

Second Year BPT Degree Supplementary Examinations - April 2014

BIOMECHANICS

Time : 3 hrs

Max marks : 100

- Answer all questions
- Draw diagrams wherever necessary

Essays

(2x10=20)

1. Explain in detail the articulations of the shoulder complex and add a note on its static and dynamic stability
2. Define posture and explain sagittal analysis of posture

Short notes

(10x5=50)

3. Describe COG, LOG and BOS
4. Explain in detail the biomechanics of lifting
5. Explain the phases and kinematics of stair climbing
6. Explain the structure of a synovial joint
7. Explain the role of intrinsic muscles of the hand
8. Define stress and strain. Add a note on load deformation curve
9. Describe the structure of the radio-ulnar joint
10. Define gait and classify the various phases & sub phases of the gait cycle
11. Explain the movements of the sacroiliac joint
12. Describe the role of patella in the knee joint

Answer briefly

(10x3=30)

13. Define inertia
14. Describe the functional position of the wrist and the hand
15. Angle of pull of a muscle
16. Define cadence
17. Centre edge angle
18. Movements of the TMJ joint
19. Hysteresis
20. Angle of torsion of femur
21. Pivot joint with example
22. Palmar arches
