

**MANIPAL UNIVERSITY****FIRST BDS DEGREE EXAMINATION – AUGUST 2017****SUBJECT: GENERAL HUMAN PHYSIOLOGY AND BIOCHEMISTRY (ESSAY)**

Thursday, August 03, 2017

Time: 14:15 – 17:00 Hrs.

Maximum Marks: 60

- ✍ Answer Section “A” and Section “B” in two separate answer books.  
✍ Draw diagrams and flow charts wherever necessary.

**SECTION – A : GENERAL HUMAN PHYSIOLOGY (30 MARKS)**

1. Describe any four functions of hypothalamus. Explain any two features of hypothalamic disorders.  
(8+2 = 10 marks)
2. **Write Short Answers on:**
- 2A. Explain the neuromuscular transmission with the help of a diagram.  
2B. Describe baroreceptor reflex.  
2C. Name the types of leucocytes and their functions.  
2D. Define hypoxia and cyanosis. Name the different types of hypoxia.  
2E. Describe any four functions of thyroid hormone.  
(4 marks × 5 = 20 marks)

**SECTION – B : BIOCHEMISTRY (30 MARKS)**

- 3A. Explain the following aspects of Vitamin D metabolism.  
i) Synthesis and activation of Vitamin D.  
ii) Role in plasma calcium homeostasis.  
(2+3 = 5 marks)
- 3B. Give an account of the factors affecting enzyme activity.  
(5 marks)
- 4A. Classify lipids giving examples for each class.  
4B. Write a note on the importance of transamination reaction with one example.  
4C. Explain the structure of starch with a note on its complete digestion in the GIT.  
4D. Van den Bergh test and its importance.  
(3 marks × 4 = 12 marks)
5. **Write briefly on:**
- 5A. Role of Vitamin A in dim light vision.  
5B. Codon and its salient features.  
5C. Structure of collagen.  
5D. Dietary sources, RDA, absorption and deficiency manifestations of cobalamin.  
(2 marks × 4 = 8 marks)

