

Second Year BPT Degree Supplementary Examinations March 2018

BIOMECHANICS

(2010 Scheme)

Time : 3 hrs

Max marks : 100

- Answer all questions
- Draw diagrams wherever necessary

Essays

(2x10=20)

1. Define kinematics. Discuss the various kinematic variables used to describe human motion
2. Define scapulohumeral rhythm. Explain integrated function of the shoulder complex

Short notes

(10x5=50)

3. Explain load deformation curve
4. Describe movements of the rib cage during respiration
5. Explain the structure of the extensor mechanism of the hand
6. Define active insufficiency. Give one example
7. The kinematics of the upper cervical spine
8. Explain the activity of biceps brachii during elbow flexion
9. Explain why a cane should be used contralateral to the side of a weak or painful hip
10. Explain the structure and function of the ligaments of the ankle
11. Define gait. Classify gait cycle
12. Explain the strategies of postural control

Answer briefly

(10x3=30)

13. Define centre of gravity
14. What is lumbopelvic rhythm
15. What is the closed packed position of the hip joint
16. What are the movements of the patella
17. Define open kinematic chain
18. What is an Isokinetic exercise
19. What are concurrent forces
20. Define prehension
21. Carrying angle
22. Mention the ligaments of the sternoclavicular joint