Reg. No.										

MANIPAL UNIVERSITY

FIRST YEAR B.Sc. M.L.T./ B.Sc. N.M.T./ B.Sc. R.T./ B.Sc. M.I.T./ B.Sc. C.V.T. DEGREE EXAMINATION – JUNE 2011

SUBJECT: ANATOMY

Monday, June 06, 2011

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

Answer all the questions:

1. List the parts of the respiratory system. Describe the features, blood supply and nerve supply of the lateral wall of the nose.

(1+3+2+2 = 8 marks)

2. Explain the external features of the heart with the help of a diagram. Add a note on the internal features of right atrium.

(4+4 = 8 marks)

3. **Answer briefly on:**

3A. Classification of synovial joints.
3B. Pleura.
3C. Superior mediastinum.
3D. Azygos vein.
3E. Rectum.
3F. Vas deferens.
3G. Ovary.
3H. Corpus striatum.

(3×8 = 24 marks)

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FIRST YEAR B.P.T./B.O.T./B.Sc.M.L.T./B.Sc.N.M.T/B.Sc.R.T. /B.Sc.M.R.T. DEGREE EXAMINATION – JUNE 2011

SUBJECT: PHYSIOLOGY

Wednesday, June 08, 2011

Time: 10.00-13.00 Hours. Max. Marks: 80

Answer all questions.

1. Describe the stages of erythropoiesis. Add a note on regulation of erythropoiesis.

(10 marks)

2. Mention any six functions of hypothalamus. Explain any two.

(10 marks)

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

3A. Describe the chemical regulation of respiration.
3B. Draw a neat labelled diagram of the stretch reflex arc.
3C. Describe the process of deglutition.
3D. Enumerate the events of neuromuscular transmission.
3E. Describe erythroblastosis fetalis.
3F. Define glomerular filtration rate (GFR). Give its normal value. Describe the factors affecting GFR.
3G. Mention the hormones of anterior pituitary. Describe the functions of any two.
3H. Describe the functions of middle ear.

(5×8 = 40 marks)

4. **Write brief answers to each of the following:**

4A. Define the following terms:
  i) Vital capacity ii) Cyanosis
4B. Mention two clinical features of cerebellar lesion
4C. Name the hormones of ovaries. State one function of each.
4D. What is myopia? How is it corrected?
4E. List two uses of an electrocardiogram (ECG).
4F. Draw a neat labelled diagram of a nephron.
4G. Mention two differences between passive transport and active transport.
4H. Name one permanent contraceptive method in males and females.
4I. What is Cushing's syndrome? Mention two clinical features of this syndrome.
4J. Give the average normal value for the following:
  i) Hemoglobin concentration in adult males
  ii) Cardiac output in adults

(2×10 = 20 marks)

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FIRST YEAR B.P.T./B.O.T/ B.Sc. M.L.T./ B.Sc. N.M.T./ B.Sc. R.T./ B.Sc. M.I.T./ B.Sc.C.V.T

DEGREE EXAMINATION – JUNE 2011

SUBJECT: BIOCHEMISTRY

Friday, June 10, 2011

Time: 10.00-11.30 Hours Max. Marks: 40

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

1. Write the reactions of synthesis of glucose from lactate.

(8 marks)

2. Write the reactions of urea cycle.

(6 marks)

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

3A. Structure of DNA.

3B. Activation of zymogens in the GIT.

3C. Mechanisms of glucose absorption in the small intestine.

3D. Biochemical functions and deficiency manifestations of vitamin D.

(4×4 = 16 marks)

4. Write briefly on:

4A. Basal metabolic rate.

4B. Inhibitors of electron transport chain.

4C. Dietary fibers.

4D. Transamination reaction.

4E. Emulsification of fats.

(2×5 = 10 marks)

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FIRST YEAR B.Sc. M.L.T. DEGREE EXAMINATION – JUNE 2011

SUBJECT: BIOMEDICAL INSTRUMENTATION TECHNIQUES

Monday, June 13, 2011

Time: 10.00-13.00 Hrs. Max. Marks: 80

✍ **Answer all questions. Draw diagrams if necessary.**

1. Describe the different types of laboratory autoclaves. Discuss about the preparation of material and the sterilization procedure of laboratory autoclaves.

2. Discuss the chromatographic technique. What are the different types of chromatography commonly used in the separation of substances?

3. Explain the working of electron microscope in detail.

(10×3 = 30 marks)

4. Write detailed notes on:

4A. pH meter
4B. Treadmill test
4C. EEG
4D. Centrifuge
4E. Colourimeter
4F. Common balance
4G. Dialysers

(5×7 = 35 marks)

5. Write short notes on:

5A. ELISA.
5B. Bronchoalveolar lavage.
5C. Incubator.
5D. Mammography.
5E. Blood gas analyzers.

(3×5 = 15 marks)