

Serial No. 1154(ii)

Roll No.....

**MASTER OF PHYSICAL EDUCATION**

**(M.P.Ed.) SEMESTER-II-2018**

**Paper: MPE-804 (ii): Subject Specialization**

**Sports Biomechanics**

Time: 3 Hrs.

Maximum Marks: 50

(Write your Roll No. on the top right side immediately on receipt of this question paper)

Note: Attempt any FIVE questions. All question carry equal marks.

- Q.1. Write on Kinanthropometric characteristics effecting the mechanics of human movement (taking one Game/Sport as example of your choice). 10
- Q.2. Discuss on Biomechanics of the Musculoskeletal system emphasizing on:- 10
- (a) Lever like arrangements
  - (b) Wheel and axle like arrangements
  - (c) Pulley like arrangement and
  - (d) General consideration of muscular skeletal machines.
- Q.3. Explain the concept related to Linear movement responses to Applied forces emphasizing on:- 10
- (a) Linear Speed and Velocity
  - (b) Linear Acceleration
  - (c) The relationship of Force, Mass and Linear acceleration
  - (d) Centripetal Force and Radial acceleration.
- Q.4. Write a note on Rotatory movement response to applied Torques emphasizing on : 10
- (a) Angular speed and velocity
  - (b) Linear velocity of a point on a rotating body.
  - (c) Angular Acceleration.
  - (d) The relationship of torque, rotational inertia and angular acceleration.
- Q.5. Give an analysis of activities in which the body rotate free of support emphasizing on any Two:- 10
- (a) The human body in rotatory motion
  - (b) Initialing rotations and
  - (c) Analysis of rotations while airborne.
- Q.6. Give performance analysis of push like movements. 10
- Q.7. Define the any four from the following: 10
- (a) Kinesiological Analysis
  - (b) Mechanical Analysis
  - (c) Biomechanical Analysis
  - (d) Quantitative analysis and
  - (e) Qualitative analysis
- Q.8. Analyse Biomechanically any one technique from a Sport/Game of your choice. 10