

# Question Paper

Exam Date & Time: 17-Jan-2024 (09:30 AM - 12:30 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD SEMESTER B.TECH END SEMESTER MAKEUP EXAMINATIONS, JAN 2024

### ANATOMY AND PHYSIOLOGY [BME 2121]

Marks: 50

Duration: 180 mins.

**Answer all the questions.**

Missing data may be suitably assumed

Draw neat diagrams wherever necessary

- 1)                      Mention the components of extrahepatic biliary apparatus. (4)  
                            Write a note on clinical implications / applied anatomy of the extrahepatic biliary apparatus.  
    A)                        
    B)                      Classify the muscles and mention the distinguishing features of each type. (3)  
    C)                      Give a brief description on thyroid gland. (3)
- 2)                      Mention the components of urinary system. Briefly describe the kidney. (3)  
    A)                        
    B)                      Give a brief description on pleura and lungs. (3)  
    C)                      Name the parts of hindbrain. Write a note on clinical implications / applied anatomy of the cerebellum. (4)
- 3)                      Briefly describe the autonomic nervous system. (2)  
    A)                        
    B)                      Briefly describe the fallopian tube. (3)  
    C)                      Define synapse. In the form of flow chart explain the events in synaptic transmission. (5)
- 4)                      Name the granulocytes and mention ONE function for each. (3)  
    A)                        
    B)                      In the form of flow chart, describe the mechanism of hearing. (3)  
    C)                      Define cardiac output. Give its normal value. Mention TWO conditions where cardiac output is increased. (4)
- 5)                      Draw and label a neuron. Mention the significance of myelination in a neuron. List the divisions of the autonomic nervous system. (3)  
    A)                        
    B)                      Describe recording technique of EMG. (3)  
    C)                      Name the muscles of inspiration. Write the steps involved in the mechanism of inspiration. (4)

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