

- x. The systemic circulation, supplies, blood to all parts of the body except
 a) Lungs, b) Heart, c) Brain, d) Stomach
- xi. Which one of the following is an ergogenic aid
 a) Amphetamine, b) Anabolic Steroid,
 c) Vitamin E, d) Analgesics
- xii. In the microscopic structure of myofibril, I band has a thread line called
 a) H zone, b) Z line, c) M line, d) Meromyosin.

MASTER OF PHYSICAL EDUCATION EXAMINATION, 2018

(1st Year, 1st Semester)

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

Time : Three hours

Full Marks : 70

A. Answer any three :

15x3=45

1. Describe the sliding filament theory of muscle contraction.
Describe the chemical composition of muscle fiber. 10+5
2. a) State briefly the effect of chronic exercise for more than five years on cardiovascular system . 12+3
3. a) State briefly pulmonary ventilation at rest and during exercise. 5+2+6+2
 b) What is Vo_2 max, and state its implications in athletic performance. What is oxygen debt?
4. Discuss anaerobic and aerobic metabolism that are used by the body for productions of energy during physical activity.
What is the fate of lactic acid? 12+3
5. a) Discuss how altitude may influence athletic performance?
 b) Dry heat, hot humid and cold, of this three climatic conditions which one put serious stress on body ; discuss with argument. 5+10

[Turn over

[2]

- B. Write short notes on (any two) :** 7.5x2=15
- a) Sarcomere
 - b) Regulation of stroke volume
 - c) Internal respiration
 - d) Training effect on muscle
 - e) Heat production in the muscle
- C. Answer any Ten** 10x1=10
- i. Identify the disease which is referred to as hypokinetic disease
 - a) AIDS, b) Dengue, c) Rheumatic Arthritis, d) Encephalitis
 - ii. According to Jan 2016 WADA list of prohibited substances which one of the following is not correct
 - a) Diuretics, b) Beta-Blockers, c) Narcotics, d) Cocaine
 - iii. Pf the following which one is not muscle protein
 - a) Albumin, b) Actin, c) Myosin, d) Troponin
 - iv. Which one is not correct in the process of muscle development due to training
 - a) Muscle fiber do increase in size,
 - b) Muscle fiber do increase in no.
 - c) More no. of myofibril,
 - d) increase of fiber-capillary ratio.

[3]

- v. During all out exercise a trained person's cardiac output may increase to
 - a) 10 lit./min., b) 15 lit./min., c) 30 lit./min., d) 45 lit./min.,
- vi. Endurance performance is seriously affected at high altitude because
 - a) O₂% of air decrease,
 - b) Partial pressure of O₂ decreases
 - c) Low temperature of ambient air,
 - d) Haemoglobin percentage decreases
- vii. The organic system that hardly takes part during Physical exercise
 - a) Cardiovascular system, b) Digestive system,
 - c) Respiratory system, d) Muscular system
- viii. The muscular activity is entirely dependent on
 - a) Nerve and blood supply, b) Environmental stimulation,
 - c) Nutritional imperts, d) Supply of Oxygen
- ix. Which measurement is recognized as the best measurement of a person's cardio vascular fitness.
 - a) Heart rate, b) Pulmonary ventilation,
 - c) Vital capacity, d) Vo₂ max.

[Turn over