

**MANIPAL ACADEMY OF HIGHER EDUCATION**  
**SECOND YEAR B.P.T./B.O.T./B.Sc. R.T./ B.Sc. R.R.T. & D.T**  
**DEGREE EXAMINATION – JUNE 2018**

**SUBJECT: PATHOLOGY**

(2010 REGULATION/BOT 209:2015 & 2011 SCHEME/2015 & 2010 SCHEME/BDT 201)

Thursday, June 21, 2018

Time: 10:00-11:30 Hrs.

Max. Marks: 40

- ✍ **Answer ALL questions.**
- ✍ **Illustrate your answers with diagrams wherever necessary.**

1. Classify anemia. Discuss the laboratory diagnosis of megaloblastic anemia.  
(2+5 = 7 marks)
  
2. Define inflammation. Mention five cardinal signs of inflammation. Discuss phagocytosis.  
(1+2+5 = 8 marks)
  
3. **Write short notes on:**
  - 3A. Mention the types and complications of diabetes mellitus
  - 3B. Rheumatoid arthritis
  - 3C. Etiology and clinical features of Bronchiectasis
  - 3D. Etiology and morphology of peptic ulcer
  - 3E. Gangrene

(5 marks × 5 = 25 marks)



**MANIPAL ACADEMY OF HIGHER EDUCATION**  
**SECOND YEAR BPT/BOT/B.Sc. RT/B.Sc. CVT/B.Sc. RRT & DT**  
**DEGREE EXAMINATION – JUNE 2018**

**SUBJECT: MICROBIOLOGY**

(COMMON FOR 2010 REGULATION/BOT 208:2015 & 2011 SCHEME/2010 & 2015 SCHEME/2015 SCHEME/BDT 202)

Friday, June 22, 2018

Time: 10:00-11:30 Hrs.

Max. Marks: 40

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✍ **Draw diagrams wherever appropriate.**

1. Describe the pathogenesis and laboratory diagnosis of human immunodeficiency virus infection.

(4+4 = 8 marks)

2. Describe the predisposing factors in urinary tract infections (UTI). Discuss the laboratory diagnosis of UTI.

(2+5 = 7 marks)

3. **Write briefly on:**

3A. Mechanism of type IV hypersensitivity

3B. Laboratory diagnosis of tuberculosis

3C. MRSA and its importance in hospital associated infections

3D. Moist heat sterilization above 100°C

3E. Bacterial flagella

(5 marks × 5 = 25 marks)



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**SECOND YEAR B.P.T./B.O.T./B.Sc. R.T./B.Sc. R.R.T. & D.T.**  
**DEGREE EXAMINATION – JUNE 2018**

**SUBJECT: PHARMACOLOGY**

(COMMON FOR 2010 REGULATION/BOT 207:2015 & 2011 SCHEME/2015 SCHEME/BDT 203)

Saturday, June 23, 2018

Time: 10:00-11:30 Hrs.

Max. Marks: 40

1. **Answer the following questions:**

- 1A. Mention two each advantages and disadvantages of intravenous route of drug administration.
- 1B. Mention three types of non-receptor mediated drug actions with an example for each.
- 1C. Classify skeletal muscle relaxants with an example for each class.

(2+3+3 = 8 marks)

2. **Define the following terms:**

- 2A. Plasma half life
- 2B. Potency

(1 mark × 2 = 2 marks)

3. **Explain the mechanism of action of the following drugs:**

- 3A. Digoxin
- 3B. Warfarin

(2 marks × 2 = 4 marks)

- 4A. List three first line drugs used in tuberculosis and describe the mechanism of action of any one of them.
- 4B. List two insulin preparations and mention two adverse effects of any one of them.
- 4C. Enumerate two corticosteroids and list their two uses and two adverse effects.

(3+2+3 = 8 marks)

5. **Mention two examples and two uses of the following classes of drugs:**

- 5A. Macrolides
- 5B. Alpha blockers
- 5C. H<sub>2</sub> blockers
- 5D. Beta lactam antibiotics
- 5E. Opioids

(2 marks × 5 = 10 marks)

6. Explain the pharmacological basis for combining levodopa with carbidopa for the treatment of parkinsonism.

(2 marks)

7. **Mention two drugs each used in the following conditions:**

7A. Congestive cardiac failure

7B. Bronchial asthma

7C. Insomnia

7D. HIV infection

7E. Angina pectoris

7F. Gout

(1 mark × 6 = 6 marks)



**MANIPAL ACADEMY OF HIGHER EDUCATION**  
**SECOND YEAR B.P.T. DEGREE EXAMINATION – JUNE 2018**

**SUBJECT: PSYCHOLOGY**  
**(2010 REGULATION)**

Monday, June 25, 2018

Time: 10:00-13:00 Hrs.

Max. Marks: 80

**1. Essay type (attempt any TWO):**

- 1A. What is classical conditioning? Explain the experiment.
- 1B. What is crisis and crisis intervention?
- 1C. What is behavior therapy? Explain various behavior therapy techniques.

(15 marks × 2 = 30 marks)

**2. Short notes (Attempt any SIX):**

- 2A. Intelligence test
- 2B. Personality test
- 2C. Effects of stress
- 2D. Survey method
- 2E. Illusion
- 2F. Explain any one theory of intelligence in details
- 2G. What is PTSD?
- 2H. Explain with the help of an example James-Lange theory of emotion
- 2I. Time out

(5 marks × 6 = 30 marks)

**3. Very short answers (Attempt any FIVE):**

- 3A. Define perception.
- 3B. Define learning.
- 3C. Define clinical psychology.
- 3D. What is psychological testing?
- 3E. Draw Maslow's need hierarchy.
- 3F. Define psychology.
- 3G. Define intelligence.

(3 marks × 5 = 15 marks)

**4. Multiple Choice Questions (All questions are compulsory)**

4A. Demerits of Survey are \_\_\_\_\_

- i) Covers larger population
- ii) Checks with prejudices and attitudes
- iii) Objective
- iv) None of the above

4B. Perception is immediate \_\_\_\_\_ of an object or objective reality as it is.

- i) Apprehension
- ii) Retention
- iii) Realization
- iv) Attention

4C. Learning is relatively \_\_\_\_\_ change in the behavior.

- i) Relatively latent
- ii) Relatively permanent
- iii) Relatively hidden
- iv) Relatively obvious

4D. Three dimensional model of the structure of intellect was proposed by \_\_\_\_\_

- i) Guilford
- ii) Spearman
- iii) Thorndike
- iv) None of the above

4E. According to Hippocrates the human body consists of \_\_\_\_\_ types of body humors.

- i) 1
- ii) 2
- iii) 3
- iv) 4

(1 mark × 5 = 5 marks)



**MANIPAL ACADEMY OF HIGHER EDUCATION**  
**SECOND YEAR B.P.T. DEGREE EXAMINATION – JUNE 2018**

**SUBJECT: BIOMECHANICS AND EXERCISE THERAPY – II**  
**(2010 REGULATION)**

Tuesday, June 26, 2018

Time: 10:00-13:00 hrs.

Max. Marks: 80

✍ **Answer ALL questions.**

**SECTION A: BIOMECHANICS**

✍ **Essay questions:**

1. Describe in detail Kinetics and Kinematics of Hip joint.

(5+5 = 10 marks)

2. **Write short notes on:**

2A. Explain Lumbo-pelvic Rhythm. Mention any two reasons for abnormal Lumbo-pelvic Rhythm.

2B. Mention types of Prehension. Explain any one.

2C. Describe Kinetics and Kinematics of Swing Phase of Gait.

2D. Explain Screw Home mechanism.

(5 marks × 4 = 20 marks)

3. **Write brief answers on:**

3A. Define carrying angle.

3B. Mention the parts of Coracoacromial arch and mention its advantage.

3C. Define angle of Torsion.

3D. What is Metatarsal Break?

3E. Define Lumbosacral angle.

(2 marks × 5 = 10 marks)

**SECTION B: EXERCISE THERAPY – II**

✍ **Essay questions:**

4. Discuss principles of Manual Muscle Testing and MRC grading.

(5+5 = 10 marks)

5. **Write short notes on:**

5A. Define Progressive Resistance Exercises. Explain Delorme's protocol.

5B. Discuss sequential Functional Re-education positions from side sitting to standing.

- 5C. Describe Physiological effects of spinal traction.  
5D. Mention causes of Inco-ordination. Explain Frenkel's exercise.

(5 marks  $\times$  4 = 20 marks)

6. **Write brief answers on:**

- 6A. Mention grades of Mobilization.  
6B. Write components of D1 and D2 flexion pattern for upper limb.  
6C. Mention any four postural deviations in lateral view.  
6D. Enumerate any four types of Orthopedic gait.  
6E. Mention types of Stretching.

(2 marks  $\times$  5 = 10 marks)





**MANIPAL ACADEMY OF HIGHER EDUCATION**  
**SECOND YEAR B.P.T. DEGREE EXAMINATION – JUNE 2018**  
**SUBJECT: ELECTROTHERAPY**  
**(2010 REGULATION)**

Wednesday, June 27, 2018

Time: 10:00-13:00 Hrs.

Max. Marks: 80

**Answer ALL the questions.**

**1. Essays questions:**

- 1A. Describe the principles and production of electromagnetic induction.
- 1B. Explain in detail pain pathophysiology. What are the physiological effects of shortwave diathermy?

(10 marks × 2 = 20 marks)

**2. Write short notes on:**

- 2A. Dangers of Micro wave diathermy
- 2B. Describe the principles and production of ultrasonic therapy.
- 2C. Explain the physiological effects of UVR.
- 2D. Indications and contraindications of IFT
- 2E. Construction and working of kromayer lamp
- 2F. Physiological effects of IRR
- 2G. Laws of reflection.
- 2H. Choke coil and its function

(5 marks × 8 = 40 marks)

**3. Write brief answers on:**

- 3A. Define shock. Mention the causes of it.
- 3B. Ohms law
- 3C. Uses of condenser
- 3D. Construction of miliampheremeter
- 3E. Define Iontophoresis
- 3F. Van't Hoff law
- 3G. Indications of laser
- 3H. Magnetron
- 3I. Attenuation in ultrasonic therapy
- 3J. Eddy currents

(2 marks × 10 = 20 marks)

