Memorandum

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 Examination May-2024
IV Semester

Class : II UG
Branch: Physical Education

Time: 3 hours
Maximum Marks: 100

21BPEC12 Physiology of Exercise

Course Outcomes:

1. Define the human anatomy and physiology.
2. Describe the kinesthetic movement and the physiological effects of exercise in human body
3. Apply the major concepts, theories, and empirical findings in health science.
4. Compare the responses of individuals of differing levels of fitness to a variety of relative and absolute exercise intensities
5. Formulate the physiological bases for differences in exercise responses and performance

Part-A **(10 x 1 = 10)**
Choose the correct answer

1. The proteins found in the skeletal muscle are — CO1 K1
   a) Actin and Troponin b) Actin and myosin
   c) Troponin and Tropomyosin d) Myosin and Tropomyosin

2. The function of the human skeletal system include — CO1 K1
   a) providing attachment sites for muscle
   b) calcium binding to tropomyosin
   c) building muscles cells
   d) calcium binding to troponin

3. Stroke volume increases during exercise due to: — CO2 K2
   a) The Frank-Starling mechanism b) Increased ventricular contractility
   c) Decreased peripheral resistance d) Heart Rate

4. Which of the following is a function of the skeletal system? — CO2 K2
   a) Movement b) Storage of minerals
   c) Protection of Internal organs d) All the above

5. How much percent of CO2 is present in exhaled air? — CO3 K3
   a) 7% b) 4% c) 20% d) 17%

6. The volume of air moving in and out of the lungs during a typical breath is known as the: — CO3 K3
   a) Vital capacity b) Tidal volume
   c) Functional residual capacity d) Residual volume

7. The rate of blood flow through a vessel is dependent on — CO4 K4
   a) The pressure gradient b) The radius of the vessel
   c) Blood viscosity d) All of the above

8. Vital capacity of lung is — CO5K4
   a) TV+IRV+ERV b) TV+IRV
   c) IRV+ERV d) All of the above

9. Which of these amino acids are not optically active? — CO5 K5
   a) Adenosine b) Adenine
   c) Glycine d) lysine

10. Which of the following factors can affect enzyme activity? — CO5 K5
   a) Temperature b) pH
   c) The addition or removal of phosphate d) All of the above

Part B

Answer All Questions **(5×6=30)**

Answer should not exceed 400 words or two pages.

11. a) Explain the Skeletal Muscle and its structure with neat diagram	CO1 K2
(or)	
11.b) Identify the characteristics of various types of Muscle fibre.	CO1 K2
12. a) How will you determine the energy of work in the body.	CO2 K3
(or)	
12.b) Describe the chemistry of muscular contraction	CO2 K3
13. a) Write about the mechanism of breathing in lungs.	CO3 K4
(or)	
13.b) Criticize - Oxygen Debt.	CO3 K4
14. a) Compare between blood pressure and heart rate.	CO4 K5
(or)	
14.b) Distinguish between cardiac muscle and stroke volume.	CO4 K5
15. a) Facilitate neuron-reflex action.	CO5 K6
(or)	
15.b)Report about the nervous system.	CO5 K6

Part C

(5 x 12 = 60)

Answer All Questions

Each answer should not exceed 800 words or four pages

16.a)Identify the nature and scope of physiology of exercise.	CO1 K2
(or)	
16.b)Indicate the structure of the muscle and their functions.	CO1 K2
17. a) Develop the effect of exercises and training on the Cardio vascular system.	CO2 K3
(or)	
17. b) Examine the sliding filament theoryof Muscular Contraction.	CO2 K3
18. a) Point out the exchange of Gases in the Lungs.	CO3 K4
(or)	
18.b) Categorize the effects of exercises and training onrespiratory system.	CO3 K4
19. a) Summarize the effects of exercises and training on the circulatory system.	CO4 K5
(or)	
19.b) Argue the effects of exercises and training on blood pressure	CO4 K5
20. a) Formulate the effects of exercises and training on nervous system.	CO5 K6
(or)	
20.b) Develop the effects of exercises and training on muscular movement.	CO5 K6