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**Question Paper Code: 53112**

B.E. / B.Tech. DEGREE EXAMINATION, DEC 2020

Third Semester

Biomedical Engineering

15UBM302 - HUMAN ANATOMY AND PHYSIOLOGY

(Regulation 2015)

Duration: One hour

Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

**(Answer any six of the following questions)**

- Which one of the following organelles digests the old organelles that are no longer useful to the cells?
  - Ribosomes
  - Mitochondria
  - Golgi apparatus
  - Lysosomes
- In somatic cell cycle which of the below is/are more appropriate
  - In G1 phase DNA content is double the amount of DNA present in the original cell
  - A short interphase is followed by a long mitotic phase
  - DNA replication takes place in S-phase
  - G2 phase follows mitotic phase
- Which of the following options occur during ventricular systole in a mammalian heart?
  - Ventricular volume increases
  - Bicuspid (mitral) valve opens
  - Ventricular pressure increases
  - Aortic pressure decreases
- The dome-shaped muscle that plays an important role in breathing is the
  - diaphragm
  - alveolus
  - larynx
  - bronchus

5. Which is the branch part of neuron that receives messages and sends them to the cell body?  
 (a) reflex arc            (b) axon            (c) dendrite            (d) synapse
6. In Peripheral nervous system \_\_\_\_\_ nervous system controls involuntary actions.  
 (a) Dorsal            (b) Somatic            (c) Ganglion            (d) Autonomic
7. Involuntary squeezing action of the muscles in digestive system causing food to move through  
 (a) Mechanical digestion            (b) Chemical digestion  
 (c) Peristalsis            (d) Indigestion
8. Saclike organ in which Urine is stored before being excreted  
 (a) Urinary Bladder            (b) Urethra  
 (c) Ureter            (d) Nephron
9. Type of joint found at the Elbow and Knee  
 (a) Hinge Joint            (b) Pivot joint  
 (c) Moveable joint            (d) Ball-and-socket joint
10. What structure is attached to the lens causing its shape to change?  
 (a) Aqueous humor            (b) Cornea  
 (c) Ciliary muscle            (d) Iris

PART – B (3 x 8= 24 Marks)

**(Answer any three of the following questions)**

11. Distinguish Prokaryotic cell and Eukaryotic cell, along with simple sketch. (8)
12. Identify different events in cardiac cycle using Wigger's diagram. (8)
13. Illustrate with suitable diagram the information pathways for Sensory, Motor and Inter-neurons. (8)
14. Sketch and explain Digestion, Absorption, Elimination functional parts of digestive system. (8)
15. Summarize and enlighten about Classification of Bones. (8)

