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)

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

SUBJECT: PSYCHOLOGY – I

Monday, June 11, 2007

Time: 3 Hrs.   Max. Marks: 80

✍   **Answer ALL questions.**

✍   **All questions carry equal marks.**

1.   Discuss any two theories of emotion.

2.   Is intelligence inherited or environmentally acquired? Critically evaluate.

3.   Discuss the interaction of biological and psychosocial factors in motivation.

4.   How is intelligence quotient (IQ) calculated? Name a few tests of intelligence commonly
      used.

5.   Explain how learning takes place by observation.

6.   Define personality. How does it help in adjustment?

7.   Discuss the different stages of cognitive development.

8.   What are the aspects of mental health?

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

SUBJECT: OCCUPATIONAL THERAPY – I
(Therapeutic activities)

Tuesday, June 12, 2007

Time: 3 Hrs.   Max. Marks: 80

✍ **Answer ALL questions.**

1. Define and explain human and nonhuman environment. Discuss how its concepts are used in occupational therapy.

(5+10 = 15 marks)

2. Define activity analysis. Explain the types of activity analysis.

(3+12 = 15 marks)

3. Write the assumptions of model of human occupation and explain the basic concepts of MOHO.

(5+10 = 15 marks)

4. Define occupational science. Explain its development as an academic discipline.

(3+12 = 15 marks)

5. **Short notes:**

5A. Write about compliance with laws and regulations of occupational therapy ethics.

(5 marks)

5B. Briefly describe about formation of World Federation of Occupational Therapists.

(5 marks)

5C. What is sickness? Briefly describe about sick role.

(2+3 = 5 marks)

5D. Define the following words:
    i)   Paradigm.
    ii) Frame of reference.

(2½+2½ = 5 marks)