

P P SAVANI UNIVERSITY
Fifth Semester of B.P.T. Examination
January 2019
SPPT 3050 Biomechanics and Kinesiology
Time: 9:00a.m. To 12:00noon Max. 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

(35 Marks)

Question 1 (Essay Question -Any one)

(10*1=10 Marks)

- 1) Write in detail about Mechanics of shoulder joint and explain scapula-humeral rhythm.
- 2) Describe the static and dynamic stabilization of shoulder joint.

Question 2 (Short Notes - Any Two)

(2*5=10 Marks)

- 1) Describe the "carrying angle".
- 2) Anatomical levers and examples of each order of lever.
- 3) Spinal curves and intrinsic stabilizing forces acting on spine.

Question 3 (Very Short Notes-Any Five)

(3*5=15 Marks)

- 1) Functional position of wrist and hand.
- 2) Ligaments of radio-ulnar joints.
- 3) Importance of center of gravity.
- 4) Types of muscle contraction.
- 5) Classify joints.
- 6) Anatomic pulley.
- 7) Mechanics of thorax.

SECTION-II

(35 Marks)

Question 1 (Essay Question –Any one)

(10*1=10 Marks)

- 1) Explain Arthrokinematics of Patellofemoral Joint?
- 2) Discus in detail the prehension activities of Hand.

Question 2 (Short Notes – Any Two)

(5*2=10 Marks)

- 1) Locking and unlocking mechanism of knee.
- 2) Pronation Twist
- 3) Acromio-Clavicular joint.

Question 3 (Very Short Notes-Any Five)

(3*5=15 Marks)

- 1) Metatarsal Break
- 2) Attachments and function of ACL of Tibiofemoral joint,
- 3) Genu Vara and Genu Valga.
- 4) Deviation of posture in Sagital plane.
- 5) Treatment plane in Mobilization.
- 6) Kinematic Chains.
- 7) Angle of torsion of the femur
