

8. Troponin is a part of
 (a) H zone (b) Z disc
 (c) Myosin (d) Actin
9. **Myocardial infarction (MI)**, commonly known as a heart attack, occurs when
 (a) Blood flow decreases or stops to a part of the heart
 (b) Causing damage to the heart muscle.
 (c) There is chest pain or discomfort which may travel into the shoulder, arm, back, neck or jaw.
 (d) All of the above
10. Pocket Valve is
 (a) located within the veins and prevent the backflow of blood and help it towards the heart
 (b) located within the arteries and prevent the backflow of blood and help it towards the heart
 (c) Both a and b
 (d) None of the above
11. Which one is not a steroid hormone ?
 (a) Growth Hormone (b) Testosterone
 (c) Epinephrine (d) Estrogen
12. Which one is not considered as a doping agent ?
 (a) Caffeine (b) Ephedrine (c) Amphetamines (d) Cocaine

MASTER OF PHYSICAL EDUCATION EXAMINATION, 2019

(1st Year, 1st Semester)

PHYSIOLOGY OF EXERCISE**PAPER - MPCC - 102**

Time : Three hours

Full Marks : 70

Group - A**Answer any three questions from the followings :**

1. Explain the Sliding Filament theory of Muscle contraction in complete detail. Write a note on Muscle Tone. (12+3=15)
2. What is metabolism ? Mention its types. Explain the Aerobic system during rest and exercise. (10+1+4=15)
3. What is VO_2 and VO_2 Max ? How you will measure VO_2 Max and write its implication in sports performance. Write the effect of endurance and strength exercises on respiratory system. (1+1+2+3+4+4=15)
4. $Q = SV \times HR$. Explain the meaning of this equation with example. Write heart rate and stroke volumes for trained and untrained people. Explain venous return mechanism. Describe the effect of exercise on cardiovascular system. (1+2+4+8=15)

[Turn over

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5. What are the control doping movement and its significance in sports ? Define ergogenic aid. Write a note on doping and sports performance. (5+2+8=15)

Group - B

Write short notes on any two from the followings :

$$7.5 \times 2 = 15$$

1. Benefits of exercise in high altitude
2. Mechanism of breathing
3. Macrostructure of skeletal muscle
4. Effect of strength exercise on muscular system

Group - C

Put (✓) mark on the right answer (*any ten*) : (10×1=10)

1. The fast twitch muschel fibre is involved in

- (a) Sprinting Activity
- (b) Cross County Running
- (c) Cycling
- (d) All of the above

2. Study of joints is known as :

- (a) Oestology
- (b) Myology
- (c) Arthrology
- (d) Histology

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3. Life span of a red blood cell is about

- (a) 1-2 months
- (b) 5-6 months
- (c) 12 months
- (d) 3-4 months

4. The respiratory centre is situated in the

- (a) Cerebrum
- (b) Cerebellum
- (c) Motor Cortex
- (d) Brain Stem

5. Threshold stimulus is a stimulus which has

- (a) Maximal strength
- (b) Minimal strength
- (c) No strength
- (d) None of the above

6. ATP breakdown ceases when

- (a) Ca ions bind with troponin
- (b) Ca ions unbind with tropomyosin
- (c) Ca ions are released from the sarcoplasmic reticulum
- (d) Ca ions unbind with troponin

7. Nerve impulse is generated and ceased during which two phases :

- (a) Excitation coupling phase and relaxation phase
- (b) Excitation Coupling phase and resting phase
- (c) Contraction phase and relaxation phase
- (d) Contraction phase and resting phase

[Turn over