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PG CBCS
M.Sc. Semester-I Examination 2021
MEDICAL LABORATORY TECHNOLOGY (MLT)
PAPER: MLT 101
(HUMAN ANATOMY AND PHYSIOLOGY)

Full Marks: 40

Time: 2 Hours

Answer any **FOUR** questions of the following:

4X10=40

1. Enlist the different parts found in Vertebral column. Write the function of thoracic cage. Differentiate the false and true pelvis? (4+3+3)
2. Define cardiac output and cardiac index. State the Frank-Starling law and how does it influence the cardiac output? (4+3+3)
3. Discussion on secretory function of cells found in gastric glands. State the function of HCL in gastric juice. Describe the role of trypsin in protein digestion. (5+2+3)
4. Explain the structure-function relation of a nephron with suitable level diagram. What is GFR? (4+4+2)
5. Describe the structure of myofibril. Discuss the different stages of cross bridge cycling during muscle contraction. (4+6)
6. Explain the developmental stages of spermatogenesis. Mention the function of Sertoli cells. Write the role of progesterone. (6+2+2)
7. Write the structure and function of stratified squamous epithelium? State the function of fibroblast. Write the comparison between white and brown adipose tissue. Differentiate compact bone from spongy bone. (3+2+3+2)
8. Describe the formation, circulation and function of cerebrospinal fluid. Classify the different types of neuroglia found in CNS and write their specific functions. (7+3)
9. How does partial pressure of CO₂ influence its transport from cell to alveolar air? Describe the chloride shift mechanism during CO₂ transport. (3+7)
10. Describe the structure and function of retina. Describe the physiological basis of different types of taste sensation. (7+3)
