

**First Year BPT Degree Examinations August 2017**

**Paper III – Biomechanics and Kinesiology  
(2016 Scheme)**

**Time: 3 hrs**

**Max marks: 100**

- Answer all questions
- Draw diagrams wherever necessary

**Essays**

**(2x15=30)**

1. List out the joints forming the shoulder complex. Explain the kinematics of gleno-humeral joint.
2. Define gait. Discuss the kinetics and kinematics of normal gait.

**Short Essays**

**(4x10=40)**

3. Analyze the various types of grips and pinches. Describe the movement occurring in the relevant joints.
4. Enumerate the various types of joints. Explain in detail each type giving example.
5. Describe the articulations in the knee joint. Explain the screw home mechanism.
6. Explain the types of muscle fibers and its function. Describe the type of muscle contraction with suitable examples.

**Short Answers**

**(10x3=30)**

7. Stress - strain curve.
8. What is closed packed position. Give one example.
9. Define cadence, the angle of toe out, gait speed.
10. Movements of the temporomandibular joint.
11. Nutation and counter nutation.
12. Lumbar pelvic rhythm.
13. Metatarsal break.
14. Define synergist and antagonist.
15. Convex-concave rule.
16. Movements of rib cage during ventilation.