Rajiv Gandhi University of Health Sciences, Karnataka

Second Year Master of Physiotherapy Degree Examination – 19-May-2025

[Time: 3 Hours] **[Max. Marks: 100]**

Fundamentals in Physiotherapy Practice, Pedagogy & Research
Paper -I (RS-4)
Q.P. CODE: 8129

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 documentation procedure adapted in terms of assessment, management in rehabilitation based on International classification of Disability and health. (ICF).
2. Define Competency. Add a note on Competency-Based Physiotherapy Education.
3. Describe various methods of sampling and sample size distribution.
4. Explain the ethical Principles in Practice of Physiotherapy in a hospital and community.
5. Explain the Instrumentation for neuromuscular electrical stimulation.
6. Explain the various study designs in research.
7. **Discuss in brief Parametric and Non-Parametric tests**
8. Considerations for exercise prescription in obesity.
9. Differentiate Aerobic and Anaerobic exercise in terms of energy expenditure.
10. Describe electrical stimulation and its effect on various systems.

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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

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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. **Adjuvant therapies in Managing Pain**
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

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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 n 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.

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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 Menstrual Cycle.**

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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.

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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.

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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 L2- L3 spinal 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.

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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 Peadiatric therapist in mainstream school.
4. Explain the application of Yoga in Peadiatric 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.

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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.

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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.

Answer All The Questions **10 X 10 = 100 Marks**

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.

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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.

Answer All The Questions **10 X 10 = 100 Marks**

1. **Explain components of 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 – 21-May-2025

[Time: 3 Hours] **[Max. Marks: 100]**

Fundamental Principles of Musculoskeletal Physiotherapy
Paper II (RS-4)
Q.P. CODE: 8130

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 components of skeletal system
2. Enumerate the tools for measurement of body fat analysis
3. Describe the applications of Newton's 2nd law in human body
4. Write basic concepts of exercise metabolism during core muscle strengthening
5. Explain mechanics &pathomechanics of knee joint
6. Explain postural abnormalities seen in thoracic region
7. Write the biomechanical analysis of gait in ankle instability
8. Explain the theories and models of pain
9. Describe soft tissue repair and healing in meniscal injury
10. Describe mechanics & pathomechanics of hip joint

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

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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. **Adjuvant therapies in Managing Pain**
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

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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 Glycoltic 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.

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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 n 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.

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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 Menstrual Cycle.**

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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 – 21-May-2025

[Time: 3 Hours] **[Max. Marks: 100]**

Applied Anatomy, Physiology and Biomechanics in Pediatrics - Paper-II (RS-4)
Q.P. CODE: 8139

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. Discuss in detail nutritional requirements in infants.
2. Explain neurophysiology of movement in 5 to 6 years old children.
3. Discuss about neonatal resuscitation algorithm.
4. Describe in detail about embryological development.
5. Define anthropometry. Discuss about Musculoskeletal system changes across pediatric lifespan.
6. Explain factors influencing motor development, write a note on typical development.
7. Discuss in detail about primitive reflexes.
8. Explain vestibular system? Mention the applied aspects of coordination and gait in children.
9. Discuss postural deviations in school going children.
10. Elaborate on theories of motor control and its application in typical paediatric population.

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 L2- L3 spinal 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 Peadiatric therapist in mainstream school.
4. Explain the application of Yoga in Peadiatric 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.

Answer All The Questions **10 X 10 = 100 Marks**

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.

Answer All The Questions **10 X 10 = 100 Marks**

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.

Answer All The Questions **10 X 10 = 100 Marks**

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.

Answer All The Questions **10 X 10 = 100 Marks**

1. Explain components of 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 – 10-Nov-2025

[Time: 3 Hours] **[Max. Marks: 100]**

Fundamentals in Physiotherapy Practice, Pedagogy & Research
Paper -I (RS-4)
Q.P. CODE: 8129

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 ICF in documentation of rehabilitation assessment and management?
2. Describe ICMR ethical guidelines?
3. **Explain in detail the important aspects of experimental design**
4. What does a measure of central tendency indicate? Describe the important measure of central tendency?
5. What are the guiding considerations in the construction of questionnaire? Explain the difference between collection of data through questionnaires and schedules?
6. Describe in detail the influence of different types of exercises on various systems?
7. Explain the consideration of age and sex in exercise and training?
8. Explain the electrical properties of muscle and nerve?
9. Evaluate the Components of electrophysiological assessment devices?
10. Why entrepreneurship is important in physiotherapy and write in details of challenges faces in physiotherapy practice?

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Rajiv Gandhi University of Health Sciences, Karnataka

Second Year Master of Physiotherapy Degree Examination – 12-Nov-2025

[Time: 3 Hours] **[Max. Marks: 100]**

Fundamental Principles of Musculoskeletal Physiotherapy
Paper II (RS-4)
Q.P. CODE: 8130
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 structure and functions of neuro-muscular system.
2. How would you analyze using the various anthropometry methods to differentiate normal and abnormal curvature of the spine?
3. Explain the concepts of energetics in chronic Osteoarthritis of knee.
4. Discuss the changes in gait in older adults.
5. Explain the adaptation to different system during exercise program.
6. Explain the mechanics and pathomechancis of non-specific neck pain.
7. How would you distinguish the mechanics and pathomechanics of anterior cruciate ligament of knee?
8. Explain the mechanism of control of posture.
9. Discuss the specific pain states and syndrome in musculoskeletal conditions.
10. Explain the biophysical effects of heat in adhesive capsulitis.

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Rajiv Gandhi University of Health Sciences, Karnataka

Second Year Master of Physiotherapy Degree Examination – 14-Nov-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. ain in detail the basic assessment methods for diagnosis of musculoskeletal conditions.

2. orate the assessment method with differential diagnosis for shoulder impingement syndrome.

3. do you conclude while screening the pain in lumbar spine is due to disc herniation. Justify with differential diagnosis.

4. uss the autonomous Practice and decision making Process in musculoskeletal physiotherapy.

5. nguish the various special tests with interpretation for knee instability.

6. ain the exercise testing in musculoskeletal disease.

7. ine the orthotics devices with indications for Spinal conditions.

8. cribe the assessment method for a two years old child who developed excessive lateral curvature of the thoracic spine.

9. ain the pre and post operative assessment of fracture neck of femur.

10. ermine the use of ICF in musculoskeletal diagnosis.

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Rajiv Gandhi University of Health Sciences, Karnataka

Second Year Master of Physiotherapy Degree Examination – 17-Nov-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. uss the interventions to improve the mobility of shoulder joint following adhesive capsulities.
2. ain the adjunct therapies in managing chronic heel pain.
3. do you determine the methods to promote physical activity in musculoskeletal conditions?
4. t alternative intervention you suggest for lateral elbow pain based on biomechanical concepts for a patient who already under went conventional Physiotherapy treatment?
5. do you distinguish and prioritize the various external application techniques for correction of forward neck posture.
6. ain the cognitive behavioural methods in the treatment of post operative knee arthoplasty.
7. ain the adjuvant methods in musculoskeletal rehabilitation.
8. uss with evidence the electrotherapy management for low back pain.
9. ain the electromagnetic agents in rehabilitation.
10. gn a work hardening and conditioning program for a Stationary mechanical engineer suffering with repeated episodes of upper back and neck pain.

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Rajiv Gandhi University of Health Sciences, Karnataka

Second Year Master of Physiotherapy Degree Examination – 12-Nov-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. Explain the neurophysiology of balance.
2. Discuss the importance of force system and application of lever system in sports with suitable examples.
3. Identify the psychological aspects of athletes and list the psychological behavioural symptoms after injury. Describe briefly any one of the symptoms.
4. Explain the anti-doping guidelines of WADA in sports.
5. Describe the physiological adaptation and benefits of high altitude training.
6. List the non-communicable diseases (NCDs). Outline the importance of prevention of NCDs through physical activity.
7. Compare and contrast the patho-mechanics of tendon and muscle at different stages of healing.
8. Develop exercise and dietary precautions to be taken in diabetic athletes during strength and conditioning.
9. List the fundamental principles of training and enumerate the components of exercise prescription for performance enhancement.
10. An athlete visits sports physiotherapist for strength and conditioning after 2 weeks of hamstring muscle strain. Discuss the periodization principles in implementing strengthening program. Add a note on exercises progression.

Rajiv Gandhi University of Health Sciences, Karnataka

Second Year Master of Physiotherapy Degree Examination – 14-Nov-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. Write in detail about the Assessment of spinal injuries in motor sports.
2. Explain in detail about guidelines for return to sports process, based on strategic assessment of risk and risk tolerance (StARRT).
3. Mention the causes of foot drop following sports injuries. Explain in detail about its Kinesiological EMG.
4. What is the biopsychological approach for sports injury and discuss about the Implementation of a biopsycholosocial approach into physiotherapists practice.
5. What is fitness? Mention about the FITT Principles, add a note on health – related physical fitness assessment.
6. Explain the role of Diagnostic imaging techniques in the early diagnosis of injuries around the knee in an 16 year old amateur basketball players.
7. Write in detail about the 4 components of the pre – participation evaluation and add a note on the goals of pre – participation evaluation in sports.
8. Write in detail about the intrinsic and extrinsic risk factors in sports injuries.
9. Define pes planus. Explain the foot assessment among sprinters.
10. Define is Kin anthropometric evaluation. Explain in detail about the application of Kin anthropometric evaluation.

Rajiv Gandhi University of Health Sciences, Karnataka

Second Year Master of Physiotherapy Degree Examination – 17-Nov-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. Classify the preventive strategies of injuries by the athlete and physiotherapist.
2. What is Bankart lesion of shoulder joint? Explain the causes and preventive strategies and physiotherapy management of conservatively managed athlete.
3. Explain the principles of soft tissue mobilization, discuss the recent advances in improving the muscle function.
4. What is adapted physical activity? Explain the role of sports physiotherapist in prevention and management of sporting injuries in athlete with disabilities.
5. A male professional athlete sustained ACL injury and undergone ACL reconstruction, discuss the accelerated protocol and guidelines from day 1 to return to sports.
6. Compare and relate the sporting injuries in individual sports and team sports. Discuss and classify the type of injuries in each of the sports with examples.
7. List the possible intrinsic factors causing ankle sprain in volleyball player. Compare the different methods of ATFL rehab in restoration of ankle stability and function.
8. A basket-ball player complains of pain from 6 months in the patellar tendon, pain increases after activity and during rest. He is unable to perform his normal function from 2 weeks.
   Discuss the possible diagnosis
   Apply the treatment guidelines to decrease pain and improving function.
   Devise a protocol for the same.
9. A basket-ball women athlete presents with bilateral pain in the anterior inferior knee. She has been training in hard surface court for more than 5 years. Her pain has stopped her from participation in competitive sports. She has swelling in infra patellar region and presents with decreased force in extension and limited mobility during flexion. Explain the following with justification.
   List the possible structure causing pain and discomfort
   Devise hypotheses for the given scenario with clinical reasoning
10. Create a protocol of cardio pulmonary resuscitation procedure for a collapsed athlete on the field.

Rajiv Gandhi University of Health Sciences, Karnataka

Second Year Master of Physiotherapy Degree Examination – 12-Nov-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 compensatory relationship between bronchial and pulmonary circulation.
2. What is Coronary artery disease? Write a note on the risk factors and pathophysiology.
3. Describe electrical properties of the skin.
4. Enumerate the need of Pre-competition nutrition, with emphasis on timing and composition.
5. Write a note on the role of nutrition in exercise.
6. Describe the exergonic and endergonic chemical processes within the body and their importance.
7. Mention the types of exercise tolerance tests and give its importance.
8. Describe pain. Write a note of acute and chronic pain.
9. Describe the exercise training aspects in a individual with a lifestyle disease.
10. Enumerate the advantages and disadvantages of the anaerobic system.

Rajiv Gandhi University of Health Sciences, Karnataka

Second Year Master of Physiotherapy Degree Examination – 14-Nov-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. Describe the Biochemical markers measured in the ICU and their normative values.
2. Describe the ATS guidelines for PFT testing and interpretation.
3. Discuss the process and steps in POMR.
4. Describe the ECG lead systems using a 12 lead ECG format. Explain the anatomic relationships and coronary arteries involved.
5. Describe the Risk Stratification Criteria based on American Association of Cardiovascular and Pulmonary Rehabilitation (AACVPR).
6. What are the components in screening a burns patient? Add a note on the importance and use of rule of nines.
7. Enumerate the Hematological and biochemical values and interpretations in renal dysfunction.
8. Interpret the methods of exercise testing for strength.
9. Describe the protocols and the interpretation of exercise testing.
10. Explain subjective assessment of pain adding a note on the different types of pain sensations.

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Rajiv Gandhi University of Health Sciences, Karnataka

Second Year Master of Physiotherapy Degree Examination – 17-Nov-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. Illustrate a care plan in ICU for a post-organ transplantation patient. Mention about stages of barrier nursing.
2. Enumerate the principles of physical therapy management for Acute Medical Conditions
3. Describe in detail the physiological principles of various devices used for facilitating airway clearance.
4. Explain mechanical aids and their role in decreasing work of breathing.
5. Describe in detail the relevance of improved exercise capacity.
6. Discuss the effect of cardiac drugs on exercise performance.
7. Describe the elements of international standards for a cardiac rehabilitation program.
8. Explain the steps and importance of primary prevention in pulmonary diseases.
9. A 55 year old male with BMI of 34, is referred to physiotherapy for the management of obesity. Write in detail the assessment and management for the same. Add a note on the risk factors of obesity.
10. Elaborate ACSM cancer rehabilitation program.

Rajiv Gandhi University of Health Sciences, Karnataka

Second Year Master of Physiotherapy Degree Examination – 12-Nov-2025

[Time: 3 Hours] **[Max. Marks: 100]**

Applied Anatomy, Physiology and Biomechanics in Pediatrics - Paper-II (RS-4)
Q.P. CODE: 8139

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 clinical features of West Syndrome.
   Or
   Anthropometric changes across pediatric life span

2. Discuss effects of submaximal exercise on cardio respiratory system in children
3. Describe central pattern generator in detail.
4. Explain motor development of 1 year old child.
5. Discuss about normal growth and maturation of respiratory system.
6. Enumerate theories of motor control and explain the application of motor control in 6 year old male patient with hemiplegia.
7. Discuss neonatal reflexes in detail.
8. Write about thoracolumbar scoliosis.
   Or
   Write about biomechanical changes seen thoracolumbar scoliosis in children
9. Write note on neurogenic bladder and mention common conditions causing paediatric neurogenic bladder.
10. Mention gait deviation in children. Explain any 2 in detail.

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Rajiv Gandhi University of Health Sciences, Karnataka

Second Year Master of Physiotherapy Degree Examination – 14-Nov-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 about high risk neonates and their assessment in ICU.
2. Write pre and post operative assessment of 6 year old boy diagnosed with osteosarcoma.
3. Mention about scales used in developmental coordination disorder and elaborate its psychometric properties.
4. Write assessment based on ICF for 12 year old Cerebral Palsy child with GMFCS level 3
5. Explain Sensory perceptual and cognitive assessment in Austism Spectrum Disorder children.
6. Pre participation assessment to prevent sport injuries in children.
7. Explain electro diagnostic studies in brachial plexopathy.
8. Clinical and genetic assessment of a child with Down's syndrome.
9. Explain Alberta Infant Motor scale.
10. Assessment of a 8 year old male child with third degree burns.

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Rajiv Gandhi University of Health Sciences, Karnataka

Second Year Master of Physiotherapy Degree Examination – 17-Nov-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. Plan a physiotherapy management for a 2 year old non ambulating child.
2. Write about the recent advances in technology based intervention used in pediatrics.
3. Discuss the management of pain in Neonates using various modalities.
4. Discuss the balance training program for children with Developmental coordination disorder. Add a note on Recent advance.
5. Discuss the role of Physiotherapy in managing a child with inborn errors of metabolism.
6. Plan a physiotherapy management for a7 year old boy who has difficulty in understanding direction, distances and inability to differentiate shapes.
7. Elaborate the PT management of a 18month old child operated for Acyanotic Heart disease.
8. Discuss the Physiotherapy management of a 11 year old boy in PICU diagnosed with Polyneuropathy.
9. Describe the management of child with 3rd degree electrical burns.
10. Explain the treatment plan for Diplegic Cerebral Palsy using ICF.

Rajiv Gandhi University of Health Sciences, Karnataka

Second Year Master of Physiotherapy Degree Examination – 12-Nov-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.

Answer All The Questions **10 X 10 = 100 Marks**

1. Explain applied anatomy of Peripheral nervous system.
2. Write about autonomic dysfunction in Physiotherapy practice.
3. What are subcortical structures and explain the role of subcortical structures in Motor Control.
4. Describe sensory development in detail.
5. Explain neural control of walking.
6. Write about variation of hand control tasks across different age groups.
7. Explain the classification of motor task.
8. What are the parameters to assess motor learning in Neuro-rehabilitation?
9. What are the Theories of Behaviour and explain the behavioural changes in disease prevention.
10. Describe the effect of Neuro-pharmacology on exercise.

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Rajiv Gandhi University of Health Sciences, Karnataka

Second Year Master of Physiotherapy Degree Examination – 14-Nov-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. Explain assessment of higher mental functions. Explain in detail any two scales used for the same.
2. Explain assessment procedure and findings in Guillian Barre Syndrome.
3. Detail the components of fall risk assessment in elderly persons with neurological disorders. Explain any two scales used for fall risk assessment in this population.
4. Compare and contrast evaluation using computed tomography and magnetic resonance imaging.
5. Explain normal electromyography findings and those in muscular dystrophies.
6. Explain in detail different methods of gait assessment.
7. Explain assessment of activities of daily living. Explain in detail any three scales used for objectively assessing ADL.
8. Outline the principles of environmental assessment.
9. What is Quality of Life? Explain the common scales used to measure Quality of Life.
10. Explain the disease specific outcome measures used in assessment of patients with spinal cord injury.

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Rajiv Gandhi University of Health Sciences, Karnataka

Second Year Master of Physiotherapy Degree Examination – 17-Nov-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.

Answer All The Questions **10 X 10 = 100 Marks**

1. Describe the treatment for 55-year-old female patient with stage 4 Hoen and Yahr Scale Parkinson's disease.

2. Write about training motor planning and control in T7 spinal cord injury.

3. What is Biofeedback? Write about the types of biofeedback with its application in Neurological rehabilitation.

4. **What is Polypharmacy? Write about the effect of Polypharmacy in elderly.**
   Or

   Role of caregiver education in neuro rehabilitation

5. What is Robotic Therapy? Write about retraining with robotic therapy in T4 level Spinal Cord Injury.

6. Enumerate the merits and demerits of Sensory Integration and mention its application in sensory processing disorders.

7. Write about Task oriented training in self-care.

8. **What is Neuroplasticity and write about the principles of Neuroplasticity.**
   Or
   What is Neuroplasticity? Write the interventions for promoting neuroplasticity

9. Write about the adaptive technology in Gait training

10. Explain the home environmental remodelling advise for 56-year-old stroke patient.

Rajiv Gandhi University of Health Sciences, Karnataka

Second Year Master of Physiotherapy Degree Examination – 12-Nov-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. Discuss components of transtheoretical model of behavior change.
2. Critically review the healthcare delivery systems in India.
3. Discuss barriers to Tele physiotherapy services in remote areas and explain any two strategies to improve Tele physiotherapy services.
4. Discuss provisions of rights of person with disability act, 2016.
5. With reference to WHO, explain the need for integrating rehabilitation in health systems
6. Explain the biomechanical principles of ankle foot orthosis.
7. Explain biomechanical analysis of stoop and free style squat lifting.
8. Discuss physiological changes with aging in neurological, musculoskeletal, cardio-respiratory, and immune system.
9. Describe the biomechanical changes in human body during pregnancy.
10. Describe the potential complications following radical mastectomy and explain their impact on activities of daily living in cancer survivors.

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Rajiv Gandhi University of Health Sciences, Karnataka

Second Year Master of Physiotherapy Degree Examination – 14-Nov-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.

Answer All The Questions 10 X 10 = 100 Marks

1. Describe the relationship between International Classification of Diseases and ICF. Why are ICD and ICF important?

2. Describe purpose and assessment tools of behavioural health.

3. What are the characteristics of clinical pathways and its contribution to healthcare quality?

4. What are the components of health-related fitness? Explain any one cardio respiratory fitness tests for children with physical disabilities.

5. Describe the process of assessment for wheelchair prescription for an elderly person with Stroke with significant disability.

6. Explain selection criteria and ergonomic assessment tools for musculoskeletal disorders.

7. Explain any four fall risk assessment tools for elderly. Add a note on the psychometric properties.

8. Explain various methods to assess pelvic floor muscle function and strength.

9. Explain the palliative care need assessment for cancer pain with its significance.

10. What is accessibility audit and why is it important?

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Rajiv Gandhi University of Health Sciences, Karnataka

Second Year Master of Physiotherapy Degree Examination – 17-Nov-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.

Answer All The Questions 10 X 10 = 100 Marks

1. Implement a health promotion intervention for employees of garment factory with capacity of 100 employees.
2. Describe any four principles of behavior change interventions.
3. Discuss WHO recommendations on rehabilitations in health systems.
4. Discuss implementation of CBR guidelines with an appropriate example.
5. Describe strategies for training a patient having foot drop to use ankle foot orthosis.
6. Discuss evidence from recent literature on work hardening program.
7. Plan and implement a geriatric rehabilitation program for residents of old-age home.
8. Prescribe an exercise program for antenatal care during the last trimester of Pregnancy.
9. Explain current clinical practice guidelines integrating physical activity and exercises as intervention strategy in cancer survivors.
10. Describe best practice guidelines in community health and rehabilitation.

Rajiv Gandhi University of Health Sciences, Karnataka

Second Year Master of Physiotherapy Degree Examination – 12-Nov-2025

[Time: 3 Hours] **[Max. Marks: 100]**

Fundamental Principles of Movements and its Dysfunction–Paper-II(RS-4)

Q.P. CODE: 8148

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 connective tissue present in the human joints. Appriase the general effects of injury and disease on connective tissues.

2. Critically discuss the difference between performance and exercise based on exercise and physiology.

3. Describe in detail Vitamin D metabolism and its effects on movement.

4. Explain the kinematic variables that describe movements. Use one example to elucidate.

5. Analyse the functional aspects of the development of Prehension and precision activities of the hand.

6. What is the role of Anthropometric evaluation in occupational settings? Differentiate work hardening and conditioning.

7. What are the Biochemical and physiological changes in exercising based on altitude

8. List and explain motor control theories. Enumerate motor control development through Ontogenic patterns in humans.

9. Explain in detail about the structure of hip joint in relation to weight bearing in bilateral and unilateral stance with emphasis on muscle work.

10. Explain Electron transport chain and its importance in exercise physiology.

Rajiv Gandhi University of Health Sciences, Karnataka

Second Year Master of Physiotherapy Degree Examination – 14-Nov-2025

[Time: 3 Hours] **[Max. Marks: 100]**

Measurement and Assessment in Movement - Paper -III (RS-4)
Q.P. CODE: 8149

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 assessment of the whole person who has to be rehabilitated after a prolonged bed rest due to a systemic illness. Justify your answer with relation to physiology of prolonged inactivity.
2. Describe the anatomical adaptations to exercise in various systems.
   Or
   Biomechanical adaptations to exercise and aging
3. Discuss the role of biochemical markers in assessment and prescription of strength training. What are the limitations of these markers?
4. Compare and contrast the musculoskeletal biomechanics in a child of 8 years, an adolescent girl of 17 years and a woman over 60 years. How would these factors affect your assessment protocol for physical fitness prescription?
5. Compare and contrast the assessment of gait using subjective naked eye observation, using a standardised quality assessment form and quantitative laboratory analysis.
6. What are the parameters of balance that can be assessed? What are the valid methods of clinical analysis?
7. A 37 year old lady reports to the department with a history of shoulder pain. All investigations are normal. Her BMI is 33 and she reports that since the Covid pandemic she has been working from home as a social media marketer. What are your hypotheses for her shoulder pain? What assessments would you do to rule out serious pathology? Justify your choice of tests and measures.
8. What are the strengths and limitations of observational balance analysis tools? Explain with examples.
9. What are the indications for instrumented gait evaluation? Discuss strengths and limitations of instrumented and clinical assessment of gait in children with gait dysfunction.
10. A 25 year old student a known case of untreated congenial talipes equinovarus presents with new onset history of back pain. Your initial hypothesis is that it is related to early degenerative changes from the affected limb. How would you proceed with assessment? Justify.

Rajiv Gandhi University of Health Sciences, Karnataka

Second Year Master of Physiotherapy Degree Examination – 17-Nov-2025

[Time: 3 Hours] **[Max. Marks: 100]**

Movement Remediation - Paper -IV (RS-4)
Q.P. CODE: 8150

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. Analytically discuss the management for gaining head control for 2 year old boy with spastic quadriplegic cerebral palsy.
   Or

   Analytically discuss the Management of postural control following prolonged bed rest
2. Appraise the structural and physiological adaptation to strength training exercises.
3. Critically explain about visualization and goal setting in counselling.
4. Explain in detail about the strengthening methods for different type of muscle fibers in performance training.
5. Explain detail about the management of mobility restriction affecting gait.
6. Analyse the role of understanding and evaluating strength in the workplace.
7. Summarize the anthropometric design guidance for physiotherapy devices.
8. Analyze and design a functional training program for a known case of COPD with recent history of falls.
   Or

   Analyze and design a functional training program for a person with mobility dysfunction interfering with manual labor complicated by poor lung function
9. List the fall risk alleviation principles used in elderly. Critique any one in detail.
10. Discuss analytically the biomechanical and functional approaches to improving movement in patients with brain disorders.