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2020

D.Pharm. First Year Final Examination

HUMAN ANATOMY AND PHYSIOLOGY

Full Marks – 80

Time – Three hours

The figures in the margin indicate full marks for the questions.

1. Answer the following (MCQ) : (20 × 1 = 20)
- (i) Which of the cell organelle is also known as the "Suicide bag of cell"?
- (a) Ribosome (b) Lysosome
- (c) Nucleus (d) Mitochondria
- (ii) Which of the smallest bone of human body?
- (a) Stapes (b) Incus
- (c) Ribs (d) Radius
- (iii) Which of these following is a lymphatic organ?
- (a) Blood (b) Kidney
- (c) Spleen (d) Heart
- (iv) Angiotensinogen is secreted from which organ?
- (a) Juxtaglomerular apparatus in the Kidney
- (b) Liver
- (c) Adrenal Gland
- (d) Lungs
- (v) Which is the hormone is secreted from the peritubular cells of the kidney and responsible for RBC production?
- (a) Growth hormone (b) Erythropoietin
- (c) Oxytocin (d) Adrenalin

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- (vi) Which organ is responsible for the production of Sound?
- (a) Alveoli (b) Larynx
(c) Lungs (d) Pharynx
- (vii) Sphygmomanometer is used to measure
- (a) Blood Pressure (b) Respiratory volumes
(c) RBC Count (d) WBC count
- (viii) What is the function of Type I alveoli?
- (a) Forms alveolar wall (b) Secrete alveolar fluid
(c) Helps in digestion of food (d) None of the above
- (ix) The ventricles of the brain contain?
- (a) Blood (b) Cerebro Spinal Fluid (CSF)
(c) Perilymph (d) Endolymph
- (x) Junction between two nerves is called.
- (a) Synapse (b) Neuron
(c) Receptor (d) Vesicles
- (xi) The light bands of muscle fibres are called:
- (a) I band (b) Z band
(c) A band (d) D band
- (xii) The endoplasmic reticulum of the muscle fiber is called
- (a) Sarcomere (b) Sarcoplasmic reticulum
(c) Sarcoplasm (d) None of the above
- (xiii) Volume of air that remains in the lungs after forceful expiration is called
- (a) Residual volume (b) Tidal Volume
(c) Vital capacity (d) Respiratory reserved volume
- (xiv) The functional unit of kidney is called _____
- (a) Neuron (b) Cortex
(c) Nephron (d) Inner medulla
- (xv) Which is the outermost layer of the meninges?
- (a) Dura Mater (b) Arachnoid Mater
(c) Corpus callosum (d) Pia Mater

(xvi) Medulla is present in which part of the brain?

- (a) Brain stem (b) Cerebrum
 (c) Cerebellum (d) Thymus

(xvii) Which hormone is secreted from Adrenal gland?

- (a) Insulin (b) Glucagon
 (c) Aldosterone (d) Somatostatin

(xviii) Which of the following is an enzyme of saliva?

- (a) Water (b) Salivary amylase
 (c) Pepsinogen (d) Gastric lipase

(xix) Vestibulocochlear nerve is responsible for?

- (a) Taste (b) Vision
 (c) Smell (d) Hearing and balance

(xx) Which of the following cells secrete Progesterone?

- (a) Leydig cells (b) Corpus luteum
 (c) Sperm (d) Sertoli cells

2. Answer any Eight questions

(8 × 5 = 40)

- (a) Explain the physiology of internal and external respiration. (5)
 (b) Classify epithelial tissue. Explain the structure and location of any two types of epithelial tissue. (1+4)
 (c) Classify Joints. Write the properties of synovial joints. (5)
 (d) Classify Leukocytes. What is the structure and function of each type (1+4)
 (e) Explain the functions of different hormones secreted by pituitary gland. (5)
 (f) Describe the ABO blood grouping. (5)
 (g) Explain the process of urine formation. (5)
 (h) Draw a neat labelled diagram of ear and explain its various parts. (5)
 (i) Describe the anatomy and functions of the liver. (5)
 (j) Explain the anatomy of male reproductive organ. (5)

3. Answer any two questions

(2 × 10 = 20)

- (a) (i) Draw a neat labelled diagram of the neuron. (2)
- (ii) Explain the functional areas of cerebrum. (8)
- (b) (i) Define Cell. (2)
- (ii) Draw a neat labelled diagram of a cell. (2)
- (iii) Describe the structure and function of plasma membrane. (6)
- (c) (i) Draw a neat labelled diagram of internal heart. (2)
- (ii) Explain the conduction system of the heart. (4)
- (iii) Explain the different waves of ECG. (4)
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