BPT

Reg. No.										

MANIPAL UNIVERSITY

FIRST YEAR B.P.T. & B.O.T./SECOND SEMESTER B.Sc. MIT DEGREE EXAMINATION – JUNE 2016

SUBJECT: ANATOMY
(NR/2015 & 2011 BATCH)

Thursday, June 02, 2016

Time: 10.00-13.00 Hours. Max. Marks: 80

✍ **Answer the following questions.**
✍ **Draw diagrams wherever necessary.**

1. **Describe shoulder joint under the following:**

1A. Type and bones articulating
1B. Ligaments
1C. Movements and muscles producing it
1D. Applied aspects

(3+8+6+3 = 20 marks)

2. **Describe femoral nerve under the following:**

2A. Origin and root value
2B. Course and relations
2C. Branches and distribution
2D. Applied anatomy

(3+6+8+3 = 20 marks)

3. **Write briefly on:**

3A. White fibres of the cerebrum
3B. External features of spinal cord
3C. Parts and fissures of cerebellum
3D. Thalamus
3E. Cerebrospinal fluid

(5 marks × 5 = 25 marks)

4. **Write short notes on**:

4A. Arch of aorta
4B. Microscopic anatomy of hyaline cartilage
4C. Pleural recess
4D. Quadriceps femoris
4E. Interior of the larynx

(3 marks × 5 = 15 marks)

Reg. No.										

MANIPAL UNIVERSITY

FIRST YEAR B.P.T. DEGREE EXAMINATION – JUNE 2016

SUBJECT: PHYSIOLOGY

(NEW REGULATION)

Saturday, June 04, 2016

Time: 10.00-13.00 Hrs. Max. Marks: 80

✍ **Answer the following questions:**

1. Define erythropoiesis. Explain the different stages and changes taking place. Add a note on its regulation.

(1+6+3 = 10 marks)

2. Draw a labeled diagram of neuromuscular junction (NMJ) and explain the events at NMJ during nerve impulse transmission.

(5+5 = 10 marks)

3. **Write short notes on the following:**

3A. Define GFR. Explain the factors affecting it.
3B. Explain the digestion and absorption of fat.
3C. Draw an ECG from limb lead II and explain the waves and intervals.
3D. Explain the role of lymphocytes in immunity.
3E. Explain how oxygen is transported in blood.
3F. List the anterior pituitary hormones. What are the actions of growth hormone?
3G. Functions of middle ear.
3H. Differences between upper and lower motor neuron lesions.

(5 marks × 8 = 40 marks)

4. **Write brief answers to each of the following:**

4A. Draw a labeled diagram of a neuron
4B. Give normal value of hemoglobin and its functions
4C. What are the effects of sympathetic stimulation on heart?
4D. Name the neural centers for respiration
4E. List the functions of aqueous humor
4F. Mention four functions of saliva
4G. Name the hormones of pancreas. Give one important function of each
4H. Define ovulation. Name two tests to detect ovulation
4I. Explain how water is reabsorbed in kidney tubules
4J. Functions of cerebrospinal fluid

(2 marks × 10 = 20 marks)

BPT

Reg. No.										

MANIPAL UNIVERSITY

FIRST YEAR BPT/BOT/B.Sc. MLT/B.Sc. RT/B.Sc. CVT / B.Sc. RRT & DT/M.Sc. NMT DEGREE EXAMINATION – JUNE 2016

SUBJECT: BIOCHEMISTRY

(NR/2015 & 2011 BATCH/ /2015 & 2010 SCHEME/2011 SCHEME/BDT 103/NR

Tuesday, June 07, 2016

Time: 10.00-11.30 Hours Max. Marks: 40

✍ **Answer ALL the questions.**

1. Describe the reactions of gluconeogenesis from lactate.

(8 marks)

2. Classify enzymes with one example each.

(6 marks)

3. **Write short notes on the following:**

3A. Dietary fibers

3B. Reactions of beta oxidation

3C. Basal metabolic rate

3D. Structure of DNA

(4 marks × 4 = 16 marks)

4. **Answer the following:**

4A. Define transamination reaction with an example.

4B. Name two physiologically important products derived from tyrosine and tryptophan each.

4C. Name the vitamin deficient in scurvy, rickets, beriberi and pellagra.

4D. Write the normal serum levels of cholesterol and uric acid.

4E. Define a buffer and give two examples.

(2 marks × 5 = 10 marks)

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MANIPAL UNIVERSITY

FIRST YEAR B.P.T. DEGREE EXAMINATION – JUNE 2016

SUBJECT: EXERCISE THERAPY – I

(NEW REGULATION)

Thursday, June 09, 2016

Time: 10.00 – 13.00 Hours | Max. Marks: 80

✍ **Answer ALL questions.**

1. **Essay questions:**

1A. Describe the thermodynamic properties of water. Explain the treatment techniques used in Hydrotherapy.

(4+6 = 10 marks)

1B. Define massage. Classify massage techniques. Explain the physiological and therapeutic effects of percussion manipulation.

(1+4+5 = 10 marks)

2. **Short notes:**

2A. Axis and planes
2B. Suspension therapy unit
2C. Explain the starting position – Hanging
2D. What are the advantages and disadvantages of Group exercise?
2E. General techniques of relaxation
2F. Limb girth measurement
2G. Principles of goniometry
2H. Ranges of muscle work

(5 marks × 8 = 40 marks)

3. **Brief answers:**

3A. What is parallelogram law of forces? Give one example from human body.
3B. What is second order lever?
3C. Name the cortical sensations.
3D. Give the afferent and efferent root values for knee jerk.
3E. Mention the equipments used for measuring each vital signs.
3F. What are the indications for measuring chest expansion?
3G. Give any two differences between passive physiological and passive accessory movements.
3H. What is Glossopharyngeal breathing?
3I. What is modified postural drainage?
3J. Compare bronchial and vesicular breath sounds.

(2 marks × 10 = 20 marks)