

2021

ANATOMY AND PHYSIOLOGY

Paper : CC-102

Full Marks : 70

The figures in the margin indicate full marks.

*Candidates are required to give their answers in their own words
as far as practicable.*

1. Describe diverse types of tissue present in the human body and enlist their functions. Write down the functions of skeletal system. 10+5

Or,

Classify synovial joints of human body with suitable example and mention the possible movements around each synovial joint. Describe the anatomical sex differences existing in human skeletal system. 10+5

2. Describe the structure of skeletal muscle with appropriate diagram. Enlist the muscles of shoulder girdle. 10+5

Or,

Describe the energy metabolism for aerobic and anaerobic exercises. Enlist the functions of blood. 10+5

3. Write the functions of T₄, Adrenalin and Insulin hormone in human body and mention the name of the glands which secrete these hormones. Describe the mechanism of breathing. 9+6

Or,

What is a motor unit? Discuss the functions of central nervous system in brief. Describe how urine is formed in kidney. 9+6

4. Write short notes on *any two* : 7½×2

- (a) Effect of exercises on muscular system
- (b) Types of exercise
- (c) Effect of exercises on respiratory system
- (d) Effect of sports training on circulatory system.

5. Answer the following MCQs by choosing the correct option given below and write the answer on your answer script (*any ten*) : 1×10

- (a) Which of the following cell organelle is considered as the power house of the cell?
- (i) Lysosome
 - (ii) Mitochondria
 - (iii) Ribosome
 - (iv) Nucleus.

Please Turn Over

- (b) How many thoracic vertebrae are there in human vertebral column?
- (i) 5 (ii) 7
(iii) 10 (iv) 12.
- (c) In which type of muscle intercalated disc is found?
- (i) Cardiac muscles (ii) Smooth muscles
(iii) Skeletal muscles (iv) None of these.
- (d) Which of the following enzymes digest fat?
- (i) Amylase (ii) Maltase
(iii) Lipase (iv) Trypsin.
- (e) The structural and functional unit of nervous system is
- (i) Synapse (ii) Neuron
(iii) Brain (iv) Spinal cord.
- (f) Iodine is essential to produce
- (i) Adrenalin (ii) ACTH
(iii) Insulin (iv) Thyroxin.
- (g) An example of neurotransmitter is
- (i) Acetylcholine (ii) Noradrenalin
(iii) GABA (iv) All of these.
- (h) The muscular membrane separating chest cavity from the abdominal cavity is
- (i) The Diaphragm (ii) The Pericardium
(iii) The Sternum (iv) The Myocardium.
- (i) The average value of stroke volume in adult person is
- (i) 50 ml (ii) 70 ml
(iii) 100 ml (iv) 120 ml.
- (j) Which of the following measures the Vital capacity?
- (i) $ERV+TV+RV$ (ii) $TV+IRV+ERV$
(iii) $IRV+TLC+TV$ (iv) $TLE+IRV+ERV$.
- (k) The amount of air inhaled or exhaled per breath is called
- (i) Residual volume (ii) Tidal volume
(iii) Vital capacity (iv) Total Lung Capacity.
- (l) Which of the following is considered as normal systolic/diastolic blood pressure of an adult person?
- (i) 120/100 mmHg (ii) 100/120 mmHg
(iii) 120/80 mmHg (iv) 80/120 mmHg.
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