

(6 pages)

Reg. No. : .....

**Code No. : 30637 E      Sub. Code : CMPE 51**

B.Sc. (CBCS) DEGREE EXAMINATION,  
NOVEMBER 2024.

Fifth Semester

Physical Education — Core

EXERCISE PHYSIOLOGY

(For those who joined in July 2021 and 2022 only)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. What is exercise physiology?
  - (a) The study of how your body fights off disease
  - (b) The study of how your body responds to exercise
  - (c) The study of skeletal system
  - (d) The study of muscular system

2. Sliding filament theory of muscle contraction was given by
  - (a) Huxley
  - (b) Newton
  - (c) Darwin
  - (d) Pythagoras
3. Blood flows from the right atrium to the right ventricle via
  - (a) Tricuspid valve
  - (b) Bicuspid valve
  - (c) Pulmonary semilunar valve
  - (d) Aorta semilunar valve
4. The protective inner lining of the chambers is the
  - (a) Septum
  - (b) Epicardium
  - (c) Endocardium
  - (d) Myocardium
5. The somatic nervous system most specifically belongs to which division of the nervous system?
  - (a) Peripheral
  - (b) Autonomic
  - (c) Sensory
  - (d) Motor
6. During heavy exercise the supply of blood increases towards
  - (a) Brain
  - (b) Skeletal muscle
  - (c) Skin
  - (d) Kidneys





7. During oxygen debt, the lactic acid is removed from  
 (a) Liver (b) Muscles  
 (c) Lungs (d) Brain
8. The most severe high altitude stress for humans is usually  
 (a) High winds and extreme cold  
 (b) Daily alternating climates  
 (c) Low air pressure  
 (d) High air pressure
9. In order to recover the fatigue, the lactic acid is  
 (a) Taken to muscle  
 (b) Taken away from muscles  
 (c) Converted to galactose  
 (d) Converted to glucose
10. Drugs that increase muscle bulk and extra power for muscle contraction are  
 (a) Caffeine (b) Androgenic steroids  
 (c) Cortico steroids (d) Beta blockers

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PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).  
 Each answer should not exceed 250 words.

11. (a) Briefly explain the history of exercise physiology.  
 Or  
 (b) Write the meaning and definition of physiology and exercise physiology.
12. (a) Briefly explain systemic circulation.  
 Or  
 (b) Short notes on exchange of gas.
13. (a) Explain the types of muscle contraction.  
 Or  
 (b) Briefly explain peripheral nervous system.
14. (a) Short note on metabolic function.  
 Or  
 (b) Briefly explain anaerobic metabolism.
15. (a) Briefly explain oxygen debt.  
 Or  
 (b) Briefly explain muscular fatigue.

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PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) Explain about the chronic response to exercise in details.

Or

- (b) Discuss in detail the role of exercise physiology in the field of physical education and sports.
17. (a) Draw the structure of the heart and explain the integrated factors of blood flow regulation.

Or

- (b) Draw the neat structure of the respiratory system and its function.
18. (a) Explain the impact of training on nervous system.

Or

- (b) Explain the sliding filament theory of muscle contraction.

19. (a) Discuss the physiological responses to exercise in high altitude.

Or

- (b) Discuss about the exercise risk at cold climate in details.
20. (a) What is second wind? What are its causes?

Or

- (b) What are the physical methods of doping? Define methods prohibited in sports.
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