

M.P.Ed. Examination, 2018
Semester-II
Physical Education
Course: MPCC-202
(Sports Biomechanics and Kinesiology)

Time – 3 Hours

Full Marks – 70

Questions are of value as indicated in the margin
Answer one question from each unit

Unit I

1. What is Sports Biomechanics? Illustrate the importance of Sports Biomechanics in developing sports performance. 2+12=14

Or

What do you understand by Kinematics and Kinetics? Explain with examples. Define Centre of Gravity and write down how Line of Gravity influences the stability of an individual. 4+4+2+4=14

Unit-II

2. What do you understand by origin and insertion of a muscle? Write down the origin, insertion and actions of the following muscles. 2+12=14

(a) Deltoid (b) Pectoralis Major (c) Trapezius (d) Serratus

Or

Name any four major muscles of lower part of the human body with the location of their origin and insertion. Write the joint movements in which they take active part. 10+4=14

Unit-III

3. Define Force. How can the components of force be measured? Define Centripetal and Centrifugal forces. Write down the ways to develop centripetal force to counter act Centrifugal force. 2+4+4+4=14

Or

Substantiate laws of motion with respect to linear and angular classification. 14

Unit-IV

4. Define Projectile. Write different parameters of Projectile with their meaning. Discuss the principles of Projectile motion. 2+6+6=14

Or

Define Lever. What do you understand by mechanical advantage of a lever? What is the principle of Lever? Discuss Lever in the human body with different motor actions. 2+2+2+8=14

Unit-V

5. What do you mean by Mechanical Analysis? Discuss the steps of Qualitative Mechanical Analysis. 4+10=14

Or

Write different methods of Biomechanical Analysis. Explain how Quantitative Biomechanical Analysis is made in sports. 6+8=14
