



## (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.

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