

Rajiv Gandhi University of Health Sciences, Karnataka

I Year B.P.T. Degree Examination – APRIL -2015

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 biomechanics of abduction of shoulder joint with factors contributing for its stability.
2. What are the ligaments of hip joint? Explain bilateral and unilateral stance with examples.
3. What is the functional position of hand? Add note on power grips.

SHORT ESSAYS (Answer any Twelve)

12 x 5 = 60 Marks

4. Describe the structure of a vertebra. Add a note on curves in the vertebral column with its articulations and functions.
5. Compare Lumbo pelvic rhythm with Scapula humeral rhythm.
6. What is biarticular muscle? Explain their property of active insufficiency with an example.
7. Describe the order of levers with examples.
8. Biomechanics of ankle joint
9. Movements of ribcage during breathing – add a note on muscles of breathing.
10. Explain locking and unlocking of knee joint.
11. Movement analysis – lifting
12. Describe the structure and function of intervertebral disc.
13. Define posture. Explain the kinetics of posture.
14. What is lubrication? Explain the types of lubrication of synovial joint.
15. Biomechanics of cervical spine
16. Pronation twist
17. What is gait cycle? Describe the Energy expenditure during normal gait

SHORT ANSWERS

10 x 2 = 20 Marks

18. Agonists
19. What is thumb opposition?
20. What are the factors that affect muscle function?
21. Role of menisci at knee
22. What is the characteristic of gluteus medius gait?
23. Spondylolisthesis
24. Acetabular ante-version
25. Ligaments of ankle joint
26. Index plus minus foot
27. Annular pulleys
