

Sl.No : M2290

Course Code: 2240201

**VINAYAKA MISSION'S RESEARCH FOUNDATION, SALEM  
(Deemed to be University)**

**M.P.T. DEGREE EXAMINATION – April 2021  
Second Semester**

**BIO-MECHANICS AND KINESIOLOGY**

Time: Three hours

Maximum: 100 marks

**I. Write short answers on:**

**(10 x 2 = 20)**

1. Torsion of bone
2. Tibia vara
3. Joint congruence
4. Codman's paradox
5. Scaphoid lunate couple
6. Tridigital grips
7. Ligaments of the wrist joint
8. Work hardening
9. Genu recurvatum
10. Bi-articular muscles

**II. Write short notes on:**

**(8 x 5 = 40)**

11. Properties of bone
12. Types of joint movements
13. Instantaneous centers of rotation
14. Dynamics of shoulder complex
15. Pathomechanics in paralysis of elbow extensors
16. Topography of hand
17. Transverse and anterior posterior stability of the knee
18. Prevention of injury through ergonomics

**III. Write essays on:**

**(2 x 20 = 40)**

19. Discuss in detail the architecture of femur and the analysis of static and dynamic forces acting on the femur. Add notes on pathomechanics of the hip joint in coxa valga.
20. Explain in detail the mechanics of muscle action. Add notes on the morphological adaptation of muscles.

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