Rajiv Gandhi University of Health Sciences, Karnataka
I Year B.P.T Degree Examination – 19-Dec-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. Discuss in detail about dynamic stabilizers of shoulder joint and a note on scapulo humeral rhythm.

2. Define Gait cycle. Explain various determinants of Gait in detail.
   OR
   Describe the structure of cervical spine and explain about various forces acting on cervical spine.

SHORT ESSAYS (Question No 3 & 12 choice)   **10 x 5 = 50 Marks**

3. Explain force velocity relationship of a muscle.
   OR
   Name the pulleys in human body. Add a note on anatomical pulleys.
4. Load deformation curve

5. Describe the kinematics of Elbow Joint.

6. Explain about palmar arches of hand in detail.

7. Describe IInd order lever with example and neat diagram.

8. Explain the goniometric procedure for measuring cervical range of motion.

9. Enumerate various prehensions of hand in detail.

10. Explain briefly pronation and supination twist.

11. Explain locking and unlocking mechanism of Knee joint.

12. Discuss about ligaments of Hip joint in detail.
    OR
    Describe sagittal plane analysis of gait.

SHORT ANSWERS   **10 x 3 = 30 Marks**

13. What is Open and closed kinematic chain?

14. What is concentric and eccentric contraction?

15. What are fibrous joints?

16. Define angle of pull.

17. What are the phases of sit to stand?

18. Define kinetics and kinematics.

19. Name the ligaments supporting knee joint

20. What is Q – angle and its significance?

21. Define work and power.

22. What is active and passive insufficiency?

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