2023

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. Define Tissue and classify epithelium tissue with proper example. Write the function of connective tissue. 2+8+5

Or,

Write the functions of skeletal system. Classify synovial joint with proper example. Specify the movements around the shoulder joint. 3+9+3

2. Mention the characteristics of muscular tissue. Describe the minute structure of skeletal muscle with diagram. 5+10

Or,

What is energy metabolism? How is energy produced during aerobic and anaerobic sports events? 5+10

3. What is Hormone? Mention the location of Thyroid gland and Adrenal gland. Write the functions of Thyroxin, Adrenalin and Insulin hormones. 2+4+9

Or,

What is a neuromuscular junction? Draw a diagram of a Neuron and label it. Write the functions of Central Nervous system. 3+6+6

4. Write notes on the following (*any two*) : 7½×2
   (a) Effect of exercise on respiratory system
   (b) Effect of exercise on muscular system
   (c) Type of muscular contraction
   (d) Effect of exercise on circulatory system.

Please Turn Over

5. Answer the following questions by selecting the correct option and writing it on your answer script (**any ten**) : 1×10

   (a) Power house of the cell is

      (i) Lysosome   (ii) Ribosome

      (iii) Nucleus   (iv) Mitochondria.

   (b) The function of Ribosome is

      (i) Cell division   (ii) Transport stimuli

      (iii) Releasing Ca^{++} (iv) Synthesis of protein.

   (c) Blood is an example of

      (i) Connective tissue   (ii) Epithelium tissue

      (iii) Nervous tissue   (iv) Muscular tissue.

   (d) An example of long bone is

      (i) Patella   (ii) Skull

      (iii) Atlas   (iv) Humerus.

   (e) Lipase, an enzyme, helps to digest

      (i) Carbohydrate   (ii) Protein

      (iii) Fat   (iv) None of these.

   (f) The blood vessel carrying oxygenated blood from the lungs to the heart is

      (i) Pulmonary Aorta   (ii) Pulmonary Vein

      (iii) Superior Vena cava   (iv) Aorta.

   (g) The nutrient normally used to produce energy by the cell is

      (i) Glucose   (ii) Amino acids

      (iii) Glycerol   (iv) Fatty acid.

   (h) The muscle actively involved in respiratory process is

      (i) Hamstring   (ii) Biceps

      (iii) Diaphragm   (iv) None of these.

   (i) In isometric contraction muscle length :

      (i) Shortens   (ii) Remains same

      (iii) Lengthens   (iv) None of these.

   (j) An example of aerobic activity is

      (i) 100 m Sprint   (ii) 10000 m Run

      (iii) 110 m Hurdles   (iv) 4×100 m Relay.

(k) Cardiac Output is

    (i) SV × TV

    (ii) SV × HR

    (iii) MV × HR

    (iv) None of these.

(l) The average value of Tidal Volume is

    (i) 250 ml

    (ii) 500 ml

    (iii) 1000 ml

    (iv) None of these.

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