

Part B
Answer ALL questions
Each answer should not exceed 400 words

5 x 6 = 30

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| 11.a. Explain the historical development of Kinesiology.
(or) | CO1K1 |
| 11.b. Discuss the importance of Kinesiology in Physical Education. | CO1K1 |
| 12.a. Describe the origin, insertion, and function of the biceps and triceps muscles.
(or) | CO1K1 |
| 12.b. Explain the structure and function of synovial joints. | CO1K1 |
| 13.a. Define muscle contraction and explain different types of contractions.
(or) | CO2K2 |
| 13.b. Discuss the importance of axis and planes in human movement. | CO2K2 |
| 14.a. Describe Newton's Laws of Motion with suitable examples in sports.
(or) | CO2K2 |
| 14.b. Explain the role of air resistance and gravity in biomechanics. | CO3K3 |
| 15.a. Analyze the biomechanics involved in running.
(or) | CO3K3 |
| 15. b. Discuss the biomechanical principles in throwing events. | CO3K4 |

Part C
Answer ALL questions
Each answer should not exceed 800 words

5 x 12 = 60

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| 16.a. Explain in detail the role of biomechanics in sports performance.
(or) | CO1K1 |
| 16.b. Discuss the importance of Kinesiology in physical Education. | CO1K1 |
| 17.a Analyze the muscle actions and forces involved in jumping.
(or) | CO1K1 |
| 17.b Explain the biomechanical principles of hitting and striking in sports | CO1K1 |
| 18.a. Discuss the types of levers and their applications in sports and exercise.
(or) | CO4 K1 |
| 18.b. Explain the role of simple machines in human movement. | CO2K2 |
| 19.a. Analyze the biomechanical principles involved in walking.
(or) | CO2K2 |
| 19.b. Explain the forces and muscles involved in pushing and pulling movements. | CO2K2 |
| 20.a. Discuss the importance of biomechanics in preventing sports injuries.
(or) | CO2K2 |
| 20.b. Explain the application of biomechanical principles in swimming. | CO3K3 |