



# BRAINWARE UNIVERSITY

Term End Examination 2023-2024

Programme – B.Physiotherapy-2021/B.Physiotherapy-2022

Course Name – Biomechanics & Kinesiology - II

Course Code - BPTC401

( Semester IV )

Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

## Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

- (i) Identify the muscle responsible for pelvic hike
  - a) Piriformis
  - b) Quadratus lumborum
  - c) Quadratus femoris
  - d) Sartorius
- (ii) Select the function of lateral collateral ligament
  - a) Resist valgus stress
  - b) Resist varus stress
  - c) Resist tibial anterior translation
  - d) Resist tibial posterior translation
- (iii) Select the appropriate answer: The strongest ligament of vertebral column is
  - a) Supraspinous
  - b) Interspinous
  - c) Anterior longitudinal
  - d) Posterior longitudinal
- (iv) Select the condition seen with increased Q-angle
  - a) Genu recurvatum
  - b) Genu valgum
  - c) Genu varum
  - d) Cubital valgus
- (v) Name the muscle which is responsible for locking of the knee
  - a) Hamstring
  - b) Quadriceps
  - c) Psoas Major
  - d) Sartorius
- (vi) Identify the nerve which is innervating wrist extensors
  - a) Median
  - b) Radial
  - c) Ulnar nerve
  - d) Axillary
- (vii) Select the appropriate answer: In advanced pregnancy \_\_\_\_\_ pelvic tilting is present
  - a) Anterior
  - b) Posterior
  - c) Lateral
  - d) None of these
- (viii) Select the muscle which become lengthened in hyper lordotic posture
  - a) Psoas major
  - b) Sternocleidomastoid
  - c) Hamstrings
  - d) Upper trapezius
- (ix) Choose the correct answer: Femoral retroversion is

- a) When angle of anterior torsion is greater than 15 degree  
 c) When angle of anterior torsion remain same
- b) When angle of anterior torsion is less than 15 degree  
 d) When angle of inclination of femur increases
- (x) Select the muscle present in pes anserinus  
 a) Gastrocnemius  
 c) Plantaris
- b) Gacilis  
 d) Soleus
- (xi) Name the condition in which lumbar kyphosis is noted  
 a) Sway back posture  
 c) Lordotic posture
- b) Flat back posture  
 d) None of these
- (xii) Select the correct answer: In standing posture line of gravity is \_\_\_\_\_ to lumbar region  
 a) Anterior  
 c) Lateral
- b) Posterior  
 d) Medial
- (xiii) Select the correct answer: In standing posture line of gravity is \_\_\_\_\_ to sacroiliac joint  
 a) Anterior  
 c) Lateral
- b) Posterior  
 d) Medial
- (xiv) Name the muscle which contracts eccentrically through the two phases of gait cycle  
 a) Psoas major  
 c) Erector spinae
- b) Illiacus  
 d) Lattisimus dorsi
- (xv) Identify the cause of tennis elbow  
 a) Inflammation of ECRB  
 c) Inflammation of triceps
- b) Inflammation of pronator teres  
 d) Inflammation of biceps

### Group-B

(Short Answer Type Questions)

3 x 5=15

2. Describe the function of plantar aponeurosis (3)  
 3. Define Nurse maid elbow. (3)  
 4. Determine the arthrokinematics of knee joint complex (3)  
 5. Describe the role of LOG and BOS on static posture (3)  
 6. Illustrate the pathomechanics of carpal tunnel syndrome (3)

OR

Analyze about the close pack and open pack position of any joint (3)

### Group-C

(Long Answer Type Questions)

5 x 6=30

7. Explain the kinematics of glenohumeral joint. (5)  
 8. Illustrate nutation and counter-nutation. (5)  
 9. Describe the role of patella in the various function of knee joint (5)  
 10. Analyze the normal erect standing posture in an anterior, posterior and lateral view (5)  
 11. Illustrate the static and dynamic stabilizers of shoulder. (5)  
 12. Explain the biomechanical deviation seen in scoliosis. (5)

OR

Compare flat back posture and lordotic posture in human. (5)

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