

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – Sep 2012

Time: Three Hours

Max. Marks: 100 Marks

BIO-MECHANICS (Revised Scheme – 4)

Q.P. CODE: 2707

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. Describe the knee complex and locking mechanism of knee.
2. List the ligaments attached in vertebral column and the importance of stability and mobility of the vertebral column.
3. Explain about the scapulo humeral rhythm during elevation through abduction of shoulder complex.

SHORT ESSAYS (Answer any Twelve)

12 x 5 = 60 Marks

4. Define lever. Explain the different types of levers, citing examples in relation to human body.
5. Static stabilization of shoulder joint.
6. Define active insufficiency. Explain it with examples.
7. Explain Anatomic pulley with example.
8. Write a note on radio ulnar joint?
9. Explain kinematics of chest wall.
10. Discuss the supination and pronation twist.
11. What is stress and strain? Explain load deformation curve.
12. Explain concurrent force system with example.
13. Explain the Newton's laws of motion with examples
14. Mobility of hip joint.
15. Classify diarthrodial joints with examples.
16. Structure and function of Sacroiliac joint.
17. Patella femoral joint movement.

SHORT ANSWERS

10 x 2 = 20 Marks

18. What are osteokinematics and arthrokinematics?
19. What is angle of pull?
20. Write muscle work in hook grip?
21. Functional significance of palmar arches.
22. What is creep?
23. Define work and energy.
24. Define angle of inclination of femur.
25. What is grasshopper eyed patella?
26. Good and Bad Posture.
27. At which range of elbow, the torque created by biceps is greater? Why?
