Reg. No.										

MANIPAL UNIVERSITY

FIRST YEAR BOT/B.Sc. MLT/B.Sc. CVT/B.Sc. MIT/B.Sc. RT/B.Sc. NMT/ B.Sc. RRT & DT/B.Sc. MRT/M.Sc. NMT DEGREE EXAMINATION – JUNE 2014

SUBJECT: PHYSIOLOGY

Thursday, June 05, 2014

Time: 10.00-11.30 Hours. Max. Marks: 40

✍ **Answer ALL questions. Draw diagrams wherever necessary.**

1. **Essay questions**:

1A. Define cardiac output. Give its normal value and describe the factors regulating cardiac output.

1B. List any five actions of thyroid hormones.

1C. Define erythropoiesis. Mention its stages and list any two factors regulating it.

1D. Define a reflex. Draw a neat labeled diagram of a reflex arc.

(5 marks × 4 = 20 marks)

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

2A. Write any two differences between simple diffusion and facilitated diffusion.

2B. Draw a neat labeled diagram of a neuron.

2C. List any four hormones secreted by anterior pituitary.

2D. Name the two divisions of autonomic nervous system.

2E. Mention any two contraceptive methods in males.

2F. List two functions of liver.

2G. Mention the location of rods and cones. State one function of each.

2H. Classify hypoxia.

2I. Define GFR and give its normal value.

2J. Draw a labeled diagram of a sarcomere.

(2 marks × 10 = 20 marks)

Reg. No.										

MANIPAL UNIVERSITY

FIRST YEAR BPT/BOT/B.Sc. MLT/B.Sc. NMT/B.Sc. RT/B.Sc. MIT/B.Sc. CVT/B.Sc. RRT & DT DEGREE EXAMINATION – AUGUST 2014

SUBJECT: BIOCHEMISTRY

Wednesday, August 27, 2014

Time: 10.00-11.30 Hours Max. Marks: 40

1. Discuss aerobic glycolysis under the following headings:

1A. Definition

1B. Site and subcellular site

1C. Steps with all the enzymes and coenzymes

(1+1+6 = 8 marks)

2. Write RDA, sources, biochemical functions and disorders of vitamin D.

(6 marks)

3. **Write short notes on the following:**

3A. Lactose intolerance

3B. Site of synthesis and functions of lipoproteins

3C. Components of electron transport chain

3D. Metabolic acidosis

(4 marks × 4 = 16 marks)

4. **Answer the following:**

4A. Define essential amino acids with two examples.

4B. List four differences between DNA and RNA.

4C. Give four functions of dietary fibers.

4D. Define basal metabolic rate and mention two factors affecting BMR.

4E. Mention four features of marasmus.

(2 marks × 5 = 10 marks)