Rajiv Gandhi University of Health Sciences, Karnataka

Second Year Master of Physiotherapy Degree Examination – 29-Oct-2026

[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. Critically appraise musculoskeletal changes and differences associated with gender, age, and physical activity.

2. What is graded exercise testing? What is the most valid and direct measure of functional cardio respiratory capacity? Analyse and interpret cardio respiratory fitness.

3. What is flexibility? Discuss the factors affecting flexibility. Do sit-and-reach test yield valid measures of hamstring and low back flexibility? Explain.

4. Explain the biomechanical properties of bone. Critically analyse the effect of age on bone density and how this change affects the biomechanical properties of cortical and Trabecular bone.

5. Explain three real-life scenarios that demonstrate the mechanism of injury in tendons and ligaments where there is a high external load, a high strain rate with a low load, and a combined high load with a high strain rate.

6. Critically analyse the pathomechanics of the shoulder.

7. Explain the normal transverse plane motion of the hip through the Gait cycle. Explain the pelvis compensation in patients with a history of left OA and subsequent loss of left hip internal rotation ROM during the patient's gait cycle.

8. Analyse the Ergonomical issues faced by Dentist. Explain the Ergonomical corrections for the same.

9. Classify posture. Explain the neural and biomechanical factors influencing upright posture.

10. Define gait. Explain the detailed analysis for Circumductory Gait.

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