

Roll No.....

MASTER OF PHYSICAL EDUCATION

M.P.Ed. SEMESTER-III

2023

MPE-0902 Fundamentals of Sports Biomechanics

Max Marks: 50

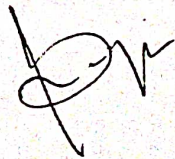
Time: 3 Hours

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

Attempt any five questions

All questions carry equal mark

1. Comprehensively discuss on work, power and energy with examples from Physical Education and sports.
2. Define speed, velocity, acceleration, uniform acceleration and momentum with suitable examples from physical education.
3. Discuss on the importance of Biomechanics in Physical Education and Sports.
4. Write a note on structure of cyclic, acyclic motor action and combination of motor action with suitable examples.
5. Discuss on analyzing performance emphasizing on the nature of skills, overall performance, objective of skill and the analysis process of skill.
6. Define types of levers, and explain their mechanical advantages and disadvantages with special reference to physical education and sports applications.
7. Define friction and types of friction and explain their mechanical, advantages and disadvantages with special reference to physical education and sports applications.
8. State and discuss on the law of angular momentum, law of action and reaction as well as law of action and reaction (angular motion).



Your Roll No.....

**MASTER OF PHYSICAL EDUCATION
(M.P.Ed.)/ SEMESTER-III**

2023

MPE-0904(ii)- Subject Specialization

Sports Bio-Mechanics

Time : 3 Hours

Max. Marks :50

Note : : Attempt any five questions. All questions carry equal marks.

1. Comprehensively write on general considerations of biomechanical parameters and techniques for biomechanical measurements and research.
2. Discuss on ethics and safety, detailed reporting and data base in biomechanics testing.
3. Write note on advantages and disadvantages of Single Plate Methods for biomechanics measurements and research.
4. Define the followings (any five) with suitable examples.
 - a) Linear displacement
 - b) Linear acceleration
 - c) Angular displacement
 - d) Angular velocity
 - e) Angular acceleration
 - f) Units for measurement for kinematic data
5. Discuss on Advantages and Disadvantages of Accelerometers for biomechanical measurements and research.
6. Discuss on sensors and movement monitoring system for biomechanical measurements and research.
7. Write a note on measurement techniques and tests for ground reaction forces and pressure distribution for biomechanical measurements and research.
8. Explain the relationship between physical properties and movement parameters also explain the testing procedure of physical properties of total body for biomechanical measurements and research.



NAME OF THE PAPER : Advance Fitness Assessment & Exercise Prescription
(MPE-1111)

NAME OF THE COURSE : M.P.Ed.

SEMESTER : III-2023

DURATION : 3 Hours

MAXIMUM MARKS : ~~50~~ 75

Instructions for Candidates

Attempt any five questions. All questions carry equal marks.

Q.1 Discuss the following :

5x2 15

- i. Relationship between Physical activity, health & fitness
- ii. Obesity & related diseases

Q.2 Discuss various cardio-vascular diseases associated with physical inactivity. 10

15

Q.3 Discuss the following :

5x2

- i. Pre & Post test responsibilities to conduct exercise testing
- ii. Administrative guidelines for fitness testing

Q.4 Discuss any two tests to evaluate cardio-vascular fitness of the individuals. 10

15

Q.5 Explain any one procedures each to assess the strength & flexibility of a person.

Q.6 Discuss principles of exercise prescription to develop strength.

10 15

Q.7 What is meant by behavior modification? Discuss various stages of Behaviour Modification.

10 15

Q.8 Write briefly on any two of the following:

5x2

- (i) Fitness components
- (ii) Principles of cardio-respiratory exercise prescription
- (iii) Measurement of heart rate (without equipment)
- (iv) FIIT principle of exercise