

Question Paper

Exam Date & Time: 20-Jan-2023 (09:30 AM - 12:30 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD SEMESTER B.TECH MAKE-UP EXAMINATIONS, JAN/FEB-2023

ANATOMY AND PHYSIOLOGY [BME 2152]

Marks: 50

Duration: 180 mins.

Answer all the questions.

Instructions to Candidates:

- (i) Answer ALL questions
- (ii) Missing data may be suitably assumed
- (iii) Write neat diagrams wherever necessary

- 1) Classify the bones. (3)
 - A)
 - B) Name the layers of eyeball. Write a note on clinical implications of the eyeball (3)
 - C) Write briefly on chambers of the heart. (4)
- 2) Mention the parts of male reproductive system. (3)
 - A)
 - B) Give a brief description on pleura and lungs. (3)
 - C) Mention the components of extrahepatic biliary apparatus. Write a note on clinical implications of the extrahepatic biliary apparatus. (4)
- 3) Name the peduncles of cerebellum. Write a note on clinical implications of the cerebellum. (3)
 - A)
 - B) Enumerate the endocrine glands. (2)
 - C) (i) Name any TWO sensory pathways and list the sensations carried by any one pathway. (5)
(ii) Write any THREE functions of cerebellum.
- 4) Describe the steps involved in the formation of end plate potential in skeletal muscle. (3)
 - A)
 - B) As part of student learning skill, respiratory parameters were assessed from students in the lab. The data obtained from one of the students was as follows:

Respiratory rate = 12 breaths /min.; Tidal volume = 600 ml; Anatomical Dead space value was normal.

Calculate alveolar ventilation in this student. Write the importance of alveolar ventilation in gas exchange.

- C) (i) Mention the components of conduction system of the heart. Describe the spread of cardiac impulse. (4)
- (ii) Define cardiac output. Mention its normal value. Mention the determinants of cardiac output.
- 5) Draw a labelled diagram of the cystometrogram and explain the same. (3)
- A)
- B) Describe impedance matching for perception of sound. (3)
- C) (i) Explain the ionic basis of depolarization and hyperpolarization in a nerve action potential. (4)
- (ii) Mention the importance of blood grouping.

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