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 – November 2024

IV Semester

Batch : 2021 **Time : 3 Hours**
Major : Physical Education **Max. Marks: 100**

21BPEC12 Physiology of Exercise

Course Outcomes:

CO1: Define the human anatomy and physiology.
CO2: Describe the kinesthetic 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 differing 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. Any activity that uses muscle groups can be maintained continuously and is rhythmic in nature is called as CO1K2
   a. Ballistic exercise b. Circuit training exercise
   c. Stretching exercise d. Aerobic exercise

2 Skeletal muscles contain an undifferentiated form of stem cell that is known as CO2K2
   a. Mesenchymal cell b. Asrocyte c. Satellite cell d. Eosinophil

3. Which type of muscle fibre generates the more force production? CO2K3
   a. Type I b. Type II c. Type II x d. Type II a

4. The direct source for energy for muscular contraction is CO2K3
   a. ATP b. ADP c. Glycogen d. Phosphocreatine

5. The power house of the muscle is known as CO2K3
   a. Myoglobin b. Myosin c. Mitochondria d. Enzyme

6 Average human beings at rest breathe in and out _____ times in a minute CO2K3
   a. 15- 18 b. 30- 32 c. 28- 30 d. 25- 28

7. Storage of ATP is COIK2
   a. Liver b. muscle c. Gall Bladder d. pancreas

8. During exercise the blood supply to the muscle is CO2K3
   a. Decreased b. Increased c. Fluctuated d. Maintained

9. Glycogen is stored in which region of a muscle fiber? CO2K2
   a. Sarcoplasm b. sarcolemma c.sarcoplasmic reticulam d.T-Tubules

10. Which chamber of the heart has the thickest walls? CO1K2
   a. right artium b. left artium
   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. Define Exercise Physiology and Explain its scope.	CO3K3
(or)	
11.b. Write about the physical properties of muscles.	CO3K3
12.a. Enumerate the functions of muscles.	CO3K3
(or)	
12.b. Elaborate the chemical composition of muscles.	CO3K3
13.a Describe the chemistry of muscular contraction.	CO3K3
(or)	
13.b. Write about the nature and importance of exercise physiology.	CO3K3
14.a Describe the types of muscle fibers.	CO3K3
(or)	
14.b. Describe about the ventilation during exercise.	CO3K3
15.a. Write about cardiac cycle.	CO2K3
(or)	
15.b. Explain about Stroke volume.	CO2K3

Part-C 5 x 12 = 60

Answer ALL questions

Each answer should not exceed 800 words or four pages

16.a. Draw a neat diagram of Structure of skeletal muscles and explain it?	CO2K2
(or)	
16 .b. Explain about the sliding filament theory of muscular contraction	CO2K2
17.a. Describe the effect of exercise and training on respiratory system.	CO2K2
(or)	
17.b. Explain about the effect of exercise on nervous system.	CO2K2
18.a. Write about the effect of exercise and training on muscular system.	CO2K2
(or)	
18.b. Write about the circulatory system and exercise.	CO2K2
19.a Enumerate about the different lung volume and its measurements.	CO2K3
(or)	
19.b Write about cardiac output and blood pressure.	CO2K3
20.a Describe about the heart rate during and after exercise.	CO2K3
(or)	
20.b Write about the nervous control of muscular movement.	CO2K3

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