

Question Paper

Exam Date & Time: 14-Apr-2021 (02:15 PM - 05:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST BDS DEGREE EXAMINATION - APRIL 2021
SUBJECT: GENERAL HUMAN PHYSIOLOGY AND BIOCHEMISTRY

Marks: 60

Duration: 165 mins.

SECTION A: GENERAL HUMAN PHYSIOLOGY (30 MARKS)

Answer all the questions.

Write brief, clear and legible answers.

Illustrate your answers with diagrams and flow charts wherever appropriate.

Essay questions:

- 1) Define Erythropoiesis. With the help of a diagram describe the changes that take place during the various stages of erythropoiesis. List any **four factors** stimulating erythropoiesis. (1+7+2 = 10 marks)
2. **Write Short Notes on:**
 - 2A) Trace the origin, course and termination of pain pathway from the face
 - 2B) Draw an oxygen dissociation curve. List any **four factors** that shift the curve to right. (2+2 = 4 marks)
 - 2C) With the help of diagram explain the stages of spermatogenesis. List **any two** factors controlling spermatogenesis. (3+1 = 4 marks)
 - 2D) Explain the role of baroreceptors in blood pressure regulation. (4)
 - 2E) Define Deglutition. Explain the second stage of deglutition. (4)

SECTION B: BIOCHEMISTRY (30 MARKS)

Answer all the questions.

3. **Essay questions:**

- 3A) Describe the citric acid cycle. Add a note on its energetics. (3+2 = 5 marks)
- 3B) Discuss the metabolism of vitamin D under the following headings: (2+2+1 = 5 marks)
 - i) Formation from provitamin
 - ii) Functions
 - iii) Deficiency manifestations

4. Write briefly on:

- 4A) Classify lipids giving examples (3)
- 4B) Discuss the types of mutations giving examples (3)
- 4C) List the causes and name the compensatory mechanisms in metabolic acidosis (3)
- 4D) Write the reactions of transamination and oxidative deamination (3)

5. Answer the following:

- 5A) Write the significance of hormone sensitive lipase (2)
- 5B) Write the components and inhibitors of complex I of ETC (2)
- 5C) Mention the laboratory tests with interpretations useful in the diagnosis of hepatic jaundice (2)
- 5D) What are proenzymes? Give TWO examples (2)

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