

(6 Pages)

Reg. No. :

Code No. : 20684 E Sub. Code : SAPE 41

B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2021.

Fourth Semester

Physical Education — Allied

APPLIED KINESIOLOGY AND BIO-MECHANICS

(For those who joined in July 2017 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. A study of muscles and bones with action is called
 - (a) Kinesiology
 - (b) Biomechanics
 - (c) Anatomy
 - (d) Physiology
2. A plane passing through the body which divides left and right
 - (a) Sagittal plane
 - (b) Transverse plane
 - (c) Frontal Plane
 - (d) Vertical Plane

3. Ilio Femoral ligament is present in
- (a) Elbow Joint (b) Knee Joint
 - (c) Hip Joint (d) Ankle Joint
4. The entire sequence of action may be realized as a single is called
- (a) Cyclic Motor Action
 - (b) Acyclic Motor Action
 - (c) Both (a) and (b)
 - (d) None
5. A study of science of movement of a living body is called
- (a) Kinesiology (b) Biomechanics
 - (c) Anatomy (d) Physiology
6. A smooth muscles are
- (a) Striated
 - (b) Non-striated
 - (c) Both (a) and (b)
 - (d) None

7. The rate change in Velocity is called
- (a) Speed (b) Acceleration
- (c) Distance (d) Displacement
8. Moving in a straight line is a
- (a) Curvilinear Motion
- (b) Angular Motion
- (c) Linear Motion
- (d) None
9. The mass of the object times the velocity of the object is called
- (a) Force (b) Momentum
- (c) Speed (d) Body Mass
10. A force acts towards the centre is called
- (a) Friction force
- (b) Centrifugal force
- (c) Eccentric force
- (d) Centripetal force

PART B — ($5 \times 5 = 25$ marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Planes of motion – Explain.

Or

- (b) Explain – Meaning of Kinesiology.

12. (a) Types of Joints – Explain.

Or

- (b) Draw a neat diagram of Gastrocnemius muscle and label its origin and insertion.

13. (a) List down various movements in our body and explain any two.

Or

- (b) Structure of acyclic motor action – Explain.

14. (a) Speed and Velocity – Explain.

Or

- (b) Types of motion – Explain.

15. (a) Write notes on Work, power and energy.

Or

- (b) Types of lever – Explain.

PART C — ($5 \times 8 = 40$ marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Aim and objectives of Kinesiology for Physical Education – Explain.

Or

- (b) Classification of muscles – Explain.

17. (a) Muscular analysis of Walking – Explain.

Or

- (b) Write origin, insertion and action of deltoid muscle with neat diagram.

18. (a) Write notes on Angular speed, Angular velocity and Angular acceleration.

Or

- (b) Structure of cyclic Motor action – Explain.

19. (a) Explain components of Linear Kinematics.

Or

(b) Aim and objectives of Bio-mechanics.

20. (a) Newton's Laws of Motion – Explain with example.

Or

(b) Principle of initial force and momentum – Explain.
