

P P SAVANI UNIVERSITY

Fifth Semester of B. P.T. Examination

January 2020

SPPT 3050 BIOMECHANICS AND KINESIOLOGY

20.01.2020, Monday

Time: 09:00 a.m. To 12:00 p.m.

Maximum Marks: 70

Instructions:

1. The question paper comprises of two sections.
2. Section I and II must be attempted in separate answer sheets.
3. Make suitable assumptions and draw neat figures wherever required.
4. Use of scientific calculator is allowed.

SECTION - I

- Q - 1 Essay Question(Any One) [10]**
- (i) Explain dynamic stability of Shoulder joint and Pathomechanics of Supraspinatus impingement.
- (ii) What is Prehension? Explain in detail about Power grip and precision handling.
- Q - 2 Short Note(Any Two) [10]**
- (i) What is Pennation angle of muscle and how it affects the force transmission?
- (ii) Carrying angle of elbow and its importance
- (iii) Central column of wrist
- Q - 3 Very Short Notes(Any Five) [15]**
- (i) Define Kinetics and kinematics with example
- (ii) Classification of joints
- (iii) Internal and external torque
- (iv) Functional position of wrist and hand
- (v) Core muscles of spine
- (vi) Nurse maid's Elbow
- (vii) Saddle joint with example

SECTION - II

- Q - 1 Essay Question(Any One) [10]**
- (i) Describe the deviations observed from frontal and sagittal plane analysis of posture.
- (ii) Describe the function of plantar arches of the foot.
- Q - 2 Short Note(Any Two) [10]**
- (i) Angle of inclination of femur and its significance
- (ii) Measurement of Q-angle and its interpretation
- (iii) Supination and Pronation twist
- Q - 3 Very Short Notes(Any Five) [15]**
- (i) Functions of menisci
- (ii) Cadence
- (iii) Phases of gait cycle
- (iv) Quadriceps Lag
- (v) Metatarsal break
- (vi) Components of lateral collateral ligament of ankle
- (vii) Structure of Anterior Cruciate Ligament
