

**THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY**

**[AHS 0321]**

**MARCH 2021**

**Sub. Code: 3901**

**(OCTOBER 2020 EXAM SESSION)**

**POST GRADUATE DIPLOMA IN BIOMECHANICS AND KINESIOLOGY IN SPORTS AND FITNESS**

**(From 2018-2019 onwards)**

**PAPER I – BIOMECHANICS**

***Q.P. Code : 363901***

**Time : Three hours**

**Answer ALL Questions**

**Maximum : 100 Marks**

**I. Elaborate notes on:**

**(2 x 20 = 40)**

1. Analyze posture and explain the postural deviations.
2. Discuss in detail the articulating structure, osteokinematics and arthrokinematics of the tibiofemoral joint. Add a note on pathomechanics of knee joint

**II. Write Short Notes on:**

**(10x6 = 60)**

1. Angulation of femur.
2. Explain the determinants of gait.
3. Mechanical stress and structural adaptation of femur
4. Squat lifting versus stoop lifting.
5. Function of intervertebral disc.
6. Describe coupled motions with two examples.
7. Reverse scapulohumeral rhythm.
8. Coxa valga and coxa vara.
9. Explain fixed support synergies with examples.
10. Synovial joint and its subdivision.

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