

Question Paper

Exam Date & Time: 31-12-2022 (02:15 PM - 05:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST BDS DEGREE EXAMINATION - JANUARY 2023
SUBJECT: GENERAL HUMAN PHYSIOLOGY AND BIOCHEMISTRY
(REGULAR BATCH)

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 the intrinsic and extrinsic pathways of blood coagulation. Name any **TWO** in vitro anticoagulants. (4+1 = 5)
- 1B). List any **TWO** functions of Basal ganglia. Mention the cause and any **FOUR** symptoms of Parkinsonism. Write **ONE** mode of its treatment. (1+1+2+1 = 5)

2. Write short notes on:

- 2A) Define menstrual cycle. Explain the endometrial changes during menstrual cycle with the hormonal basis. (1+3 = 4)
- 2B) Define hypoxia. Give the types of hypoxia with **ONE** example for each. (1+3 = 4)
- 2C) Draw a labeled diagram of a normal ECG recorded from limb lead II. Give the causes for each wave. (4)
- 2D) Mention the components of Juxta glomerular apparatus and give the functions of each. (4)
- 2E) Draw and label an monophasic action potential recorded from a nerve fiber and give the ionic basis for different phases. (2+2 = 4 marks)

SECTION B - BIOCHEMISTRY

Answer all the questions.

- 3A) Explain competitive inhibition giving one example. Write the clinical importance of competitive inhibitors. (2+3 = 5)
- 3B) Explain the calcium homeostasis. (5)
- 4A) Write the irreversible reactions of glycolysis. (3)
- 4B) Name the ketone bodies and explain their formation. (3)
- 4C) With the help of a neat diagram explain absorption of dietary glucose. (3)
- 4D) Explain phase I reactions of detoxification. (3)

- 5A) List out any **FOUR** nucleotides and give their importance. (2)
- 5B) Define high energy compounds with **TWO** examples. (2)
- 5C) Mention the causes and compensatory mechanisms of metabolic acidosis. (2)
- 5D) Give any **TWO** differences between Kwashiorkor and Marasmus. (2)

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