

MANIPAL UNIVERSITY**FIRST BDS DEGREE EXAMINATION – JULY 2015****SUBJECT: GENERAL HUMAN PHYSIOLOGY AND BIOCHEMISTRY (ESSAY)**

Wednesday, July 22, 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. Explain the actions and regulation of secretion of growth hormone. List four features of acromegaly.

(1+4+3+2 = 10 marks)

2. Short questions:

- 2A. Define hemostasis. Name the different mechanisms. Add a note on tests of hemostasis.
2B. Explain the process of gas exchange at alveoli.
2C. Explain the functions of oesophageal sphincters in deglutition.
2D. Explain stages of spermatogenesis.
2E. Differentiate the features of upper motor neuron lesion and lower motor neuron lesion.

(4 marks × 5 = 20 marks)

SECTION – B : BIOCHEMISTRY: 30 MARKS**1. Answer the following questions.**

- 1A. Outline the pathway of citric acid cycle.
1B. Describe in detail the digestion and absorption of dietary lipids.

(5+5 = 10 marks)

2. Answer the following:

- 2A. Discuss Wald’s visual cycle.
2B. Define gluconeogenesis. Write the key reactions for the same.
2C. What is BMR? Explain four factors influencing BMR.
2D. Discuss the functions of iron in our body. Mention the sources and RDA for iron.

(3 marks × 4 = 12 marks)

3. Answer the following briefly:

3A. Classify lipoprotein giving one function for each class.

3B. Name the enzyme defect in

- i) Phenyl ketonuria ii) Tay Sach's disease iii) Albinism
iv) Homocystinuria

3C. Name any four isoenzymes and their diagnostic importance.

3D. What is Van Den Bergh test? How is it useful in evaluating the various types of jaundice?

(2 marks × 4 = 8 marks)

