

MANIPAL ACADEMY OF HIGHER EDUCATION

(Deemed University)

FIRST YEAR B.O.T. DEGREE EXAMINATION – MAY/JUNE 2006**SUBJECT: ANATOMY***(COMMON FOR BOTH OLD & NEW REGULATIONS)*

Wednesday, May 31, 2006

Time available: 3 Hours.

Max. Marks: 80

☞ All questions are compulsory. Illustrate the answers with suitable diagrams.

1. Define pronation and supination. Name the muscles producing these actions. Give attachments, actions and nerve supply of the muscles.

(3+2+8+7 = 20 marks)

2. Describe the knee joint under the following headings.

2A. Bones taking part.

2B. Type of joint.

2C. Ligaments.

2D. Give a brief account of tibial collateral ligament.

(4+2+8+6 = 20 marks)

3. Write short notes on:

3A. Brain stem.

3B. Blood supply of superolateral surface of cerebrum.

3C. Pyramidal tract.

3D. Visual area.

3E. Ventricles of the brain.

(5×5 = 25 marks)

4. Write short notes on:

4A. Stomach.

4B. Muscles of facial expression.

4C. Structure of neuron.

4D. Chambers of the heart.

4E. Cartilage.

(3×5 = 15 marks)



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FIRST YEAR B.O.T. DEGREE EXAMINATION – MAY/JUNE 2006**SUBJECT: PHYSIOLOGY***(COMMON FOR BOTH OLD & NEW REGULATIONS)*

Thursday, June 01, 2006

Time available: 3 Hours.

Max. Marks: 80

1. Draw a diagram to show the origin, course and termination of corticospinal tract. List any five differences between upper motor neuron paralysis and lower motor neuron paralysis.
(5+5 = 10 marks)
2. Draw a neat labelled diagram to show the conducting system of the heart. Give the normal heart rate. Explain any three factors which regulate heart rate.
(3+1+6 = 10 marks)
3. Answer briefly:
 - 3A. Define cardiac output and stroke volume and give their normal values. Briefly explain any two factors regulating cardiac output.
(2+2 = 4 marks)
 - 3B. Write short notes on: i) Significance of lung capacities ii) Causes of Hypoxias
(2+2 = 4 marks)
 - 3C. Briefly explain the sequence of excitation contraction coupling in skeletal muscle fibers.
(4 marks)
 - 3D. Explain the effects of moderate exercise on blood flow to skeletal muscle.
(4 marks)
 - 3E. List the cause for any two of the common errors of refraction in the eye and state how each is corrected.
(2+2 = 4 marks)
 - 3F. Briefly explain any two functions of hypothalamus.
(2+2 = 4 marks)
 - 3G. List four respiratory changes that occur during muscular exercise.
(4 marks)
 - 3H. Tabulate the agglutinogens and agglutinins in each of the groups of ABO and Rh systems of blood grouping.
(4 marks)
 - 3I. Enumerate any four factors affecting velocity of impulse conduction in a nerve fiber and give the significance of any one.
(2+2 = 4 marks)
 - 3J. State any two features/symptoms observed in:
 - i) Diabetes mellitus
 - ii) Cerebellar syndrome
(2+2 = 4 marks)

4. Give short answers:
- 4A. List any two differences between cortical and juxtamedullary nephrons. (2 marks)
- 4B. List four functions of liver. (2 marks)
- 4C. List the stages of erythropoiesis. (2 marks)
- 4D. Give the significance of: i) ovulation time ii) sperm count. (1+1 = 2 marks)
- 4E. List the hormones released from anterior pituitary gland (2 marks)
- 4F. State one morphological feature and one function of the following cells:
i) neutrophil ii) platelet (1+1 = 2 marks)
- 4G. State one temporary method of contraception, each, in males and females. (1+1 = 2 marks)
- 4H. List two functions of middle ear. (2 marks)
- 4I. Name one neuromuscular blocker and its mode of action. (1+1 = 2 marks)
- 4J. List two actions of thyroxine on CVS. (2 marks)



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FIRST YEAR B.O.T. DEGREE EXAMINATION – MAY/JUNE 2006**SUBJECT: BIOCHEMISTRY***(COMMON FOR BOTH OLD & NEW REGULATIONS)*

Friday, June 02, 2006

Time available: 3 Hours

Max. Marks: 80

✍ **Answer ALL questions.**

1. Define isoenzyme. Explain its clinical significance giving two examples. (1+4 = 5 marks)
2. Explain signal transduction via cAMP and IP₃, as second messenger with suitable diagrams. (4+4 = 8 marks)
3. Explain the structure of collagen with suitable diagram. (5 marks)
4. Explain calcium under
 - i) Absorption
 - ii) Metabolic functions
 - iii) Regulation of blood calcium
 (2+5+5 = 12 marks)
5. Explain vitamin B₁₂ under
 - i) Source
 - ii) Absorption, Transport, Storage
 - iii) Metabolic functions
 - iv) Deficiency disorders
 (1+3+3+3 = 10 marks)
6. Enumerate different reasons for increase in blood urea level. (4 marks)
7. Classify proteins depending on function. (3 marks)
8. Write the reasons of TCA cycle. Explain how many ATP are formed in this pathway. (10+2 = 12 marks)
9. Explain Frederickson's classification of hyper lipoproteinemia. (10 marks)
10. Explain glycogenolysis and its regulation. (6+4 = 10 marks)
11. Define basal metabolic rate. (1 mark)



Reg. No.

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FIRST YEAR B.O.T. DEGREE EXAMINATION – MAY/JUNE 2006

SUBJECT: PSYCHOLOGY – I

Saturday, June 03, 2006

Time: 3 Hrs.

Max. Marks: 80

✍ **Answer ALL questions.**

✍ **All questions carry equal marks.**

1. Define psychology and explain any two important branches of psychology.
2. Discuss any two methods used in psychology.
3. Discuss problem solving and creativity.
4. What are the cognitive, behavioral and physiological components of emotions?
5. Define intelligence and discuss ways to measure intelligence.
6. What is learning? Explain the classical conditioning experiment.
7. How does prejudice and discrimination affect our feelings and actions?
8. Discuss the psychoanalytic theory of development.



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FIRST YEAR B.O.T. DEGREE EXAMINATION – MAY/JUNE 2006**SUBJECT: OCCUPATIONAL THERAPY – I****(Therapeutic activities)**

Monday, June 05, 2006

Time: 3 Hrs.

Max. Marks: 80

Answer ALL questions.

1. Write in detail on "The ecology of human performance" frame of reference.
(15 marks)
2. Define communication skills. Classify and enumerate evaluation process of communication skills.
(3+12 = 15 marks)
3. Write in detail about the pioneers and founders of occupational therapy.
(15 marks)
4. Explain in detail about occupational adaptation frame of reference.
(15 marks)
5. Short notes:
 - 5A. Enumerate 3 therapeutic values and 3 precautions for needle work activity.
(2½+2½= 5 marks)
 - 5B. Write in brief on explanatory model of illness and disability.
(5 marks)
 - 5C. Describe the following words: i) Sickness ii) Liminality.
(2½+2½= 5 marks)
 - 5D. Define and enumerate purpose of activity analysis.
(2+3 = 5 marks)

