Avinashilingam Institute for Home Science and Higher Education for Women, [Deemed to be university] Coimbatore-641043

Bachelor's Degree Examination- April 2019

VI Semester

Class : III UG **Time : 3 hrs**

Major : Physical Education **Max. Marks: 100**

15BPEC 26 Kinesiology and biomechanics

Part-A **10x1=10**

Choose the correct answer

1. Kinesiology refers to study of
   a. movements b. joints c. muscles d. systems

2. When the angle of joint decrease, the movement will be
   a. Abduction b. Adduction c. Flexion d. Extension

3. During the walking, when the joints of knee and hip are flexed, the movement of ankle will be
   a. Flexion b. Extension c. Hyper flexion d. Hyper extension

4. Visualize the object from the anterior part, the planes of motion will be
   a. Planes of motion b. Sagittal plane c. Frontal plane d. Transverse plane

5. The plane of motion in which, the upper part of the body only can be visualized
   a. Planes of motion b. Sagittal plane
   c. Frontal plane d. Transverse plane

6. When the multipoint muscle is involved in the movement all joints will be
   a. Same movement b. opposite movement c. Either same or opposite
   d. None of these

7. Isometric contraction will take place when
   a. Force is apply b. Force is greater than resistance
   c. Force is less than resistance d. None of these

8. Isokinetic muscle contraction it's possible on
   a. Running in ground b. Treadmill running
   c. Weight lifting d. Weight training

9. When the hand is away from the midline of the body, the movement will be
   a. Adduction b. Abduction c. Flexion d. Extension

10. The contraction in which the length of the muscle will not be changed
    a. Isotonic b. Isometric c. Isokinetic d. Static

PART-B **5X6=30**

Answer the following

Answer should not exceed 400 words or two pages

11. (a) Write down the brief history of kinesiology.

(Or)

11. (b) Explain the meaning of the term kinesiology and biomechanics.

12. (a) Describe the Deltoid muscles.

(Or)

12. (b) Draw a neat diagram of rectus abdominis muscle.

13. (a) Write about types of contraction.

(Or)

13. (b) Explain Isometric contraction.

14. (a) Briefly explain about the laws of motion.

(Or)

14. (b) Describe the factors influencing motion.

15. (a) Explain the biomechanical principles involved in jumping.

(Or)

15. (b) Explain the biomechanical principles in involved running events.

PART-C **5X12=60**

Answer the following

Answer should not exceed 800 words or four pages

16. (a) Explain the Role and importance of kinesiology in physical education and sports.

(Or)

16. (b) Explain the classification of synovial joints and body movements.

17. (a) Explain the origin, insertion and actions of pectoralis major and minor muscles.

(Or)

17. (b) Explain the origin, insertion and actions of trapezius and latissimusdorsi muscles.

18. (a) Define Biomechanics and Explain biomechanics principles involved in games and sports.

(Or)

18. (b) Describe the types of muscle contraction and explain it.

19. (a) State the three laws of motions with suitable examples of sports activities.

(Or)

19. (b) Explain the types of levers and examples of body Equilibrium.

20. (a) Describe the biomechanics analysis of running, Catching, Pushing and Pulling.

(Or)

20. (b) Draw a neat diagram of Hamstring muscle with origin, insertion and action.

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