

Serial No. 4053 (ii)

Roll No.: _____

MASTER OF PHYSICAL EDUCATION
(M.P.Ed.) SEMESTER - IV - 2017
Paper - MPE-1004 (ii) : SUBJECT SPECIALIZATION
(SPORTS BIO-MECHANICS)

Time: 03 Hours.

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 questions carry equal marks.

1. Write a note on Mechanical Energy, Work and Efficiency emphasizing on – (10)
 - a) Definition and Standard Unit
 - b) Limitations
 - c) Purposes for Measuring
 - d) Potential Uses for measurement of movement patterns.
2. Discuss on Cinematography and Computerized Video Analysis emphasizing on the following:- (10)
2-D Cinematography and Computerized video Analysis (Equipment specialization, calibration, expected reliability and other considerations).
3. Explain recommended procedure for Direct Measurement Techniques emphasizing on the following:- (10)
Acclerometry (Equipment Specifications, Calibration Procedures and Expected Reliability).
4. Explain recommended procedures related to Force Transducers emphasizing on the following:- (10)
Force Platforms (Designs, Basic consideration in Design and Utilization, Procedures and Expected Reliability).
5. Write on the following with examples:- (10)
Body Segment and Total Body Energies and Mechanical Work and Output (Equipment specifications).
6. Explain the recommended procedures for Neuromuscular Measurement (EMG) emphasizing on (10)
 - a) Units
 - b) Terms and
 - c) Standards in Reporting EMG Research.
7. Give an introduction to Measurement and Applications in Gait Analysis. (10)
8. Discuss on Modern Trends and Development of Biomechanical Instrumentation and Measurement. (10)