

(6 Pages)

Reg. No. : .....

Code No. : 10534 E Sub. Code : CAPE 41

B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2023.

Fourth Semester

Physical Education — Allied

SPORTS BIOMECHANICS AND KINESIOLOGY

(For those who joined in July 2021 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Axis of the body that passes from head to foot at right angles to the transverse plane  
(a) Frontal axis (b) Vertical axis  
(c) Sagittal axis (d) Transverse axis
2. Which plane separates the front and back of the human body?  
(a) Longitudinal plane (b) Transverse plane  
(c) Sagittal plane (d) Frontal plane

3. Exaggeration of a back ward curve or decrease of forward curve is  
(a) Lordosis (b) Kyphosis  
(c) Scoliosis (d) Flat foot
4. Which type of motor development takes place in skeleton of the body?  
(a) Gross motor development  
(b) Fine motor development  
(c) High motor development  
(d) Small motor development
5. The which muscle is involved in the elevation of arm?  
(a) Deltoid (b) Biceps  
(c) Triceps (d) Quadriceps
6. What 'Hamstring' muscle?  
(a) extends knee (b) flexes knee  
(c) extends elbow (d) flexes elbow
7. Mechanics is the branch of physics that deals with bodies  
(a) The at rest (b) In motion  
(c) Both (a) and (b) (d) None of the above



8. If the path of an object project projected into free air space is known as  
(a) speed (b) abnormal curve  
(c) velocity (d) parabola
9. Which type of lever is most effective in sport movements?  
(a) Class I (b) Class II  
(c) Class III (d) None of the above
10. Which Newton's law of motion deals with acceleration?  
(a) First (b) Second  
(c) Third (d) None of these

-PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).  
Each answer should not exceed 250 words.

11. (a) Write a history of kinesiology.

Or

- (b) Explain the objectives of kinesiology.

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12. (a) Explain any three advantages of correct posture.

Or

- (b) Describe the causes of scoliosis. What are preventive measures required to avoid this?

13. (a) Write the origin and insertion of biceps and triceps.

Or

- (b) What are the muscles are in the upper extremity?

14. (a) Write a short note on angular speed and angular velocity.

Or

- (b) Elucidate modern trends biomechanics in sports.

15. (a) Write a short note on weight and work.

Or

- (b) Write the meaning of equilibrium and its types.

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PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).  
Each answer should not exceed 600 words.

16. (a) Explain the anatomical terms of human movements.

Or

- (b) Explain the need and importance of kinesiology in physical education and sports.

17. (a) Enumerate the key points to improve the good posture when sitting and standing.

Or

- (b) Explain the centre of gravity and its application in sports.

18. (a) Write and explain the location and action of upper extremity muscles.

Or

- (b) Draw a neat diagram and labeled major muscles group of lower extremity.

19. (a) Write need and importance of biomechanics in physical education and sports.

Or

- (b) Write down the factors affecting projectile trajectory.

20. (a) Explain the lever's and applications in sports.

Or

- (b) Describe the Newton's laws of motion and their application in the field of sports.
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