

Reg. No.										
----------	--	--	--	--	--	--	--	--	--	--

## MANIPAL UNIVERSITY

FIRST YEAR B.Sc. M.L.T./B.Sc. N.M.T./B.Sc. R.T./B.Sc. M.R.T./B.Sc. M.I.T./ B.Sc. C.V.T./  
B.Sc. R.R.T & D.T./M.Sc. N.M.T.

FIRST SEMESTER B OPTOM./B.Sc. H.I.A./ B.Sc. P.F.T.

DEGREE EXAMINATION – JUNE 2014

SUBJECT: ANATOMY/GENERAL ANATOMY

Tuesday, June 03, 2014

Time: 10.00-11.30 Hrs.

Max. Marks: 40

☞ Answer ALL the questions.

1. Name the parts of respiratory system. Describe the right lung in detail.

(5+5 = 10 marks)

2. Write short notes on the following:

2A. Spermatic cord

2B. Pericardium

2C. Gall bladder

2D. Spinal cord

2E. Tongue

2F. Fibrous joints

(5 marks × 6 = 30 marks)



**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)



CVT

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/M.Sc. NMT

DEGREE EXAMINATION – JUNE 2014

SUBJECT: BIOCHEMISTRY

Saturday, June 07, 2014

Time: 10.00-11.30 Hours

Max. Marks: 40

- ✍ Answer ALL the questions.
- ✍ Draw diagrams and flow charts wherever appropriate.

1. Explain gluconeogenesis under the following headings:

- 1A. Site and subcellular site
- 1B. Reactions of synthesis of glucose from lactate

(1+7 = 8 marks)

2. Classify enzymes giving one example for each class.

(6 marks)

3. Write short notes on the following:

- 3A. Structure of starch
- 3B. Reactions of  $\beta$ -oxidation of fatty acyl CoA
- 3C. Four differences between DNA and RNA
- 3D. Classification and functions of lipoproteins

(4 marks  $\times$  4 = 16 marks)

4. Answer the following:

- 4A. Define and write the normal values of BMR
- 4B. Name two essential fatty acids and write their functions
- 4C. Write the normal serum levels of total protein, creatinine, calcium and urea
- 4D. List four differences between kwashiorkor and Marasmus
- 4E. Mention the fate of the end product of glycogenolysis in liver and muscle

(2 marks  $\times$  5 = 10 marks)



Reg. No.

**MANIPAL UNIVERSITY**

**FIRST YEAR B.Sc. C.V.T. DEGREE EXAMINATION – JUNE 2014**

**SUBJECT: PAPER IV – ELECTROCARDIOGRAM  
(2011 SCHEME)**

Tuesday, June 10, 2014

Time: 10.00-11.30 Hrs.

Max. Marks: 40

- ✍ **Answer ALL the questions.**
- ✍ **Draw the diagram wherever necessary.**

1. Explain Electrocardiography in Electrolyte imbalance.
2. Explain localization of Myocardial Infarction by the help of diagram.
3. Define pitfalls in ECG Interpretation.
4. Explain action potential (Electrical) of ventricular muscle, SA-node and AV-node.
5. Detection and management of Ventricular Tachycardia.

(8 marks × 5 = 40 marks)





Reg. No.

--	--	--	--	--	--	--	--	--	--

**MANIPAL UNIVERSITY**

**FIRST YEAR B.Sc. C.V.T. DEGREE EXAMINATION – JUNE 2014**

**SUBJECT: PAPER V – BASICS IN CARDIOLOGY  
(2011 SCHEME)**

Thursday, June 12, 2014

Time: 10.00-11.30 Hrs.

Max. Marks: 40

- ✍ **Answer ALL the questions.**
- ✍ **Draw the diagram wherever necessary.**

1. Explain anatomy of pericardium and its clinical significance.
2. Explain development of atria.
3. Explain conduction system of the heart.
4. Explain fetal circulation in detail.
5. Draw a labeled diagram of Aorta, SVC/IVC and its tributaries.

(8 marks × 5 = 40 marks)



CVT

Reg. No.									
----------	--	--	--	--	--	--	--	--	--

**MANIPAL UNIVERSITY**

**FIRST YEAR B.Sc. M.L.T./B.Sc. N.M.T./B.Sc. R.T./B.Sc. M.R.T./B.Sc. M.I.T./ B.Sc. C.V.T./  
B.Sc. R.R.T & D.T. DEGREE EXAMINATION – AUGUST 2014**

**SUBJECT: ANATOMY**

Monday, August 25, 2014

Time: 10.00-11.30 Hrs.

Max. Marks: 40

**☞ Answer ALL the questions.**

1. Name the parts of female reproductive system. Describe the uterus.

(5+5 = 10 marks)

2. Write short notes on the following questions:

2A. Hyaline cartilage

2B. Testis

2C. Pancreas

2D. Ureter

2E. Corpus callosum

2F. Oesophagus

(5 marks × 6 = 30 marks)



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 DEGREE EXAMINATION – AUGUST 2014**

**SUBJECT: PHYSIOLOGY**

Tuesday, August 26, 2014

Time: 10.00-11.30 Hours.

Max. Marks: 40

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

**1. Essay Questions:**

- 1A. Draw and label the oxygen- hemoglobin dissociation curve. Mention any two factors that shift the curve to the right.
- 1B. Define blood pressure. Describe the regulation of blood pressure by baroreceptor mechanism.
- 1C. Mention any five functions of hypothalamus.
- 1D. Name the hormones of posterior pituitary. Describe their actions.

(5 marks × 4 = 20 marks)

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

- 2A. Mention any two functions of plasma proteins.
- 2B. Mention the normal range of platelet count and list any one function of platelets.
- 2C. Mention two functions of large intestine.
- 2D. List two functions of aqueous humor.
- 2E. Name the permanent methods of contraception in males and females.
- 2F. Mention the two divisions of autonomic nervous system. Mention one action of any one division.
- 2G. Name the two types of smooth muscle. Give an example for each type.
- 2H. Define resting membrane potential. Mention the RMP of a neuron.
- 2I. Mention two functions of kidneys.
- 2J. Mention the cause of myopia. Name the correction lens used to treat myopia.

(2 marks × 10 = 20 marks)



CVT

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)

