

MANIPAL UNIVERSITY**FIRST YEAR B.P.T./B.O.T. DEGREE EXAMINATION – JUNE 2010****SUBJECT: ANATOMY****(COMMON FOR BOTH OLD & NEW REGULATIONS)**

Monday, June 07, 2010

Time: 10.00-13.00 Hours.

Max. Marks: 80

1. Give a brief account of shoulder joint under the following headings:

- 1A. Type, subtype and bones taking part
- 1B. Ligaments
- 1C. Movements and muscles producing them
- 1D. Scapulohumoral rhythm
- 1E. Dislocations

(3+6+7+2+2 = 20 marks)

2. Give a brief account of tibial nerve under the following headings:

- 2A. Origin, root value
- 2B. Course and relations
- 2C. Area of cutaneous distribution
- 2D. Muscles supplied by it
- 2E. Applied aspects

(2+8+2+5+3 = 20 marks)

3. Write briefly on:

- 3A. Circle of Willis
- 3B. Dorsal column tracts
- 3C. Internal capsule
- 3D. Lateral ventricles
- 3E. Hypothalamus

(5×5 = 25 marks)

4. Write short notes on:

- 4A. Neurons
- 4B. Male urethra
- 4C. Right coronary artery
- 4D. Pancreas
- 4E. Diaphragm

(3×5 = 15 marks)



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DEGREE EXAMINATION – JUNE 2010

SUBJECT: PHYSIOLOGY

Wednesday, June 09, 2010

Time: 10.00-13.00 Hours.

Max. Marks: 80

✍ **Answer all questions.**

1. Draw a labelled diagram of neuromuscular junction. Write the sequence of events of neuromuscular transmission

(10 marks)

2. Describe the actions of thyroid hormones. Add a note on Cretinism

(10 marks)

3. Write short notes on the following:

3A. Facilitated diffusion.

3B. ABO system of blood grouping.

3C. Stages of deglutition.

3D. Functions of cerebrospinal fluid.

3E. Baroreceptor role in regulation of blood pressure.

3F. Oxygen transport.

3G. Functions of kidney.

3H. Functions of placenta.

(5×8 = 40 marks)

4. Write brief answers to the following questions:

4A. List the functions of rods and cones.

4B. Give the cause for each of the following conditions:

i) Cushing's syndrome ii) Diabetes mellitus

4C. Mention two actions of estrogen.

4D. What is neutrophilia? Give one condition for it.

4E. Mention any two sensations carried by the dorsal column tract.

4F. Define hypoxia. Give one cause for it.

4G. Define blood pressure. Give its normal value.

4H. Enumerate the functions of liver.

4I. Define glomerular filtration rate. Give its normal value.

4J. Name the muscle proteins that have a role in contraction.

(2×10 = 20 marks)

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DEGREE EXAMINATION – JUNE 2010**

**SUBJECT: BIOCHEMISTRY
(NEW REGULATIONS)**

Friday, June 11, 2010

Time: 10.00-11.30 Hours

Max. Marks: 40

1. With the help of graphs, explain the effect of competitive and non competitive inhibitors on enzyme activity. (4 marks)
2. Classify lipids giving one example for each class. (3 marks)
3. Tabulate THREE similarities and THREE differences between starch and glycogen. (3 marks)
4. With the help of schematic diagram, explain the biochemical changes taking place in a patient with lactose intolerance after the intake of milk. (4 marks)
5. Explain with reactions, the process of glycolysis. (7 marks)
6. Write short notes on the importance of dietary fibers. (3 marks)
7. Explain the process of protein digestion in the stomach. (3 marks)
8. List four similarities and four differences between marasmus and kwashiorkor. (4 marks)
9. Write the reactions of the urea cycle. (5 marks)
10. Describe the Watson and Crick model of DNA. (4 marks)



MANIPAL UNIVERSITY**FIRST YEAR B.P.T. DEGREE EXAMINATION – JUNE 2010****SUBJECT: EXERCISE THERAPY – I
(NEW REGULATION)**

Monday, June 14, 2010

Time: 10.00-13.00 Hours

Max. Marks: 80

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

- 1A. Explain in detail the different types of sensory evaluation. (10 marks)
- 1B. Define goniometry. Explain the principles of goniometry and procedure to evaluate the wrist joint. (2+4+4 = 10 marks)

2. Short notes:

- 2A. Principles of massage.
- 2B. Ideal hydrotherapy unit.
- 2C. Fundamental positions.
- 2D. Vital signs.
- 2E. Group exercises.
- 2F. Types and importance of reflex testing.
- 2G. Ranges of muscle work.
- 2H. Principles of breathing exercises. (5×8 = 40 marks)

3. Short answers:

- 3A. Define a lever.
- 3B. What is base of support.
- 3C. Define reflex arc.
- 3D. State the properties of water.
- 3E. Define postural drainage.
- 3F. Angle of pull.
- 3G. Classify passive movements.
- 3H. Limb girth measurement.
- 3I. Define inertia.
- 3J. Define friction. (2×10 = 20 marks)

