

**Master of Physiotherapy Examination**  
**Basic Science in**  
**Physiotherapy in Musculo-Skeletal Disorders**

**Date : 01-04-2019, Monday]**  
**Time : 3 Hours]**

**[Max. Marks : 100**

- Instructions :** (1) Figure to the right indicate marks.  
(2) Write legibly.  
(3) Draw diagrams wherever necessary.

1. Enlist electro diagnostic tests, indications, advantages, disadvantages of electro diagnosis and describe neurotization time and galvanic titanic ratio. **20**
  2. Describe articular neurology and its applications to musculoskeletal physiotherapy. **20**
  3. Enlist nutritional deficiencies, effects and management. **20**
  4. Enlist the levels of evidences and describe randomized control trial research design. **20**
  5. Describe the anthropometric measurements in detail. **20**
-

**Master of Physiotherapy Examination**  
**Basic Science in**  
**Physiotherapy in Cardio-Pulmonary Disorders**

[Max. Marks : 100

Date : 01-04-2019, Monday]

Time : 3 Hours]

- Instructions :** (1) Figure to the right indicate marks.  
(2) Write legibly.  
(3) Draw diagrams wherever necessary.

- Q.1 Explain in detail about how connective tissue responded to various type of mechanical loading. (20)
- Q.2 Justify Sodium and potassium pump plays crucial role in propagation in nerve impulse and write a brief note on role of calcium ion in muscle contraction. (20)
- Q.3 Explain in detail about biomechanical principle lies behind spinal, knee and foot orthosis. (20)
- Q4. Computer plays an important role in research. Justify. (20)
- Q5. Enumerate various nutritional deficiencies and explain how it effect on cardiopulmonary system. (20)
-

0419E016

Candidate's Seat No : \_\_\_\_\_

**Master of Physiotherapy Examination**  
**Basic Science in**  
**Physiotherapy and Rehabilitation**

**Date : 01-04-2019, Monday]**  
**Time : 3 Hours]**

**[Max. Marks : 100**

- Instructions :** (1) Figure to the right indicate marks.  
(2) Write legibly.  
(3) Draw diagrams wherever necessary.

- 1) Write about fatigue assessment and its work –rest regime to control fatigue. 20 Marks
- 2) Describe joint movement neuro-physiology and principles of application. 20 Marks
- 3) Write about neurophysiology of pain transmission and the central nervous system mechanism of pain modulation. 20 Marks
- 4) Describe the neuromuscular control of gait. 20 Marks
- 5) Enumerate the outcome measures in rehabilitation research and its objectivity. Explain ethical concepts in research.

**(10+10=20) Marks**

---

**Master of Physiotherapy Examination**  
**Basic Science in**  
**Physiotherapy in Neurological Conditions**

[Max. Marks : 100

Date : 01-04-2019, Monday]  
Time : 3 Hours]

- Instructions :** (1) Figure to the right indicate marks.  
(2) Write legibly.  
(3) Draw diagrams wherever necessary.

Q.1 Describe H reflex as an outcome measure in clinical research.(20M )

Q. 2 Differentiate myopathy and neuropathy based on electrophysiological findings(20M )

Q.3 Describe fatigue control strategies in patients with neurological conditions(20M )

Q. 4 Describe alterations in various levels of neurological system responsible for incoordination.  
( 20M )

Q.5 Justify the correct use of sampling technique in research studies.(20M )

---

**Master of Physiotherapy Examination**  
**Basic Science in**  
**Physiotherapy in Sports**

[Max. Marks : 100

Date : 01-04-2019, Monday]

Time : 3 Hours]

- Instructions :** (1) Figure to the right indicate marks.  
(2) Write legibly.  
(3) Draw diagrams wherever necessary.

- |   |  |    |
|---|--|----|
| 1 | Identify the three energy systems and outline the relative contribution of each for exercise intensity and duration  | 20 |
| 2 | Define Physical activity and Fitness terminology separately. Enumerate Health-Related and Skill-Related Components of Physical Fitness   | 20 |
| 3 | Explain how an action potential results in a muscle contraction  | 20 |
| 4 | Why probability sampling is generally preferred in comparison to non-probability sampling? Explain the procedure of selecting a simple random sample.  | 20 |
| 5 | Explain the meaning of the following in context of Research design.<br>(a) Extraneous variables;<br>(b) Confounded relationship;<br>(c) Research hypothesis;<br>(d) Experimental and Control groups; | 20 |
-

**Master of Physiotherapy Examination**  
**Basic Science in**  
**Physiotherapy in Peadiatric**

**Date : 01-04-2019, Monday]**

**Time : 3 Hours]**

**[Max. Marks : 100**

- Instructions :** (1) Figure to the right indicate marks.  
(2) Write legibly.  
(3) Draw diagrams wherever necessary.

- 1) Write in details about types of nerve injuries and Wallerian degeneration. 20 M
  - 2) Write in details about electrotherapeutic advances of pain modulation. 20 M
  - 3) Write briefly about gait in spastic diplegic Cerebral Palsy (CP) child. Describe various orthotic and mobility aids which are commonly used for mobility in CP. 20 M
  - 4) Write in details about testing of hypothesis and types of errors with examples of research in Physiotherapy. 20 M
  - 5) How to assess fatigue? Describe various strategies to manage fatigue in different neurological conditions. 20 M
-

**Master of Physiotherapy Examination  
Physical & Functional Diagnosis I & II  
Physiotherapy in Musculo-Skeletal Disorders**

**Date : 03-04-2019, Wednesday]**

**Time : 3 Hours]**

**[Max. Marks : 100**

- Instructions :** (1) Figure to the right indicate marks.  
(2) Write legibly.  
(3) Draw diagrams wherever necessary.

- |  |    |
|--|----|
| 1. Describe the assessment & treatment of balance disorders in geriatrics. | 20 |
| 2. Describe the Rood's approach in details                                 | 20 |
| 3. Describe psychophysiological and neurophysiological tests.              | 20 |
| 4. Describe the motor nerve conduction velocity assessment                 | 20 |
| 5. Describe the gait analysis.   | 20 |
-

**Master of Physiotherapy Examination**  
**Physical & Functional Diagnosis I & II**  
**Physiotherapy in Cardio-Pulmonary Disorders**

**Date : 03-04-2019, Wednesday]**

**Time : 3 Hours]**

**[Max. Marks : 100**

- Instructions :** (1) Figure to the right indicate marks.  
(2) Write legibly.  
(3) Draw diagrams wherever necessary.

- Q.1 Explain in detail various test used to evaluate pulmonary function. (20)
- Q.2 Write in detail about preoperative and postoperative physiotherapy assessment of Pneumonectomy. (20)
- Q.3 Write in detail kinetic and kinematic analysis of gait. (20)
- Q.4 Explain in detail role of exercises in management of osteoporosis. (20)
- Q.5 Explain in detail various testing protocol used in treadmill test. (20)
-



**Master of Physiotherapy Examination  
Physical & Functional Diagnosis I & II  
Physiotherapy and Rehabilitation**

**Date : 03-04-2019, Wednesday]  
Time : 3 Hours]**

**[Max. Marks : 100**

- Instructions :** (1) Figure to the right indicate marks.  
(2) Write legibly.  
(3) Draw diagrams wherever necessary.

- 1) Describe steps of electromyography testing and various activities.  
20 Marks
  - 2) Merits and demerits of mobilization and manipulation techniques.  
(any one mobilization any one manipulation) (10 + 10 Marks)
  - 3) Details of Geriatric assessment. 20 Marks
  - 4) Describe the principles of fitness testing and write an assessment  
protocol for football player. 10+10 = 20 Marks
  - 5) Inhibition and facilitation techniques used in physiotherapy  
management. 20 Marks
-

**Master of Physiotherapy Examination  
Physical & Functional Diagnosis I & II  
Physiotherapy in Neurological Conditions**

**Date : 03-04-2019, Wednesday]**

**Time : 3 Hours]**

**[Max. Marks : 100**

- Instructions :** (1) Figure to the right indicate marks.  
(2) Write legibly.  
(3) Draw diagrams wherever necessary.

Q.1 Describe various clinical measures used for the assessment of Tone with relevant evidence.  
(20M )

Q. 2 Describe the role of imaging techniques in diagnosing neurological conditions.(20M )

Q. 3 Describe kinetic and kinematic gait parameters assessed in patients with hemiparesis.(20M )

Q. 4 Describe the relevant balance assessment tools in a patient with spinal cord injury who is able to sit only with support.(20M )

Q.5 Describe the clinical assessment scales for quantifying ability of a hemiplegic patient to perform activities of daily living.(20M )

---

**Master of Physiotherapy Examination**  
**Physical & Functional Diagnosis I & II**  
**Physiotherapy in Sports**

**Date : 03-04-2019, Wednesday]**

**Time : 3 Hours]**

**[Max. Marks : 100**

- Instructions :** (1) Figure to the right indicate marks.  
(2) Write legibly.  
(3) Draw diagrams wherever necessary.

- |   |   |    |
|---|---|----|
| 1 | Describe standard instrumentation for Electromyography in Physiotherapy                     | 20 |
| 2 | Your differential diagnosis for an athlete's foot injuries.                                 | 20 |
| 3 | Discuss various concepts of mobilization and manipulation.                                  | 20 |
| 4 | Discuss Maitland's teachings on the use of movement diagrams and its clinical significance. | 20 |
| 5 | Write a note on International Classification of Functioning, Disability and Health (ICF).   | 20 |
-

**Master of Physiotherapy Examination**  
**Physical & Functional Diagnosis I & II**  
**Physiotherapy in Paediatric**

**Date : 03-04-2019, Wednesday]**  
**Time : 3 Hours]**

**[Max. Marks : 100**

**Instructions :** (1) Figure to the right indicate marks.  
(2) Write legibly.  
(3) Draw diagrams wherever necessary.

- 1) Write in details about physical disability evaluation. 20 M
  - 2) Write in details about Voluntary Control assessment and functional independence outcome measures used in paediatric conditions. 20 M
  - 3) Write in details about application of inhibitory and facilitation techniques in paediatric neurorehabilitation. 20 M
  - 4) Describe effect of ageing on Nervous System. Briefly write about management of 65 year old man with Diabetic Neuropathy. 10+10= 20 M
  - 5) Write in details about principles of fitness testing. Describe various methods used to assess physical fitness in a child. 10+10= 20 M
-

**Master of Physiotherapy Examination**  
**Advanced Therapeutics I & II**  
**Physiotherapy in Musculo-Skeletal Disorders**

**Date : 05-04-2019, Friday]**

**Time : 3 Hours]**

**[Max. Marks : 100**

- Instructions :** (1) Figure to the right indicate marks.  
(2) Write legibly.  
(3) Draw diagrams wherever necessary.

1. Describe the role of Physiotherapy after plastic surgery and describe the physiotherapy for patient who has undergone plastic reconstruction after breast surgery. 20
  2. Describe the role of physiotherapy in psychiatry and mental health. 20
  3. Enlist naturopathy modalities/interventions and describe the advantages and disadvantages of complimentary therapies like Naturopathy. 20
  4. Describe the yoga approach to acute, subacute and chronic low back pain. 20
  5. Describe the motor learning theories and enlist various neuro-developmental techniques or approaches. 20
-

**Master of Physiotherapy Examination**  
**Advanced Therapeutics I & II**  
**Physiotherapy in Cardio-Pulmonary Disorders**

[Max. Marks : 100

**Date : 05-04-2019, Friday]**

**Time : 3 Hours]**

- Instructions :** (1) Figure to the right indicate marks.  
(2) Write legibly.  
(3) Draw diagrams wherever necessary.

- Q.1 Explain in detail about physiological responses of aerobic, anaerobic, isometric and isokinetics exercise on cardiac functions. (20)
- Q.2 Enumerate various body positioning and compare physiological responses of supine and prone body positioning. (20)
- Q.3 Write in detail about physiotherapy management of chronic bronchitis. (20)
- Q.4 Define cough. Write in detail about various stages and types of cough. (20)
- Q.5 Write in details about significance of physiotherapy in management of Thromboangiitis obliterans. (TAO) . (20)
-

Master of Physiotherapy Examination  
Advanced Therapeutics I & II  
Physiotherapy and Rehabilitation

[Max. Marks : 100]

Date : 05-04-2019, Friday]  
Time : 3 Hours]

Instructions : (1) Figure to the right indicate marks.  
(2) Write legibly.  
(3) Draw diagrams wherever necessary.

- 1) Enumerate the recent pain management techniques and modalities in physiotherapy practice. 20 Marks
  - 2) Role of physiotherapy in Obstetric condition. 20 Marks
  - 3) Role of Physiotherapy in nutritional deficiency skeletal diseases. 20 Marks
  - 4) Describe the importance of physiotherapy in cancer rehabilitation. 20 Marks
  - 5) Write in detail about pulmonary rehabilitation. 20 Marks
-

Master of Physiotherapy Examination  
Advanced Therapeutics I & II  
Physiotherapy in Neurological Conditions

Date : 05-04-2019, Friday]

Time : 3 Hours]

[Max. Marks : 100

- Instructions : (1) Figure to the right indicate marks.  
(2) Write legibly.  
(3) Draw diagrams wherever necessary.

Q.1 Describe the treatment for hemiplegic shoulder joint since 3 months.(20M )

Q. 2 Describe the role of Neural tissue mobilization in patients with lumbar radiculopathy.(20M )

Q. 3 Describe the use of IFT for the relief of pain in a patient with TB spine since 2 years.(20 M )

Q. 4 Describe the Energy conservation measures, during treatment sessions, for a patient with multiple sclerosis(20M )

Q. 5 Describe exercise prescription for a 45yrs old male patient with Diabetes since 5 months  
( 20M )

---



**Master of Physiotherapy Examination**  
**Advanced Therapeutics I & II**  
**Physiotherapy in Sports**

[Max. Marks : 100

**Date : 05-04-2019, Friday]**  
**Time : 3 Hours]**

**Instructions :** (1) Figure to the right indicate marks.  
(2) Write legibly.  
(3) Draw diagrams wherever necessary.

- |   |  |    |
|---|--|----|
| 1 | Discuss pain management by various electrotherapeutic modalities.                              | 20 |
| 2 | Discuss the use of EMG Biofeedback in physiotherapy rehabilitation.                            | 20 |
| 3 | The impact of Yoga in Physiotherapy.   | 20 |
| 4 | Role of physiotherapy during labour in pregnancy.  | 20 |
| 5 | Write about recent advances in physiotherapy management after fractures around the knee joint. | 20 |
-

**Master of Physiotherapy Examination**  
**Advanced Therapeutics I & II**  
**Physiotherapy in Paediatric**

[Max. Marks : 100

**Date : 05-04-2019, Friday]**  
**Time : 3 Hours]**

**Instructions :** (1) Figure to the right indicate marks.  
(2) Write legibly.  
(3) Draw diagrams wherever necessary.

- 1) Write in details about role of therapeutic biofeedback in Neurorehabilitation. 20 M
  - 2) Write about role of yogasanas in neuromotor learning. 20 M
  - 3) Describe pre and post operative physiotherapy in tendon transfers done in paediatric conditions. 20 M
  - 4) Describe various neuropathic pain and its Physiotherapy management. 20 M
  - 5) Write briefly on application of naturopathy in Neurorehabilitation. 20 M
-

UNIVERSITY  
Master of Physiotherapy Examination  
Elective Paper in  
Physiotherapy in Paediatric

[Max. Marks : 100]

Date : 09-04-2019, Tuesday]  
Time : 3 Hours]

- Instructions :** (1) Figure to the right indicate marks.  
(2) Write legibly.  
(3) Draw diagrams wherever necessary.

*All questions are compulsory:*

- 1) Explain in details about early intervention and management of high risk infants. 20 M
  - 2) Describe principles of Neurodevelopmental Technique and its application in Neurorehabilitation. 20 M
  - 3) Describe the motor learning principles and strategies used to manage trunk and upper limb in Cerebral Palsy. 20 M
  - 4) Write in details about physiotherapy management of 10 year old child with Duchene Muscular Dystrophy. 20 M
  - 5) Write in details on physiotherapy management of hydrocephalic child with Ventriculoperitoneal shunt. 20 M
-

**Master of Physiotherapy Examination**  
**Elective Paper in**  
**Physiotherapy in Musculo-Skeletal Disorders**

**Date : 09-04-2019, Tuesday]**

**Time : 3 Hours]**

**[Max. Marks : 100**

- Instructions :** (1) Figure to the right indicate marks.  
(2) Write legibly.  
(3) Draw diagrams wherever necessary.

- |   |  |    |
|---|--|----|
| 1 | Describe the classification of sports and sports injuries.   | 20 |
| 2 | Enlist Electro-modalities for pain management in Musculo-skeletal conditions. Write briefly about how each modality relieves pain. | 20 |
| 3 | Describe the community based approach to orthopedic rehabilitation.  | 20 |
| 4 | Describe the role of physiotherapists in prosthetics and orthotics and explain the checkouts for below knee prosthesis.            | 20 |
| 5 | Enlist any three manual theory approaches and compare and contrast the same.   | 20 |
-

**Master of Physiotherapy Examination**  
**Elective Paper in**  
**Physiotherapy in Cardio-Pulmonary Disorders**

**Date : 09-04-2019, Tuesday]**  
**Time : 3 Hours]**

**[Max. Marks : 100**

- Instructions :** (1) Figure to the right indicate marks.  
(2) Write legibly.  
(3) Draw diagrams wherever necessary.

- Q.1 Define Humidification. Explain the role of upper respiratory tract in the process of humidification. Write in brief about various types and hazards of humidifiers. (20)
- Q.2 Write in detail about Phase I and Phase II of cardiac rehabilitation in the condition of post myocardial infarction. (20)
- Q.3 A person age 58 years old had a venous ulcer on right side of lower limb. Write down its physiotherapy management. (20)
- Q.4 Physiotherapy plays a significant role in the recovery of patient in Intensive care unit. Justify it. (20)
- Q.5 Explain in details about various diagnostic procedures used in cardio respiratory condition. (20)
-

**0419E163**

Candidate's Seat No : \_\_\_\_\_

**Master of Physiotherapy Examination**  
**Elective Paper in**  
**Physiotherapy and Rehabilitation**

**[Max. Marks : 100**

**Date : 09-04-2019, Tuesday]**  
**Time : 3 Hours]**

- Instructions :** (1) Figure to the right indicate marks.  
(2) Write legibly.  
(3) Draw diagrams wherever necessary.

- 1) Role of physiotherapy in Information technology. (IT) Industry  
20 Marks
  - 2) Role of physiotherapy in prevention, detection and assessment of disability.  
20 Marks
  - 3) Role of yoga in stress management.  
20 Marks
  - 4) Write the complete rehabilitation programme for bilateral below knee amputee aged 25 years working in automobile industry.  
20 Marks
  - 5) Write about various rehabilitation approaches and difference between Institution based rehabilitation and community based Rehabilitation.  
20 Marks
-

---

**0419E165**

Candidate's Seat No : \_\_\_\_\_

**Master of Physiotherapy Examination**

**Elective Paper in  
Physiotherapy in Sports**

**09-04-2019, Tuesday]  
3 Hours]**

**[Max. Marks : 100**

- Instructions :** (1) Figure to the right indicate marks.  
(2) Write legibly.  
(3) Draw diagrams wherever necessary.

- |          |   |           |
|----------|---|-----------|
| <b>1</b> | Discuss the role of psychology in gaining the winning edge in competitive sports.   | <b>20</b> |
| <b>2</b> | Differential diagnosis of shoulder pain in sports.  | <b>20</b> |
| <b>3</b> | Explain the mechanism of injury, management and rehabilitation of ACL injury. Write about 'return to play guidelines' after ACL reconstruction? | <b>20</b> |
| <b>4</b> | Explain joint protection techniques for the degenerative condition of Knee.   | <b>20</b> |
| <b>5</b> | Explain six easy and quick tests to measure an athlete's strength, fitness and endurance.   | <b>20</b> |
-

**Master of Physiotherapy Examination**  
**Elective Paper in**  
**Physiotherapy in Neurological Conditions**

**Date : 09-04-2019, Tuesday]**

**[Max. Marks : 100**

**Time : 3 Hours]**

- Instructions :** (1) Figure to the right indicate marks.  
(2) Write legibly.  
(3) Draw diagrams wherever necessary.

Q.1 Describe management of hand dysfunction in a patient with combined median, ulnar and radial nerve palsy (neurotmesis) since 1 month. (20M )

Q. 2 Describe rational behind using Functional electrical stimulation in a patient with hemiparesis (20M )

Q. 3 Describe any two theories of motor learning with emphasis on its clinical application in a patient with neurological dysfunctions. (20M )

Q. 4 Describe the role of biofeedback in treating patients with tonal abnormalities (20M )

Q.5 Justify the use of PNF in a patient with incomplete T12 level Spinal cord injury (20M )

---