

Total No. of printed pages = 6

**BP 101T**

Roll No. of candidate

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**2018**

**B.Pharm. 1st 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)

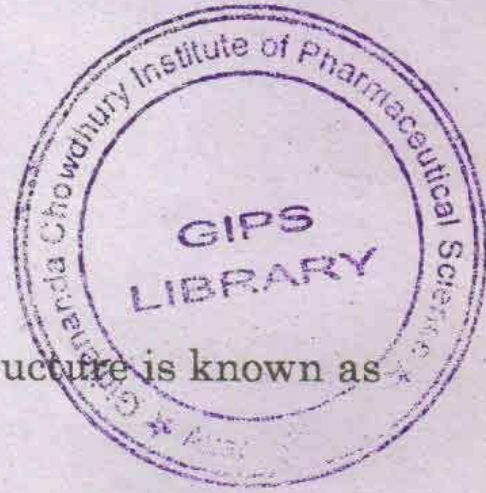
- (i) The science which deals with the functional changes associated with disease and aging is
- (a) Pathophysiology
  - (b) Pharmacology
  - (c) Renal physiology
  - (d) Immunology
- (ii) The main component of Integumentary system is
- (a) Trachea
  - (b) Skin
  - (c) Skeletal muscle
  - (d) Cardiac muscle

[Turn over

- (iii) Non-polar, hydrophobic molecules move across the lipid bilayer through the process
- (a) Simple diffusion
  - (b) Facilitated diffusion
  - (c) Active transport
  - (d) Endocytosis
- (iv) Neurotransmitters are released from nerve cell by a process known as
- (a) Transcytosis
  - (b) Exocytosis
  - (c) Pinocytosis
  - (d) Phagocytosis
- (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) The epithelial tissue which lines urinary bladder and portions of ureters and urethra is
- (a) Transitional epithelium
  - (b) Glandular epithelium
  - (c) Stratified cuboidal epithelium
  - (d) Stratified columnar epithelium



- (vii) The following are the cells of connective tissue except
- (a) Fibroblast
  - (b) Macrophages
  - (c) Mast cells
  - (d) Renal cell
- (viii) Back aspect of any structure is known as
- (a) Superior
  - (b) Anterior
  - (c) Posterior
  - (d) None of the above
- (ix) Mature bone cells, are the main cells in bone tissue and maintain its daily metabolism
- (a) Osteocytes
  - (b) Osteoblasts
  - (c) Osteoclasts
  - (d) None of the above
- (x) The strongest and longest bone in human body is
- (a) Radius
  - (b) Tibia
  - (c) Femur
  - (d) Humerus
- (xi) The only movable bone of human face is
- (a) Maxilla
  - (b) Mandible
  - (c) Cheek bone
  - (d) None of the above



- (xii) Movement of bone toward midline, usually in frontal plane is
- (a) Adduction
  - (b) Abduction
  - (c) Flexion
  - (d) Extension
- (xiii) The following cell is non-nucleated
- (a) Skeletal muscle cell
  - (b) Cardiac muscle cell
  - (c) Smooth muscle cell
  - (d) RBC cell
- (xiv) High count of Eosinophils may indicate
- (a) Allergic reaction
  - (b) Drug toxicity
  - (c) stress
  - (d) Pregnancy
- (xv) Which node is responsible for initiation of cardiac impulse?
- (a) SA node
  - (b) AV node
  - (c) Bundle of His
  - (d) None of the above
- (xvi) The spleen can act as a reservoir of
- (a) RBC cells
  - (b) WBC cells
  - (c) Platelets
  - (d) None of the above



- (xvii) The reason of second heart sound is due to
- (a) Closure of Tricuspid valve
  - (b) Closure of Bicuspid valve
  - (c) Closure of semilunar valve
  - (d) None of the above
- (xviii) The thin myofilaments are composed of a complex protein called
- (a) Actin
  - (b) myocin
  - (c) Thrombin
  - (d) None of the above
- (xix) Systole means
- (a) Contraction of ventricular muscles
  - (b) Relaxation of ventricular muscles
  - (c) Both (a) and (b)
  - (d) None of the above
- (xx) 0.9% NaCl is an example of
- (a) Hypertonic solution
  - (b) Hypotonic solution
  - (c) Isotonic solution
  - (d) None of the above

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

- (a) Briefly describe the mechanism of blood coagulation. (5)
- (b) Classify WBC cells. Write a brief note on functions of WBC cells. (1 + 4)

- (c) Briefly describe the disorders of cardiovascular system. (5)
- (d) Briefly describe the anatomy of ear with neat diagram. (5)
- (e) Write a brief note on formation and circulation of lymph. (5)
- (f) Briefly describe the functions of cranial nerves. (5)
- (g) Briefly describe the events of muscle contraction. (5)
- (h) Classify Joints. Write a brief note on synovial joint. (2 + 3 = 5)
- (i) Briefly describe the structure of skin. (5)
3. Answer any *two* questions: (2 × 10 = 20)
- (a) Briefly describe the structure and function of cell membrane. Discuss elaborately about different transport processes across the cell membrane. (4 + 6 = 10)
- (b) Describe in details about the various consequences in a cardiac cycle. Explain cardiac output. (7 + 3 = 10)
- (c) Write the functions of haemoglobin. Write a brief note on ABO and Rh blood grouping and their significance. Briefly describe the different types of Anemia. (2 + 5 + 3 = 10)
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