

# Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination - OCT-2019

**Time: Three Hours**

**Max. Marks: 100 Marks**

## **BIO-MECHANICS (RS - 5)** **QS'. CODE: 2734**

Your answers should be specific to the questions asked.  
Draw neat, labeled diagrams wherever necessary

### **LONG ESSAYS (Answer any Two)**

**2 x 10 = 20 Marks**

1. Define posture and factors affecting posture. Explain sagittal plane analysis of posture.
2. Explain in detail about kinetics and kinematics of thoracic rib cage.
3. Define lever and explain about various orders of lever with suitable examples and neat diagrams.

### **SHORT ESSAYS (Answer any Twelve)**

**12 x 5 = 60 Marks**

4. Concurrent force systems
5. Enumerate various grips of hand.
6. Enumerate different types of muscle contraction.
7. Distance and temporal variables of gait
8. Analysis of lifting
9. Define gait and add a note on any two pathological gaits.
10. Palmar arches and its significance
11. Define Goniometer. Its principles, types and uses.
12. Define pulley and enumerate various pulleys present in human body.
13. Active **and** passive insufficiency
14. Static stability of shoulder joint
15. Analyse various pinches of hand
16. Briefly classify joints in detail.
17. Supination and pronation twist

### **SHORT ANSWERS**

**10 x 2 = 20 Marks**

18. Antalgic gait
19. Carrying angle
20. Functional position of wrist and hand
21. Mechanical advantage
22. Muscles of ventilation
23. Creep and relaxation
24. Angle of torsion
25. Degree of toe out
26. Index of insall and salviti
27. Define axis and plane.