

Rajiv Gandhi University of Health Sciences, Karnataka
I Year B.P.T. Degree Examination – 26-May-2025

Time: Three Hours

Max. Marks: 100 Marks

BIO-MECHANICS (RS - 5)

Q.P. CODE: 2734

Your answers should be specific to the questions asked.

Draw neat, labeled diagrams wherever necessary.

LONG ESSAYS (Second Question choice)

2 x 10 = 20 Marks

1. Describe the structure of Hip Joint. Add a note on Kinetics and Kinematics of hip joint.
2. Describe in detail about mechanism of muscle contraction and explain the different types of muscle contraction with examples.

Or

Explain biomechanics of Thorax and Chest wall.

SHORT ESSAYS (Question No.3 & 12 choice)

10 x 5 = 50 Marks

3. Scapulo humeral rhythm.

Or

List out various gait deviations. Discuss any two in detail.

4. Postural changes in pregnancy.
5. Determinants of Gait.
6. Lumbo pelvic rhythm.
7. Different types of Grip.
8. Mention in brief about concurrent force system.
9. Enumerate the deviations occurring at ankle joint.
10. Describe in detail the classification of joints.
11. Length tension relationship of a muscle.
12. Explain levers in detail.

Or

Describe stress and strain curve.

SHORT ANSWERS

10 x 3 = 30 Marks

13. Scoliosis.
14. Stair climbing – briefly explain the muscle work.
15. Anteversion and retroversion.
16. Patella Plica.
17. Pes planus and Pes-cavus.
18. Define axis and planes.
19. Name the ligaments of Hip Joint.
20. Define moment arm of Force.
21. Palmar arches.
22. Open kinematic chain.
