

Syllabus for MD (Physical Medicine & Rehabilitation) Programme



Guru Gobind Singh Indraprastha University

A State University established by the Govt. of NCT of Delhi

University School of Medicine and Allied Health Sciences


GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, DELHI
(FACULTY of MEDICAL SCIENCES)

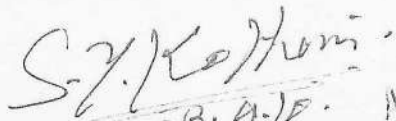
COMPETENCY BASED POSTGRADUATE TRAINING
PROGRAMME FOR
MD IN PHYSICAL MEDICINE AND REHABILITATION

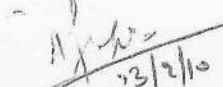
Preamble:


The goal of this program is to standardize Physical Medicine and Rehabilitation (PM&R) teaching at the Post Graduate level throughout the country so that it will benefit in achieving uniformity in postgraduate as well as undergraduate medical teaching.

Physical Medicine and Rehabilitation, also called Physiatry, (pronounced fizz ee at tree), or Physical and Rehabilitation Medicine, is an important branch of medical sciences emphasizing the prevention, diagnosis and treatment of disorders, particularly those of the neuro-musculo-skeletal, cardiovascular, and pulmonary systems, that may produce temporary or permanent activity limitation, disability, or participation restriction. Physical Medicine and Rehabilitation is an independent clinical discipline. It has a vast scope as it provides integrated comprehensive care in the diagnosis, treatment and rehabilitation management of neurological, musculo-skeletal, cardio-pulmonary disabilities from acquired or congenital conditions presenting at any stage in life from pediatric to geriatric phases. This specialty focuses on the restoration of function of people to the highest possible level, through a multi-disciplinary team approach, making use of diagnostic and therapeutic armamentarium including education and counseling, prescription of medicines, therapeutic exercises, equipments (mobility aids, orthotic-prosthetic appliances, assistive technology, physical agents and modalities, etc.), injections, surgical interventions for correction of deformities etc. in an institution-based (out-door and in-door/wards/ICUs/Nursing Homes/Old-Age Homes etc.), out-reach (Camps, Mobile Units), or community-based settings (CBR), based on the evaluation of the individual under consideration. It is also involved in disability prevention, evaluation and certification, besides development, monitoring and supervision of a rehabilitation plan and conducting research and development.


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Dean 1

Program Objectives:

The overall objective is to impart a thorough and comprehensive training to a medical graduate so that at the end of this training he/she becomes a knowledgeable, skilled, and competent Physical Medicine and Rehabilitation specialist, capable of discharging his/her duties as expected under different settings, in an ethical manner.

He/she should be able to suspect, investigate, diagnose, confirm, evaluate, prognosticate, certify, treat, and rehabilitate if and when a person is suffering from a temporary or permanent limitation in function, disability, or restriction in participation as well as plan, prescribe, monitor, supervise and lead the execution of rehabilitation plan through an integrated, multi-disciplinary team involving various medical, nursing, paramedical or allied health professionals such as therapists (occupational therapists, physiotherapists etc.), counselors, technicians etc. He/she should be able to interpret reports and plan research, teach medical and paramedical personnel, educate the person with disability, family, rehab team members and community, and be well versed with recent advances, administrative, financial, ethical and legal aspects related to the specialty.

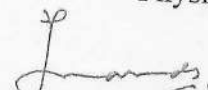
Selection: The candidate should have passed MBBS degree examination of recognized University and should have completed one year compulsory rotatory Internship in a hospital recognized by the MCI. He/she should have full registration with the State Medical Council/Medical Council of India.


Duration: Three years full time program in a Department of Physical Medicine and Rehabilitation.

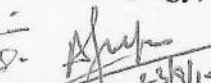
SPECIFIC LEARNING OBJECTIVES


Upon completion of the training and successfully qualifying in the MD (Physical Medicine and Rehabilitation) examinations he/she should be able to demonstrate:

1. **Theoretical knowledge:** He/she should be able to demonstrate possession of basic knowledge of (1) the basic medical sciences such as Anatomy, Physiology, Biochemistry, Pathology, Microbiology, Pharmacology, and


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Molecular Biology etc. as related to Physical Medicine and Rehabilitation;
(2) factors which may disturb structure or function and result in disability;
(3) bed-side procedures (diagnostic and therapeutic).

2. **Teaching-Training:** He/she should be able to plan educational programs in Rehabilitation Medicine in association with his senior colleagues/Faculty and be familiar with the modern methods of teaching and evaluation; teach and/or deliver lectures to medical students, residents, other health professionals and persons with disabilities and their family members etc. and hold clinical demonstrations for them; write and discuss a seminar or a symposium and critically discuss it; methodically summarize published articles according to prescribed instructions and critically evaluate and discuss each selected article etc.

CURRICULUM

SUBJECT SPECIFIC THEORETICAL COMPETENCIES

Course Contents


The course contents for MD (Physical Medicine and Rehabilitation) is divided into four broad sections, covering four Theory Papers. However, certain degree of overlapping may occur among different sections. The content would include the following:-

Section A:


Basic Anatomy and Physiology of the Musculoskeletal (including Biomechanics), Urogenital, Cardio-pulmonary and Nervous Systems, etc.

- 1) Basics of Biochemical aspects of Calcium and Vit. D metabolism, osteoporosis, diabetes mellitus etc.
- 2) Basic Pathological processes causing diseases and disabilities, healing etc.
- 3) Basic principles of Pharmacology as applied to the conditions encountered in Physical Medicine and Rehabilitation.
- 4) Basic principles of diagnostic modalities as applied to Physical Medicine and Rehabilitation.
- 5) Philosophy, history, scope and need of Physical Medicine and Rehabilitation.


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Dean
3

- 6) Basic concepts in Physical Medicine and Rehabilitation - definitions, rehabilitation team, team members, scope, role and responsibilities of different members etc.
- 7) Principles of evaluation and rehabilitation management of social problems
- 8) Principles of evaluation and rehabilitation management of vocational problems
- 9) Organization and Administration of Physical Medicine & Rehabilitation Services.
- 10) Disability process. Impairment, disability, International Classifications
- 11) Disability Prevention- levels and examples
- 12) Epidemiology of Disability, magnitude, causes, changing trends etc.
- 13) Gait Analysis – Terminology, types, Clinical Applications
- 14) Electrodiagnostic Medicine - basic principles, clinical methods, interpretation etc.
- 15) Outcome Measures in Physical Medicine and Rehabilitation
- 16) Impairment Rating and Disability Evaluation

Section B:

- 17) Therapeutic Exercises - principles, types, indications, contraindications
- 18) Physical Agents/Modalities - principles, types, indications, contra-indications, precautions.
- 19) Manipulation, Traction, Massage - principles, types, indications, contra-indications, precautions.
- 20) Electrical Stimulation - principles, types, indications, contra-indications, precautions.
- 21) Principles and scope of Occupational Therapy
- 22) Rationale of A.D.L. (Activities of Daily Living) in various conditions
- 23) Integrative Medicine and Physical Medicine and Rehabilitation
- 24) Assistive Technology related to Physical Medicine and Rehabilitation
- 25) Upper limb orthotic devices – principles, types, materials and indications
- 26) Lower limb orthotic devices – principles, types, materials and indications
- 27) Spinal orthoses – principles, types, materials and indications

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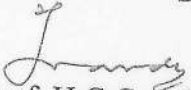
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- 28) Upper limb prosthetics and amputee rehabilitation
- 29) Lower limb prosthetics and amputee rehabilitation
- 30) Mobility aids, wheelchairs and seating systems
- 31) Low back pain and Physical Medicine and Rehabilitation
- 32) Musculoskeletal trauma and Physical Medicine and Rehabilitation
- 33) Holistic Rehabilitation of persons suffering from:
 - Arthritis, including Rheumatoid Arthritis, Osteoarthritis, Ankylosing Spondylitis, etc.
 - Spinal deformity
 - Neck Pain, Shoulder Pain etc.
 - Osteoporosis
 - Sports Injury
 - Burns Injury
 - Spinal Cord Injury (traumatic and non-traumatic)
- 34) Rehabilitation of persons:
 - with obesity, dyslipidemia, etc.
 - after Arthroplasty
 - after POP cast, Fracture treatment, Surgical intervention
- 35) Principles of Sports Medicine
- 36) Basic principles of rehabilitative surgeries such as deformity correction in poliomyelitis, cerebral palsy, clubfoot, contractures, revision of amputation stump, closure of pressure sore, tendon transfers etc.

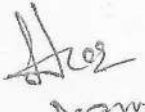
Section C:

- 37) Holistic Rehabilitation of persons suffering from:
 - Plexus or Nerve Injury
 - Traumatic Brain Injury
 - Stroke
 - Parkinsonism, Multiple sclerosis, Ataxia, neurodegenerative disorders etc.
 - Neuropathy, Bell's Palsy etc.
 - Hansen's Disease
 - Diseases of Muscles e.g. myopathy, motor-neuron disease, myasthenia gravis, etc.
 - Cerebral Palsy
 - Spasticity


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Dean
5

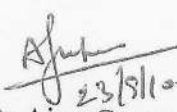
- Poliomyelitis and its sequelae
 - Cardiovascular Disease e.g. CAD, MI, CABG Surgery, Angioplasty, Cardiac transplantation, etc.
 - Pulmonary Disease e.g. COPD, Bronchiectasis, Cystic fibrosis, etc.
 - Cancer
 - Swallowing disorder
 - Bladder dysfunction
 - Bowel dysfunction
 - Vertigo
 - HIV/AIDS
 - Chronic Pain
 - Neural tube defects like meningomyelocele and hydrocephalus, etc.
- 38) Rehabilitation of persons:
- after Organ Transplantation
 - in ICU setting
- 39) Pediatric Rehabilitation including children with Autism Spectrum Disorders, learning disabilities, multiple disabilities, etc.
- 40) Geriatric Rehabilitation
- 41) Principles of evaluation and rehabilitation management of persons with:
- Visual impairment
 - Mental retardation
 - Hearing /Speech impairment
 - Psychological problems or mental illness
- 42) Medical Emergencies in Physical Medicine and Rehabilitation
- 43) Sexuality and Disability

Section D:


- 44) Evidence-based Medicine and Physical Medicine and Rehabilitation
- 45) Legislation in relations to disability- National and International
- 46) Schemes and Benefits extended to persons with disabilities by the Govt.
- 47) Barrier-free Environment and access related issues
- 48) Computers in Physical Medicine and Rehabilitation
- 49) Recent Advances related to Physical Medicine and Rehabilitation


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6

SUBJECT SPECIFIC PRACTICAL COMPETENCIES

- 1. Clinical/Practical skills:** Understand and develop competence in executing common general procedures employed in diagnosis, investigations and management of conditions encountered in rehabilitation medicine. He/she should be able to practice and handle independently most of the day to day problems as encountered in Rehabilitation Medicine in a safe, effective and ethical manner. He/she should be able to plan a comprehensive rehabilitation service independently. He/she should be able to demonstrate understanding of the fabrication and competence in prescription and check out of orthoses and Prostheses, the principles, prescription and supervision of physiotherapy, occupational therapy, psycho-socio-vocational counseling. He should be able to practice rehabilitation medicine at the door step of community. He should be familiar with the common problems occurring in the urban, semi-urban, and rural areas and deal with them effectively, should be able to organize, conduct, and supervise surveys in rural, urban and industrial communities and in specified groups of population; organize and conduct camps for disability prevention and rehabilitation of disabled persons, and guide rehabilitation workers at the peripheral level for rehabilitation of persons with disabilities.
- 2. Research:** He/she should be able to recognize a research topic, state the objectives in terms of what is expected to be achieved in the end, plan a rational approach with full awareness of the statistical validity, spell out the methodology and carry out most of the technical procedures required for the study, accurately and objectively record on systematic lines the results and observations made, analyze the data using appropriate statistical approach, interpret the observations in the light of existing knowledge and highlight in what ways the study has advanced existing knowledge on the subject and what remains to be done, draw conclusions which should be reached by logical deduction and he should be able to assess evidence both as to its reliability and its relevance, write a thesis in accordance with the prescribed instructions, and be familiar with the ethical aspects of research etc.


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7


Section A:


1. Evaluation Process:
 - History taking in Physical Medicine and Rehabilitation
 - Clinical evaluation, Manual Muscle Strength Testing, Joint Range of Motion, Goniometry, Activities of Daily Living
 - Investigations – Laboratory and Radiological imaging studies
 - Evaluation of neurogenic bladder and bowel dysfunction
2. Gait Analysis – Terminology, types, Clinical Applications
3. Electrodiagnostic Medicine - basic principles, clinical methods, interpretation etc.
4. Outcome Measures in Physical Medicine and Rehabilitation
5. Impairment Rating and Disability Evaluation

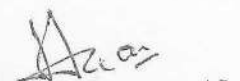
Section B:

6. Therapeutic Exercises- settings, equipments, applications
7. Physical Agents/Modalities - precautions, prescription, application, follow-up etc.
8. Traction, Massage - principles, types, indications, contra-indications, precautions, prescription, application, follow-up etc.
9. Electrical Stimulation - precautions, prescription, application, follow-up etc.
10. Prescription of Occupational Therapy
11. Training of A.D.L. (Activities of Daily Living) in various conditions
12. Injection Techniques (e.g. intra-articular, peri-articular, trigger-point, epidural etc.) in Physical Medicine and Rehabilitation
13. Interventions in Physical Medicine and Rehabilitation e.g. Botulinum toxin injection, Phenol block, Alcohol blocks etc.
14. Upper limb orthotic devices - applications
15. Lower limb orthotic devices - applications
16. Spinal orthoses - applications
17. Upper limb prosthetics and amputee rehabilitation
18. Lower limb prosthetics and amputee rehabilitation


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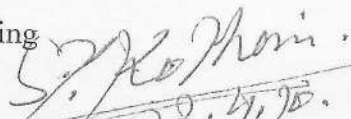

8 Dean

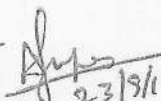
19. Mobility aids, wheelchairs and seating systems
20. Low back pain and Physical Medicine and Rehabilitation
21. Musculoskeletal trauma and Physical Medicine and Rehabilitation
22. Rehabilitation of persons suffering from:
 - Arthritis including Rheumatoid Arthritis, Osteoarthritis, Ankylosing Spondylitis etc.
 - Spinal deformity
 - Neck Pain, Shoulder Pain etc.
 - Osteoporosis
 - Sports Injury
 - burns Injury
 - Spinal Cord Injury
23. Rehabilitation of persons:
 - with obesity, dyslipidemia etc.
 - after Arthroplasty
 - after POP cast, Fracture treatment, Surgical intervention
24. Basic principles of rehabilitative surgeries such as deformity correction in poliomyelitis, cerebral palsy, clubfoot, contractures, revision of amputation stump, closure of pressure sore, tendon transfers etc.

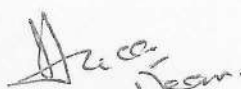
Section C:

25. Rehabilitation of persons suffering from:
 - Plexus or Nerve Injury
 - Traumatic Brain Injury
 - Stroke
 - Parkinsonism, Multiple sclerosis, Ataxia, neurodegenerative disorders etc.
 - Neuropathy, Bell's palsy, etc.
 - Hansen's Disease
 - Diseases of Muscles e.g. myopathy, motor-neuron disease, myasthenia gravis, etc.
 - Cerebral Palsy
 - Spasticity
 - Poliomyelitis and its sequelae
 - Cardiovascular Disease e.g. CAD, MI, CABG Surgery, Angioplasty, Cardiac transplantation etc.
 - Pulmonary Disease e.g. COPD, Bronchiectasis, Cystic fibrosis etc.
 - Cancer
 - ICU setting


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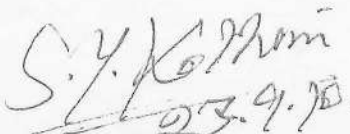

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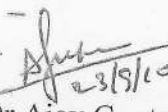
- Swallowing disorder
 - Bladder dysfunction
 - Bowel dysfunction
 - Vertigo
 - HIV/AIDS
 - Chronic Pain
 - Organ Transplantation
26. Pediatric Rehabilitation including children with Autism Spectrum Disorders, learning disabilities, multiple disabilities, etc.
27. Geriatric Rehabilitation
28. Principles of evaluation and rehabilitation management of persons with:
- Visual impairment
 - Mental retardation
 - Hearing /Speech impairment
 - Psychological problems or mental illness
29. Medical Emergencies in Physical Medicine and Rehabilitation
30. Sexuality and Disability


Section D:

31. Evidence-based Medicine and Physical Medicine and Rehabilitation
32. Legislation in relations to disability- National and International
33. Schemes and Benefits extended to persons with disabilities by the Govt.
34. Barrier-free Environment and access related issues
35. Computers in Physical Medicine and Rehabilitation
36. Recent Advances related to Physical Medicine and Rehabilitation


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10 Dean

TEACHING AND LEARNING METHODS

Post-Graduate Training:

A. Theoretical training:

The students pursuing post-graduation in Physical Medicine and Rehabilitation would be expected to engage in self-study. However, theoretical knowledge would be also imparted to the candidates through discussions during symposia and seminars, etc.


Symposia/Seminars: The post-graduate student would be required to present topics to the combined group of teachers and students. A free discussion would be encouraged in these activities. The topics of the symposia/seminars would be given to the residents with the dates for presentation.

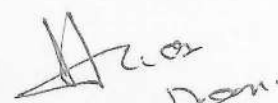
The topics for Seminars could include any of the following, such as Gait Analysis, Spasticity, Pressure Sores, Spinal Orthoses, Hand Splints, Assistive Technology, Psycho-Social-Vocational Aspects, Cardiac Rehabilitation, Pulmonary Rehabilitation, Neuro-developmental Techniques, Post-Polio Syndrome, Cognitive Rehabilitation, Prosthetic Feet, PTB Prosthetic, Prosthetic Terminal Devices, CAD-CAM, FES, Spinal Deformities, Rehabilitation after Arthroplasty, Epidemiology of Disability, Barrier-free Environment, Ethical Aspects, Legislation related to Disability and Rehabilitation, Community-Based Rehabilitation, Leprosy Rehabilitation, Sexuality and Disability, Rehabilitation related to HIV/AIDS, Stem Cell Therapy in Rehabilitation, Geriatric Rehabilitation, Sports Injuries Rehabilitation, Rehabilitation after Organ Transplantation, Pain Management, Analgesics, NSAIDs, DMARDs, Disability Evaluation, Interventions in Physical Medicine and Rehabilitation etc.

Journal Club: This should be a regular/weekly activity. The candidate would be assigned /allowed to chose an article from amongst the recent publications from the list of recommended journals, present, summarize, and discuss the published article critically. The contributions made by the article in furtherance of the scientific knowledge as well as limitations (if any) should be highlighted.


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11

B. Practical and Clinical Training:

Clinical: The student would be attached to a Faculty member to be able to pick up methods of history taking and examination in rehabilitation practice. During this period the student would also be oriented to the common problems that present in the OPD or Wards/ICUs or are encountered in the community. The student would be supervised by Senior Residents and Faculty members.

Bedside: The student would work up cases; learn management of cases by discussion with the senior residents and faculty of the department. He/she would be trained in management of in-patients including performing certain procedures such as debridement, Plaster cast application, traction, catheterization, intubation etc.

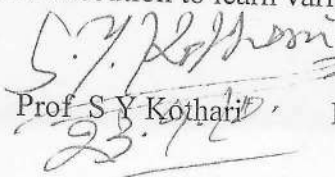
Rehabilitative Surgery: The student would be provided with an opportunity, as far as possible, to observe, learn, assist and once proficient, perform rehabilitative surgical operations such as for correction of deformities in polio, cerebral palsy, amputation, clubfoot, pressure sore etc. including post-operative care with the assistance of the Senior Residents and/or under the direct supervision of a Faculty member.

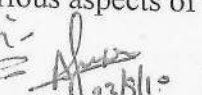
The student would also be oriented to the various sections/units in a comprehensive rehabilitation set up (such as occupational therapy, orthotics-prosthetics, physiotherapy, social works, clinical psychology, vocational guidance/counseling, educational institution and Non-Governmental Organization in the disability sector etc.) and be well informed about and demonstrated the various equipments / materials / methods used there, and the scope, role and responsibilities of different members of a rehabilitation team.

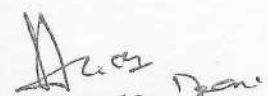
C. Training in Research Methodology

The student would carry out the research project and write a thesis. Thesis topic would be finalized by the student in consultation with the Guide and Co-Guides, as per the norms duly approved by the Ethics Committee of the Institution. He would also be given exposure to partake in the research projects going on to learn their planning, methodology and execution to learn various aspects of research.


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12

ASSESSMENT

FORMATIVE ASSESSMENT i.e., Assessment during the residency program

Formative assessment would include:

- Case presentation,
- Case work up,
- Case handling/management day to day basis by faculty members during each posting besides assessment of log book.

In addition to bedside teaching rounds, formal teaching is necessary.

Journal club	Once a week
Seminar/ lecture	Once a week
Case discussions	Once a week
Disabilities evaluation & prosthetic and orthotic check out clinic	Once a week

Attend accredited scientific meetings (CME, symposia, and conferences)

END ASSESSMENT, NAMELY ASSESSMENT AT THE END OF TRAINING

Post-Graduate Examinations:


Thesis:


Submission- Duly typed, checked and approved by the Guides, to be submitted 6 months before the final MD Examination.

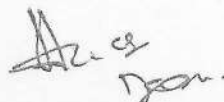
Evaluation- To be done by two external examiners. The external examiner need not be the same as the external examiner appointed for Practical Examination.

Approval of the Thesis by external examiners is mandatory before the Degree is awarded after theory and practical Examinations.


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A. Theory:

The broad curriculum will be covered in Papers I, II, III, and IV. However, some overlap may occur. (100 Marks Each Paper)

Paper I: Basic Sciences and Basic Concepts as applied to Physical Medicine and Rehabilitation

Paper II: Principles and Practice of Physical Medicine; and Rehabilitation Management of Musculoskeletal Conditions

Paper III: Principles and Practice of Rehabilitation Management of Neurological, Cardio-pulmonary and other Conditions

Paper IV: Legislation, Recent Advances as applied to Physical Medicine and Rehabilitation, etc.

B. Practicals:

A total of four examiners (two external examiners and two internal examiners) from the specialty of Physical Medicine and Rehabilitation and involved in teaching-training at Post-Graduate level in the respective discipline.

Long Case – One

Short Cases – Three

Viva-Voce involving

X-Ray/CT Scan/MRI /Bone Scan Films

Rehabilitation Surgery Instruments

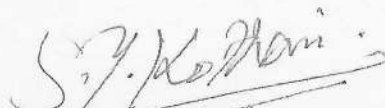
Pathology Specimens

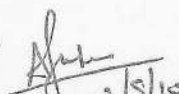
Physical Medicine Instruments/Equipments/Modalities

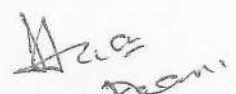
Orthotic-Prosthetic Appliances

Any other examination


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14

OSCE Based Examination Scheme for MD (PMR) Examinations

1. Theory Examination (400 Marks)

Pattern of the types of questions and their weightage suggested is as follows:

Types of question	No. of questions	Maximum Marks	Total
Pattern I			
Long Question	Two	30	60
Short Notes	Four	10 x 4	40
Pattern II			
Short Notes	Ten	10 x 10	100
Pattern III			
Long Question	One	30	30
Short Notes	Seven	10 x 7	70

2. Practical and Clinical Examination. (400 Marks)

The emphasis would be laid on the Objective Structured Clinical Examination (OSCE). All the four examiners conducting practical, clinical and viva voce shall have "equal assessment marks" at their disposal for evaluation of the examinees.

Clinical Examination shall consist of the following: -

- Long Case - 1
- Short Cases - 3


System of marking/evaluation and weightage given to each area shall be as follows: -

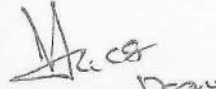
Long Case, One Case, Maximum Marks: 100.

Item	Maximum Marks
i) Written Work (including history, examination, summary & provisional diagnosis)	10
ii) Presentation Style	10
iii) Demonstration Elicitation of signs or maneuvers (two)	20
iv) Discussion Differential Diagnosis	20
Investigations	10
Management	20
v) Attitudes	10


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15 Dean


Short Cases, Three Cases, 60 marks each case.


	Item	Maximum Marks
i)	Written Work	10
	(including General Physical Examination, Systemic/Regional Examination & diagnosis)	
ii)	Diagnosis (including Differential Diagnosis)	5
iii)	Demonstration	
	Elicitation of signs (two signs)	15
iv)	Discussion	25
	(Differential Diagnosis & Management)	
v)	Attitudes	5


Viva voce, comprising of 120 Marks, shall be in the following areas:

	Item	Maximum Marks
i.	Pathology specimens	10
ii.	X-rays, US Scan, CT Scan, MRI etc.	20
iii.	Surgical Instruments	20
iv.	Prosthetic and Orthotic devices	25
v.	Physical Medicine Instruments/Equipments	25
vi	Any other examination	20

The Qualifying marks for Theory will be 50%. The qualifying marks for the Clinical Practical and Viva Voce combined would be 50%.


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Dr Anil Kumar


Recommended Reading: The list is indicative only, and not exhaustive.

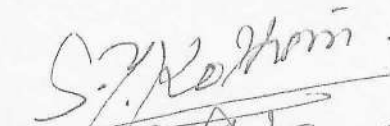
Books:


1. Braddom RL *Physical Medicine & Rehabilitation*, Saunders (latest edition)
2. DeLisa JA. *Rehabilitation Medicine: Principles and Practice*. Lippincott (latest edition)
3. Rusk HA. *Rehabilitation Medicine*. CV Mosby (latest edition)
4. Helander E, Mendis P, Nelson G, Goerdts A, *Training in the Community for People with Disabilities* WHO, Geneva, 1989.
5. Helander E. *Prejudice and Dignity- An Introduction to Community-Based Rehabilitation*. UNDP, 1999.
6. Solomon L. *Apley's System of Orthopaedics and Fractures*. Arnold London (latest edition)
7. Fauci, Braunwald, Kasper, Hauser et al. *Harrison's Principles of Internal Medicine* McGraw-Hill Company (latest edition)
8. Vernon W Lin. *Spinal Cord Medicine- Principles and Practice*. Demos

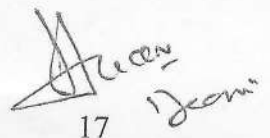
Journals:

1. Archives of Physical Medicine & Rehabilitation
2. American Journal of Physical Medicine & Rehabilitation
3. Journal of Rehabilitation Research and Development
4. Scandinavian Journal of Rehabilitation Medicine
5. Physical Medicine & Rehabilitation Clinics of North America
6. Orthopaedics Clinics of North America
7. Stroke
8. Spinal Cord
9. Arthritis and Rheumatism
10. Journal of Prosthetics Orthotics International
11. Physical Therapy
12. Physiotherapy
13. American Journal of Occupational Therapy
14. Neurology India
15. Indian Pediatrics
16. Indian Journal of Orthopaedics (IJO)
17. Indian Journal of Physical Medicine & Rehabilitation (IJPMR)
18. National Medical Journal of India (NMJI)


Prof H C Goyal


Prof S Y Kothari


Dr Ajay Gupta
22/5/10


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