M. P. Ed 2nd Semester Examination 2021

Sports Biomechanics and Kinesiology

MPCC – 202

Full Marks – 70 **Time – 3 Hours**

The figures in the margin indicate full Marks.
The candidates are required to give their answers in their own words as far as practicable.
Illustrate the answer wherever necessary.

1. Define the term 'equilibrium'. What are the various types of equilibrium ? Write down the principles of equilibrium, with examples of physical activity. **2+3+5+5=15**

OR

Define Centre of gravity. Explain the importance of locating the centre of gravity of different segments of human body with examples from daily life and sports. **2+6+7 =15**

2. Write down the origin and insertion of rectus femoris and Deltoid muscles. Explain the action of the said muscles for movement generation. **8+7=15**

OR

Write down the origin and insertion of Trapezius and Serratus anterior muscles. Explain the action of the said muscles for movement generation. **8+7=15**

3. What is projectile motion? Write down the principles of projectile motion. Explain the condition of maximum range from a surface to surface projectile motion. Identify the equation of projectile with example from the field of sports. **2+3+5+5=15**

OR

What do you mean by surface drag? What is co-efficient of drag? Explain the theoretical square law of drag. Explain about angle of attitude and angle of attack with example from the field of sports. **2+3+5+5=15**

4. What is Qualitative Analysis of Movement? Distinguish between Qualitative Analysis of Movement and Quantitative Analysis of Movement. Write down the need of movement analysis in sports. **2+6+7 =15**

OR

Analyze the various stages of human walking. Distinguish between Walking & Running.

5. Write notes on any two of the following:

A) Newton's Laws of Motion
B) Mechanical advantages and disadvantages of 2Nd class Liver
C) Types of Muscle Contraction
D) Discussion of Flexion, Abduction and Circumbduction.