Reg. No.										

MANIPAL UNIVERSITY

FIRST BDS DEGREE EXAMINATION – DEC 2015 / JAN 2016

SUBJECT: GENERAL HUMAN PHYSIOLOGY AND BIOCHEMISTRY (ESSAY)

Wednesday, December 30, 2015

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 : HUMAN PHYSIOLOGY: 30 MARKS

Long question:

1. Define Blood pressure and give normal values. Briefly explain the factors regulating Blood pressure.

(1+1+8 = 10 marks)

2. **Write Short notes:**

2A. Define Erythropoiesis. Briefly describe the changes that take place during the various stages of erythropoiesis.

2B. Explain any four functions of Hypothalamus.

2C. List the steps involved in excitation contraction coupling. Name any two neuromuscular blockers.

2D. Describe in detail the second phase of deglutition.

2E. List the refractory errors of the eye. Give the cause and correction of any two of them.

(4 marks × 5 = 20 marks)

SECTION – B : BIOCHEMISTRY: 30 MARKS

1A. Discuss the beta oxidation of fatty acids under the following headings:

i) Transport into mitochondria
ii) Beta oxidation proper
iii) Energetics

(1+3+1 = 5 marks)

1B. What is the normal serum bilirubin level? Describe the differential diagnosis of jaundice.

(1+4 = 5 marks)

2. **Write short answers for the following:**

2A. Draw a neat labelled diagram of a normal serum protein electrophoretogram and indicate its clinical significance.

2B. Give the reactions catalysed by key enzymes of gluconeogenesis.

2C. Give an account of respiratory acidosis.

2D. Describe Wald's visual cycle.

(3 marks × 4 = 12 marks)

3. **Write briefly on:**

3A. Isoenzymes

3B. Sources of carbon and nitrogen in a purine ring

3C. Kwashiorkor

3D. Functions of zinc and copper

(2 marks × 4 = 8 marks)