

MANIPAL UNIVERSITY

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

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

Tuesday, May 29, 2012

Time: 10.00-13.00 Hours.

Max. Marks: 80

✍ **Answer the following questions:**

1. Explain the shoulder joint in detail with a neat labeled diagram under the following headings:
- Type and bones articulating
 - Ligaments
 - Movements and muscles producing those movements
 - Applied anatomy

(3+6+7+4 = 20 marks)

2. Write a brief note on the media nerve under the following headings:

- Origin and root value
- Its course
- Structures supplied by it
- Applied anatomy

(3+5+7+5 = 20 marks)

3. **Write briefly on:**

- Internal capsule
- Functional areas on the frontal lobe of cerebrum
- Third ventricle
- CSF formation and circulation
- External features of spinal cord

(5×5 = 25 marks)

4. **Write short notes on:**

- Pleura
- Blood supply of heart
- Elbow joint
- Typical rib
- Atlanto occipital joint

(3×5 = 15 marks)



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FIRST YEAR B.O.T. /B.Sc. M.L.T./B.Sc. C.V.T/ B.Sc. MIT/ B.Sc. R.T./B.Sc. N.M.T/
B.Sc. OPT. DEGREE EXAMINATION – MAY/JUNE 2012

SUBJECT: PHYSIOLOGY

Thursday, May 31, 2012

Time: 10.00-11.30 Hours.

Max. Marks: 40

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

1. Essay questions:

- 1A. Draw a labeled diagram of the nerve action potential. Mention the ionic basis for the different phases.
- 1B. In the form of a flow chart write the sequence of events occurring during the excitation contraction coupling of a skeletal muscle.
- 1C. Describe the changes seen in the ovary during menstrual cycle.
- 1D. Explain the various types of movements in the small intestine.

(5×4 = 20 marks)

2. Write short answers for the following:

- 2A. What are anticoagulants? Mention any two anticoagulants.
- 2B. Mention any two functions of basal ganglia.
- 2C. Write any two properties of cardiac muscle.
- 2D. Define cardiac output and give the normal value.
- 2E. Define alveolar ventilation and pulmonary ventilation.
- 2F. Name the hormones of posterior pituitary. Mention one action of any one hormone.
- 2G. Mention the cause and two features of clinical features of diabetes mellitus.
- 2H. Define GFR and mention the normal value.
- 2I. Draw a diagram to depict a reflex arc.
- 2J. List any two common errors of refraction. Describe any one.

(2×10 = 20 marks)



MANIPAL UNIVERSITY**FIRST YEAR B.P.T./BOT DEGREE EXAMINATION – MAY/JUNE 2012****SUBJECT: PHYSIOLOGY
(BPT-NEW/BOT-OLD REGULATION)**

Thursday, May 31, 2012

Time: 10.00-13.00 Hours.

Max. Marks: 80

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

1. With the help of a schematic diagram describe the intrinsic pathway of blood coagulation. Name any FOUR anticoagulants. Add a note on hemophilia.
2. Mention the location of central and peripheral chemoreceptors. Describe the role of central and peripheral chemoreceptors in the regulation of respiration.

(10×2 = 20 marks)

3. Write short notes on the following:

- 3A. List different types of transport mechanisms occurring across the cell membrane. Explain any ONE with suitable example.
- 3B. Describe the functions of thyroid hormones.
- 3C. Draw a neat labeled diagram of an ECG from limb lead II. Indicate any TWO intervals. Mention the cause for each wave.
- 3D. Describe the forms and mechanism of carbon dioxide transport in blood.
- 3E. Explain the sequence of events occurring during synaptic transmission.
- 3F. Describe the excitation - contraction coupling in skeletal muscle.
- 3G. Describe the mechanism of HCl secretion in stomach.
- 3H. Describe any TWO errors of refraction and mention how they are corrected?

(5×8 = 40 marks)

4. Write brief answers to each of the following:

- 4A. Mention TWO actions of estrogen.
- 4B. Write TWO differences between skeletal muscle and cardiac muscle.
- 4C. List TWO functions of middle ear.
- 4D. List TWO functions of bile.
- 4E. Define GFR. Give its normal value.
- 4F. Name TWO contraceptive methods in males.
- 4G. Name FOUR hormones of anterior pituitary.
- 4H. List TWO clinical features of cerebellar disease.
- 4I. Define stroke volume. Mention its normal value.
- 4J. Mention any TWO functions of skin.

(2×10 = 20 marks)



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FIRST YEAR B.P.T./B.O.T/ B.Sc. M.L.T./ B.Sc. N.M.T./ B.Sc. R.T./ B.Sc. M.I.T.
DEGREE EXAMINATION – MAY/JUNE 2012

SUBJECT: BIOCHEMISTRY

Saturday, June 02, 2012

Time: 10.00-11.30 Hours

Max. Marks: 40

✍ Answer ALL the questions.

✍ Draw diagrams and flow charts wherever appropriate.

1. Discuss β -oxidation of palmitic acid under the following headings:

1A Site and sub-cellular site

1B. Activation and transport

1C. Reactions

(1+3+4 = 8 marks)

2. Describe the complete digestion of carbohydrates in the GIT.

(6 marks)

3. Answer the following:

3A. Explain with diagrams the secondary structure of proteins.

3B. Define isoenzymes and explain the isoenzymes of LDH with its clinical significance.

3C. Write the reactions of the four key enzymes of gluconeogenesis.

3D. Discuss the RDA, sources and biochemical functions of vitamin D.

(4×4 = 16 marks)

4. Answer the following:

4A. Define steatorrhea and give its causes.

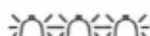
4B. Write a note on the regulation of glycolysis.

4C. Classify amino acids based on nutritional requirement with ONE example each.

4D. Define specific dynamic action of food and give values for the major macronutrients.

4E. Give normal serum levels of glucose in fasting and post-prandial states.

(2×5 = 10 marks)



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FIRST YEAR B.O.T. DEGREE EXAMINATION – MAY/JUNE 2012

**SUBJECT: PSYCHOLOGY - I
(OLD REGULATION)**

Tuesday, June 05, 2012

Time: 10:00-13:00 Hrs.

Max. Marks: 80

1. Choose the single best answer.

1A. Amnesia means

- | | |
|-----------------------|-----------------------|
| i) Distorted thinking | ii) Loss of sensation |
| iii) Loss of speech | iv) Loss of memory |

1B. Salivation elicited by the sound of the bell in Pavlov's experiment is

- | | |
|---------------------------|----------------------------|
| i) Conditioned response | ii) Unconditioned response |
| iii) Conditioned stimulus | iv) Unconditioned stimulus |

1C. Fluid intelligence and crystallized intelligence are proposed by

- | | | | |
|------------|------------|----------------|------------|
| i) Cattell | ii) Eysenk | iii) Sternberg | iv) Vernon |
|------------|------------|----------------|------------|

1D. Social learning theory was formulated by

- | | | | |
|-----------|-------------|--------------|-------------|
| i) Tolman | ii) Bandura | iii) Skinner | iv) Erikson |
|-----------|-------------|--------------|-------------|

1E. Illusion is a

- | | | | |
|------------------|----------------|------------|-------------------|
| i) Misperception | ii) Perception | iii) Trick | iv) Hallucination |
|------------------|----------------|------------|-------------------|

(1×5 = 5 marks)

2. Write definitions on any FIVE of the following:

- 2A. Independent and Dependent Variable.
- 2B. Developmental Psychology.
- 2C. Punishment.
- 2D. Non-Volitional attention.
- 2E. Source and surface traits.
- 2F. Organizing principle of perception.
- 2G. Coping mechanism.

(3×5 = 15 marks)

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

- 3A. Problem solving and types of problem solving.
- 3B. Factors influencing attitude formation.
- 3C. Atkinson and Shiffrin model of memory.

- 3D. Types of Aptitude.
- 3E. Learning approach to Personality.
- 3F. Any two theories of emotion.
- 3G. Perceptual Constancy.
- 3H. Defense mechanism.
- 3I. Observational method.

(5×6 = 30 marks)

4. Write essay on any TWO of the following:

- 4A. Define intelligence. Discuss any three theories of intelligence.
- 4B. Define conditioning. Discuss different types of conditioning.
- 4C. What are the characteristics of a good test? Write a brief account on assessment of Intelligence.

(15×2 = 30 marks)



MANIPAL UNIVERSITY

FIRST YEAR B.O.T. DEGREE EXAMINATION – MAY/JUNE 2012

**SUBJECT: GENERAL PSYCHOLOGY
(NEW REGULATION)**

Tuesday, June 05, 2012

Time: 10:00-13:00 Hrs.

Max. Marks: 80

1. Choose the single best answer.

1A. Amnesia means

- | | |
|-----------------------|-----------------------|
| i) Distorted thinking | ii) Loss of sensation |
| iii) Loss of speech | iv) Loss of memory |

1B. Salivation elicited by the sound of the bell in Pavlov's experiment is

- | | |
|---------------------------|----------------------------|
| i) Conditioned response | ii) Unconditioned response |
| iii) Conditioned stimulus | iv) Unconditioned stimulus |

1C. Fluid intelligence and crystallized intelligence are proposed by

- | | | | |
|------------|-------------|----------------|------------|
| i) Cattell | ii) Eyesenk | iii) Sternberg | iv) Vernon |
|------------|-------------|----------------|------------|

1D. Social learning theory was formulated by

- | | | | |
|-----------|-------------|--------------|-------------|
| i) Tolman | ii) Bandura | iii) Skinner | iv) Erikson |
|-----------|-------------|--------------|-------------|

1E. Illusion is a

- | | | | |
|------------------|----------------|------------|-------------------|
| i) Misperception | ii) Perception | iii) Trick | iv) Hallucination |
|------------------|----------------|------------|-------------------|

(1×5 = 5 marks)

2. Write definitions on any FIVE of the following:

- 2A. Independent and Dependent Variable.
- 2B. Developmental Psychology.
- 2C. Punishment.
- 2D. Non-Volitional attention.
- 2E. Source and surface traits.
- 2F. Organizing principle of perception.
- 2G. Coping mechanism.

(3×5 = 15 marks)

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

- 3A. Problem solving and types of problem solving.
- 3B. Factors influencing attitude formation.
- 3C. Atkinson and Shiffrin model of memory.

- 3D. Types of Aptitude.
- 3E. Learning approach to Personality.
- 3F. Any two theories of emotion.
- 3G. Perceptual Constancy.
- 3H. Defense mechanism.
- 3I. Observational method.

(5×6 = 30 marks)

4. Write essay on any TWO of the following:

- 4A. Define intelligence. Discuss any three theories of intelligence.
- 4B. Define conditioning. Discuss different types of conditioning.
- 4C. What are the characteristics of a good test? Write a brief account on assessment of Intelligence.

(15×2 = 30 marks)



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

Thursday, June 07, 2012

Time: 10:00-13:00 Hrs.

Max. Marks: 80

Answer ALL questions.**Long question:**

1. Explain in detail the components of the Model of Human Occupation. (15 marks)
2. Outline the occupational therapy assessment process in brief and explain in detail the types of documentation procedures used in occupational therapy. (5+10 = 15 marks)
3. Explain in detail the three levels of activity analysis. (15 marks)
4. Explain the 12 variables in occupational therapy group process. (15 marks)
5. **Short Notes:**
 - 5A. Define high therapeutic rapport.
 - 5B. Purpose of goniometry.
 - 5C. Environmental adaptation.
 - 5D. Application of Person Environment Occupational Model in occupational therapy. (5×4 = 20 marks)



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FIRST YEAR B.O.T. DEGREE EXAMINATION – MAY/JUNE 2012

**SUBJECT: OCCUPATIONAL THERAPY FUNDAMENTALS
(NEW REGULATION)**

Thursday, June 07, 2012

Time: 10:00-11:30 Hrs.

Max. Marks: 40

Answer all the questions.

1. Discuss the role of World Wars in defining the modern day practise of occupational therapy.
(10 marks)

2. Explain the occupational therapy intervention process as described by Occupational Therapy Practise Framework.
(10 marks)

3. **Short Notes:**
 - 3A. Write a short note on contributions by Kamla V. Nimbkar.
 - 3B. Short note on 'Prudence' as an important personal value of an occupational therapist.
 - 3C. Difference between 'occupation' and 'activity'.
 - 3D. Motor and praxis skills

(5×4 = 20 marks)



MANIPAL UNIVERSITY**FIRST YEAR B.O.T. DEGREE EXAMINATION – MAY/JUNE 2012****SUBJECT: BASICS OF OCCUPATIONAL THERAPY ASSESSMENT
(NEW REGULATION)**

Saturday, June 09, 2012

Time: 10:00-11:30 Hrs.

Max. Marks: 40

✍ Answer all the questions.

1. Define assessment. Explain the process of assessment with flow chart.

(2+5+3 = 10 marks)

2. Define sensation. Explain the purpose of sensory evaluation and the neurophysiological foundations of tactile sensation.

(2+3+5 = 10 marks)

3. Short Notes:

3A. Factors influencing range of motion.

3B. How to improve the art of palpation?

3C. Principles of manual muscle testing.

3D. Write a note on social history taking.

(5×4 = 20 marks)

