total Intake**- 10 per stream

Career Opportunities

- Physiotherapists practice in many settings such as Government hospitals
- Private hospitals
- Private Practice
- Outpatient clinics
- Health and Wellness clinics,
- In the rehabilitation Department.
- Critical care unit.
- Centers for the handicapped, schools for the mentally retarded and physically disabled children,
- Health institutions
- Physiotherapist with various sports teams.
- Defense medical establishments.
- In Multinational companies.
- Academics
- Research analyst in Research Centers
- Schools and Private homes
- They can also practice in non patient care roles like health policy, health insurance, and Health care administration and as health care executives.
- Physiotherapists are also involved in medical legal field serving as expert and performing peer reviews.

Duration of the Course:
The duration of Masters of Physiotherapy course shall be of four academic semesters including compulsory submission of dissertation and clinical practice.

a) First Professional M.P.T 1 year
b) Second Professional M. P. T. 1 year

Syllabus:
Syllabus for the course leading to the degree of MPT will be approved by the Board of Studies of the Department/Faculty of Physiotherapy, SGT University.

University Examinations:
M.P.T Examination will be held as per Scheme of Examinations approved by the Board of Studies of the Department /Faculty of Physiotherapy, SGT University.

Distribution of Marks:
The distribution of marks shall be as prescribed in the Scheme of Examinations approved by the Board of Studies of the Department/Faculty of Physiotherapy, SGT University.

Eligibility to appear in Examinations:

The following regular students shall be eligible to appear in the examinations:

(i) The student should bear a good moral character.

(ii) The student should have at least 75% attendance of the lectures delivered; 75% of the practical held; and 75% of full of the clinical practice held separately; Provided further that a deficiency in the number of lectures in theory and/or non-lecture teaching may be condoned by the Dean/Director, Faculty of Physiotherapy on the recommendation of the concerned Head of the Department up to 5%.

(iii) Submission of three research proposals in respective discipline opted by the student in MPT course out of which one will be finally approved or allowed.

(iv) The student, who fulfils the conditions laid down under (i) to (iii) above for one or more subjects and not for the other(s), will be allowed to take examination only in such subject(s) in which he fulfills the conditions.

(v) The Dean Faculty of Physiotherapy shall send the name (s) of the student (s) who does not fulfill the eligibility criteria for appearing in the examinations to the Controller of Examinations.

Internal Assessment:

(i) There shall be Internal Assessment of 40% of the total marks in each subject.

(ii) The marks of Internal Assessment will be divided equally between theory and practical.

(iii) Internal Assessment should be submitted to the Controller of Examinations at least two weeks before the commencement of theory examinations.

(iv) Internal Assessment shall be awarded on the basis of student's participation in learning process (preparation of subject for seminar, preparation of a clinical case for discussion, clinical case study/problem solving exercise, participation in a project for health care in the community from planning stage to evaluation, proficiency in carrying out a practical or a skill in small research project, MCQs test after completion of a system/teaching, etc.), regular periodical practical examinations and maintenance of day-to-day records.

(v) The concerned teacher shall maintain and preserve the Internal Assessment record of each student, which should be made available for inspection to the student concerned as well as university authorities whenever demanded.

(vi) The re-appear/fail students may be re-assessed, if they so desire, next time for the purpose of improvement of internal assessment, otherwise their previous score of assessment will be carried forward.

PLAN OF DISSERTATION:

Every student appearing for the M.P.T. degree examination for the first time shall submit with his application for the admission to the examination, six type written copies of dissertation of a research topic undertaken by the candidate and prepared under the direction and guidance to the satisfaction of the concerned faculty. The dissertation shall be referred to the examiners for the MPT Examination and acceptance of it by the examiners shall be a pre-condition to the admission of the candidate to the written part of the examination.

(i) Every student will be required to submit his/ her plan of dissertation to the Head of the Department who would forward the same to the Chairperson of the concerned Postgraduate Board of Studies **within six months from the date of commencement** of the course. Admission to the course can be cancelled, if the candidate fails to submit his/her plan within stipulated time. The delay, in exceptional circumstances if any, may be condoned on genuine reasons by the Dean on the recommendation of the Supervisor through the HOD up to 15 days, and by the Vice-Chancellor up to 30 days.

(ii) After approval of the subject of dissertation by the Board of Studies. The synopsis/ plan of dissertation shall be forwarded to the ethical committee of the institute for clearance. The thesis work shall start only after the Institutional review board \Ethical Committee clearance on the approval by the Committee, the same will be sent to the Controller of the Examinations for approval of the Vice Chancellor.

(iii) The Head of the Department shall certify that all necessary facilities for proper investigation and supervision of the candidate's work will be provided. If the necessary facility for a particular project is not available with the Department, then an academic tie-up can be done with another university/ college where such facilities are available. The dissertation shall be on a subject connected with the science and practice of Physiotherapy.

(iv) The dissertation shall conform to the requirements laid down in this Ordinance and would have to be submitted at the end of 4^{th} semester before the date of final examination.The delay, in exceptional circumstances if any, may be condoned on genuine reasons by the Dean on the recommendation of the Supervisor through the HOD up to 30 days with late fee of Rs. 2000, and by the Vice-Chancellor with another 30 days with late fee of Rs. 5000.

(v) The dissertation shall embody the result of the candidate's own research and shall contain precise reference to the publications quoted, and must attain a good standard with a summary embodying conclusions arrived at by the candidate. Every candidate shall submit six copies of the dissertation.

(vi) The dissertation shall be examined separately by two examiners (one internal and one external) approved by the Board of Studies concerned. They shall report whether the thesis is accepted, or rejected or the candidate be allowed to resubmit the thesis after revision. If the examiners disagree, the Vice-Chancellor shall appoint a third examiner who shall be an expert in the same specialty as a replacement of the examiner rejecting the thesis. The third examiner shall be appointed by **the Vice-Chancellor on the recommendation of the Dean, Faculty of Physiotherapy from the panel approved by the Board of Studies or any other independent examiner**. If the dissertation is accepted, it shall be classified as accepted, commended or highly commended and the result will be communicated to the candidate. Every approved dissertation shall become

the property of the S.G.T. University, Gurgaon along with copyright, and may be placed in the University Library or uploaded on a sever for access in public domain. If the dissertation is rejected, the student may be required either to re-write the dissertation or to take up another topic. The examiner rejecting the dissertation shall point out in writing the defects and make suggestions for improvements and modifications, if a revision will render it acceptable. The revised dissertation shall be submitted to the university not later than one year from the date of intimation of the result accompanied by half the amount of the prescribed examination fee.

(vii) A student whose dissertation has been accepted but who fails in the examination may be allowed to reappear at a subsequent examination but his/her dissertation shall not be evaluated again. He/she shall pay the examination fee as prescribed by the University

(viii) The dissertation should be written under the following heading.

1. Introduction
2. Aim or Objective of the Study.
3. Review of the literature
4. Materials and Methods
5. Results
6. Discussion
7. Conclusion
8. Summary
9. References
10. Tables
11. Annexure

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

Teaching Strategies and Curricula

Unique style of teaching and experimental learning is followed. We believe in achieving excellence by integrating teaching, learning & research.

Hands on training is provided to the students to enhance their skills. Various workshops are conducted in department to provide them opportunity to learn advance treatment skills.

Course distribution: The MPT Programme will be of 2 yrs duration.

METHODS OF TRAINING

The training of postgraduate for MPT degree shall be on a full time pattern with graded responsibilities in the management and treatment of patients entrusted to his / her care. The participation of all the students in all facets of educational process is essential. Every candidate should take part in seminars, group discussions, clinical rounds, care demonstrations, clinics, journal review meetings & CME. Every candidate should be required to participate in the teaching and training programs of undergraduate students. Training should include involvement in laboratory experimental work and research studies.

MONITORING PROCESS OF STUDIES (INTERNAL MONITORING)

It is essential to monitor the learning progress of each candidate through continuous appraisal and regular assessment. It not only helps teachers to evaluate students, but also students to evaluate themselves. The monitoring is done by the staff of the department based on participation of students in various teaching / learning activities. It may be structured and assessment be done using checklists that assess various aspects.

Following Check Lists shall be used for the evaluation of Student's performance

MODEL CHECKLIST FOR EVALUATION OF JOURNAL REVIEW PRESENTATIONS

Name of the student: _____

Name of the faculty: _____

Date: _____/_____/_____

GRADING- Poor (0) Below Average (1) Average (2) Good (3) Very Good (4)

1. Article chosen was …….
2. Extent of understanding of scope and objectives of the paper by candidates
3. Whether cross references have consulted
4. Whether other relevant publications consulted
5. Ability to respond to questions on the paper/subject 6 Audio-visual aids used
6. Ability to defend the paper
7. Clarity of presentation
8. Any other observation
9. Total score

MODEL CHECKLIST FOR EVALUATION OF SEMINAR PRESENTATION

Name of the student: _____

Name of the faculty: _____

Date: _____/_____/_____

GRADING Poor (0) Below Average (1) Average (2) Good (3) Very Good (4)

1. Whether other relevant publications consulted
2. Whether cross references have been consulted
3. Completeness of preparation
4. Clarity of presentation
5. Understanding of subject
6. Ability to answer the questions
7. Time schedule
8. Appropriate use of audio-visual aids
9. Any other observation

Total score

MODEL CHECKLIST FOR EVALUATION OF WORK

Name of the student: _____

Name of the faculty: _____

Date: _____/_____/_____

GRADING Poor (0) Below Average (1) Average (2) Good (3) Very Good (4)

1. Regularity of the attendance
2. Punctuality
3. Interaction with colleagues and supportive staff
4. Maintenance of case records
5. Presentation of cases during rounds
6. Investigation work up
7. Besides manners
8. Rapport with patients
9. Treatment approaches and techniques
10. Overall quality of ward work

Total score

EVALUATION OF CLINICAL PRESENTATION

Name of the student: _____

Name of the faculty: _____

Date: _____/_____/_____

GRADING Poor (0) Below Average (1) Average (2) Good (3) Very Good (4)

1. Completeness of history
2. Whether all relevant points elicited
3. Clarity of presentation
4. Logical order
5. Mentioned all positive and negative points of importance
6. Accuracy of general physical examination
7. Whether all physical signs elicited correctly
8. Whether any major signs missed or misinterpreted
9. Diagnosis
10. Investigation required, Special investigation
11. Aims
12. Means
13. Treatment techniques
14. Other

Total score

MODEL CHECKLIST FOR EVALUATION OF TEACHING SKILL PRACTICE

Name of the student: _____

Name of the faculty: _____

Date: _____/_____/_____

GRADING Poor (0) Below Average (1) Average (2) Good (3) Very Good (4)

1. Communication of the purpose of the talk
2. Evokes audience interest in the subject
3. The introduction
4. The sequence of ideas
5. The use of practical examples &/or illustrations
6. Speaking style (enjoyable, monotonous, etc. specify)
7. Attempts audience participation
8. Summary of main points at the end
9. Asks questions
10. Answer questions asked by the audiences
11. Rapport of the speaker with his audience
12. Effectiveness of the talk
13. Uses audio-visual aids appropriately

Total Score

MODEL CHECKLIST FOR EVALUATION OF DISSERTATION PRESENTATION

Name of the student: _____

Name of the faculty: _____

Date: _____/_____/_____

GRADING- Poor (0) Below Average (1) Average (2) Good (3) Very Good (4)

1. Interest shown in selecting topic
2. Appropriate review of literature
3. Discussion with guide and other faculty
4. Quality of protocol
5. Preparation of proforma

Total score

CONTINUOUS EVALUATION OF DISSERTATION OF DISSERTATION WORK BY GUIDE

Name of the Student: …….
Name of Faculty / Observer: …….
Date: …….

Poor (0) Below Average (1) Average (2) Good (3) Very Good (4)

1. Periodic consultation with guide
2. Regular collection of case material
3. Depth of analysis / discussion
4. Departmental presentation of findings
5. Quality of final output
6. Others

Total Score

SEMESTER-1

MPT 1ST SEM

REVIEW OF HUMAN SCIENCES -I

TEACHING HOURS: 64

Periods/Week Credits

Max Marks: 100

L: 4 T: 0 4
Internal: 40
External: 60

Duration of Examination: 2 Hrs

S. No	Topic	Domain	Hours
1.	**ANATOMY** (i) Upper limb lower limb trunk, head & neck (ii) Cardio-respiratory (iii) Nervous system	**MUST KNOW**	**64**

MPT -I
Review of Human sciences -I
Paper Code -3070101

TEACHING HOURS: 64

Periods/Week Credits

Max Marks: 100

L: 4 T: 0 4
Internal: 40
External: 60

Duration of Examination: 2 Hrs

S. No	Contents of the Topic	Learning Objectives (At the end of the course the student shall be able to)	Teaching Guidelines	Methodology	Time
1.	**Anatomy-musculoskeletal**	To learn the anatomy of musculoskeletal system of whole body. To demonstrate various plexus and its positions of the human body.	**To Cover** • Anatomy and physiology of pelvis, pelvic floor and muscles of pelvis, perineum, abdominal muscles ,breast, reproductive tract , urinary tract Vascular system, Applied Anatomy • Puberty and menarche • Adolescence and the musculoskeletal system	Student Interactive session Students seminars Case discussion SIS	**30**
2.	**Anatomy Cardio-respiratory**	To describe the anatomy of Cardio respiratory system.	To cover • Pleura and lungs • Pericardium and heart • Vessels and Large Vessels • Endocrine sysytm • Gastrointestinal	Student Interactive session Students seminars Case discussion SIS	**10**

			system • Urinary system • Menstruation, pregnancy and fetal development		
3.	**ANATOMY - Nervous System**	To learn and describe the whole neurological anatomy	**To Cover** • Elementary Neuro-anatomy • Neurons and Neuralgia • Properties of nerve fibers, synapse • Spinal cord Cerebral cortex • Pyramidal and extra pyramidal system • The cerebellum Autonomic nervous system Cerebrospinal fluid • Cranial nerves • Blood supply of CNS	Student Interactive session Students seminars Case discussion SIS	**24**

References books

- Mcminn's Color Atlas of Human Anatomy. / Abrahams, Peter H.
- Cunningham's Manual of Practical Anatomylby GJ. Romanes
- Textbook of human Neuroanatomy. / Singh, lnderbir.
- Clinical Anatomy for medical students. / Snell, Richard S.
- Essential clinical anatomy. / More, Keith L.
- Human Anatomy :Regional and applied by B.D.Chaurasia

MPT- 1
Review of basic sciences -I
Paper Code -

TEACHING HOURS: 64

Periods/Week Credits

Max Marks: 100

L: 4 T: 0 4

Internal: 40

External: 60 Duration of Examination: 2 Hrs

S. No	Topic	Domain	Hours
1.	**Pathology** (i) General Pathology (ii) Nervous System (iii) Musculo-skeletal System (iv) Cardio-vascular System	**MUST KNOW**	**64**

MPT I
Review of Basic sciences -I
Paper Code-3070102

TEACHING HOURS: 64

Periods/Week Credits

Max Marks: 100

L: 4 T: 0 4
Internal: 40
External: 60 Duration of Examination: 2 Hrs

S No.	Contents of the Topic	Learning Objectives (At the end of the course the student shall be able to)	Teaching Guidelines	Methodology	Time
1.	**Pathology**	Describe concepts of cell injury and changes produced thereby in different tissues and organs	**To Cover** • **General Pathology** (cell injury, inflammation, Repair, immune system)	Student Interactive session Students seminars Case discussion	**10**
2.	**General body system**	To enumerate the pathological changes in the body because of certain disease conditions.	**To Cover** • **Nervous System** **Infection** • Meningitis • Encephalitis **Vascular Disease** • Ischemic encephalopathy • Cerebral infarction • Intracranial infarction • Intracranial hemorrhage **Degenerative disease** • Alzheimer's' disease • Huntington's disease • Parkinson's disease • Motor neuron disease **Demyelinating diseasep**	Student Interactive session Students seminars Case discussion	**20**

			• Multiple sclerosis **The peripheral nervous system** • Peripheral neuropathy • Acute idiopathic polyneuropathy • Diabetic neuropathy		
3.	Musculoskeletal System	To demonstrate pathological changes of various bones and joints conditions.	**To Cover** **Bones** • Hereditary and metabolic diseases (Osteoporosis, rickets, osteomalacia, osteitisfibrosa cystic renal osteodystrophy) • Infections (Osteomyelitis and tuberculosis) **Joints** • Degenerative joint disease • Bursitis • Skeletal muscles • Muscle atrophy • Myositis • Muscular dystrophy • Myasthenia gravis	Student Interactive session Students seminars Case discussion	**20**
4.	**Cardiovascular system**	To learn and demonstrate various cardiac conditions.	**To Cover** • Rheumatic heart disease • Myocardial infarction • Atherosclerosis. • Congenital heart diseases	Student Interactive session Students seminars Case discussion	**14**

Reference Book

- Textbook of Pathology / Mohan, Harsh.
- Pathology illustrated/ by Peter S. Macfarlane, Robine
- Pathology: implications for the physical therapistby Catherine Cavallaro
- DGoodmann and Williams G. Boissonn

MPT -I
APPLED ELECTROTHERAPY
PAPER CODE-3070103

TEACHING HOURS: 64

Periods/Week Credits

Max Marks: 100

L: 4 T: 0 4
Internal: 40
External: 60

Duration of Examination: 2 Hrs

S. No	Topic	Domain	Hours
1.	Electro- Therapy	**MUST KNOW**	**50**
2.	Acupuncture, Magneto therapy	**NICE TO KNOW**	**14**

MPT -I
APPLED ELECTROTHERAPY
PAPER CODE-

TEACHING HOURS: 64

Periods/Week Credits

Max Marks: 100

L: 4 T: 0 4
Internal: 40
External: 60

Duration of Examination: 2 Hrs

S. No	Contents of the Topic	Learning Objectives (At the end of the course the student shall be able to)	Teaching Guidelines	Methodology	Time
1.	Electro-Therapy	To enumerate the role of various currents and usage of electrotherapeutic modalities.	To cover • General Review of all types of Low, Med and high currents and their modifications like Di-dynamic and Russian Currents etc. • Uses of different electrotherapeutic modalities • Therapeutic role of different currents • Appropriate doses of different modalities • Advance Electrotherapeutic modalities. • Principles of combination of Therapeutic currents	Student Interactive session Practical Demonstration	**50**
2.	Acupuncture, Magneto-therapy,	To learn about acupuncture points and its effect and usage.	To cover • Acupuncture – definition, principles, techniques,	Student Interactive session	**14**

		To learn about other alternative therapies.	physiological effects, indications, contra-indications, dangers and integration of acupuncture with physiotherapy. • Magneto therapy	Practical Demonstration	

MPT-I

APPLIED ELECTROTHERAPY- PRACTICAL
Paper Code- 3070103

TOTAL HRS-64

Periods/Week Credits

Max Marks: 100

p: 4 T: 0 2
Internal: 40
External: 60

Duration of Examination: 2 Hrs

S. No	Contents of the Topic	Learning Objectives (At the end of the course the student shall be able to)	Teaching Guidelines	Methodology	Time
1.	Electrotherapy Therapeutic techniques	To demonstrate and use of various electrotherapeutic modalities.	To Cover • Principles, application and calculation of appropriate dosage of different electrical currents	Demonstration of techniques Practical Demonstration Case Presentation	**64**

References Books

- Electrotherapy explained: principles and practice / by John low, Ann Reed and Mary Dyson. / Iow, John
- Clayton's electrotherapy / edited by Sheila Kitchen and Sarah Bazin. I Kitchen, Sheila
- Therapeutic modalities for physical therapistslby William E. Prentice, William Quillen and Frank Underwood; Prentice, William E.

MPT-I

REVIEW OF BASIC BIOMECHANICS
Paper code- 3070104

TEACHING HOURS: 64

Periods/Week Credits

Max Marks: 100

L: 4 T: 0 4

Internal: 40

External: 60 Duration of Examination: 2 Hrs

S. No	Topic	Domain	Hours
1.	Fundamental Mechanics	**MUST KNOW**	**8**
2.	Muscle Mechanics	**MUST KNOW**	**6**
3.	Ligament and Tendon Mechanics	**MUST KNOW**	**6**
4.	Bone Mechanics	**MUST KNOW**	**8**
5.	Joint Mechanics	**MUST KNOW**	**8**
6.	Measurement Instruments	**MUST KNOW**	**20**
7.	Mechanical energy, Work and Power	**MUST KNOW**	**8**

MPT-I

REVIEW OF BASIC BIOMECHANICS

TEACHING HOURS: 64

Periods/Week Credits

Max Marks: 100

L: 4 T: 0 4

Internal: 40

External: 60 Duration of Examination: 2 Hrs

S. No	Contents of the Topic	Learning Objectives (At the end of the course the student shall be able to)	Teaching Guideline	Methodology	Time
1.	Fundamental Mechanics	To understand and demonstrate the basic fundamental of physical mechanics and their relevance to human body.	**To Cover** • Forces; composition and resolution of forces; force systems, Force of gravity and COG, Stability, Reaction forces, Friction, Moments, Newton's laws • Equilibrium: static and dynamic • Simple Machines: Levers. pulleys and wheel and axle, Segmental dimensions • Poisson's effect Static and cyclic load behaviors • Load: Load sharing and load transfer	Student Interactive session Practical Demonstration Case Presentation	**8**
2.	Muscle Mechanics	To understand the basic types, structure and composition of muscles. To understand the biomechanical properties	**To Cover** • Structure and composition of muscle • Fiber length and cross-section areas • Mechanical properties • EMG chances during fatigue and contraction	Student Interactive session Practical Demonstration Case Presentation	**6**

		muscles and their clinical significance.	• Changes in mechanical properties because of aging, exercise and immobilized of immobilization • Clinical applications		
3.	Ligament and Tendon Mechanics	To understand the basic structure of ligaments and tendons and their biomechanical relevance.	**To Cover** • Structure, composition and mechanical properties • Cross-sectional area measurement • Muscle tendon properties • Temperature sensitivity • Changes in mechanical properties because of aging, exercise and immobilization • Mechanoreceptors • Clinical application • Bone Mechanics	Student Interactive session Practical Demonstration Case Presentation SIS	**6**
4.	Bone Mechanics	To understand the basic structure of bone and its biomechanical importance.	**To Cover** • Structure and composition of bone • Stress Strain • Modulus of Rigidity & Modulus of elasticity • Mechanical properties of Trabecular system • Mechanical properties of Cortical bone • Bone Remodeling • Response of bone to aging & exercise & immobilization • Mechanics to prevent fracture in bone • Clinical application	Demonstration of techniques Practical Demonstration Case Presentation SIS	**8**
5.	Joint Mechanics	To understand about the Joints and its functions biomechanically. To illustrate the	**To Cover** • Joint design • Joint categories • Joint functions: Arthrokinematics,	Student Interactive session Practical Demonstration Case Presentation	**8**

		effect of any disease or degenerative changes of joints and bones over joint function.	Osteokinematics and kinematics chains • Joint Forces, equilibrium and distribution of these forces • Degenerative changes in weight bearing joints and compensatory actions • Joint stability and its mechanisms Clinical • Clinical applications		
6.	Measurement Instruments	To demonstrate various instruments and their clinical variables used to check biomechanical deviations.	**To Cover** • Photo-optical devices • Pressure transducers and Force Plates • Gait Analyzer • Isokinetic device • EMG (Electro physiology of muscle contraction, recording. processing • Relationship between EMG and Biomechanical Variables	Student Interactive session Practical Demonstration Case Presentation	**20**
7.	Mechanical energy, Work and Power	To understand the correlation between work, power and energy expenditure by muscles.	**To Cover** • Definitions • Positive and negative muscles work • Muscle mechanical power • Causes of inefficient, movement co-contractions, Isometric contractions, against gravity jerky movement, energy generation at one joint and absorption at another, energy flow. • Energy Storage	Student Interactive session	**8**

Reference books

- Introduction to kinesiology/Hoffman, Shirf
- Kinesiology: the Mechanics &Pathomechanics of human
- Movement by Carol A. Oatis. / Oatis, Carol A.
- Joint Structure and Function Cynthia Norkins
- Joint Structure and Function: a comprehensive analysis/Levangie, Pamela K
- Fundamentals of Biomechanics, Orkaya, N

MPT-I

RESEARCH METHODOLOGY
PAPER CODE-3070105

TEACHING HOURS: 64

Periods/Week Credits

Max Marks: 100

L: 4 T: 0 4
Internal: 40
External: 60 Duration of Examination: 2 Hrs

S. No	Topic	Domain	Hours
1.	Research Introduction	**MUST KNOW**	**6**
2.	Review of literature	**MUST KNOW**	**6**
3.	Research design	**MUST KNOW**	**8**
4.	Research process	**MUST KNOW**	**8**
5.	Sampling	**MUST KNOW**	**8**
6.	Data collection and analysis	**MUST KNOW**	**6**
7.	Interpretation & presentation of data	**MUST KNOW**	**5**
8.	Writing a dissertation, research paper	**MUST KNOW**	**6**
9.	Critical appraisal of research	**MUST KNOW**	**5**
10.	Presentation and Publication of research	**MUST KNOW**	**6**

MPT-I

RESEARCH METHODOLOGY
PAPER CODE- 3070105

TEACHING HOURS: 64

Periods/Week Credits

Max Marks: 100

L: 4 T: 0 4
Internal: 40
External: 60 Duration of Examination: 2 Hrs

S. No	Contents of the Topic	Learning Objectives (At the end of the course the student shall be able to)	Teaching Guideline	Methodology	Time
1.	Research Introduction	To understand the basics of Research methodology.	**To Cover** • Terminology in research • Ethical issues in research • Research process	Student Interactive session	**6**
2.	Review of literature	To understand the importance of review of literature.	**To Cover** • Importance, sources & steps in reviewing the literature.	Student Interactive session	**6**
3.	Research design	To illustrate the value of Research Design with its various types.	**To Cover** • Type of research – qualitative & quantitative. • Experimental & non experimental, survey – advantages& disadvantages	Student Interactive session	**8**
4.	Research process	To demonstrate the research proposal with its consequences. To illustrate the formulation of research hypothesis.	**To Cover** • Research question, Aim & objectives, Assumptions, • Limitations & Delimitations, Variables • Hypothesis – formation & testing	Student Interactive session Demonstration of techniques Practical Demonstration	**8**
5.	Sampling	To understand the various sampling techniques and its variables.	**To Cover** • Sampling technique • Population, sample, • Sample size & determination • Sampling methods	Student Interactive session Demonstration of techniques	**8**

			• Sampling error		
6.	Data collection and analysis	To understand the various ways of data collection with their implementation and their reliability.	**To Cover** • Data sources, technique of data collection, tools • Reliability & validity • Process of data collection • Pilot study-method, need	Student Interactive session Demonstration of techniques	**6**
7.	Interpretation & presentation of data	To demonstrate the various ways to interpret and present the data collected.	**To Cover** • Quantitative & qualitative analysis • Graphical representation of data • Conclusion & discussion	Student Interactive session Demonstration of techniques	**5**
8.	Writing a dissertation, research paper	Describe the various steps involved in research report writing and different types of report writing	**To Cover** • How to write dissertation, research paper	Student Interactive session Demonstration of techniques	**6**
9.	Critical appraisal of research	To understand the importance of critical analysis of research.	**To Cover** • Critical appraisal of research	Student Interactive session Demonstration of techniques	**5**
10.	Presentation and Publication of research	To understand the ways to publish an article in journal and how to present it on stage.	**To Cover** • Steps and process of research publications • Stage presentation	Student Interactive session Demonstration of techniques	**6**

Reference books

- Research methods in physical activity: Thomas, J
- Bio-Stastics. Prof. S.C. Gakhar
- Clinical research for health professionals: a user-friendly Guide: Batavia, Mitchell.
- Practical research: a guide for therapists.French, Sally
- Rehabilitation Research: Principles and Applications: Elizabeth Domholdt
- Methods in biostatistics for medical students and research workers. Mahajan, B.K.
- Manual ofbio5tatistics: Baride, JP

MPT-I

EVALUATIVE CLINICAL PRACTICE

Paper Code-3070106

Periods/Week Credits

Max Marks: 100

p: 12 4

Students will engage in clinical training in hospital based medical and physiotherapy department settings to enhance their clinical skills and apply contemporary knowledge gained during teaching sessions.

MPT-I
SEMINAR / CASE PRESENTATIONS
PAPER CODE- 3070107

TOTAL HRS-64

Periods/Week Credits

Max Marks: 100

p: 4 T: 0 4

Internal: 40

These will serve as platform for students to integrate various components of patient management and debate contentious issues on the efficacy of physiotherapy techniques. Students will give presentations on topic given to them.

MPT SEMESTER-II

MPT -II
Review of Human sciences -II
Paper Code-3070201

TEACHING HOURS: 64

Periods/Week Credits

Max Marks: 100

L: 4 T: 0 4
Internal: 40
External: 60 Duration of Examination: 2 Hrs

S. No	Topic	Domain	Hours
1	**EXERCISE PHYSIOLOGY** (i) Respiratory System and Exercise (ii) Cardio Vascular System and Exercise (iii) Energy Transfer for Physical activity (iv) Muscle Physiology (v) Gastrointestinal tract & Endocrine	**MUST KNOW**	**30**
2.	**HEALTH & FITNESS** (i) Nutrition (ii) Diet (iii) Fitness testing (iv) Body composition (v) Aging and exercise (vi) Temperature regulation (vii) Physiological basis and principles of training and conditioning (viii) Misc. Topics	**DESIRABLE TO KNOW**	**34**

MPT -II
Review of Human sciences -II
Paper Code -3070202

TEACHING HOURS: 64

Periods/Week Credits

Max Marks: 100

L: 4 T: 0 4

Internal: 40

External: 60 Duration of Examination: 2 Hrs

S. No	Contents of the Topic	Learning Objectives (At the end of the course the student shall be able to)	Teaching Guidelines	Methodology	Time
1.	**Exercise Physiology**	To understand and describe the changes in Physiology of various body systems during and because of exercises	**To Cover** • Respiratory System and Exercise • Cardio Vascular System and Exercise • Energy Transfer for Physical activity • Muscle Physiology • Gastrointestinal tract & Endocrine	Students seminars Case discussion SIS	**30**
2.	**Health & Fitness**	To learn various needs of health and fitness regarding its nutritional needs. To learn Physiological needs of training and conditioning	**To Cover** • Nutrition • Diet • Fitness testing • Body composition • Aging and exercise • Temperature regulation • Physiological basis and principles of training and conditioning • Misc. Topics	Student Interactive session Students seminars Case discussion	**34**

References books

- Principles of exercise physiology. / Axen, Kenneth.
- Physiology of sport and exercise by Wilmore, Jack M
- Textbook of practical physiology. / Ghai, C.L.
- Concise medical physiology. / Chaudhuri, Sujit K.
- Human physiology by N M Muthayya. / Muthayya, M N.
- Textbook of medical physiology. / Guyton, Arthur C
- Textbook of physiology /by AX. Jain / Jain, AX.
- Exercise Physiology-Katch&Katch

MPT II
Review of basic sciences- II
Paper Code-3070202

TEACHING HOURS: 64

Periods/Week Credits

Max Marks: 100

L: 4 T: 0 4
Internal: 40
External: 60 Duration of Examination: 2 Hrs

S. No	Topic	Domain	Hours
1	**Pharmacology** (i) Drugs used in pain (ii) Local anesthetics (iii) Steroids (iv) Muscle relaxants (v) Drugs acting upon Central and Autonomic nervous system (vi) Topically acting upon Cardio Respiratory system (vii) Drugs acting upon Musculoskeletal system	**MUST KNOW**	**64**

MPT II

Review of basic sciences- II

Paper Code- 3070202

TEACHING HOURS: 64

Periods/Week Credits

Max Marks: 100

L: 4 T: 0 4

Internal: 40

External: 60 Duration of Examination: 2 Hrs

S No.	Contents of the Topic	Learning Objectives (At the end of the course the student shall be able to)	Teaching Guidelines	Methodology	Time
1.	**Pharmacology**	To learn use of various medicines used in musculoskeletal conditions, cardio respiratory functions and CNS and ANS.	**To Cover** • Drugs used in pain • Local anesthetics • Steroids • Muscle relaxants • Drugs acting upon Central and Autonomic nervous system • Topically acting upon Cardio Respiratory system • Drugs acting upon Musculoskeletal system	Student Interactive session Students seminars	**64**

Reference Book

- Essential of medical pharmacology/by K.D. Tripathi Pharmacology drug actions &reactions
- Textbook of pharmacology, Seth, SD 2

MPT II
APPLED EXERCISE THERAPY-THEORY
PAPER CODE-3070203

TEACHING HOURS: 64

Periods/Week Credits

Max Marks: 100

L: 4 T: 0 4
Internal: 40
External: 60 Duration of Examination: 2 Hrs

S. No	Topic	Domain	Hours
1.	Assessment techniques	**MUST KNOW**	**6**
2.	Stretching	**MUST KNOW**	**4**
3.	Re-education and Strengthening.	**MUST KNOW**	**6**
4.	Balance and Co-ordination Ex.	**MUST KNOW**	**6**
5.	Gait Analysis and "Training (Both Normal and Pathological Gaits)	**MUST KNOW**	**8**
6.	Relaxation and soft Tissue Manipulations	**MUST KNOW**	**6**
7.	Posture	**MUST KNOW**	**4**
8.	PNF and Neuromuscular Coordination	**MUST KNOW**	**6**
9.	Hydrotherapy	**MUST KNOW**	**4**
10.	Joint Mobilization	**MUST KNOW**	**6**
11.	Yogasanas	**DESIRABLE TO KNOW**	**4**
12.	Naturopathy	**NICE TO KNOW**	**3**

MPT II
APPLED EXERCISE THERAPY-THEORY
PAPER CODE- 3070203

TEACHING HOURS: 64

Periods/Week Credits

Max Marks: 100

L: 4 T: 0 4
Internal: 40
External: 60 Duration of Examination: 2 Hrs

S. No	Contents of the Topic	Learning Objectives (At the end of the course the student shall be able to)	Teaching Guidelines	Methodology	Time
1.	Assessment techniques	To demonstrate basic assessment technique of Physiotherapy	**To Cover** • Manual Muscle Testing • Goniometry	Student Interactive session Practical Demonstration	**6**
2.	Stretching	To demonstrate various stretching techniques of different limb and spinal muscles.	**To Cover** • Various Stretching techniques of limb and spinal muscles • Various self stretching techniques of limb and spinal muscles.	Student Interactive session Practical Demonstration	**4**
3.	Re-education and Strengthening.	To demonstrate various reeducation and strengthening techniques.	**To Cover** • Various relearning techniques • Various strengthening techniques	Student Interactive session Practical Demonstration	**6**
4.	Balance and Co-ordination Ex.	To demonstrate various Balance and coordination Exercises.	**To Cover** • Balance and coordination Exercises.	Student Interactive session Practical Demonstration	**6**
5.	Gait Analysis and	To analyse various normal gait and various	**To Cover** • Analysis of Normal gait pattern	Student Interactive session Practical	**8**

	Training	pathological gait patterns.	• Pathological Gaits	Demonstration	
6.	Relaxation and soft Tissue Manipulations	To demonstrate various Relaxation and soft Tissue Manipulation techniques.	**To Cover** • Various relaxation techniques • Various soft tissue manipulations	Student Interactive session Practical Demonstration	**6**
7.	Posture	To analyse the ideal posture and deviations in posture.	**To Cover** • Ideal posture • Posture analysis • Deviations of posture in different planes	Student Interactive session Practical Demonstration	**4**
8.	PNF and Neuromuscular Coordination	To demonstrate numerous Coordination techniques. To demonstrate different PNF patterns.	**To Cover** • PNF techniques • Frenkel's exercise • ADL training	Student Interactive session Practical Demonstration	**6**
9.	Hydrotherapy	To demonstrate various uses hydrotherapeutic techniques.	**To Cover** • Various hydrotherapeutic techniques for strengthening and relaxation	Student Interactive session Practical Demonstration	**4**
10.	Joint Mobilization	To demonstrate the joint mobilization techniques of all joints of the body.	**To Cover** • Joint mobilization • Grades of Joint mobilization	Student Interactive session Practical Demonstration	**6**
11.	Yogasanas	To learn the holistic approach of Yogasana. To enumerate the role of various yogasanas.	**To Cover** • Yogasanas and Pranayama- Physiological and therapeutic principles of yoga Yogasanas for physical culture, relaxation and meditation • Application of Yogasanasin physical	Student Interactive session Practical Demonstration	**4**

			fitness, flexibility, cardiac rehabilitation and neuromotor learning Pranayama and respiratory physiology Kriyas and their physiological significance. Therapeutic application of yoga • Yoga– a holistic approach		
12.	Naturopathy	To learn about other alternative therapies.	**To Cover** • Naturopathy	Student Interactive session Practical Demonstration	**3**

MPT-II
APPLIED EXERCISE THERAPY- PRACTICAL-
Paper Code-3070203

TEACHING HOURS: 64

Periods/Week Credits

Max Marks: 100

p: 2 T: 0 2
Internal: 40
External: 60 Duration of Examination: 2 Hrs

S. No	Contents of the Topic	Learning Objectives (At the end of the course the student shall be able to)	Teaching Guidelines	Methodology	Time
1.	Exercise and Physical Therapeutic techniques	To demonstrate and use various assessment and physical exercise techniques.	To Cover • Various Assessment and treatment techniques used in exercise therapy such as o MMT, o Goniometry, o stretching, o PNF, o Posture, o Gait assessment and training etc	Student Interactive session Practical Demonstration Case Presentation	**64**

References Books

- The principles of exercise therapy / Gardiner, M Dena.
- Therapeutic exercisefoundations and techniques / by
- Practical exercise therapy / by Margaret Hollis &Phyl Fletcher-Cook
- Muscles testing and function/by Florence Peterson Kendall (et..al)) ; Kendall, Florence Peterson
- Therapeutic exercise moving toward functionlby Carrie M. Hall and Lori Thein Brody.; Hall, Carrie M.
- Daniels and worthingham's muscle testing techniques of manual examinationlby Helen J. Hislop and Jacqueline Montgomery; Hislop, Helen

MPT-II

APPLIED BIOMECHANICS & ERGONOMICS
Paper code- 3070204

TEACHING HOURS: 64

Periods/Week Credits

Max Marks: 100

L: 4 T: 0 4
Internal: 40
External: 60 Duration of Examination: 2 Hrs

S. No	Topic	Domain	Hours
1.	Gait	**MUST KNOW**	**15**
2.	Patho-mechanics	**MUST KNOW**	**15**
3.	Ergonomics	**MUST KNOW**	**14**
4.	Biomechanics of Respiration	**MUST KNOW**	**10**
5.	Biomechanics of Nervous System	**MUST KNOW**	**10**

MPT-II

APPLIED BIOMECHANICS & ERGONOMICS
Paper code- 3070204

TEACHING HOURS: 64

Periods/Week Credits

Max Marks: 100

L: 4 T: 0 4
Internal: 40
External: 60 Duration of Examination: 2 Hrs

S. No	Contents of the Topic	Learning Objectives (At the end of the course the student shall be able to)	Teaching Guideline	Methodology	Time
1.	Gait	To illustrate the basic gait pattern. To analyse various pathological gaits and its causes.	**To Cover** • Gait parameter: kinetic, kinematics, time-space • Pathological gait • Running • Stair climbing • Changes in gait following various surgeries/ diseases/disorders	Student Interactive session Practical Demonstration Case Presentation	**15**
2.	Patho-mechanics	To demonstrate the biomechanical changes due to certain pathology in different systems of body.	**To Cover** • Bone and Joint Patho-mechanics • Neural Patho-mechanics • Cardio Patho-mechanics • Pulmonary Patho-mechanics • Vascular Patho-mechanics	Student Interactive session Practical Demonstration Case Presentation	**15**
3.	Ergonomics	To understand the basic ergonomic care.	**To Cover** • Definitions • Physiological and bio-mechanical risk factors	Student Interactive session Practical Demonstration	**14**

		To implement the ergonomics to be taken in different fields of work accordingly.	• Job design • Developing and implementing work site programme • Ergonomics in home : child care and leisure activities • Addressing problems at computer workstation	Case Presentation	
4.	Biomechanics of Respiration	To understand biomechanical correlation of muscles and organs while respiration	**To Cover** • Biomechanics of respiratory system	Student Interactive session Practical Demonstration Case Presentation	**10**
5.	Biomechanics of Nervous System	To understand the biomechanical correlation of muscles and neural system.	**To Cover** • Biomechanics of neuromuscular system	Student Interactive session Practical Demonstration Case Presentation	**10**

Reference books

- Introduction to kinesiology/Hoffman, Shirf
- Kinesiology: the Mechanics &Pathomechanics of human
- Movementlby Carol A. Oatis. / Oatis, Carol A.
- Joint Structure and Function Cynthia Norkins
- Joint Structure and Function: a comprehensive analysis/Levangie, Pamela K
- Fundamentals of Biomechanics, Orkaya, N
- Ergonomics for Therapists: Karen Jacobs Carl M, Bl;tlencour!

MPT-II

BIOSTATISTICS
PAPER CODE-3070205

TEACHING HOURS: 64

Periods/Week Credits

Max Marks: 100

L: 4 T: 0 4

Internal: 40

External: 60 Duration of Examination: 2 Hrs

S. No	Topic	Domain	Hours
1.	Biostatistics Introduction	**MUST KNOW**	**10**
2.	Measures of central tendency	**MUST KNOW**	**12**
3.	Measures of variability	**MUST KNOW**	**12**
4.	Sample distribution & error	**MUST KNOW**	**8**
5.	Correlation	**MUST KNOW**	**10**
6.	Statistical significance	**MUST KNOW**	**12**

MPT-II

BIOSTATISTICS
PAPER CODE- 3070205

TEACHING HOURS: 64

Periods/Week Credits

Max Marks: 100

L: 4 T: 0 4

Internal: 40

External: 60 Duration of Examination: 2 Hrs

S. No	Contents of the Topic	Learning Objectives (At the end of the course the student shall be able to)	Teaching Guideline	Methodology	Time
1.	Biostatistics Introduction	The understand the basics concepts and techniques of descriptive and inferential statistics in health care	**To Cover** • Frequency distribution • Tabulation & graphical presentation of data	Student Interactive session	**10**
2.	Measures of central tendency	To demonstrate the different types of calculations for central tendency values.	**To Cover** • Mean, • Median, • Mode	Student Interactive session	**12**
3.	Measures of variability	To understand the importance measures of variability	**To Cover** • Range • Percentage • SD	Student Interactive session	**12**
4.	Sample distribution & error	To understand the various sampling methods with its consequences.	**To Cover** • Sample distribution & error	Student Interactive session	**8**
5.	Correlation	To describe the parametric and	**To Cover** • Meaning	Student Interactive session	**10**

		nonparametric test used for correlation research design	• Rank order • Product Moment correlation (Pearson's product moment, Spearman's Regression analysis)		
6.	Statistical significance	To describe the describe the parametric and nonparametric tests used for multiple comparisons	**To Cover** • Parametric tests-'t' tests, Tukeys following One way ANOVA • ANOVA (Oneway, two way – for parametric & nonparametric), ANOVA, Multistage ANOVA • Nonparametric tests-Chi-square test, Mann Witney U test, 'Z' test • Wilcoxon's matched pairs test	Student Interactive session	**12**

Reference books

- Research methods in physical activity: Thomas, J
- Bio-Stastics. Prof. S.C. Gakhar
- Clinical research for health professionals: a user-friendly Guide: Batavia, Mitchell.
- Practical research: a guide for therapists.French, Sally
- Rehabilitation Research: Principles and Applications: Elizabeth Domholdt
- Methods in biostatistics for medical students and research workers. Mahajan, B.K.
- Manual ofbio5tatistics: Baride, JP

MPT-II

CLINICAL EVALUATIVE PRACTICE

PAPERCODE- 3070206

Max Marks: 100

Periods / Week Credits

p: 12 T: 0 C: 4

Students will engage in clinical training in hospital based medical and physiotherapy department settings to enhance their clinical skills and apply contemporary knowledge gained during teaching sessions.

MPT-II
SEMINAR / CASE PRESENTATIONS
PAPER CODE- 3070207

TEACHING HOURS: 64

Periods/Week Credits

Max Marks: 100

p: 4 4

Internal: 40

Duration of Examination: 3 Hrs

These will serve as platform for students to integrate various components of patient management and debate contentious issues on the efficacy of physiotherapy techniques. Students will give presentations on topic given to them.

MPT IIIrd Sememster

MPT IN COMMUNITY REHABILITATION
MPT III
ASSESSMENT & DIAGNOSIS IN COMMUNITY HEALTH REHABILITATION
PAPER CODE: 3150301

TEACHING HOURS:
Periods/Week L-4 Credits 4 hours -64

Max Marks: 100 Duration of Examination: 2 Hrs
External 60
Internal: 40

S. No	TOPIC	LEARNING OBJECTIVES (At the end of the course the student shall be able to)	Teaching Guidelines	Methodology	Time
1.	**Community health in Geriatric population**	An understanding of Geriatric population conditions in the Community.	**To Cover** • Introduction to Geriatric condition, classification of geriatrics. • Most common conditions affecting geriatric population. • Fall in geriatrics. • Assessment of geriatrics. • Nutrition in Geriatric health. • Government schemes for Geriatric health care system. • Most common surgeries occurring in geriatric population.	• Lecture Discussion • Students seminars • OPD/ IPD visits • Old age home visits • SIS	**16**
2.	**Community health in pediatric population**	To learn the various ailments in pediatric populations	**To Cover** • Introduction to Pediatric condition, milestones, classification of pediatrics. • Congenital and Acquired conditions in Children. • Assessment of Pediatrics. • Nutrition in Children health • Provisions from Indian government for Pediatric health welfare.	• Lecture Discussion • Students seminars • OPD/ IPD visits • Special centre visits • SIS	**16**

3.	**Community health in Women.**	To learn the various problems faced by the women of India.	**To Cover** • Introduction to Women Health. • Ailments of women health. • Assessment of Women health. • Nutrition in women health • Provisions from Indian government for women health welfare.	• Lecture Discussion • Students seminars • Case discussion • OPD and IPD visits • SIS	**16**
4.	**Psychosomatic Disorders**	To understand the affect of various cultures on community health	**To Cover** • Depression, schizophrenia, stress, Epilepsy. • Drug abuse & Alcoholism • Affect of society and cultures on community health • Assessment and evaluation of psychosomatic disorders.	• Lecture Discussion • Students seminars • Case discussion • OPD and IPD visits • Community visits. • SIS	**16**

Books Recommended

1. Orthopedic Physical Assessment by David J Magee
2. Physical rehabilitation- Sussan O Sullivan
3. Physiotherapy in Obstetrics and Gynaecology by Polden Margaret
4. Ghai Essential Pediatrics By Vinod K Paul
5. Hutchinson's Clinical Methods
6. Davidson's Essential of Medicine
7. Legal rights of disabled in India- Gautam Banerjee
8. Disabled village children by David Werner

MPT III

PHYSIOTHERAPY MANAGEMENT IN COMMUNITY HEALTH REHABILITATION

PAPER CODE:3150302

TEACHING HOURS:

Periods/Week Credits **4** hours -64

L-4

Max Marks: 100 Duration of Examination: 2 Hrs

External 60

Internal: 40

S. No	TOPIC	LEARNING OBJECTIVES (At the end of the course the student shall be able to)	Teaching Guidelines	Methodology	Time
1.	**Rehabilitation of clinical condition with in a community**	To understand the role of Physiotherapy at Community level.	**To Cover** • Rehabilitation in musculoskeletal conditions, sport sciences and health promotion • Rehabilitation in cardio-pulmonary conditions, and health promotion • Rehabilitation in neurological conditions, movement &psycho-somatic disorders • General fitness strategies-body mass composition, assessment, obesity and weight control.	• Lecture Discussion • Students seminars • SIS • OPD/ IPD Visits • PHC/CHC visits	**16**
2.	**Physiotherapy management in geriatrics health care**	To understand the role of Physiotherapy for geriatric condition with in a community	**To Cover** • Role of Physiotherapy in a Home for the aged- geriatric care/physiotherapy, holistic approach, change in life-style to reduce risk factors for disability. • Assistive Technology used for Stability & mobility to enhance function. • Role of physiotherapist to promote fitness in elderly	• Lecture Discussion • Students seminars • SIS • OPD/ IPD Visits • PHC/CHC visits • Visits to centers	**16**
3.	**Mother child care**	To understand the role of Physiotherapy interventions in a community	**To Cover** • Anatomy of Pelvic floor-Physiological changes occurring in female during	• Lecture Discussion • Students seminars • Case discussion	**16**

		with respect to Mother and Child care.	pregnancy, Physical exercises during pregnancy. - Clinical reasoning for care to be taken while performing exercises during pregnancy. • Prenatal /antenatal programme-Clinical reasoning for specific breathing exercises/relaxation/ postural training/ Pelvic floor stretching & strengthening exercises. • Physiotherapy during labor - Post-natal exercise programme after normal labour / labour with invasive procedures, pain – musculoskeletal pain during pregnancy, pain during delivery and pain relief. • Maintenance of posture during pregnancy-fitness programs and breast feeding.	• OPD and IPD visits • SIS	
4.	**Physiotherapy management of Amputee Patients**	To learn the Physiotherapeutic exercises for various Amputations	**To Cover** • Pre OP & Post OP care of amputee limb • Stump care • Donning & Doffing of Prosthesis • Ambulation	• Lecture Discussion • Students seminars • Case discussion • OPD and IPD visits • SIS	**16**

Books Recommended

1. Physical rehabilitation- Sussan O Sullivan
2. Lower-Limb Prosthetics and Orthotics: Clinical Concepts by Joan Edelstein and Alex Moroz (Dec 15, 2010)
3. Tidy's Physiotherapy
4. Clinical Orthopaedic Evaluation By Brotzman
5. Orthotics: A Comprehensive Clinical Approach by Joan Edelstein MA PT FISPO and Jan Bruckner PhD PT (Jan 1, 2002)
6. Cash Book of Physiotherapy.
7. Orthopedics & Applied Physiotherapy by Jayant Joshi
8. Ergonomic Living : How to Create a User-Friendly Home & Office by Gordon Inkeles and Iris Schencke (Nov 1, 1994)
9. Legal rights of disabled in India- Gautam Banerjee
10. Disabled village children by David Werner
11. Orthotics and Prosthetics in Rehabilitation by Michelle M. Lusardi PhD PT and Caroline C. Nielsen PhD (Jun 30, 2006)
12. Prosthetics and Orthotics: Lower Limb and Spine by Ron Seymour PhD (Feb 14, 2002)

13. Orthotics in Functional Rehabilitation of the Lower Limb by Deborah A. Nawoczenski PhD PT and Marcia E. Epler PhD PT ATC (Jan 15, 1997)

MPT III

COMMUNITY MEDICINE IN PHSIOTHERAPY

PAPER CODE: 3150303

TEACHING HOURS:

Periods/Week Credits 4 hours -64

L-4

Max Marks: 100 Duration of Examination: 2 Hrs

External 60

Internal: 40

S. No	TOPIC	LEARNING OBJECTIVES (At the end of the course the student shall be able to)	Teaching Guidelines	Methodology	Time
1.	**Man & Medicine**	An understanding of various types of Medicines and its role in Human mankind.	**To Cover** • Introduction to Community Medicine • Introduction to primitive medicine, Indian Medicine, Chinese medicine, Alternative medicines. • Changing concepts in public health. • Health for All	• Lecture Discussion • Students seminars • SIS	**4**
2.	**Concepts of Health & Disease**	To learn the basics concepts of health and medical conditions.	**To Cover** • Dimensions & Determinants of Health. • Indicators of health. • Environment related Health Issues. • Primary Heal Care • Preventive Medicines	• Lecture Discussion • Students seminars • SIS	**6**
3.	**Health care System in India**	To learn the functionality of rural and urban health care system in INDIA	**To Cover** • History of medical system of India • Hierarchy of Medical System of India	• Lecture Discussion • Students seminars • SIS	**10**

			• Population Coverage, Functions of CHC, PHC, Subcenters, Sub-district & Districts Hospitals. • Health Administration, Institutional based rehabilitation and community based rehabilitation – its principles and differences, multi-disciplinary approach, role of national institutes, District rehabilitation centre and primary health centre.		
4.	**Medicine & Social Sciences**	To understand the role of medicine at various society level.	**To Cover** • Concepts of Sociology. • Concepts of Psychology • Social Psychology. • Family in Health & Diseases • Cultural Factors in Health & Diseases. • Social Problems • Art of Interviewing • Public health education methods and appropriate media – Public awareness to the various disabilities, communications, message generation and dissipation.	• Lecture Discussion • Students seminars • SIS	**8**
5.	**Nutrition & Health**	To learn the role of Nutritional problems in public health	**To Cover** • Emphasis on nutritional problems of public health • Nutritional requirements • Nutrition Surveillance & social aspects of nutrition • Community nutrition programs	• Lecture Discussion • Students seminars • SIS	**8**
6.	**National Health Programs in India**	To understand about the various health policies of India.	**To Cover** • Role of Government & NGOs in CBR, inter-sectoral programs and co-ordination, Implementation of the Act. • PWD Acts National Health programmes like AYUSH, NHM, NPHCE, AMRIT, National Programme for Control and Treatment of Occupational Diseases, etc.	• Lecture Discussion • Students seminars • SIS	**8**

7.	**International Health**	To understand about the various international health organizations.	**To Cover** • WHO • Other United Nation Agencies & NGOs.	• Lecture Discussion • Students seminars • SIS	**4**
8.	**Physical Medicine**	To understand various types of disability and its evaluation.	**To Cover** • Impairment, Disability & Handicap • Rehabilitation Team. • PMR • Evaluation of Disability • Vocational Rehabilitation • Social Rehabilitation • Holistic Approach of Physiotherapy.	• Lecture Discussion • Students seminars • Case discussion • OPD and IPD visits • SIS	**5**
9.	**Amputation**	To learn about different levels of Amputation	**To Cover** • Introduction to Amputation • Types of Amputation • Levels of Amputation	• Lecture Discussion • Students seminars • Case discussion • OPD and IPD visits • SIS	**4**
10.	**Bio Engineering**	To understand the use of Orthosis and Prosthesis with recent advancements.	**To Cover** • Principles of Orthosis & Prosthesis • Orthosis of Upper Limb, Lower Limb & Spine. • Prosthesis of Upper Limb, Lower Limb. • Myoelectric Orthosis & Prosthesis & Robotics. • Check out of Orthosis & Prosthesis.	• Lecture Discussion • Students seminars • Case discussion • OPD and IPD visits • SIS	**7**

Books Recommended:

1. Parks text book of preventive & social medicine – K. Park ,Bhanot Publication
2. Text Book of Community Medicine with Recent Advances- Suiryakatha, JP
3. Text Book of Community Medicine- Sunderlal & others
4. A Treatise on Health Management- SC Mohapatra, M.Mohapatra & VMohapatra ,JP Brothers Publication Pvt Ltd
5. Nutritive value of Indian foods – C.Gopalan, NIN Publiucation
6. Public health & preventive medicine -Maxcy-rosenau
7. Oxford text book of public health -Oxford medical publication
8. Preventive & community medicine – Clark
9. Human nutrition & Dietetics – Passmore
10. An outline of sociology as applied to medicine- David Armstrong
11. Theory & practice of public health – Hobson
12. Rehabilitation -Evans,
13. Physical medicine & rehabilitation- Okawata
14. Community diagnosis &Health-Actlon- Bennerth,

15. Hand book of Physical medicine & rehabilitation- Husk
16. Action Plan for Community-Based Rehabilitation (CBR) in India: focus on Culture and Participation by Kamaraj.
17. Orthotics and Prosthetics in Rehabilitation by Michelle M. Lusardi PhD PT and Caroline C. Nielsen PhD (Jun 30, 2006)
18. Prosthetics and Orthotics: Lower Limb and Spine by Ron Seymour PhD (Feb 14, 2002)
19. Orthotics in Functional Rehabilitation of the Lower Limb by Deborah A. Nawoczenski PhD PT and Marcia E. Epler PhD PT ATC (Jan 15, 1997)

MPT III

COMMUNITY MEDICINE IN PHSIOTHERAPY (PRACTICAL)

PAPER CODE: 3150303

TEACHING HOURS:
Periods/Week P-8 Credits **4** hours -64

Max Marks: 100 Duration of Examination: 2 Hrs
External 60
Internal: 40

S. No	TOPIC	LEARNING OBJECTIVES (At the end of the course the student shall be able to)	Teaching Guidelines	Methodology	Time
1.	**Orthopedic / Musculoskeletal Examination**	Explain History, Reviews, Tests and Measures	**To cover** • Various musculoskeletal examination, history, reviews test and measurement of Pediatric, Geriatric population. • Various Musculoskeletal examination Prenatal & Postnatal conditions of women.	• Lecture Discussion • Students seminars • OPD/ IPD visits • Explain using charts, models and films	**30**
2.	**Community health in Geriatric population**	Explain History, Reviews, Tests and Measures	**To Cover** • PT Management of various Geriatric conditions like prevention of Fall, MS, PD, Stroke, GBS, Diabetes, HTN, etc.	• Lecture Discussion • Students seminars • OPD/ IPD visits • Special centre visits • SIS	**12**
3.	**Community health in pediatric population**	Explain History, Reviews, Tests and Measures	**To Cover** • PT Management of various Pediatric conditions like CTEV, CDH, CP, MR, Autism.	• Lecture Discussion • Students seminars • OPD/ IPD visits • Special centre visits • SIS	**8**
4.	**Mother child care**	To understand the role of Physiotherapy	**To Cover** • PT Management of various	• Lecture	**8**

		interventions in a community with respect to Mother and Child care.	Women health like Labor, prenatal & post Natal care. • Bladder & Bowell Incontinence.	Discussion • Students seminars • Case discussion • OPD and IPD visits • SIS	
5.	**Physiotherapy management of Amputee Patients**	To learn the Physiotherapeutic exercises for various Amputations	**To Cover** • Stump care • Donning & Doffing of Prosthesis • Ambulation • Management of Phantom Pain	• Lecture Discussion • Students seminars • Case discussion • OPD and IPD visits • SIS	**6**

Books Recommended

1. Physical rehabilitation- Sussan O Sullivan
2. Lower-Limb Prosthetics and Orthotics: Clinical Concepts by Joan Edelstein and Alex Moroz (Dec 15, 2010)
3. Tidy's Physiotherapy
4. Clinical Orthopaedic Evaluation By Brotzman
5. Orthotics: A Comprehensive Clinical Approach by Joan Edelstein MA PT FISPO and Jan Bruckner PhD PT (Jan 1, 2002)
6. Cash Book of Physiotherapy.
7. Orthopedics & Applied Physiotherapy by Jayant Joshi
8. Ergonomic Living : How to Create a User-Friendly Home & Office by Gordon Inkeles and Iris Schencke (Nov 1, 1994)
9. Legal rights of disabled in India- Gautam Banerjee
10. Disabled village children by David Werner
11. Orthotics and Prosthetics in Rehabilitation by Michelle M. Lusardi PhD PT and Caroline C. Nielsen PhD (Jun 30, 2006)
12. Prosthetics and Orthotics: Lower Limb and Spine by Ron Seymour PhD (Feb 14, 2002)
13. Orthotics in Functional Rehabilitation of the Lower Limb by Deborah A. Nawoczenski PhD PT and Marcia E. Epler PhD PT ATC (Jan 15, 1997)

MPT III

CLINICAL EVALUATIVE PRACTICE
PAPERCODE 3150305

Max Marks: 100

Periods / Week Credits
P: 12 T: 0 C: 4

Students will engage in clinical training in hospital based medical and physiotherapy department settings & Community Visits to enhance their clinical skills and apply contemporary knowledge gained during teaching sessions.

SEMINARS / CASE PRESENTATIONS
PAPER CODE-3150306

Periods/Week	Credits	Max Marks: 100
P: 4	2	Internal: 40

These will serve as platform for students to integrate various components of patient management and debate contentious issues on the efficacy of physiotherapy techniques. Students will give presentations on topic provided to them

MPT IVTH SEMESTER

MPT-IV
PROFESSIONAL DEVELOPMENT-I
(COMMON SUBJECT FOR ALL STREAMS)
PAPER CODE- 3150401

TEACHING HOURS: 64

Periods/Week Credits

Max Marks: 100

L: 4 4

Internal: 40

External: 60

Duration of Examination: 2 Hrs

S. No	Topic	Domain	Hours
1.	Concepts of Teaching and learning	**MUST KNOW**	**12**
2.	Curriculum	**MUST KNOW**	**12**
3.	Teaching	**MUST KNOW**	**12**
4.	Measurements and Evaluation	**MUST KNOW**	**10**
5.	Guidance and Counseling	**MUST KNOW**	**10**
6.	Clinical education	**MUST KNOW**	**8**

MPT IV
PROFESSIONAL DEVELOPMENT-I
PAPER CODE-3150401

TEACHING HOURS: 64

Periods/Week Credits

Max Marks: 100

L: 4 4
Internal: 40
External: 60

Duration of Examination: 2Hrs

S. No	TOPIC	LEARNING OBJECTIVES (At the end of the course the student shall be able to)	Teaching Guidelines	Methodology	Time
1.	Concepts of Teaching and learning	To understand the concept of teaching and learning among individuals.	**To Cover** • Meaning and Scope of Educational of Psychology • Meaning and Relationship between Teaching and Learning • Learning Theories • Dynamics of Behavior • Individual Differences	Students seminars Case discussion SIS	**12**
2.	Curriculum	To understand the basics of curriculum and its importance with effective development of curriculum	**To Cover** • Meaning and Concepts • Basis of Curriculum Formulation Development • Framing Objectives for Curriculum • Process of Curriculum Development and Factors Affecting Curriculum Development • Evaluation of Curriculum	Students seminars Case discussion SIS	**12**
3.	Teaching	To understand various teaching methods. To demonstrate the effective ways of lecture.	**To Cover** • Lecture Demonstration, Discussion, Seminar, Assignment Project and Case • **Planning for Teaching** o Bloom's Taxonomy of Instructional Objectives, Writing Instructional	Students seminars Case discussion SIS	**12**

			○ Unit planning and Lesson planning • **Teaching Aides** ○ Types of Teaching Aids ○ Principles of Selection, ○ Preparation &Use of Audio- Visual aids.		
4.	Measurements and Evaluation	To assess the various psychological issues among people through various diagnostic tests.	**To Cover** • Nature of Educational Measurement: Meaning, Process and Types of tests • Construction of an Achievement Test and it Analysis Standardized Test • Introduction of some Standardized tools. Important tests of intelligence. • Aptitude Personality. • Continuous and Comprehensive Evaluation	Students seminars Case discussion SIS	**10**
5.	Guidance and Counseling	To understand the concept of guidance and counseling.	**To Cover** • Meaning and Concepts of Guidance and Counseling • Principles • Guidance and Counseling Services for Students and Faculty members • Faculty Development and Development of Personnel for physiotherapy Services	Students seminars Case discussion SIS	**10**
6.	Clinical education	To illustrate the various methods to educate people among different society.	**To Cover** • Awareness and guidance to the common people about health diseases and available professional services • Patient education • Education of the practitioners	Students seminars Case discussion SIS	**8**

Reference books

- Educational Technology. Dr. S.C Gakhar
- Fox pro 2.5 made simple for DOS & Windows, Taxali. RK
- Computers and commonsense. Hunt. R & Shelly. J
- Health studies: an introduction. Naidoo.

MPT-IV
PROFESSIONAL DEVELOPMENT-II
(COMMON SUBJECT FOR ALL STREAMS)
PAPER CODE-3150402

TEACHING HOURS: 64

TEACHING HOURS:
Periods/Week L-4 Credits **4**
Max Marks: 100
External 60
Internal: 40 Duration of Examination: 2 Hrs

S. No	Topic	Domain	Hours
1	Functions of Management	**MUST KNOW**	**12**
2	Marketing	**MUST KNOW**	**10**
3	Hospital as an Organization	**MUST KNOW**	**12**
4	Physiotherapy	**MUST KNOW**	**10**
5	Professional associations and its Functions	**MUST KNOW**	**10**
6	Computer Applications	**MUST KNOW**	**10**

PROFESSIONAL DEVELOPMENT-II
PAPER CODE-3150402

TEACHING HOURS: 64

Periods/Week L-4 Credits **4**
Max Marks: 100
External 60
Internal: 40 Duration of Examination: 2 Hrs

S. No	TOPIC	LEARNING OBJECTIVES (At the end of the course the student shall be able to)	Teaching Guidelines	Methodology	Time
1	Functions of Management	To understand the basic principle of Management and its importance.	**To cover** • Planning, • Organization, • Direction • Controlling and • Decision- making. • **Personal management:** o Staffing, o Recruitment selection o Performance appraisal, o Collective bargaining o Discipline o Job satisfaction. • **Quantitative methods of management:** o Relevance of statistical and/ or techniques in management.	Students seminars Case discussion SIS	**12**
2	Marketing	To understand the various ways of marketing and its importance.	**To Cover** • Marketing segmentation, • Marketing research • Production • Planning • Pricing • Channels of distribution, • Promotion • Consumer behavior and licenser. • **Total Quality Management**: o Basis of quality management,	Students seminars Case discussion SIS	**10**

			○ Quality assurance program in hospitals, ○ Medical audit ○ International quality system.		
3	Hospital as an Organization	To understand the importance of hospital and how I works in different departments.	**To cover** • Functions and types of hospitals selected • Clinical supportive and ancillary staff of the hospital • Emergency department. • Nursing. • Physical medicine and rehabilitation, • Clinical laboratory, • Pharmacy and dietary department. • **Roles of** physiotherapy director, physiotherapy supervisor, physiotherapy assistant, physiotherapy, occupational therapist, • Home health aide and volunteer. • Direct acre and referral relationships and confidentiality	Students seminars Case discussion SIS	**12**
4	Physiotherapy	To understand the role of Physiotherapy and its benefits to the society. To learn about the code of ethics to practice as Physiotherapist morally and socially.	**To cover** • Definition and development • Implications and conformation to the rules of professional conduct • Legal responsibility for their actions in the professional context understanding the physiotherapist's liability and obligations in the case of medico-legal action • Code of ethics: wider knowledge of ethics relating to current social and medical policy in the provision of health care. • Standards of practice for	Students seminars Case discussion SIS	**10**

			physiotherapy • Current issues		
5	Professional associations and its Functions	To learn about various government or on governmental organizations for betterment or welfare of society.	**To Cover** • Function of relevant professional associations education body and trade union ○ Role of the International Health agencies such as the World Health Organization	Students seminars Case discussion SIS	**10**
	Computer Applications	To understand the basics of Computer. To implement the knowledge of computers for professional use.	**To Cover** • Basics of Computer-Hardware and Software • Basic Computer • Applications-Windows, MS Word, Excel, power Point. etc.	Students seminars Case discussion SIS	**10**

Reference books

- Educational Technology. Dr. S.C Gakhar
- Fox pro 2.5 made simple for DOS & Windows, Taxali. RK
- Computers and commonsense. Hunt. R & Shelly. J
- Health studies: an introduction. Naidoo.

MPT-IV
DISSERTATION PROJECT WORK
PAPER CODE-3150403

TEACHING HOURS: 128

Periods/Week p-16 Credits **8**
Max Marks: 100
External 60
Internal: 40 Duration of Examination: 2 Hrs

As part of their requirement for the Master Degree the student is required to undertake a research study under the guidance of Guide and Co-guide. Research study must be selected only from the chosen specialization i.e. Musculoskeletal Conditions or Sports Injuries or Neurological Conditions or Cardiopulmonary Conditions and to be studied on patients or normal individuals. Students have to undergo a dissertation viva-voce by examining committee

MPT-IV

CLINICAL EVALUATIVE PRACTICE

PAPER CODE-3150404

Max Marks: 100

Periods / Week Credits

p: 12 T: 0 C: 4

Students will engage in clinical training in hospital based medical and physiotherapy department settings to enhance their clinical skills and apply contemporary knowledge gained during teaching sessions.

MPT-IV

SEMINARS / CASE PRESENTATIONS

PAPER CODE-

TEACHING HOURS: 64

Periods/Week Credits

Max Marks: 100

P- 4 2

Internal: 40

Duration of Examination: 2 Hrs

These will serve as platform for students to integrate various components of patient management and debate contentious issues on the efficacy of physiotherapy techniques. Students will give presentations on topic provided to them