

# Question Paper

Exam Date & Time: 04-Dec-2019 (02:15 PM - 05:00 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST BDS DEGREE EXAMINATION - DECEMBER 2019  
SUBJECT: GENERAL HUMAN PHYSIOLOGY AND BIOCHEMISTRY  
Wednesday, December 04, 2019 (14:15 - 17:00)

Marks: 60

Duration: 165 mins.

### SECTION A: GENERAL HUMAN PHYSIOLOGY (30 MARKS)

1. **Essay:**

- 1A) Explain the role of Parathormone in calcium homeostasis. (5)  
1B) Explain the role of lymphocytes in immunity. (5)

2. **Write short notes:**

- 2A) Outline the transport of oxygen in blood. (4)  
2B) Define G.F.R. Give its normal value. Explain the role of various pressures in filtration. (1+3 = 4 marks)  
2C) List four functions of saliva. Explain any one of them. (2+2 = 4 marks)  
2D) Give the steps of spermatogenesis indicating therein the chromosomal number. (2+2 = 4 marks)  
2E) Draw a labelled diagram of neuromuscular junction and list the events that occur during neuromuscular transmission. (2+2 = 4 marks)

### SECTION B: BIOCHEMISTRY (30 MARKS)

- 3A) Explain the steps of beta oxidation of palmitic acid, giving energetics. (5)  
3B) Explain the factors affecting the enzyme activity. (5)

4. **Explain the following:**

- 4A) Key irreversible reactions of gluconeogenesis. (3)  
4B) Draw the components of electron transport chain indicating the sites of ATP synthesis. (3)  
4C) What are the differences between DNA and RNA? (3)  
4D) Digestion of proteins in the gastrointestinal tract. (3)

5. **Write briefly on:**

- 5A) Structure of cell membrane (2)  
5B) Functions of vitamin A (2)  
5C) Features of Pellagra (2)  
5D) Example for Point mutation (2)

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