

MANIPAL UNIVERSITY

FIRST YEAR B.P.T./B.O.T. DEGREE EXAMINATION – AUGUST 2012

SUBJECT: ANATOMY
(COMMON FOR BOTH OLD & NEW REGULATIONS)

Tuesday, August 21, 2012

Time: 10.00-13.00 Hours.

Max. Marks: 80

Answer the following questions:**1. Give a brief account of ulnar nerve under the following headings:**

- 1A. Origin and root value
- 1B. Course and relations
- 1C. Branches and distribution
- 1D. Applied anatomy

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

2. Give a brief account of knee joint under the following headings:

- 2A. Intracapsular structures
- 2B. Locking and unlocking mechanisms
- 2C. Nerve supply
- 2D. Names of bursae around it
- 2E. Applied anatomy

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

3. Write briefly on:

- 3A. Corpus callosum, its parts and relations
- 3B. Motor and sensory areas of cerebral hemispheres
- 3C. Pyramidal tract
- 3D. Basal ganglia
- 3E. Internal structure of pons

(5×5 = 25 marks)

4. Write short notes on:

- 4A. Typical spinal nerve
- 4B. Ovary
- 4C. Pleura
- 4D. Left kidney
- 4E. Hypophysis cerebri

(3×5 = 15 marks)



MANIPAL UNIVERSITY

FIRST YEAR B.O.T (NR)/B.Sc. M.I.T/ B.Sc. R.T/B.Sc. N.M.T/ DEGREE EXAMINATION – AUGUST 2012

SUBJECT: PHYSIOLOGY

Wednesday, August 22, 2012

Time: 10.00-11.30 Hours.

Max. Marks: 40

✍ **Answer ALL questions. Draw diagrams wherever necessary.**

1. Essay questions:

- 1A. With the help of a schematic diagram, explain the process of intrinsic pathway of blood coagulation.
- 1B. Draw a neat labeled diagram of neuromuscular junction. Describe the events that occur during neuromuscular transmission in the form of flow chart.
- 1C. Mention three functions of middle ear. Describe any one.
- 1D. List any four hormones secreted by anterior pituitary and explain the actions of any one hormone.

(5×4 = 20 marks)

2. Write short answers for the following:

- 2A. Explain facilitated diffusion with an example.
- 2B. Mention two functions of lymph.
- 2C. Discuss two properties of sensory receptors.
- 2D. Define cardiac output. Give its normal value.
- 2E. Mention any two clinical features of Addison's disease.
- 2F. Describe the second stage of deglutition.
- 2G. List two functions of kidneys.
- 2H. What are the different types of hypoxia?
- 2I. Name the receptors for smell and taste. Where are they located?
- 2J. Mention any two actions of progesterone.

(2×10 = 20 marks)



MANIPAL UNIVERSITY
FIRST YEAR B.P.T./BOT DEGREE EXAMINATION – AUGUST 2012

SUBJECT: PHYSIOLOGY
(BPT-NEW/BOT-OLD REGULATION)

Wednesday, August 22, 2012

Time: 10.00-13.00 Hours.

Max. Marks: 80

✍ **Answer ALL questions.**

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

1. In the form of a flow chart, write the steps involved in the intrinsic and extrinsic pathways of blood coagulation.

(10 marks)

2. **Explain cardiac cycle under the following headings:**

2A. Definition

2B. Normal duration

2C. Graph depicting left ventricular pressure changes

(1+1+8 = 10 marks)

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

3A. Mention THREE actions of thyroid hormones and explain any one function.

3B. Describe the mechanism of quiet inspiration.

3C. Define deglutition. Describe the second stage of deglutition.

3D. Draw a labeled diagram of the pathway carrying fine touch sensation from lower limbs.

3E. Describe the functions of middle ear.

3F. Describe micturition reflex.

3G. Draw a labeled diagram of the nerve action potential and give the ionic basis of it.

3H. In the form of a flow chart, describe the events that occur during neuromuscular transmission in skeletal muscle.

(5×8 = 40 marks)

4. **Write short answers for the following:**

4A. Mention two features of Parkinson's disease.

4B. Name the contractile proteins in skeletal muscle.

4C. Define tubular maximum. Give the normal value of T_m for glucose.

4D. Name the phases of the uterine cycle.

4E. State Landsteiner's law.

4F. Write two differences between rods and cones.

4G. Define blood pressure. Give its normal value in adults under resting conditions.

4H. Mention two factors which shift the oxygen hemoglobin dissociation curve to the right.

4I. List two functions of testosterone.

4J. Enumerate two physiological actions of cortisol.

(2×10 = 20 marks)



MANIPAL UNIVERSITY

FIRST YEAR B.P.T./B.O.T/B.Sc. R.T./ B.Sc. M.I.T. DEGREE EXAMINATION – AUGUST 2012

SUBJECT: BIOCHEMISTRY
(COMMON FOR BOTH OR AND NR)

Thursday, August 23, 2012

Time: 10.00-11.30 Hours

Max. Marks: 40

- ✍ **Answer ALL the questions.**
✍ **Draw diagrams and flow charts wherever appropriate.**

1. Describe the synthesis of mature collagen with diagrams. (8 marks)

2. Write the site, subcellular site and reactions of urea cycle. (6 marks)

3. **Write short notes on the following:**
 - 3A. Structure of DNA
 - 3B. FOUR functions each of calcium and phosphorus
 - 3C. Classification of lipids with examples
 - 3D. Reactions of β -oxidation in mitochondria(4×4 = 16 marks)

4. **Give brief answers for the following:**
 - 4A. Define specific dynamic action and give values for all THREE macronutrients.
 - 4B. Name FOUR physiologically important compounds derived from tyrosine.
 - 4C. Name TWO glycogen storage disorders with their deficient enzymes.
 - 4D. Define proenzymes with TWO examples.
 - 4E. Write the normal serum levels of uric acid, total protein, glucose and creatinine.(2×5 = 10 marks)



3. **Write short notes on any SIX of the following:**

- 3A. Types of attention
- 3B. Experimental method
- 3C. Psychological theories of motivation
- 3D. Nonverbal test of intelligence
- 3E. Application of learning theories
- 3F. Types of thinking
- 3G. Measurement of aptitude
- 3H. Cannon Bard's theory of emotion
- 3I. Processes involved in Observational Learning

(5×6 = 30 marks)

4. **Write essay on any TWO of the following:**

- 4A. Define emotion. List the important characteristics and functions of emotion. Briefly describe any two theories of Emotion.
- 4B. Define Psychology. Elaborate upon the scope of psychology.
- 4C. Briefly describe the psychoanalytic point of view of personality development.

(15×2 = 30 marks)



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(15×2 = 30 marks)



MANIPAL UNIVERSITY**FIRST YEAR B.O.T. DEGREE EXAMINATION – AUGUST 2012****SUBJECT: OCCUPATIONAL THERAPY – I
(Therapeutic Activities)
(OLD REGULATION)**

Saturday, August 25, 2012

Time: 10:00-13:00 Hrs.

Max. Marks: 80

✍ Answer ALL questions.

1. Explain in detail the purpose of activity adaptation. Discuss the methods of adaptation using a biomechanical approach.
(5+10 = 15 marks)
2. Define occupation and explain in detail the components of balanced occupation.
(3+12 = 15 marks)
3. Differentiate Empathy and Sympathy with suitable examples and explain the therapeutic application of the same.
(10+5 = 15 marks)
4. Draw the schematic representation of the various constructs in the Occupational Adaptation FOR. Explain relative mastery. Discuss the four generic steps in practicing the occupational adaptation frame of reference.
(5+5+5 = 15 marks)
5. **Write short notes on:**
 - 5A. Enumerate the psychological components of occupational therapy practice
 - 5B. SOAP
 - 5C. WFOT
 - 5D. Occupational form, function and meaning
(5×4 = 20 marks)



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MANIPAL UNIVERSITY

FIRST YEAR B.O.T. DEGREE EXAMINATION – AUGUST 2012

SUBJECT: OCCUPATIONAL THERAPY FUNDAMENTALS
(NEW REGULATION)

Saturday, August 25, 2012

Time: 10:00-11:30 Hrs.

Max. Marks: 40

✍ **Answer all the questions.**

✍ **Long questions:**

1. Discuss the outcomes of occupational therapy service programs and intervention. (10 marks)
2. Discuss the 'six Ws' to describe the value of occupational therapy. (10 marks)

3. **Short Notes:**

- 3A. Short note on 'Freedom' as an important personal value of an occupational therapist.
 - 3B. What is occupational dysfunction?
 - 3C. Short note on 'occupation' as a tool for occupational therapy.
 - 3D. Sensory perceptual skills
- (5×4 = 20 marks)



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MANIPAL UNIVERSITY

FIRST YEAR B.O.T. DEGREE EXAMINATION – AUGUST 2012

SUBJECT: BASICS OF OCCUPATIONAL THERAPY ASSESSMENT
(NEW REGULATION)

Monday, August 27, 2012

Time: 10:00-11:30 Hrs.

Max. Marks: 40

Answer all the questions.

1. Write a detail note on assessment process and explain the informal methods of evaluation.
(6+4 = 10 marks)
2. Define range of motion. Explain the principles and procedures in joint measurement.
(2+4+4 = 10 marks)
3. **Write short notes on:**
 - 3A. Effect of sensory loss on movement
 - 3B. Purpose of history taking
 - 3C. Neurophysiological foundations of tactile sensation
 - 3D. Contra indications and precautions of manual muscle testing

(5×4 = 20 marks)

