

THE TAMIL NADU Dr.M.G.R. MEDICAL UNIVERSITY

[BPT 0122]

**JANUARY 2022
(AUGUST 2021 EXAM SESSION)**

Sub. Code: 6277

**BACHELOR OF PHYSIOTHERAPY DEGREE COURSE
SECOND YEAR (Regulations from 2017-2018 onwards)
PAPER II – BIO-MECHANICS, APPLIED ANATOMY & KINESIOLOGY
*Q.P. Code : 746277***

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Describe in detail the function and biomechanics of lumbar spine and also its Pathomechanics.
2. Give in detail the interaction between the spine, pelvis, hip, knee ankle and foot and upper limbs in gait.

II. Write notes on:

(10 x 5 = 50)

1. Hand Function.
2. Importance of angles and curves in femur.
3. Elasticity and it's effects over joints.
4. Arches of foot and its biomechanics.
5. Comment on Osteo kinematics and Arthro kinematics.
6. Role of Scapulo Humeral Rhythm.
7. Optimal muscle length, comment on its efficiency.
8. Grip and grasp functions.
9. Abdominals in posture maintenance.
10. Elbow joints – its biomechanics.

III. Short answers on:

(10 x 2 = 20)

1. Stride Length.
2. Pes Cavus.
3. Facet joints.
4. Opposition.
5. Arcuate lines.
6. Creeps phenomenon.
7. Convergent forces.
8. Line of gravity.
9. Joint reaction force.
10. Resting position of hand.
