

Question Paper

Exam Date & Time: 25-Oct-2023 (02:15 PM - 05:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST BDS DEGREE EXAMINATION - OCTOBER 2023
SUBJECT: GENERAL HUMAN PHYSIOLOGY AND BIOCHEMISTRY

Marks: 60

Duration: 165 mins.

SECTION A GENERAL HUMAN PHYSIOLOGY

All questions are compulsory.

Write brief, clear and legible answers.

Illustrate your answers with diagrams and flow charts wherever appropriate

- 1A) Describe any **TWO** actions of thyroid hormones. Describe the regulation of thyroid hormone secretion in the form of a flow chart (2+3 = 5 marks)
- 1B) List **TWO** functions of basal ganglia. Describe the cause and **THREE** clinical features of Parkinson's disease (1+4 = 5 marks)
- 2A) Describe the baroreceptor reflex mechanism of arterial blood pressure regulation (4)
- 2B) Write the intrinsic pathway of blood coagulation (4)
- 2C) Define glomerular filtration rate. List any **TWO** factors influencing GFR. Explain any one (1+1+2 = 4 marks)
- 2D) Describe milk ejection reflex (4)
- 2E) Draw a neat labelled diagram of light reflex pathway. Give the physiological basis for consensual light reflex (3+1 = 4 marks)

SECTION B BIOCHEMISTRY

Answer all the questions.

- 3A) Write the reactions of TCA cycle (5)
- 3B) Explain the formation and fate of bilirubin (5)
- 4A) Describe the structure of an immunoglobulin molecule with the help of a neat labelled diagram (3)
- 4B) Explain the compensatory mechanisms occurring in metabolic acidosis. Mention **TWO** causes for the same. (3)
- 4C) Give a diagrammatic representation of the arrangement of electron carriers in the electron transport chain (3)
- 4D) Explain the biological role of vitamin A (3)
- 5A) Write the key reactions of gluconeogenesis (2)
- 5B) How are ketone bodies utilised? (2)
- 5C) List **FOUR** salient features of kwashiorkor (2)
- 5D) Define and write one example for transamination (2)

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