

Rajiv Gandhi University of Health Sciences, Karnataka
I Year B.P.T. Degree Examination – 13-Jul-2022

Time: Three Hours

Max. Marks: 100 Marks

BIO-MECHANICS (RS5)

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. Explain the structure of knee joint in detail and add a note on screw home mechanism of knee joint.
2. Define ventilation and explain the kinetics and kinematics of ribcage in detail.

OR

Define gait and explain in detail about saggital plane analysis of gait.

SHORT ESSAYS (Question No 3 & 12 choice)

10 x 5 = 50 Marks

3. Define force and enumerate the force components.

OR

Describe scapula humeral rhythm.

4. Discuss the structure of connective tissue.
5. Describe the mechanical behavior of ligament and bone.
6. Describe the structure of Atypical vertebra.
7. Explain briefly dynamic stability of shoulder joint.
8. Briefly explain different types of muscle contraction with neat diagram.
9. Define axis and plane with respect to hip joint movements.
10. Explain the strategies controlling posture.
11. Discuss movement analysis of lifting.
12. Explain the structure of subtalar joint.

OR

Describe active and passive insufficiency.

SHORT ANSWERS

10 x 3 = 30 Marks

13. Name the pulleys of hand.
14. What is angle of inclination of femur?
15. Define law of equilibrium.
16. Define static and dynamic posture.
17. Name the muscles responsible for extension of knee joint.
18. Define torque.
19. Name the deviations of posture occurring in frontal plane.
20. Name the ligaments of shoulder joint.
21. Describe in short stress strain curve.
22. What are the different types of goniometer?
