

Exam Date & Time: 11-Mar-2022 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

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) Gap junctions are made up of proteins called (1)

1) Clathrin	2) Connexin	3) Cadherin	4) Calcineurin
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2) Molecules of this protein form the M line in a sarcomere (1)

1) Dystrophin	2) Myosin	3) Myomesin	4) Titin
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3) The ends of cardiac muscle fibres connect to neighbouring fibres by (1)

1) Z discs	2) Intercalated discs	3) Tight junctions	4) Hemidesmosomes
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4) HIV enters the helper T cells via (1)

1) Facilitated diffusion	2) ReceptorMediated endocytosis	3) Receptor mediated exocytosis	4) ReceptorMediated pinocytosis
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5) Which ions in the saliva activate salivary amylase?

(1)

1) Chloride ions	2) Bicarbonate ions	3) Phosphate ions	4) Sodium ions
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6) Acne is an inflammation of (1)

1) Ceruminous glands	2) Sebaceous glands	3) Eccrine glands	4) Apocrine glands
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7) Lubb (S1) sound is caused by

1) Blood turbulence associated with closure of the AV valves soon after ventricular systole begins	2) Blood turbulence associated with closure of the AV valves soon after ventricular systole ends	3) Blood turbulence associated with closure of the SL valves soon after ventricular systole begins	4) Blood turbulence associated with closure of the SL valves soon after ventricular systole ends
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(1)

8) Ciliated simple columnar epithelium is present in

1) Heart	2) Fallopian tube	3) Trachea	4) Lungs
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9) The thoracic duct drains lymph into venous blood via the (1)

1) Left subclavian vein	2) Right subclavian vein	3) Right brachiocephalic vein	4) Left brachiocephalic vein
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10) Inability of the stomach to produce intrinsic factor causes

1) Thalassemia	2) Pernicious anemia	3) Aplastic anemia	4) Hemolytic anemia
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11) (1) Which movement occurs when you stand on your heels?

1) Plantar flexion	2) Dorsiflexion	3) Pronation	4) Supination
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12) Plasma membrane of this cell is folded into a ruffled border

1) Osteogenic cell	2) Osteoblast cell	3) Osteoclast cell	4) Osteocyte
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13) Pressure that must be overcome before a semilunar valve can open is

1) Preload	2) Afterload	3) Stroke volume	4) Cardiac output
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14) Blood passes from the right atrium into the right ventricle through a valve called

1) Bicuspid valve	2) Pulmonary valve	3) Tricuspid valve	4) Aortic valve
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15) This is a primary lymphatic organ

1)	Lymph nodes	2)	Spleen	3)	Lymphatic follicles	4)	Thymus
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16) The primary function of slow oxidative fibres is in

1)	Walking	2)	Sprinting	3)	Maintenance of posture	4)	Rapid movements of short duration
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17) (1) Which is devoid of lymphatic capillaries?

1)	Cornea	2)	Hepatocyte	3)	Small intestine	4)	Diaphragm
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18) Fenestrated capillaries are located in

1)	Kidneys	2)	Liver	3)	Lungs	4)	Spleen
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19) A 12 year old boy was presented to hospital showing moderate dehydration. 2 liters of 0.9% sodium chloride was administered. What will be the change in shape of RBC after sodium chloride administration?

1)	No change	2)	Increase in size	3)	Decrease in size	4)	Hemolysis
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20) Which cells secrete hydrochloric acid?

1)	Chief cells	2)	Parietal cells	3)	G cells	4)	Surface mucous cells
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II Long Answers

Answer all the questions.

- 1) With a schematic representation, explain the process of absorption of various digested nutrients in the small intestine. What is lactose intolerance? (10)
- 2) Describe different transportation mechanisms across the plasma membrane with example

III Short Answers

Answer all the questions.

- 1) Describe the structural and functional classification of joints

- 2) Explain the process of haemopoiesis (5)
- 3) Discuss the clinical significance of ECG

- 4) Write in detail about hormonal regulation of blood pressure

- 5) Explain the accessory structures of skin

- 6) Describe the formation and flow of lymph. Elaborate its functions

- 7) Discuss the functions of liver

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