

Total No. of printed pages = 4

**BP 101 T**

Roll No. of candidate

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2021

**B.Pharm. 1<sup>st</sup> Semester (Regular) Examination**

**B.Pharm.**

**HUMAN ANATOMY AND PHYSIOLOGY - I (Theory)**

**(New Regulation w.e.f. 2017 - 18)**

Full Marks - 75

Time - Three hours

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

Answer question No. 1 and any six from the rest.

1. Answer all the questions : (20 × 1 = 20)
- (i) Anatomy deals with the
- (a) Body structures and the relationship among them
  - (b) Structure of the body in disease state
  - (c) Functions of the body parts
  - (d) Cell and their functions
- (ii) The breaking down of complex substances into smaller and simpler components is called as:
- (a) Metabolism
  - (b) Anabolism
  - (c) Catabolism
  - (d) None of the above
- (iii) The maintenance of nearly constant conditions in the internal environment of the body is known as:
- (a) Homeostasis
  - (b) Hemodialysis
  - (c) Hemostasis
  - (d) Hemocyte
- (iv) Which directional term is used to mean 'toward the head or the upper part of the body'?
- (a) Inferior
  - (b) Anterior
  - (c) Superior
  - (d) Posterior

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- (v) Axilla is the scientific term used for.
- (a) Nose (b) Chest  
(c) Neck (d) Armpit
- (vi) Which of the following is not a cellular organelle?
- (a) Endoplasmic reticulum  
(b) Cytosol  
(c) Ribosome  
(d) Mitochondria
- (vii) Somatic cell division consists of
- (a) Mitosis and Meiosis  
(b) Meiosis and Cytokinesis  
(c) Mitosis and Cytokinesis  
(d) Only Mitosis
- (viii) Select the one which does not fall under a feedback system
- (a) Receptor  
(b) Control centre  
(c) Effector  
(d) Initiator
- (ix) 0.9 % NaCl solution is
- (a) Isotonic to blood (b) Hypertonic to blood  
(c) Hypotonic to blood (d) None of the above
- (x) Human somatic cells have how many numbers of chromosomes?
- (a) 42 (b) 23  
(c) 44 (d) 46
- (xi) The lymphatic system consists of the following except:
- (a) Lymph (b) Lymph nodes  
(c) Lymphatic vessels (d) Blood
- (xii) Which of the following blood cells play an important role in blood clotting?
- (a) Thrombocytes (b) Neutrophils  
(c) Leucocytes (d) Erythrocytes
- (xiii) Serum differs from blood as it lacks
- (a) Antibodies (b) Clotting factors  
(c) Albumins (d) Globulins

- (xiv) Taste receptors are called
- (a) Gustatory receptors (b) Taste pores  
(c) Olfactory receptors (d) Taste buds
- (xv) The clear jellylike substance behind the lens of the eye is the
- (a) Vitreous humor (b) Cellular body  
(c) Ciliary body (d) Aqueous humor
- (xvi) Which of the following bones of the skull is movable?
- (a) Nasal bone (b) Temporal bone  
(c) Maxilla (d) Mandible
- (xvii) Skeletal muscle bundles are held together by a common connective tissue layer known as:
- (a) Fascia (b) Perimysium  
(c) Aponeurosis (d) Endomysium
- (xviii) Haversian canals occur in \_\_\_\_\_
- (a) Humerus (b) Scapula  
(c) Pubis (d) Clavicle
- (xix) In the peripheral nervous system, the nerves that arise from spinal cord and brain are called
- (a) Frontal nerves (b) Temporal nerves  
(c) Cranial nerves (d) Spinal nerves
- (xx) Which layer is not part of the Integumentary system?
- (a) All are part of the Integumentary System  
(b) Epidermis  
(c) Dermis  
(d) Hypodermis

2. Answer any seven questions: (7 × 5 = 35)
- (a) What are cell junctions? Discuss the different types of cell junction. (1+4)
- (b) Discuss the different forms of intracellular signaling. (5)
- (c) Briefly discuss the cell cycle. (5)
- (d) Classify peripheral nervous system. Mention the differences between sympathetic and parasympathetic nervous system. (2+3)
- (e) Describe the structure of heart with a suitable diagram. (4+1)
- (f) Discuss the differences between axial and appendicular skeleton. (5)

- (g) What is lymph? Write a note on the composition and function of lymph. (1+2+2)
- (h) Discuss the mechanism of skeletal muscle contraction. (5)
- (i) Discuss the anatomy of skin with a suitable diagram. Mention two important functions of skin. (3+2)

3. Answer any two questions: (2 × 10 = 20)

- (a) Describe briefly the fluid mosaic model with a suitable diagram. Discuss elaborately different transport processes across the cell membrane. (4+1+5)
- (b) Define and classify tissue. Discuss the structure, location and functions of epithelial tissue. (1+2+3+1+3)
- (c) (i) Discuss the composition and functions of blood. (3+1)
- (ii) Write a note on blood grouping. (2)
- (iii) Discuss the mechanisms of coagulation. (4)