

MANIPAL UNIVERSITY**FIRST YEAR B.Sc. M.L.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 2015****SUBJECT: ANATOMY**

Wednesday, August 26, 2015

Time: 10.00 – 11.30 Hrs.

Max. Marks: 40

✍ Answer ALL the questions.

1. Name the components (parts) of female reproductive system. Describe the position, parts, relations, blood supply and lymphatic drainage of uterus.

(2+8 = 10 marks)

2. **Write short notes on:**

- 2A. Classification and structure of bones
2B. Lungs
2C. Aorta
2D. Anal canal
2E. Pituitary gland
2F. Lobes and functional areas of cerebral hemisphere

(5 marks × 6 = 30 marks)



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**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 2015**

SUBJECT: PHYSIOLOGY

Thursday, August 27, 2015

Time: 10.00 – 11.30 Hours.

Max. Marks: 40

✍ **Answer ALL questions. Draw diagrams and flow chart wherever appropriate.**

1. Essay Questions:

- 1A. Explain the intrinsic mechanism of blood clotting.
- 1B. Draw and label a normal electrocardiogram from limb lead II and mention the causes for each wave.
- 1C. Mention any three functions of cerebellum. List any two features of cerebellar lesion.
- 1D. List four actions of thyroid hormones. Name the condition that results due to deficiency of thyroid hormones in adults.

(5 marks × 4 = 20 marks)

2. Short Answer Questions:

- 2A. Describe rigor mortis
- 2B. Describe primary active transport mechanism with an example
- 2C. List two features of erythroblastosis fetalis
- 2D. What are the two different forms of carbon dioxide transport in blood?
- 2E. Define cardiac output. Mention its normal value
- 2F. Name the components of vestibular apparatus
- 2G. List any two functions of liver
- 2H. Mention any two actions of testosterone
- 2I. Define glomerular filtration rate. Give its normal value
- 2J. Mention two properties of sensory receptors

(2 marks × 10 = 20 marks)



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FIRST YEAR BPT / BOT / B.Sc. MLT / B.Sc. RT / B.Sc. MIT / B.Sc. CVT /
B.Sc. RRT & DT DEGREE EXAMINATION – AUGUST 2015

SUBJECT: BIOCHEMISTRY

Friday, August 28, 2015

Time: 10.00 – 11.30 Hours

Max. Marks: 40

✍ Answer ALL the questions.

✍ Draw diagrams and flow charts wherever appropriate.

1. Explain the oxidation of acetyl CoA in the TCA cycle and add a note on its energetics.
(8 marks)

2. Give a detailed account of the process of emulsification and absorption of lipids in the intestine.
(6 marks)

3. Write short notes on the following:
 - 3A. Classification of lipoproteins based on density and their functions
 - 3B. Ketolysis and its significance
 - 3C. Basal metabolic rate
 - 3D. Differences between DNA and RNA(4 marks × 4 = 16 marks)

4. Write brief answers for the following:
 - 4A. Give the Henderson- Hasselbalch equation of bicarbonate buffer system with normal values of the components.
 - 4B. Give normal serum level of calcium and mention THREE hormones involved in its regulation.
 - 4C. Define essential amino acids with THREE examples.
 - 4D. Classify polysaccharides giving ONE example each.
 - 4E. Describe the effect of temperature on enzyme activity with a suitable graph.(2 marks × 5 = 10 marks)



MANIPAL UNIVERSITY
FIRST YEAR B.Sc. C.V.T. DEGREE EXAMINATION – AUGUST 2015
SUBJECT: PAPER IV – ELECTROCARDIOGRAM
(2011 SCHEME)

Saturday, August 29, 2015

Time: 10.00 – 11.30 Hrs.

Max. Marks: 40

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

1. Explain Action potential (Electrical) of Ventricular muscle, Sino-atrial node and Atrio-Ventricular node.
2. Explain the ECG criteria for Left Ventricular Hypertrophy.
3. Explain orthodromic and antidromic AVRT in detail.
4. Explain the ECG changes in Myocardial Infarction.
5. Define ECG findings of Atrial Fibrillation and Flutter.

(8 marks × 5 = 40 marks)



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MANIPAL UNIVERSITY

FIRST YEAR B.Sc. C.V.T. DEGREE EXAMINATION – AUGUST 2015

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

Monday, August 31, 2015

Time: 10.00 – 11.30 Hrs.

Max. Marks: 40

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

1. Embryological development of inter ventricular septum.
2. Explain pulmonary circulation in detail with a labelled diagram.
3. Explain first heart sound and second heart sound.
4. Explain aorta and it's branches.
5. Explain coronary venous anatomy. Write a note on pericardial layers.

(8 marks × 5 = 40 marks)

