

**Rajiv Gandhi University of Health Sciences, Karnataka**  
**I Year B.P.T. Degree Examination – 27-Nov-2024**

**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. Explain the structure of knee joint in detail and add a note on screw home mechanism of knee joint.
2. Define posture and factors affecting posture. Explain sagittal plane analysis of posture.  
**Or**  
Define lever. Explain the various types of levers with examples and add a note on.

**SHORT ESSAYS (Question No.3 & 12 choice)**

**10 x 5 = 50 Marks**

3. Write in detail about Scapulo Humeral Rhythm.  
**Or**  
Movement analysis of Lifting.
4. Describe plantar arches and its significance.
5. Kinematics of elbow joint.
6. Explain the role of patella in knee joint.
7. Write a note on radioulnar joint.
8. Discuss supination and pronation twist.
9. Define active insufficiency. Explain in detail with example.
10. What is motor unit? Explain the types of muscle fibers.
11. Explain the biomechanics of mandibular motions.
12. Explain the biomechanics of mandibular motions.  
**Or**  
Describe equilibrium and classify with appropriate examples.

**SHORT ANSWERS**

**10 x 3 = 30 Marks**

13. What is Windlass mechanism?
14. What is Trendelenburg gait?
15. Angle of Torsion.
16. Index of install and Salvati.
17. Degree of toe out.
18. Stress strain curve.
19. What is Genu Recurvatum?
20. Nutation and counter Nutation.
21. Moment Arm of Force.
22. What is closed packed position?

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