

**Rajiv Gandhi University of Health Sciences, Karnataka**  
**Second Year Master of Physiotherapy Degree Examination – 23-May-2025**

**[Time: 3 Hours]**

**[Max. Marks: 100]**

**Physical and Functional Diagnosis in Musculoskeletal Disorders**

**Paper III (RS-4)**

**Q.P. CODE: 8131**

Your answers should be specific to the questions asked.  
Draw neat, labeled diagrams wherever necessary.

**Answer All The Questions**

**10 X 10 = 100 Marks**

1. Enumerate basic assessment methods for joint play movements
2. Explain screening the Head & Neck in upper cross syndrome
3. Illustrate primary care of Intervertebral Disc Prolapse
4. Describe physiotherapy diagnosis in lower cross syndrome
5. Write exercise testing in Anterior Cruciate Ligament reconstruction
6. Explain pre operative and post operative assessment of fracture neck of femur
7. Describe assessment methods in poliomyelitis
8. Enumerate ergonomic risk assessment in musculoskeletal disorders
9. Explain evaluation of work capacity and return to work
10. Describe screening the Sacroiliac & Pelvic joint

\* \* \* \* \*

**Rajiv Gandhi University of Health Sciences, Karnataka**  
**Second Year Master of Physiotherapy Degree Examination – 26-May-2025**

**[Time: 3 Hours]**

**[Max. Marks: 100]**

**Physiotherapy Interventions in Musculoskeletal Disorders**

**Paper IV (RS-4)**

**Q.P. CODE: 8132**

Your answers should be specific to the questions asked.  
Draw neat, labeled diagrams wherever necessary.

**Answer All The Questions**

**10 X 10 = 100 Marks**

1. Describe the impaired mobility seen in ankle injuries
2. Write in detail about the role of various educational strategies in managing low back pain
3. Describe the role of anti gravity muscles in maintaining postural stability
4. Describe McKenzie's principles of mobilization
5. Describe the role various external appliances used for rehabilitation in patients following L2-L3 disc prolapse
6. Describe the evidence based electrotherapy management of fibromyalgia
7. Describe the role of image assessing for wound healing
8. Describe wrist ergonomics for a computer operator
9. Describe the role of assistive devices in industrial setups which work with heavy loads
10. Describe the role of evidence based rehabilitation following arthroscopic meniscus repair

\* \* \* \* \*

**Rajiv Gandhi University of Health Sciences, Karnataka**  
**Second Year Master of Physiotherapy Degree Examination – 21-May-2025**

[Time: 3 Hours]

[Max. Marks: 100]

**Basic Medical Sciences for Sports Physiotherapy - Paper II (RS-4)**

**Q.P. CODE: 8133**

Your answers should be specific to the questions asked.

Draw neat, labeled diagrams wherever necessary.

**Answer All The Questions**

**10 X 10 = 100 Marks**

1. What is peak height velocity and peak weight velocity? Explain the influence of physical performance in sports, rapid growth and risk of injury.
2. What is Bioenergetics? Explain the oxidative phosphorylation and Glycolytic process in energy conservation.
3. Mention the anatomy of Serratus anterior muscle and how would you relate the biomechanical and patho mechanical role of Serratus anterior muscle in throwing.
4. What are the various phases of cricket bowling and explain in detail about the facts of any two phases of throwing injuries in a cricket bowler.
5. Explain in detail about the mechanism in absorption of protein diet. Add note on the sources of protein diet.
6. What are the qualities and role of a Sports Physiotherapist in any sports?
7. What is your understanding about FITTVP principles? Formulate the procedure for Cardio respiratory and Neuromotor exercise training based on FITTVP principle.
8. Distinguish the components of sports fitness and explain the various principles of prevention of injuries.
9. What is altitude? State the physiological effects and acclimatization due to high altitude training.
10. Define ergogenic aids. Mention the various categories of Ergogenic Aids, their dietary supplements and the banned substances.

\* \* \* \* \*



**Rajiv Gandhi University of Health Sciences, Karnataka**  
**Second Year Master of Physiotherapy Degree Examination – 23-May-2025**

[Time: 3 Hours]

[Max. Marks: 100]

**Sports Assessment, Injury Evaluation (Sports Traumatology)  
and Exercise Physiology – Paper III (RS-4)**

**Q.P. CODE: 8134**

Your answers should be specific to the questions asked.  
Draw neat, labeled diagrams wherever necessary.

**Answer All The Questions**

**10 X 10 = 100 Marks**

1. Explain the practical challenges and benefits of implementing the clinical bio-psychosocial approach in a sports injury rehabilitation setting.
2. Discuss the relevance of body composition analysis to physical therapy.
3. Describe the methods you would employ to conduct a functional assessment on gymnasts, considering factors such as flexibility, balance, and core strength.
4. Determine the importance of musculoskeletal screening in terms of preventing injuries and enhancing performance in athletes.
5. List the role of electromyography (EMG) in diagnosing sports-related neuromuscular conditions.
6. Explain in detail the assessment techniques and on-field procedures employed by a sports physiotherapist for acute ankle sprain in a badminton player.
7. Examine the sports-specific assessment for upper limb complex in athletes, including range of motion analysis and functional strength tests.
8. Develop assessment and evaluation for low back pain in cricket players. Add a note on the investigative procedures and tests used for the same.
9. Analyze the importance of a functional assessment for basketball players in terms of their vertical jump performance, lateral quickness, and shooting accuracy.
10. Explain the concept of kin-anthropometric evaluation in sports physiotherapy. Outline the key anthropometric measurements commonly assessed in athletes.

\* \* \* \* \*

**Rajiv Gandhi University of Health Sciences, Karnataka**  
**Second Year Master of Physiotherapy Degree Examination – 26-May-2025**

**[Time: 3 Hours]**

**[Max. Marks: 100]**

**Sports Injuries, Prevention, Management and Rehabilitation – Paper IV (RS-4)**

**Q.P. CODE: 8135**

Your answers should be specific to the questions asked.

Draw neat, labeled diagrams wherever necessary.

**Answer All The Questions**

**10 X 10 = 100 Marks**

1. Mention the difference between rigid and kinesio taping. Describe the principles of kinesio taping and procedures of kinesio taping for supraspinatus tendinitis.
2. Explain the intrinsic and extrinsic factors of injury and explain the methods of preventing intrinsic and extrinsic injury in sports.
3. Describe the biomechanics of knee joint and write the physiotherapeutic management for anterior cruciate ligament reconstruction in a hockey player and their fitness assessment for return to play.
4. Describe the steps in on field assessment of an unconscious athlete and the first aid management to be followed for life threatening state of the athlete.
5. Explain the physiology of muscle contraction and the mechanism in formation of trigger point. Describe the technique to release the trigger points of any three muscles.
6. Mention the reason why are Females More Susceptible to Sports Injuries and describe the common injuries and their prevention programs.
7. Explain the Contributing Factors in Tennis elbow. Describe the assessment and conservative physiotherapy management for tennis elbow.
8. Define Iliotibial band syndrome. Explain the intrinsic contributing factors and extrinsic contributing factor of Iliotibial band syndrome and describe the physiotherapy management in treating Iliotibial band syndrome.
9. Define physical fitness. Mention the key hormones in athletic performance. Explain the roll of hormones in athletic performance and the methods of testing level of hormones.
10. Describe the effects on sports performance during the phases of Mensural cycle.

\* \* \* \* \*

**Rajiv Gandhi University of Health Sciences, Karnataka**  
**Second Year Master of Physiotherapy Degree Examination – 21-May-2025**

[Time: 3 Hours]

[Max. Marks: 100]

**Basics of Cardiovascular and Pulmonary Sciences - Paper-II (RS-4)**

**Q.P. CODE: 8136**

Your answers should be specific to the questions asked.

Draw neat, labeled diagrams wherever necessary.

**Answer All The Questions**

**10 X 10 = 100 Marks**

1. Describe the neuromuscular components of the respiratory system and explain its significance. Add a note on the location at which several neuromuscular diseases affect the respiratory system.
2. Explain cardiac Arrhythmias.
3. Describe wounds. Discuss the stages of wound healing, and mention the features of abnormal wounds.
4. Explain the effect of body weight on the energy cost of different forms of physical activity.
5. Describe the responses and adaptations of aerobic exercise in geriatric population.
6. Elaborate on exercise performance and responses in cold.
7. Discuss the principles of weight control.
8. Explain the need of graded exercise testing in exercise intolerant individuals.
9. Describe the gateways of pain modulation.
10. Describe the methods of testing and training of the anaerobic system.

\* \* \* \* \*



**Rajiv Gandhi University of Health Sciences, Karnataka**  
**Second Year Master of Physiotherapy Degree Examination – 23-May-2025**

[Time: 3 Hours]

[Max. Marks: 100]

**Physical Assessment and Functional Diagnosis of Cardiovascular  
and Pulmonary Sciences - Paper-III (RS-4)**

**Q.P. CODE: 8137**

Your answers should be specific to the questions asked.  
Draw neat, labeled diagrams wherever necessary.

**Answer All The Questions**

**10 X 10 = 100 Marks**

1. What is Weaning failure? Explain the factors responsible for it.
2. Describe the guidelines for examination of cough and secretions.
3. What is angiography? Describe the procedure and add a note on the significance of the test. Explain briefly why is it important for a PT to know?
4. Discuss the traditional methods of exercise tolerance testing.
5. What is the function of ANS? Write a note on the division of ANS and its role on cardiac activity. Explain briefly the methods of ANS testing.
6. Explain scales used to assess fatigue.
7. Define physical activity. Explain its importance in health and disease.
8. Describe the ECG lead systems using a 12 lead ECG format. Explain the anatomic relationships and coronary arteries involved.
9. Describe the different healing stages of wounds. Add a note on the assessment of wound healing and mention briefly about the healing process in burn wounds.
10. Create an algorithm for systematically assessing basic pulmonary function test results.

\* \* \* \* \*

**Rajiv Gandhi University of Health Sciences, Karnataka**  
**Second Year Master of Physiotherapy Degree Examination – 26-May-2025**

[Time: 3 Hours]

[Max. Marks: 100]

**Physiotherapy Interventions in Cardio-Vascular and Pulmonary Sciences**

**Paper-IV (RS-4)**

**Q.P. CODE: 8138**

Your answers should be specific to the questions asked.  
Draw neat, labeled diagrams wherever necessary.

**Answer All The Questions**

**10 X 10 = 100 Marks**

1. Describe the general management of Respiratory Failure in the ICU using an algorithm.
2. Explain the principles and techniques of postural drainage in neonates
3. Recent advances in inspiratory muscle training.
4. List out long acting bronchodilators and explain the effect on respiratory system.
5. A 47 Year old obese female is diagnosed with Type 2 Diabetes mellitus. She is also a case of bilateral OA knee. Add a note on assessment and exercise prescription for the same.
6. Describe the components of public health program formed by AACVPR for cardiovascular diseases.
7. Evidence based physiotherapy assessment and management of patients with lymphatic disease.
8. Enumerate Neurophysiological facilitation of respiration, and explain 3 techniques.
9. What is lung expansion therapy? Write a note on therapeutic interventions used to optimise ventilation patterns. Briefly explain the ventilatory and movement strategies for improving functional outcomes?
10. What are the mechanisms of airway clearance? Write a note on the stages of cough evaluation. Explain briefly the assessment of cough effectiveness.

\* \* \* \* \*



**Rajiv Gandhi University of Health Sciences, Karnataka**  
**Second Year Master of Physiotherapy Degree Examination – 23-May-2025**

[Time: 3 Hours]

[Max. Marks: 100]

**Physical and Functional Diagnosis in Paediatrics - Paper-III (RS-4)**

**Q.P. CODE: 8140**

Your answers should be specific to the questions asked.  
Draw neat, labeled diagrams wherever necessary.

**Answer All The Questions**

**10 X 10 = 100 Marks**

1. Explain use of Electro Encephalogram (EEG) in assessing brain damage.
2. Assessment of voluntary control of movement.
3. Describe genetic counselling and add note on pedigree analysis.
4. Describe assessment of a 6 year old boy with I2- I3 spina cord injury using ICF format.
5. Explain developmental screening and describe any two tools used in neonates with their psychometric properties.
6. Discuss exercise tolerance testing for a 14 yr old boy with spastic Diplegia.
7. Enumerate perceptual disorders and explain the assessment of any two perceptual disorder in detail.
8. Discuss various scales used in assessment of cerebral palsy along with its psychometric properties.
9. Write about functional diagnosis in paediatric burns.
10. Mention causes of obesity in typical children.

\* \* \* \* \*

**Rajiv Gandhi University of Health Sciences, Karnataka**  
**Second Year Master of Physiotherapy Degree Examination – 26-May-2025**

**[Time: 3 Hours]**

**[Max. Marks: 100]**

**Paediatric Physiotherapy/ Physiotherapeutics in Paediatrics - Paper-IV (RS-4)**

**Q.P. CODE: 8141**

Your answers should be specific to the questions asked.  
Draw neat, labeled diagrams wherever necessary.

**Answer All The Questions**

**10 X 10 = 100 Marks**

1. Explain the management of pain in children using various modalities.
2. Analyse the role of physiotherapy in managing juvenile diabetes.
3. Write about the role of Paediatric therapist in mainstream school.
4. Explain the application of Yoga in Paediatric Population.
5. Discuss the role of Physiotherapy in Growth disorders.
6. Describe orosensory dysfunction. Explain the management in detail.
7. Discuss gait training in a 6 year old child with hemiplegic cerebral palsy. Add a note on recent advances.
8. Explain Exercise prescription of 19 year old boy with obesity.
9. Plan the management of 3 year old boy with Fetal alcohol spectrum disorder.
10. Explain in detail the management of Scoliosis with Cobb angle 30 in a 14 year old.

\* \* \* \* \*

**Rajiv Gandhi University of Health Sciences, Karnataka**  
**Second Year Master of Physiotherapy Degree Examination – 21-May-2025**

[Time: 3 Hours]

[Max. Marks: 100]

**Basic Sciences for Neurological Physiotherapy - Paper –II (RS-4)**

**Q.P. CODE: 8142**

Your answers should be specific to the questions asked.  
Draw neat, labeled diagrams wherever necessary.

**10 X 10 = 100 Marks**

**Answer All The Questions**

1. Write about the lesions of the upper motor neurons in detail with appropriate diagrams.
2. Explain the Motor Neuron-Muscle Relationships.
3. Describe the peripheral mechanisms of Spasticity and its implications.
4. Explain the Development Milestones in detail.
5. What are the implications of reflex testing with reflex grading of deep tendon reflexes?
6. Define Motor learning. Explain Implicit and explicit learning with examples.
7. Explain the implications of errors and feedback in motor learning.
8. Describe the Kinematic and Kinetic variables of Motor Control.
9. Describe the physiological changes in neuromuscular system across the life span.
10. Write about the effect of Neuro-pharmacology on exercise and recovery.

\* \* \* \* \*



**Rajiv Gandhi University of Health Sciences, Karnataka**  
**Second Year Master of Physiotherapy Degree Examination – 23-May-2025**

**[Time: 3 Hours]**

**[Max. Marks: 100]**

**Neurophysiotherapy Assessment – Paper –III (RS-4)**

**Q.P. CODE: 8143**

Your answers should be specific to the questions asked.  
Draw neat, labeled diagrams wherever necessary.

**Answer All The Questions**

**10 X 10 = 100 Marks**

1. Write physiotherapy assessment for 42 year/male with Grade 2 Diffuse axonal injury?
2. 62 year/ Male patient complains of giddiness while getting up from his bed and turning his head suddenly along with nausea and tinnitus. Write the physiotherapy assessment with differential diagnosis.
3. Write an assessment of autonomic nervous system.
4. Explain principles of MRI and type of MRI images? Write about the differences between MRI and fMRI.
5. Discuss evoked potential tests. Explain about Motor evoked potential tests.
6. Write an assessment of upper limb in a patient with Right side MCA infract.
7. Write about posture and gait assessment of 68-year-old male patient suffering with Parkinson's Disease.
8. Explain the various performance measures used to assess functional reaching tasks.
9. What is Activities of Daily Living& Instrumental ADL and explain any one scale use to assess ADL with its Psychometric properties.
10. Explain role of ICF model as outcome measure in Neuro rehabilitation with example.

\* \* \* \* \*

**Rajiv Gandhi University of Health Sciences, Karnataka**  
**Second Year Master of Physiotherapy Degree Examination – 26-May-2025**

[Time: 3 Hours]

[Max. Marks: 100]

**Neurophysiotherapy Treatment – Paper –IV (RS-4)**

**Q.P. CODE: 8144**

Your answers should be specific to the questions asked.  
Draw neat, labeled diagrams wherever necessary.

**10 X 10 = 100 Marks**

**Answer All The Questions**

1. Define Diabetic peripheral neuropathy and its PT management.
2. What is unilateral neglect and explain strategies to manage unilateral neglect.
3. Describe Coma stimulation following acute traumatic brain injury.
4. Explain Erb's palsy management with evidence-based practice.
5. Write about the effect of Electrical stimulation of muscle recovery.
6. Explain the application of functional electrical stimulation to improve gait in paraplegics.
7. Describe Biofeedback mechanisms, principles and uses in bladder retraining.
8. Explain Systems Model of retraining postural control.
9. Write about use of virtual reality and augmented reality in stroke rehabilitation.
10. Explain the role of environmental remodelling of home for a paraplegic patient.

\* \* \* \* \*

**Rajiv Gandhi University of Health Sciences, Karnataka**  
**Second Year Master of Physiotherapy Degree Examination – 21-May-2025**

[Time: 3 Hours]

[Max. Marks: 100]

**Applied Theories, Philosophies and Global Perspective for Physiotherapy  
in Community Health – Paper -II (RS-4)**

**Q.P. CODE: 8145**

Your answers should be specific to the questions asked.  
Draw neat, labeled diagrams wherever necessary.

**Answer All The Questions**

**10 X 10 = 100 Marks**

1. Explain the influence of behavioral factors in health and disease.
2. Define community health. Explain its principles and consequences of neglecting community health.
3. Describe, with suitable examples, how emerging technology is transforming physiotherapy practice.
4. Explain the various models of disability.
5. Justify why, rehabilitation in health systems as proposed by WHO is important.
6. Explain biomechanics of below knee prosthesis
7. Analyze biomechanics of standing posture.
8. Explain biological theories of aging.
9. Describe various biomechanical changes during pregnancy and explain their implications for physiotherapist.
10. Explain benefits of and barriers to physical activity in patients with cancer.

\* \* \* \* \*



**Rajiv Gandhi University of Health Sciences, Karnataka**  
**Second Year Master of Physiotherapy Degree Examination – 23-May-2025**

[Time: 3 Hours]

[Max. Marks: 100]

**Assessment Framework for Physiotherapy Service Provisions  
in Community Health – Paper -III (RS-4)**

**Q.P. CODE: 8146**

Your answers should be specific to the questions asked.  
Draw neat, labeled diagrams wherever necessary.

**10 X 10 = 100 Marks**

**Answer All The Questions**

1. Discuss applications of ICF.
2. Describe approaches to health behaviour assessment.
3. Discuss components of community health assessment.
4. Discuss challenges in fitness assessment in resource limited settings.
5. Explain guidelines for wheelchair prescription.
6. Explain any two ergonomic assessment tools for desk workers.
7. Discuss any two tools for chronic pain assessment in elderly.
8. Enlist post-delivery complications and discuss assessment of any two complication.
9. Discuss assessment of cancer related pain in patients undergoing chemotherapy.
10. Describe principles of accessibility audit.

\* \* \* \* \*

**Rajiv Gandhi University of Health Sciences, Karnataka**  
**Second Year Master of Physiotherapy Degree Examination – 26-May-2025**

[Time: 3 Hours]

[Max. Marks: 100]

**Planning and Management Framework for Physiotherapy Service  
Provisions in Community Health – Paper -IV (RS-4)**

**Q.P. CODE: 8147**

Your answers should be specific to the questions asked.  
Draw neat, labeled diagrams wherever necessary.

**10 X 10 = 100 Marks**

**Answer All The Questions**

1. Explain components health promotion intervention.
2. Describe the effectiveness of interventions using self-monitoring to reduce sedentary behavior in adults.
3. What are current evidence-based recommendations for implementation of rehabilitation interventions in the community?
4. Why is community mobilization important for CBR programs? Explain the steps involved in community mobilization.
5. Schematically represent and describe the WHO eight steps to appropriate wheelchair prescription.
6. Develop an ergonomic intervention program for preventing work related musculoskeletal disorders for general surgeons.
7. Describe the current clinical practice guidelines for prevention of Sarcopenia in elderly.
8. Plan an exercise program for prevention of osteoporosis in post-menopausal women.
9. Explain current clinical practice guidelines to integrate physical activity promotion as part of routine cancer care.
10. Describe the 12 steps for integrating rehabilitation in health system as proposed by WHO as part of best practice in rehabilitation.

\* \* \* \* \*

**Rajiv Gandhi University of Health Sciences, Karnataka**  
**Second Year Master of Physiotherapy Degree Examination – 26-May-2025**

[Time: 3 Hours]

[Max. Marks: 100]

**Physiotherapy Interventions in Cardio-Vascular and Pulmonary Sciences**

**Paper-IV (RS-4)**

**Q.P. CODE: 8138**

Your answers should be specific to the questions asked.  
Draw neat, labeled diagrams wherever necessary.

**Answer All The Questions**

**10 X 10 = 100 Marks**

1. Describe the general management of Respiratory Failure in the ICU using an algorithm.
2. Explain the principles and techniques of postural drainage in neonates
3. Recent advances in inspiratory muscle training.
4. List out long acting bronchodilators and explain the effect on respiratory system.
5. A 47 Year old obese female is diagnosed with Type 2 Diabetes mellitus. She is also a case of bilateral OA knee. Add a note on assessment and exercise prescription for the same.
6. Describe the components of public health program formed by AACVPR for cardiovascular diseases.
7. Evidence based physiotherapy assessment and management of patients with lymphatic disease.
8. Enumerate Neurophysiological facilitation of respiration, and explain 3 techniques.
9. What is lung expansion therapy? Write a note on therapeutic interventions used to optimise ventilation patterns. Briefly explain the ventilatory and movement strategies for improving functional outcomes?
10. What are the mechanisms of airway clearance? Write a note on the stages of cough evaluation. Explain briefly the assessment of cough effectiveness.

\* \* \* \* \*