Question Paper

MANIPAL ACADEMY OF HIGHER EDUCATION

Human Anatomy and Physiology-I [PHA-BP101T - S3]

Marks: 75   **Duration: 180 mins.**

I Multiple Choice Questions (MCQs)

Answer all the questions.   Section Duration: 30 mins

1) Which among the following is NOT a component of endocrine system?   (1)

   Insulin secreting cells of pancreas
   Oestrogen secretion
   Pepsinogen secretion
   Testosterone secretion

2) Which of the following is a peripheral protein of the plasma membrane   (1)

   Insulin
   Insulin receptor
   Phospholipase C
   Na+ channels

3) Which among the following is true about glucose transport across plasma membrane   (1)

   Glucose is absorbed via simple diffusion
   Glucose can only be absorbed via active transport
   Glucose is absorbed via facilitated diffusion as well as active processes
   Glucose is absorbed via ion channels.

4) In a tissue, the cells are vertically elongated and arranged in two layers. It can be called   (1)

   Simple cuboidal
   Stratified transitional
   Stratified columnar
   Stratified squamous

5) Number of bones in the axial skeleton   (1)

   80
   126
   206
   28

6) Longest and strongest bone in the human body   (1)

   Humerus
   Ulna
   Femur

Fibula

7) Organ known as the graveyard of RBC (1)

Liver
Spleen
Kidney
Gall Bladder

8) Structural protein present in the skeletal muscle (1)

Myosin
Actin
Titin
Troponin

9) U-shaped bone of the neck that is fractured in one-third of all homicides by strangulation. (1)

Hyoid
Scapula
Mandible
Patella

10) A very low reticulocyte count may indicate. (1)

Pulmonary embolism
End stage kidney disease
Blood doping
Polycythemia

11) Name the cell that plays a major role in coagulation process (1)

RBC
WBC
Hemoglobin
Platelets

12) Liberated ADP and TXA2 from platelets have a major role in (1)

Vascular spasm
Extrinsic pathway
Platelet adhesion
Platelet activation

13) When the formed elements are removed from blood, straw coloured liquid is called (1)

Lymph
Plasma
Hematocrit
ESR

14) The WBC with horseshoe shaped nucleus and cytoplasm is blue gray (1)

Monocyte
Eosinophil
Lymphocyte
Basophil

15) The layer of cardiac tissue in contact with the blood in the chambers is (1)

Myocardium
Visceral serous Pericardium
Endocardium
Parietal serous pericardium

16) Which among the following carries oxygenated blood (1)

Superior
Venecava
Inferior Venecava
  Aorta
Pulmonary artery

17) Which of the following is called resistance vessels? (1)

Large arteries
Arterioles
Capillaries
  Venules

18) The outer layer of heart is (1)

Endocardium
Pericardium
Epicardium
Myocardium

19) Choose the cells that secrete gastrin (1)

  G Cells
Chief cells
Parietal cells
Mucus neck cells

20) Which cells secrete mucus in the small intestine? (1)

Paneth cells
 CCK cells
Goblet cells
 S cells

II Long Answers

Answer all the questions.

1) Discuss the composition of blood and explain the functions. Describe the morphological characteristics of RBC. (10)

2) With the help of a diagram explain the structure of stomach. List the secretory cells of small intestine. (10)

III Short Answers

Answer all the questions.

1) With the help of an example, explain the negative feedback system of homeostasis. (5)

2) Define osmosis. Describe tonicity of solution with example. (5)

3) Describe the structure and function of each part of a long bone. (5)

4) Classify joints with examples. Describe the structure of synovial joint. (5)

5) Explain the cardiac events causing the P and Q spikes, as observed in the ECG from Lead-II. (5)

6)   Explain how pressure sensing receptors regulate heart rate?   (5)

7)   Describe cephalic and gastric phase of digestion.   (5)

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