

Question Paper

Exam Date & Time: 08-Aug-2022 (02:15 PM - 05:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST BDS DEGREE EXAMINATION - AUGUST 2022

SUBJECT: GENERAL HUMAN PHYSIOLOGY AND BIOCHEMISTRY
(CASUAL BATCH)

All questions are compulsory. Write brief, clear, relevant and legible answers.
Illustrate your answers with diagrams and flow-charts wherever appropriate.

Marks: 60

Duration: 165 mins.

SECTION A: PHYSIOLOGY

Answer all the questions.

1. ESSAY:

- 1A) Explain the intrinsic and extrinsic pathways of blood coagulation. (5)
1B) Describe the regulation of cardiac output. (5)

2. SHORT NOTES :

- 2A) Mention the different functional divisions of the cerebellum along with their functions. What are the features of cerebellar lesion? (3+1 = 4 marks)
2B) Describe the actions and regulation of secretion of aldosterone. (4)
2C) Describe Tubular maximum and renal threshold for glucose. (4)
2D) List the properties of action potential. Explain the ionic basis of nerve action potential. (4)
2E) Explain the functions of the middle ear (4)

SECTION B : BIOCHEMISTRY

Answer all the questions.

- 3A) Explain the process of β -oxidation of palmitic acid as per the following:
i) Role of carnitine (1)
ii) Reactions of β -oxidation proper (4)
3B) Explain FOUR organizational levels of protein structure. Add a note on denaturation (4+1 = 5 marks)

4. Write short notes on:

- 4A) Describe the formation of bilirubin and its disposal from the body (3)

- 4B) Sketch the components of electron transport chain in the sequential order indicating ONE inhibitor for each complex (3)
- 4C) Give an account of functions of calcium. Add a note on the role of vitamin D on calcium Homeostasis (3)
- 4D) Describe the causes and biochemical features seen in kwashiorkor (3)

5. Write short answers on:

- 5A) Name the key enzymes of gluconeogenesis (2)
- 5B) Classify lipids with one example for each class (2)
- 5C) List the differences between DNA and RNA (2)
- 5D) Explain the structure of collagen (2)

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