

Second Year BPT Degree Supplementary Examinations March 2019

Biomechanics

(2010 Scheme)

Time: 3 hrs

Max marks: 100

- Answer all questions
- Draw diagrams wherever necessary

Essays

(2x10=20)

1. Define gait. Classify gait cycle and its sub phases. Discuss movements of the ankle joint during stance phase of the gait cycle
2. Explain forces on the hip joint during unilateral stance

Short notes

(10x5=50)

3. Discuss postural analysis in the sagittal plane
4. Describe the articulation of the transverse tarsal joints
5. Explain the role of patella in knee extension
6. Define passive insufficiency. Give one example
7. Discuss movements of the pelvis
8. Explain structure of the radioulnar joints
9. Explain arches of the hand and its function
10. Describe the articulating surfaces of the elbow
11. Explain the ligaments of the glenohumeral joint
12. Describe the motions at the temporomandibular joints

Answer briefly

(10x3=30)

13. Define pes cavus
14. Pronation twist
15. What is Q angle
16. What are the attachments of the transverse carpal ligament
17. Define closed kinematic chain
18. What is an isometric I exercise
19. What are parallel forces
20. Define power grips
21. Centre edge angle of the acetabulum
22. Lateral ligaments of the ankle joint