1. 2-Mark Questions

1. Define mechanics and biomechanics.
2. What is force? Provide a simple diagram to represent it.
3. Differentiate between concurrent and coplanar forces.
4. Define the line of gravity.
5. What is the centre of gravity in the human body?
6. Define equilibrium in a static state.
7. What is a supporting base in the context of equilibrium?
8. Name two types of pulley systems used in physiotherapy.
9. Define a lever and give one example in the human body.
10. What is the difference between speed and velocity?
11. Define work in the context of mechanics.
12. What is meant by power in biomechanics?
13. Define acceleration with an example.
14. What is momentum? Give its SI unit.
15. State Newton's First Law of Motion.
16. Define friction and give one example.
17. What is elasticity in materials?
18. Define stress in the context of elasticity.
19. Define strain and its relationship with stress.
20. State Hooke's Law.
21. What is a fixed pulley?
22. Differentiate between static and dynamic equilibrium.
23. What is a co-linear force?
24. Name one elastic material used in physiotherapy.
25. What is the angle of pull in muscles?

2. 5-Mark Questions

1. Explain the scope of biomechanics in physiotherapy.
2. Describe the classification of forces with examples.
3. Explain the concept of concurrent forces with a diagram.
4. Discuss the role of the centre of gravity in maintaining balance.

5. Describe the types of equilibrium with examples from the human body.
6. Explain the function of a movable pulley in physiotherapy equipment.
7. Discuss the properties of springs used in therapeutic devices.
8. Explain the first-class lever with an example from the human body.
9. Describe the practical application of velocity in physiotherapy.
10. Explain Newton's Second Law with a physiotherapy-related example.
11. Discuss the role of friction in human movement.
12. Explain the concept of elasticity with an example from physiotherapy.
13. Describe the composition of forces with a diagram.
14. Explain the role of pulleys in rehabilitation equipment.
15. Discuss the application of momentum in sports physiotherapy.
16. Explain the resolution of forces with a simple diagram.
17. Describe the concept of work and its relevance in physiotherapy.
18. Explain the angle of pull of muscles and its significance.
19. Discuss the types of levers with examples from the human body.
20. Explain the concept of springs in series and parallel with examples.

3. 15-Mark Questions

1. Define biomechanics and explain its principles and applications in physiotherapy with relevant examples.
2. Discuss the classification of forces in detail. Explain the concepts of concurrent, coplanar, and co-linear forces with diagrams and their relevance in physiotherapy.
3. Define gravity and the centre of gravity. Explain how the line of gravity and centre of gravity affect posture and balance in the human body with examples.
4. Explain the concept of equilibrium. Discuss the types of equilibrium and their applications in static and dynamic states in physiotherapy.
5. Describe the system of pulleys, their types, and applications in physiotherapy. Include diagrams to illustrate their function.
6. Discuss the properties of springs and their arrangement in series and parallel. Explain the use of elastic materials in physiotherapy equipment.
7. Define levers and classify them based on their order. Discuss their functions and applications in physiotherapy, with examples of each order in the human body.
8. Explain the concepts of speed, velocity, work, energy, power, acceleration, and momentum. Discuss their practical applications in physiotherapy with examples.

9. State Newton's Laws of Motion and explain their applications in understanding human movement and physiotherapy interventions.
10. Define elasticity, stress, and strain. Explain Hooke's Law and its application in designing physiotherapy equipment with elastic components.