

(2012 - Scheme)

Biomechanics and Kinesiology

Time : 3 hrs

Max marks : 100

- **Answer all questions**
- **Draw diagrams wherever necessary**

Essays:

(2x14=28)

1. Define gait and the phases of gait cycle. Describe the kinetic analysis of gait. (2+6+6=14)
2. Define posture. Describe postural control in detail. (2+12=14)

Short notes:

(4x8=32)

3. Mechanics of breathing
4. Explain the humero-radial articulation and the effects of immobilization in elbow joint
5. Age related changes in vertebral column
6. Dynamic stabilizers of shoulder joint

Answer briefly:

(10x4=40)

7. Patella alta and patella baja
8. Define power and endurance
9. Mechanical advantages of class I and II levers
10. Types of muscle work.
11. Q angle and its significance.
12. Screw home movement
13. Angle of wiberg.
14. Safe lifting
15. Functional position of the hand
16. Properties of connective tissues.