

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

[BOT 0324]

**MARCH 2024
(FEBRUARY 2024 EXAM SESSION)**

Sub. Code: 6177

**BACHELOR OF OCCUPATIONAL THERAPY DEGREE COURSE
SECOND YEAR - (Regulations for the candidates admitted from 2014-2015 onwards)
PAPER III – BIOMECHANICS, APPLIED ANATOMY AND APPLIED
PHYSIOLOGY**

Q.P. Code: 786177

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Describe the normal curves of vertebral column and discuss the factors responsible for its mobility and stability.
2. Analyze posture with respect to the optimal alignment of joint in the antero-posterior and lateral views.

II. Write notes on:

(8 x 5 = 40)

1. Determinants of gait.
2. Elementary principles of joint design.
3. Structures that contribute to joint stability.
4. Summarize factors affecting muscle tension.
5. Lumbar pelvic rhythm.
6. Advantages and disadvantages of coracoacromial arch.
7. Factors that create the carrying angle.
8. Coxa valga and coxa vara on the basis of hip stability and mobility.

III. Short answers on:

(10 x 2 = 20)

1. Closed kinematic chain.
2. Tonic and phasic muscles.
3. What is Synergists?
4. Angular velocity.
5. Intervertebral disc.
6. Muscles of shoulder elevation.
7. What is Prehension?
8. Function of the patello femoral joint.
9. Intrinsic muscles of foot.
10. Optimal erect posture.
