

**MANIPAL UNIVERSITY****SECOND YEAR B.P.T./B.O.T. DEGREE EXAMINATION – DECEMBER 2010****SUBJECT: PATHOLOGY AND MICROBIOLOGY  
(COMMON FOR BOTH OLD & NEW REGULATION)**

Monday, December 13, 2010

Time: 10:00-13:00 Hrs.

Max. Marks: 80

- ✍ Answer section A and section B in TWO separate answer books.  
✍ Draw labelled diagrams wherever appropriate.

**SECTION 'A': PATHOLOGY: 40 MARKS**

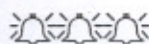
1. Define inflammation. Discuss the cellular events of acute inflammation.  
(1+7 = 8 marks)
2. What are the types of fractures? Discuss the process of fracture healing. Add a note on factors influencing fracture healing.  
(1+4+2 = 7 marks)
3. Write short notes on:
  - 3A. Predisposing factors and complications of atherosclerosis.
  - 3B. FAB classification of leukemia.
  - 3C. Spread of tumors.
  - 3D. Fate of thrombus.
  - 3E. Viral hepatitis.

(5×5 = 25 marks)

**SECTION 'B': MICROBIOLOGY: 40 MARKS**

4. Classify methods of Sterilization. Discuss sterilization by moist heat above 100°C in detail.  
(3+5 = 8 marks)
5. Discuss the etio-pathogenesis of leprosy. Add a note on its laboratory diagnosis.  
(5+2 = 7 marks)
6. Write short notes on:
  - 6A. Innate immunity.
  - 6B. Gram negative bacterial cell wall.
  - 6C. Pathogenesis of polio.
  - 6D. Laboratory diagnosis of UTI.
  - 6E. Food poisoning.

(5×5 = 25 marks)



**MANIPAL UNIVERSITY****SECOND YEAR B.P.T./B.O.T. DEGREE EXAMINATION – DECEMBER 2010****SUBJECT: PHARMACOLOGY  
(COMMON FOR BOTH OLD & NEW REGULATIONS)**

Wednesday, December 15, 2010

Time: 10:00-11:30 Hrs.

Max. Marks: 40

1. Name two antihypertensives acting by different mechanism and one adverse effect of each.  
(3+1 = 4 marks)
- 2A. Name two NSAIDs and explain two uses of one of them.  
2B. Explain how nitroglycerine improves exercise performance in angina patients.  
((1+3)+2 = 6 marks)
3. Give one use and one contraindication for:
- 3A. Morphine  
3B. Ciprofloxacin  
3C. Glibenclamide  
3D. Gentamicin  
3E. Lignocaine + Adrenaline  
(2×5 = 10 marks)
4. Explain the pharmacological basis for the following:
- 4A. Atropine in organophosphorous poisoning  
4B. Bromhexine in bronchiectasis  
4C. Benzyl Penicillin in syphilis  
4D. Carbimazole in thyrotoxicosis  
4E. Piroxicam for myalgia  
(2×5 = 10 marks)
- 5A. Name two bronchodilators and mention their routes of administration.  
5B. Name two examples for transdermal route of drug administration with one indication for each.  
5C. Name two drugs that can limit musculoskeletal functions with reasons.  
5D. Mention two uses of Diazepam with its basis.  
5E. Mention two uses and two adverse effects of Phenytoin.  
(2×5 = 10 marks)



**MANIPAL UNIVERSITY****SECOND YEAR B.P.T. DEGREE EXAMINATION – DECEMBER 2010****SUBJECT: ELECTROTHERAPY  
(COMMON FOR BOTH OLD AND NEW REGULATION)**

Friday, December 17, 2010

Time: 10:00-13:00 Hrs.

Max. Marks: 80

☞ Answer ALL questions.

**1. Essay Questions:**

- 1A. Explain in detail the production of ultrasound and physiological effects of Ultrasound therapy.  
(5+5 =10 marks)
- 1B. Write in detail the production of short wave diathermy and explain the modes of application.  
(5+5 = 10 marks)

**2. Short Notes:**

- 2A. Write the indications and contraindications of ultraviolet radiation.
- 2B. Explain the Pain Gate theory.
- 2C. Discuss the physiological effects and uses of paraffin wax bath.
- 2D. Discuss the methods of application of ice in physiotherapy.
- 2E. Explain the production of Interferential currents.
- 2F. Explain in detail strength – duration curve with diagrams.
- 2G. Discuss about the emitters of microwave diathermy.
- 2H. Write about the types of TENS.

(5×8 = 40 marks)

**3. Brief Answers:**

- 3A. Define earth shock.
- 3B. Define Ohm's law.
- 3C. Define Joule's law.
- 3D. Define Diodes.
- 3E. Define Lenz's law.
- 3F. Define iontophoresis.
- 3G. Define Rheobase.
- 3H. List the properties of LASER.
- 3I. Define suberythema dose.
- 3J. Define Biofeedback.

(2×10 = 20 marks)



# MANIPAL UNIVERSITY

## SECOND YEAR B.P.T. DEGREE EXAMINATION – DECEMBER 2010

### SUBJECT: BIOMECHANICS AND EXERCISE THERAPY – II (NEW REGULATION)

Monday, December 20, 2010

Time: 10:00-13:00 hrs.

Max. Marks: 80

✍ Answer ALL questions.

#### SECTION A: BIOMECHANICS (40 Marks)

**1. Essay Question:**

Describe the role of rotator cuff muscles and explain the phases of scapulohumeral rhythm.

(4+6 = 10 marks)

**2. Short Notes:**

- 2A. Explain the structure and function of intervertebral disc.
- 2B. Write about the various types of prehension of hand.
- 2C. Describe briefly the kinetics and kinematics of the elbow joint.
- 2D. Describe the unilateral stance mechanism for the hip joint.

(5×4 = 20 marks)

**3. Brief Answers:**

- 3A. Mention (any four) postural abnormalities of the vertebral column.
- 3B. Define the lumbosacral angle.
- 3C. Name the ligaments around the ankle joint.
- 3D. What is lumbo-pelvic rhythm?
- 3E. What is trendelenberg's gait?

(2×5 = 10 marks)

#### SECTION B: EXERCISE THERAPY – II (40 Marks)

**4. Essay Question:**

Describe the indications, contraindications and classification of the mobilisation techniques.

(2+2+6 = 10 marks)

**5. Short Notes:**

- 5A. Discuss the grades of manual muscle testing and limitations for the manual muscle testing.
- 5B. Name any THREE types of walking aids and write their indications.
- 5C. Describe the principles of Proprioceptive Neuromuscular Facilitation.
- 5D. Define postural drainage and write the indications and contraindications of postural drainage

(5×4 = 20 marks)

**6. Brief Answers:**

- 6A. What is pursed lip breathing?
- 6B. Mention the methods of stretching.
- 6C. Enumerate the contraindications for spinal traction.
- 6D. What is hold-relax technique?
- 6E. Define trick movements and give one example.

(2×5 = 10 marks)



**MANIPAL UNIVERSITY****SECOND YEAR B.P.T. DEGREE EXAMINATION – DECEMBER 2010****SUBJECT: PSYCHOLOGY  
(COMMON FOR BOTH OLD AND NEW REGULATION)**

Wednesday, December 22, 2010

Time: 10:00-13:00 Hrs.

Max. Marks: 80

- ✍ Answer any FOUR questions from Section 'A' and any FOUR questions from Section 'B'.  
✍ All questions carry equal marks.

**SECTION – A**

1. What is creative thinking? Outline the stages in creative thinking.
2. Define memory and discuss any two theories of memory.
3. Discuss the various styles of personality.
4. Outline the different stages of cognitive development as given by Piaget.
5. Write briefly on any TWO of the following:
  - 5A. Types of attribution.
  - 5B. Emotional development.
  - 5C. Prejudice.

**SECTION – B**

6. Discuss the oriental and Indian concepts of mental health.
7. Describe any three behavior therapy techniques.
8. Enumerate on any two perspectives on normality and abnormality.
9. Outline the importance of psychosocial rehabilitation.
10. Write briefly on any TWO of the following:
  - 10A. Marital Therapy.
  - 10B. Coping with stress.
  - 10C. Survey method.

