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. DEGREE EXAMINATION – JUNE 2015

SUBJECT: ANATOMY

Tuesday, June 02, 2015

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

✍ **Answer ALL the questions.**

1. Name the parts of urinary system. Describe the right kidney.

(5+5 = 10 marks)

2. **Write short notes on:**

2A. Spinal cord

2B. Vas deferens

2C. Typical synovial joint

2D. Nasal septum

2E. Ovary

2F. Maxillary air sinus

(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/M.Sc. NMT DEGREE EXAMINATION – JUNE 2015

SUBJECT: PHYSIOLOGY

Thursday, June 04, 2015

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

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

1. Essay Questions:

1A. Explain the chemical regulation of respiration.

1B. Draw and label an electrocardiogram (ECG) from limb lead II. Indicate any two intervals of ECG. Mention any two uses of ECG.

1C. Mention any two functions of cerebellum. List any three features of cerebellar lesion.

1D. Mention any two actions of growth hormone. List any three clinical features of acromegaly.

(5 marks × 4 = 20 marks)

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

2A. List any two functions of hemoglobin.

2B. List any two functions of white blood cells.

2C. Write a note on achalasia cardia.

2D. Name the parts of the vestibular apparatus and mention one function of vestibular apparatus.

2E. Define blood pressure. Mention the normal systolic and diastolic blood pressure range in a normal adult, at rest.

2F. Mention any two functions of skin.

2G. Name two indicators of ovulation.

2H. Mention two differences between facilitated diffusion and active transport mechanism.

2I. Mention two differences between skeletal and cardiac muscles.

2J. Give any two differences between rods and cones.

(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/M.Sc. NMT DEGREE EXAMINATION – JUNE 2015

SUBJECT: BIOCHEMISTRY

Saturday, June 06, 2015

Time: 10.00-11.30 Hours Max. Marks: 40

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

1. Explain anaerobic glycolysis and add a note on its energetics.

(8 marks)

2. Give a diagrammatic representation of the processes of emulsification and absorption of lipids in the intestine.

(6 marks)

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

3A. Components of electron transport chain and order of their arrangement
3B. Reactions of β-oxidation in mitochondria
3C. Importance of dietary fibers
3D. Secondary structure of proteins

(4 marks × 4 = 16 marks)

4. **Answer the following:**

4A. List four differences between DNA and RNA.
4B. Write two reactions where the coenzyme form of niacin is required.
4C. List the four key enzymes of gluconeogenesis.
4D. Name one condition in which these biochemical parameters are increased in blood: glucose, uric acid, bilirubin and urea.
4E. Define buffer and write the Henderson- Hasselbalch equation.

(2 marks × 5 = 10 marks)

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MANIPAL UNIVERSITY

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

SUBJECT: PAPER IV – ELECTROCARDIOGRAM

(2011 SCHEME)

Tuesday, June 09, 2015

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

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

1. Explain localization of Myocardial Infarction by the help of diagram.

2. Explain WPW syndrome.

3. Define ECG in trifascicular block and enumerate the various causes.

4. Explain Electrocardiography in Electrolyte imbalance.

5. Write a note on QRS axis and its clinical significance.

(8 marks × 5 = 40 marks)

Reg. No.										

MANIPAL UNIVERSITY

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

SUBJECT: PAPER V – BASICS IN CARDIOLOGY

(2011 SCHEME)

Thursday, June 11, 2015

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

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

1. Describe Heart Tube formation.

2. Explain the factors determining the arterial Pressure.

3. Explain cardiac cycle with event timing.

4. Explain Aorta and its branches diagrammatically.

5. Explain the Pericardial anatomy.

(8 marks × 5 = 40 marks)