



Murugesu

Avinashilingam Institute for Home Science and Higher Education for Women
(Deemed to be University Estd. u/s 3 of UGC Act 1956, Category 'A' by MHRD)
Re-accredited with 'A++' Grade by NAAC. Recognised by UGC under Section 12B
Coimbatore - 641 043, Tamil Nadu, India

Bachelor's Degree Arrear Examination - December 2023

IV Semester

Batch : 2021
Major : Physical Education

Time: 3 Hours
Max. Marks: 100

21BPEC12 Physiology of Exercise

Course Outcomes:

- CO1: Define the Human Anatomy & Physiology.
- CO2: Describe the kinematic movement and the Physiological effects of exercise in human body.
- CO3: Apply the major concepts, theories and empirical findings in health science.
- CO4: Compare the responses of individuals of different levels of fitness to a variety of relative and absolute exercise intensities .
- CO5: Formulate the physiological bases for differences in exercise responses and performance.

Part - A 10 x 1 = 10
Choose the Correct Answer

1. Types of muscle fibers are determined by CO1K1
a. Calorimeter b. biopsy c. spectro photometer d. skinfold caliper
2. "Shin Splint" occurs in CO2K2
a. Upper leg b. Lower leg c. Abdomen d. Back
3. Water in the muscles is responsible for CO2K2
a. Flexibility b. Strength c. Suppleness d. Endurance
4. Main elements of human bone is CO1K3
a. Potassium b. Calcium and Phosphorus
c. Phosphorus and iron d. Iron
5. What is the percentage of Water in the muscle tissues? CO2K2
a. 75% b. 90% c. 85% d. 80%
6. The muscle fiber is covered by a thin membrane is known as CO2K3
a. Cell sap b. Sarcolemma
c. Myoglobin d. Sarcomere
7. Which type of muscle fiber generate greatest force production? CO2K2
a. Type I b. Type II a c. Type II d. Type IV
8. The direct sources of energy for muscular contraction is CO2K2
a. ATP b. ADP c. glycogen d. Phospocreatine
9. The sympathetic nervous system would contribute to CO2K3
a. increased heart rate b. skeletal muscles contraction
c. skeletal muscle inhibition d. increased energy conservation
10. Which chamber of the heart has the thickest walls? CO2K2
a. right atrium b. left atrium c. right ventricle d. left ventricle

Part - B

5 x 6 = 30

Answer ALL questions

Each answer should not exceed 400 words or two pages

- 11.a. Describe about the chemistry of muscular contraction. CO3K2
(or)
11 .b. List and explain the types of Muscle Fibre? CO1K2
- 12.a. Explain the functions of skeletal muscle . CO1K1
(or)
12.b. Enumerate the chemical composition of the muscles. CO1K2
- 13.a. Explain the properties of muscles. CO2K1
(or)
13.b. Describe the ventilation during exercise? CO1K3
- 14.a. Write about blood pressure and its types. CO1K2
(or)
14 .b. Describe the heart rate response during exercise. CO2K3
- 15.a. Explain about Reflex action , Reflex arc. CO1K2
(or)
15.b. Write about Cardiac cycle and cardiac output CO1K2

Part - C

5 x 12 = 60

Answer ALL questions

Each answer should not exceed 800 words or four pages

16. a. Explain the effects of exercise on muscular system. CO1K2
(or)
16. b. Explain the Microscopic structure of the muscle fibre with diagram. CO3K3
17. a. Write briefly about the Sliding Filament Theory of muscular contraction. CO2K2
(or)
17. b. Explain in detail about the nature and scope of exercise physiology. CO1K2
18. a. Write about the control of ventilation during and after exercise. CO2K1
(or)
18. b. Write about Lung Volumes and Capacities. CO3K2
- 19.a. Write about Functions and types of muscular system. CO2K1
(or)
19. b. Write about the effect of exercise on Circulatory system. CO2K3
- 20.a. Write about effect of exercise on respiratory system. CO2K1
(or)
20.b. Describe about the effect of exercise and training on nervous system. CO2K3
