

Exam Date & Time: 28-Dec-2018 (09:30 AM - 12:30 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

BPharm Semester 1- End Semester Examination December 2018

PHA BP-101T, Human Anatomy and Physiology

Date:28/12/2018

Human Anatomy and Physiology-I [PHA-BP101T]

Marks: 75

Duration: 180 mins.

I Multiple Choice Questions (MCQs)

Answer all the questions.

Section Duration: 30 mins

- 1) That which monitors changes in a controlled condition in a feedback system, is
 1) effector 2) receptor 3) control centre 4) stimulus (1)

Correct option is: 2

- 2) Which of these molecules diffuse easily through the lipid bilayer of plasma membrane?
 1) Polar hydrophilic 2) bipolar amphiphilic 3) nonpolar hydrophobic 4) polar Heterophilic (1)

Correct option is: 3

- 3) Which tissue detects changes in the environment and responds accordingly?
 1) nervous 2) connective 3) muscular 4) epithelial (1)

Correct option is: 1

- 4) This cell in the epidermis of skin detects different aspects of touch sensations
 1) Langerhans 2) keratinocytes 3) melanocytes 4) Merkel (1)

Correct option is: 4

- 5) When blood Ca^{2+} rises above normal, parafollicular cells secrete
 1) parathyroid hormone 2) calcitriol 3) calcitonin 4) calcineurin (1)

Correct option is: 3

6) A cartilaginous joint in which the connecting material is hyaline
1) syndesmoses 2) synovial 3) suture 4) synchondroses (1)

Correct option is: 4

7) During smooth muscle contraction, this regulatory protein binds to calcium
1) calsequestrin 2) calmodulin 3) troponin 4) tropomyosin (1)

Correct option is: 2

8) Which of the following WBCs has a kidney shaped nucleus?
1) monocyte 2) lymphocyte 3) neutrophil 4) basophil (1)

Correct option is: 1

9) Lymphatic system is responsible for transporting
1) dietary sugar to blood 2) dietary protein to blood 3) dietary lipids to blood 4) dietary vitamins to blood (1)

Correct option is: 3

10) P wave on electrocardiogram represents
1) atrial repolarization 2) atrial depolarization 3) ventricular depolarization 4) ventricular repolarization (1)

Correct option is: 2

11) One of the following hormones decreases blood pressure
1) aldosterone 2) anti-diuretic hormone 3) angiotensin II 4) atrial natriuretic peptide (1)

Correct option is: 4

12) Which of the cells in the gastric gland secretes intrinsic factor?
1) parietal cell 2) chief cell 3) G cell 4) mucous neck cell (1)

Correct option is: 1

13) All these are functions of liver EXCEPT (1)

- 1) excretion of bilirubin 2) protein metabolism 3) filtration of bilirubin 4) activation of vitamin D

Correct option is: 3

14) The net gain in glycolysis process is

- 1) 1 ATP molecule 2) 2 ATP molecules 3) 3 ATP molecules 4) 4 ATP molecules (1)

Correct option is: 2

15) RBC undergoes hemolysis in

- 1) isotonic solution 2) hypotonic solution 3) hypertonic solution 4) mesotonic solution (1)

Correct option is: 2

16) A clot is made up of insoluble protein fibres called

- 1) fibrinogen 2) proaccelerin 3) fibrin 4) prothrombin (1)

Correct option is: 3

17) Myocardium has its own blood circulation known as

- 1) systemic 2) lymphatic 3) pulmonary 4) coronary (1)

Correct option is: 4

18) Which cells of pancreas secrete digestive enzymes?

- 1) pancreatic acini 2) pancreatic islets 3) pancreatic globules 4) pancreatic papilla (1)

Correct option is: 1

19) Slow oxidative skeletal muscle fibres are involved in

- 1) walking 2) running marathon 3) sprinting 4) weight lifting (1)

Correct option is: 2

20) Which function does simple squamous epithelium perform?

- 1) distention 2) mucus secretion 3) filtration 4) protection (1)

Correct option is: 3

II Long Answers

Answer all the questions.

- 1) Explain the different transportation processes across plasma membrane giving suitable examples for each process [10] (10)
- 2) With a neat, labelled diagram of heart, explain the circulation of blood. Describe the conduction system of heart [3+3+4] (10)

III Short Answers

Answer all the questions.

- 1) Define homeostasis. With a schematic representation, describe the components of a feedback system [1+4] (5)
- 2) Explain any five functions of stomach (5)
- 3) Describe the various factors affecting bone growth (5)
- 4) Discuss the fate of red blood cells (5)
- 5) Describe the physiology of smooth muscle contraction (5)
- 6) Explain the reactions by which ATP is produced in muscle fibres. List the different sport activities which utilize ATP accordingly (5)
- 7) With suitable examples, describe the functions of integumentary system (5)

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