

Question Paper

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



MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD SEMESTER B.TECH END SEMESTER EXAMINATIONS, NOV/DEC 2023

ANATOMY AND PHYSIOLOGY [BME 2121]

Marks: 50

Duration: 180 mins.

Answer all the questions.

Missing data may be suitably assumed

- 1) Name the parts of the respiratory system. Mention their functions and clinical implication / applied anatomy. (4)
 - A)
 - B) Classify the synovial joints. (3)
 - C) Name the chambers of the heart and write a note on clinical implications / applied anatomy of arteries supplying heart. (3)
- 2) Describe the male reproductive system. (3)
 - A)
 - B) Describe the stomach. (3)
 - C) Mention the components of urinary system. Briefly describe the urinary bladder. (4)
- 3) Name the ventricles of the brain. Add a note on production of CSF. (2)
 - A)
 - B) Briefly describe lobes of cerebrum. Add a note on the thalamus. (3)
 - C) Mention the nerve supply to heart. Mention any TWO effects of stimulation of each of these nerves to the heart. (5)
- 4) List the forms in which carbon dioxide is transported in the blood. Write a note on tidal volume. (3)
 - A)
 - B) Define resting membrane potential (RMP) and mention its normal value in a nerve cell. Explain the ionic basis of RMP. (3)
 - C) Mention any TWO functions of cerebellum. Enumerate any TWO features of cerebellar disorder. (4)
- 5) Draw a labelled diagram of a nephron and mention the functions of different parts of a nephron. (3)
 - A)
 - B) Name the photoreceptors of eye and mention their location. Mention the three changes that occur during accommodation of eye. (3)
 - C) Define motor unit. Explain neuromuscular transmission in skeletal muscle. (4)

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