

MANIPAL UNIVERSITY
FIRST YEAR B.P.T./B.O.T. DEGREE EXAMINATION – AUGUST 2010
SUBJECT: ANATOMY
(COMMON FOR BOTH OLD & NEW REGULATIONS)
Monday, August 23, 2010

Time: 10.00-13.00 Hours.

Max. Marks: 80

1. Describe the origin, root value, course and distribution of radial nerve and its terminal branches. Add a note on its applied anatomy.
(1+1+6+10+2 = 20 marks)
2. Describe the arches of foot under the following headings:
2A. Classification
2B. Bones taking part
2C. Factors maintaining the arches
2D. Functions
2E. Applied anatomy
(2+3+10+3+2 = 20 marks)
3. Explain briefly on:
3A. Midbrain
3B. Dural folds
3C. Functional lobes and important connections of cerebellum
3D. Corpus callosum
3E. Basal nuclei
(5×5 = 25 marks)
4. Write short notes on:
4A. Trachea
4B. Pituitary gland
4C. Spermatic cord
4D. Pericardium
4E. Parotid gland
(3×5 = 15 marks)



MANIPAL UNIVERSITY**FIRST YEAR B.P.T./B.O.T./B.Sc.N.M.T/B.Sc.R.T. DEGREE EXAMINATION – AUGUST 2010****SUBJECT: PHYSIOLOGY**

Tuesday, August 24, 2010

Time: 10:00-13:00 Hours.

Max. Marks: 80

✍ Answer all questions.

1. Define blood pressure and give the normal values in an adult. Explain the short term regulation of blood pressure.

(10 marks)

2. Classify white blood cells. Give their percentage distribution in an adult. Draw neat labeled diagrams of any two of them and explain their functions.

(10 marks)

3. Write short notes on the following:

3A. Oxygen transport

3B. Diabetes mellitus

3C. Milk ejection reflex

3D. Blood groups

3E. Excitation-Contraction coupling in skeletal muscle

3F. Functions of placenta.

3G. Mechanism of hydrochloric acid secretion in the stomach

3H. Functions of middle ear

(5×8 = 40 marks)

4. Write brief answers to the following questions:

4A. Mention two factors affecting cardiac output.

4B. Name the photoreceptors in the eye. Mention their functions.

4C. Mention any two hormones secreted by the anterior pituitary and mention one action of each.

4D. Mention the functions of platelets.

4E. Define 'erythropoiesis'. Mention two factors regulating it.

4F. Draw a labelled diagram of a nephron.

4G. List four factors increasing heart rate.

4H. Define 'Hypoxia'. Mention any two types of hypoxia.

4I. Enumerate two functions of hypothalamus.

4J. List two differences between upper motor neuron lesion and lower motor neuron lesion.

(2×10 = 20 marks)



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DEGREE EXAMINATION – AUGUST 2010

SUBJECT: BIOCHEMISTRY
(NEW REGULATIONS)

Wednesday, August 25, 2010

Time: 10.00-11.30 Hours

Max. Marks: 40

✍ **Answer ALL questions.**

✍ **Draw diagrams and flow charts wherever appropriate.**

1. Discuss urea cycle under the following headings:

1A. Site and subcellular site.

1B. Reactions.

1C. Mention **TWO** disorders of urea cycle and their defective/deficient enzyme.

(1+5+2 = 8 marks)

2. Classify enzymes giving **ONE** example for each class.

(6 marks)

3. Write briefly on:

3A. Reactions of ketolysis.

3B. **FOUR** differences between marasmus and kwashiorkor.

3C. Causes and biochemical findings of metabolic acidosis.

3D. Dietary sources and functions of vitamin C.

(4×4 = 16 marks)

4. Explain the following with an example

4A. Essential fatty acids.

4B. Specific dynamic action.

4C. Positive nitrogen balance.

4D. Proenzymes.

4E. Mutual supplementation of proteins.

(2×5 = 10 marks)



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

Thursday, August 26, 2010

Time: 10.00-13.00 Hours

Max. Marks: 80

✍ Answer all questions.**1. Essay Questions:**

1A. Define passive movements. Classify them and enumerate the principles of relaxed passive and accessory movements.

(2+2+6 = 10 marks)

1B. Define massage. Classify massage manipulations and explain how do you prepare yourself and patient before performing facial massage?

(2+3+5 = 10 marks)

2. Short notes:

2A. Compare vesicular and bronchial breath sounds.

2B. How will you perform limb length and girth measurement?

2C. Explain hydrotherapy unit with effects, merits and demerits.

2D. Differences between individual and group exercises.

2E. Progressive resisted exercise (PRE).

2F. Define goniometry and explain the principles.

2G. Describe fundamental and derived positions.

2H. Describe principles and techniques of relaxation.

(5×8 = 40 marks)

3. Brief answers:

3A. Superficial sensation.

3B. Pendulum and pendular movements.

3C. List the equipments in therapeutic gym.

3D. Write down the merits of home programme.

3E. Types of suspension therapy.

3F. Define axis and planes.

3G. Define muscle tone and postural tone.

3H. Classification of passive movements.

3I. Define reflex arc.

3J. Centre of gravity and line of gravity.

(2×10 = 20 marks)

