

Name of Examination:- Master of Physical Education (M.P.Ed.)
Paper :- MPE-1004(II)
Subject:- Subject Specialization-Sports Biomechanics
Semester:- IV (May/June 2025)
Maximum marks:- 50
Time:- 3 hours

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

Note:- Attempt any five questions.

All questions carry equal marks.

Each question carry 10 marks.

- Q1. Write a note on mechanical energy, work and efficiency emphasizing on-
- a) Definition and standard unit
 - b) Limitations
 - c) Purpose for measuring
 - d) Potential uses for measurement of movement patterns.
- Q2. Discuss on cinematography and computerized video analysis emphasizing on the following- 3-D cinematography (equipment specifications, calibration and expected reliability, other consideration).
- Q3. Explain recommended procedure for direct measurement techniques emphasizing on the following- Accelerometry (equipment specifications, calibration procedures and expected reliability).
- Q4. Explain recommended procedures related to force transducers emphasizing on the following- Pressure platforms (design, basic consideration in design and utilization, procedures and expected reliability).
- Q5. Write on Isokinetic technology and its applications.
- Q6. Write on the following with examples-Body segment and total body energies and mechanical work and output (equipment specifications).
- Q7. Give an introduction to measurement and applications in gait analysis.
- Q8. Write an essay on policy statement regarding the use of human subject and informed consent.