

MANIPAL UNIVERSITY

FIRST YEAR B.P.T./B.O.T. DEGREE EXAMINATION – JUNE 2007

SUBJECT: ANATOMY

(COMMON FOR BOTH OLD & NEW REGULATIONS)

Thursday, June 07, 2007

Time available: 3 Hours.

Max. Marks: 80

✍ **All questions are compulsory. Draw diagrams wherever necessary.**

1. Describe the hip joint under the following headings:

1A. Bone taking part.

1B. Ligaments.

1C. Movement and muscles producing each of those movements.

(2+8+10 = 20 marks)

2. Describe the median nerve under the following headings:

2A. Origin and course.

2B. Distribution.

2C. Effect of injury.

(8+6+6 = 20 marks)

3. Write short notes on:

3A. Sulci and gyri of superolateral surface of cerebrum.

3B. Ascending tracts of Spinal cord.

3C. Internal capsule.

3D. Cerebellum.

3E. Basal ganglia.

(5×5 = 25 marks)

4. Write short notes on:

4A. Vermiform appendix.

4B. Soleus.

4C. Coronary arteries.

4D. Cubital fossa.

4E. Right kidney.

(3×5 = 15 marks)



MANIPAL UNIVERSITY

FIRST YEAR B.P.T./B.O.T./B.Sc.M.L.T./B.Sc.N.M.T/B.Sc.R.T.T. DEGREE EXAMINATION – JUNE 2007

SUBJECT: PHYSIOLOGY

Friday, June 08, 2007

Time available: 3 Hours.

Max. Marks: 80

- 1A. Describe the mechanism of contraction in skeletal muscle.
- 1B. Describe the functions of the following structures of brain:
- i. Hypothalamus ii. Cerebellum

(10+(5+5 = 20 marks)

2. Write short notes on each of the following:
- 2A. Lung volumes and capacities.
- 2B. Regulation of cardiac output in exercise.
- 2C. Digestive enzymes that act on carbohydrates in diet.
- 2D. Visual pathway.
- 2E. Nerve action potential.
- 2F. Functions of platelets.
- 2G. Lactation.
- 2H. Functions of renal tubules.

(5×8 = 40 marks)

3. Write brief answers to the following:
- 3A. Mention two conditions leading to bradycardia.
- 3B. Give the location of respiratory centers. Mention their functions.
- 3C. Mention two functions of smooth muscles.
- 3D. Name the receptors for
- i. Colour vision ii. Hearing
- 3E. Mention two components of gastric juice.
- 3F. Mention the location and function of vestibular apparatus.
- 3G. Mention two functions of plasma proteins.
- 3H. Name any two hormones of adrenal cortex.
- 3I. Mention the normal body temperature and method of measuring it.
- 3J. Mention two factors affecting spermatogenesis.

(2×10 = 20 marks)



MANIPAL ACADEMY OF HIGHER EDUCATION

(Deemed University)

FIRST YEAR B.P.T./B.O.T DEGREE EXAMINATION – JUNE 2007**SUBJECT: BIOCHEMISTRY***(NEW REGULATIONS)*

Saturday, June 09, 2006

Time available: 1½ Hours

Max. Marks: 40

✍ **Answer ALL questions.**

1. Define glycolysis. Write the reactions of aerobic glycolysis mentioning the enzymes and coenzymes at each step.
(1+7 = 8 marks)
2. Define the term carbohydrates. Classify carbohydrates and give TWO examples for each class.
(5 marks)
3. Name lipoproteins and write one function each of the lipoproteins.
(4 marks)
4. Define BMR and list the factors affecting it.
(4 marks)
5. With the help of a graph explain the effect of substrate concentration and temperature on enzyme activity.
(6 marks)
6. Discuss urea cycle under the following headings:
 - 6A. Site and subcellular site.
 - 6B. Reactions.(1+5 = 6 marks)
7. What are essential fatty acids? Give TWO examples.
(2 marks)
8. Write the Henderson-Hasselbach equation for the bicarbonate buffer in the body. Add a note on the role of ammonia in the net generation of bicarbonate by the kidneys.
(5 marks)



MANIPAL UNIVERSITY**FIRST YEAR B.P.T. DEGREE EXAMINATION – JUNE 2007****SUBJECT: EXERCISE THERAPY – I
(NEW REGULATION)**

Monday, June 11, 2007

Time available: 3 Hours

Max. Marks: 80

✍ **Answer ALL the questions.****1. Essay Questions:**

1A. Define hydrotherapy. Discuss its effects, uses and disadvantages.

(1+4+3+2 = 10 marks)

1B. Discuss the principles, types and uses of suspension therapy.

(4+3+3 = 10 marks)

2. Short notes:

2A. Group exercises.

2B. Home program.

2C. Principles of passive movements.

2D. Hacking.

2E. Peripheral sensations – Assessment.

2F. Goniometry for elbow flexion.

2G. Pulleys and springs.

2H. Progressive relaxation.

(5×8 = 40 marks)

3. Short answers:

3A. Define endurance.

3B. List any two contraindications to massage.

3C. Newton's second law.

3D. List the types of pelvic tilt.

3E. List any two effects of effleurage.

3F. Define base of support.

3G. What is a first order lever?

3H. Mention any two effects of free exercises.

3I. Mention any four positions derived from standing.

3J. List any two uses of accessory movements.

(2×10 = 20 marks)

