

Question Paper

Exam Date & Time: 04-Jul-2023 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

Instructions: Answer ALL questions.

Human Anatomy and Physiology [PHA 1.1T-S1]

Marks: 70

Duration: 180 mins.

Section A

Answer all the questions.

Long Answer Questions (3 x 10 marks = 30 marks)

- 1) Describe the anatomy of spinal cord. Explain the following clinical terms: subdural anaesthesia, epidural block, meningitis, and lumbar puncture (10)
- 2) Explain the features of ECG and its clinical relevance. (10)
- 3) Describe the phases of the menstrual cycle. Correlate the ovarian and uterine cycles with the hypothalamic and anterior pituitary gland hormones. (10)

Section B

Answer all the questions.

Short Answer Questions (6 x 5 marks = 30 marks)

- 4) A 27-year-old man was brought to the emergency department after a motor vehicle collision. The patient indicates that he stopped at the signal and pulled into an intersection before he hit the roadside by another car. There is no prior history of seizures. The patient does not wear prescriptive lenses, nor does he have a history of visual problems. Vital signs were normal and no apparent head trauma from the collision. Reflexes were normal. Visual abnormality was detected, and MRI showed an intracranial tumor near the optic chiasm. Explain how the visual pathway in this patient got affected by the pathological condition. (5)
- 5) Describe the anatomy of the lungs. (5)
- 6) Describe the physiology of the secretion of hydrochloric acid in the stomach. (5)
- 7) Discuss the mechanism of action of water-soluble hormones. (5)
- 8) Describe how the body responds to stress. (5)
- 9) Explain various family planning methods. Discuss the merits and demerits. (5)

Section C

Answer all the questions.

Give Reasons for the Following (5 x 2 marks = 10 marks)

- 10) Infusion of mannitol is useful to treat patients with cerebral edema. Give reason. (2)
- 11) How the human immunodeficiency virus enters and infect body cells. (2)
- 12) Unlike pacemakers, ventricular fibres cannot generate action potential. Why? (2)
- 13) The largest amount of solute and water reabsorption from filtered fluid occurs in the proximal convoluted tubules. Why? (2)
- 14) Thiazide diuretics act in the distal convoluted tubule. How it could be useful in the treatment of hypertension. (2)

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