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BINA CHOWDHURY CENTRAL LIBRA  
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Azara, Hatkhowapara,  
Guwahati - 781017

**BP 101 T**

Roll No. of candidate

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**2019**

**B.Pharm. 1<sup>st</sup> Semester End-Term Examination**

**HUMAN ANATOMY AND PHYSIOLOGY - I**

**(Theory)**

**(New Regulations)**

**(w.e.f 2017-2018)**

Full Marks – 75

Time – Three hours

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

1. Answer *all* the questions : (20 × 1 = 20)
- (i) Which one of the following is highly vascular tissue
- (a) Connective tissue
  - (b) Muscular tissue
  - (c) Nervous tissue
  - (d) Epithelial tissue
- (ii) Number of carpal bones present in one wrist
- (a) 14
  - (b) 16
  - (c) 08
  - (d) None of the above

[Turn over

- (iii) Innominate bone is a bone of
- (a) Lower limb
  - (b) Arm
  - (c) Wrist
  - (d) Pelvic girdle
- (iv)  $\text{Na}^+/\text{K}^+$  ATPase is an example of
- (a) Primary active Transport
  - (b) Endocytosis
  - (c) Exocytosis
  - (d) None of the above
- (v) Which division of the nervous system initiates a response known as fight or flight?
- (a) The sympathetic nervous system
  - (b) The parasympathetic nervous system
  - (c) The somatic nervous system
  - (d) None of the above
- (vi) Which part of the neurone receives information?
- (a) The Node of Ranvier
  - (b) The myelin sheath
  - (c) The axon
  - (d) The dendrite
- (vii) Which of the layers of an artery contains smooth muscles?
- (a) tunica interna
  - (b) tunica externa
  - (c) tunica media
  - (d) all of the above

- (viii) The hepatic portal vein transports:
- (a) blood to the brain
  - (b) nutrient-rich blood to the liver
  - (c) blood to the skin
  - (d) transports blood to the heart
- (ix) The lymph leaves the lymph node via the:
- (a) afferent lymphatic vessel
  - (b) efferent lymphatic vessel
  - (c) superior vena cava
  - (d) aorta
- (x) Which of the following stimulates erythropoiesis?
- (a) decreased demand of tissue oxygen
  - (b) increased demand of tissue oxygen
  - (c) increased red blood cell count
  - (d) increased white blood cell count
- (xi) The inner ear is also known as the
- (a) Chain
  - (b) Maze
  - (c) Labyrinth
  - (d) Convolution
- (xii) The thin myofilaments are composed of a complex protein called
- (a) Actin
  - (b) Myosin
  - (c) Fibrinogen
  - (d) None of the above

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- (xiii) Channel mediated facilitated diffusion is a type of
- (a) Passive transport
  - (b) Active transport
  - (c) Endocytosis
  - (d) Exocytosis
- (xiv) Cones are mostly sensitive to which colours?
- (a) Red, yellow, white
  - (b) Red, yellow, blue.
  - (c) Red, yellow, green.
  - (d) Red, blue, green.
- (xv) The following are the Phases of Mitosis cell division except
- (a) Prophase
  - (b) Metaphase
  - (c) Telophase
  - (d) Interphase
- (xvi) The parasympathetic nervous system innervates the heart via which cranial nerve?
- (a) Cranial nerve IV - Trochlear nerve
  - (b) Cranial nerve VI - Abducens nerve
  - (c) Cranial nerve X - Vagus nerve
  - (d) Cranial nerve XII - Hypoglossal nerve

- (xvii) The plasma membrane of a human cell is:
- (a) a membrane that contains pili on its cell surface
  - (b) a double layer of carbohydrate enclosing the cell
  - (c) a single layered cell membrane
  - (d) a double layer of phospholipids
- (xviii) Active transport system utilises
- (a) ATP
  - (b) hydrogen ions
  - (c) acid-bicarbonate buffer system
  - (d) phosphate buffer
- (xix) Systole means
- (a) Contraction of ventricular muscles
  - (b) Relaxation of ventricular muscles
  - (c) Both (a) and (b)
  - (d) None of the above
- (xx) Front aspect of any structure is known as
- (a) Superior
  - (b) Anterior
  - (c) Posterior
  - (d) None of the above

2. Answer any *seven* questions : (7 × 5 = 35)

- (a) Briefly describe the levels of structural organization and body systems. (5)
- (b) What is erythropoiesis? What factors speed up and slow down erythropoiesis? (1 + 4)

- (c) Describe active transport process with examples. (5)
- (d) Briefly describe the anatomy of eye with neat diagram. (5)
- (e) Define cell cycle. Describe the cell cycle of somatic cell in brief. (1 + 4)
- (f) Why are cholinergic and adrenergic neurons so named? What are the functions of the entire division of the ANS? (2 + 3)
- (g) What do you mean by Anemia? Write a brief note on different types of anemia. (1 + 4)
- (h) Classify Joints. Briefly describe the synovial joint with neat diagram. (2 + 3)
- (i) Discuss the functions of skin. (5)

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

- (a) Define homeostasis. What are the different components of feedback system? Describe elaborately about body negative feedback systems. (1 + 3 + 6)
- (b) Define Tissue. Classify it. Write a descriptive note on connective tissue. (1 + 2 + 7)
- (c) (i) What do you mean by cardiac cycle? Write a brief note on the events of cardiac cycle. (1 + 4)
- (ii) Write a brief note on circulation of blood in the heart with proper diagram. (5)