


MANIPAL UNIVERSITY
FIRST YEAR B.P.T./B.O.T. DEGREE EXAMINATION – AUGUST 2008
SUBJECT: ANATOMY
(NEW REGULATION)
Monday, August 25, 2008

Time available: 3 Hours.

Max. Marks: 80

- ✍ **ALL questions are compulsory.**
 ✍ **Illustrate the answers with suitable diagrams.**

1. Describe the Radial Nerve under the following headings.
 1A. Origin and root value.
 1B. Course.
 1C. Distribution.
 1D. Applied aspects.

(2+6+9+3 = 20 marks)

2. Describe the Glutei muscles under the following headings.
 2A. Origin.
 2B. Insertion.
 2C. Nerve supply
 2D. Actions.
 2E. Applied aspects.

(9+3+2+4+2 = 20 marks)

3. Write short notes on:

- 3A. Extra cranial course, branches and distributions of facial nerve.
 3B. Functional areas of the superolateral surface of cerebrum.
 3C. Mid brain at the superior colliculus level.
 3D. Circle of Willis.
 3E. Transverse section of the spinal cord showing the ascending and descending tracts.

(5×5 = 25 marks)

4. Write short notes on:

- 4A. Kidney.
 4B. Uterus.
 4C. External features of the heart.
 4D. Name the parts of large intestine.
 4E. Sternocleidomastoid muscle.

(3×5 = 15 marks)



MANIPAL UNIVERSITY**FIRST YEAR B.P.T. DEGREE EXAMINATION – AUGUST 2008****SUBJECT: PHYSIOLOGY**

(NEW REGULATION)

Tuesday, August 26, 2008

Time available: 3 Hours.

Max. Marks: 80

1. Explain the various regulatory mechanisms which help in maintaining the blood pressure within the normal range.
(10 marks)
2. Describe the process of regulation of respiration.
(10 marks)
3. Write short notes on the following:
 - 3A. Human blood group systems.
 - 3B. Process of accommodation in the eye.
 - 3C. Excitation-contraction coupling in skeletal muscles.
 - 3D. Diffusion.
 - 3E. Milk ejection reflex.
 - 3F. Erythroblastosis fetalis.
 - 3G. Normal electrocardiogram (ECG).
 - 3H. Diabetes mellitus.(5×8 = 40 marks)
4. Answer the following questions:
 - 4A. State Frank – Starling's law of heart.
 - 4B. List two differences between white and red muscle fibers.
 - 4C. Enumerate any two functions of placenta.
 - 4D. Mention the functions of hemoglobin.
 - 4E. List four functions of liver.
 - 4F. List four functions of cerebellum.
 - 4G. Define cardiac output. Give the average normal cardiac output in an adult.
 - 4H. Define glomerular filtration rate and mention the normal value.
 - 4I. Mention functions of gastric hydrochloric acid.
 - 4J. List two differences between postsynaptic potential and action potential.(2×10 = 20 marks)



MANIPAL UNIVERSITY**FIRST YEAR B.P.T./B.O.T DEGREE EXAMINATION – AUGUST 2008****SUBJECT: BIOCHEMISTRY****(NEW REGULATION)**

Wednesday, August 27, 2008

Time available: 1½ Hours

Max. Marks: 40

✍ **Answer ALL questions.**

1. Define gluconeogenesis. Write a reactions catalysed by key enzymes of gluconeogenesis.
(1+5 = 6 marks)
2. Give an outline of the biosynthesis of mature collagen.
(4 marks)
3. Write short notes on following:
 - 3A. Marasmus
 - 3B. Lactose intolerance
 - 3C. Basal metabolic rate
 - 3D. Phenyl alanine
 - 3E. Structure of DNA
 - 3F. Essential fatty acids(3×6 = 18 marks)
4. Name ketone bodies. Write in detail the steps of ketogenesis. List two conditions during which ketogenesis take place.
(6 marks)
5. Write the normal serum level of following compounds:
 - i) Glucose
 - ii) Cholesterol
 - iii) Urea
 - iv) Calcium(2 marks)
6. Write coenzyme forms and one reaction each in which the following vitamins are required as coenzymes:
 - i) Thiamine
 - ii) Niacin(4 marks)



MANIPAL UNIVERSITY**FIRST YEAR B.P.T. DEGREE EXAMINATION – AUGUST 2008****SUBJECT: EXERCISE THERAPY – I
(NEW REGULATION)**

Thursday, August 28, 2008

Time available: 3 Hours

Max. Marks: 80

✍ **Answer ALL the questions.**✍ **Essay Questions:**

1. Define passive movements. Classification of passive movements. Principles of relaxed passive movements.

(2+3+5 = 10 marks)

2. Define goniometry. Describe the principles of goniometry.

(2+8 = 10 marks)

3. Short Notes:

3A. Classify soft tissue massage.

3B. Describe the effects and uses of hydrotherapy.

3C. Principles of home programme.

3D. Describe various types of suspension.

3E. Newton's laws of motion.

3F. Principles of relaxation.

3G. Describe various types of muscle work.

3H. Describe various types of levers in the body.

(5×8 = 40 marks)

4. Brief Answers:

4A. Define centre of gravity.

4B. List out various fundamental positions.

4C. Define equilibrium.

4D. List out the types of reflexes.

4E. What are the different ranges of muscle work?

4F. Parallelogram law of forces.

4G. List out the cortical sensations.

4H. Demerits of home programme.

4I. Effects of effleurage.

4J. What is the importance of limb girth measurement?

(2×10 = 20 marks)

