



Avinashilingam Institute for Home Science and Higher Education for Women
Deemed to be University Estd. u/s 3 of UGC Act 1956, Category 'A' by MHRD (now MoE)
Re-accredited with 'A++' Grade by NAAC. CGPA 3.65/4, Category I by UGC
Coimbatore - 641 043, Tamil Nadu, India

Continuous Internal Assessment Test II – April 2025
VI SEMESTER

Class : III BSc
Major : Physical Education

Time: 2 hours
Maximum Marks: 60

21BPEC26 Kinesiology and Biomechanics

Course Outcomes:

At the end of the course, students will:

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|--|---------------------------------|
| 1. Identify biomechanical, health, physiological, and psychological limitations to and interventions for | improving physical performance. |
| 2. Analyze and explain the mechanisms underlying biomechanical, physiological, and psychological after acute and chronic exercise. | changes that occur during |
| 3. Develop physical conditioning programs based on scientific principles designed to develop physical performance. | fitness and improve athletic |
| 4. Understand mechanical principles can be applied to the analysis of human movement to assess and risk of injury. | improve performance and reduce |
| 5. Know effectiveness of human movement using mechanical principles. | |

Part-A

6x1=6

Choose the correct answer

- | | |
|--|-------|
| 1. What does kinematics study?
a) The causes of motion
b) The description of motion without considering its causes
c) The forces acting on a body
d) The energy associated with motion | CO2K3 |
| 2. Which of the following is a scalar quantity?
a) Velocity
b) Displacement
c) Speed
d) Acceleration | CO1K2 |
| 3. The area under a velocity-time graph represents:
a) Displacement
b) Acceleration
c) Force
d) Work done | CO3K3 |
| 4. How many muscles are there in the body of human?
a) 340
b) 560
c) 640
d) 860 | CO4K3 |
| 5. Which of the following is not a kind or type of muscle?
a) Cardiac
b) Skeletal
c) Sesamoids
d) Smooth | CO5K1 |
| 6. Which of the following is moving skull bone?
a) Femur
b) Mandible
c) Atlas
d) Tibia | CO3K4 |

Part- B

3x6=18

Answer ALL Questions

Each answer should not exceed 400 words or two pages

- | | |
|---|-------|
| 7. a. What is the shortest muscle and longest muscle in our body and where it is located?
(or) | CO2K4 |
| 7. b. Define Isometric contraction and give few examples | CO3K1 |
| 8.a. Define Isokinetic contraction and give few examples
(or) | CO4K3 |
| 8.b. Brief the Laws of motion | CO2K4 |
| 9.a. Brief – Air Gravity and Water friction
(or) | CO4K2 |
| 9.b. Define gait analysis and how its useful in sports and games field | CO4K2 |

Part-C

3x12=36

Answer ALL questions

Each answer should not exceed 800 words or four pages

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|--|-------|
| 10. a. List the abdominal muscles and explain its origin, insertion and action
(or) | CO3K1 |
| 10.b. Explain the muscular designing and kinesiological grouping | CO3K1 |
| 11. a. Describe the types of Axis and Planes
(or) | CO2K4 |
| 11.b. Elaborate the mechanical principles involved in sports and games | CO4K5 |
| 12. a. Enumerate the types of Motion
(or) | CO3K2 |
| 12.b. Explain the application and analysis of biomechanical principles in Walking, Running, Throwing, Jumping and Hitting. | CO2K6 |