

**MANIPAL UNIVERSITY**  
**THIRD YEAR B.P.T./B.O.T. DEGREE EXAMINATION – DECEMBER 2011**  
**SUBJECT: CLINICAL ORTHOPAEDICS AND RHEUMATOLOGY**  
**(COMMON FOR BOTH OLD & NEW REGULATION)**

Monday, December 12, 2011

Time: 10:00-13:00 Hrs.

Maximum Marks: 80

✍ Answer SECTION "A" and SECTION "B" in two separate answer books.

**SECTION "A": CLINICAL ORTHOPAEDICS: 40 MARKS**

✍ Answer ALL the questions.

1. Define and classify nerve injuries. What is Tinels sign? What is its clinical significance?  
(10 marks)
2. Define nonunion? Enumerate the causes of nonunion. Describe the principles of management of nonunion.  
(10 marks)

- 3A. Classify bone tumours
- 3B. De Quervains Disease
- 3C. Gait cycle
- 3D. Seronegative arthritis

(20 marks)

**SECTION "B": RHEUMATOLOGY: 40 MARKS**

4. Write short notes on any FOUR out of the following five questions:

- 4A. Describe the clinical features of Raynaud's phenomenon.
- 4B. Mention salient investigations for diagnosis of Gout.
- 4C. Describe clinical features of Henoch Schölein Purpura.
- 4D. Explain the etiopathogenesis, investigations and treatment for Perthe's disease.
- 4E. Enlist the criteria for diagnosis of RA.

(5×4 = 20 marks)

✍ Answer any TWO out of the following three questions:

- 5A. Define Scleroderma.
- 5B. Describe its clinical features.
- 5C. Enlist salient investigations and treatment options.

(1+4+5 = 10 marks)

- 6A. Define Osteoporosis.
- 6B. Describe the etiopathogenesis and clinical features.
- 6C. Discuss how to investigate and treat a patient with osteoporosis.

(1+4+5 = 10 marks)

- 7A. Define Septic Arthritis.
- 7B. Enlist the common organisms causing septic arthritis.
- 7C. Describe the common clinical manifestations.
- 7D. Mention any two important tests to diagnose Septic Arthritis and enumerate appropriate drugs for treatment.

(1+2+3+ (2+2) = 10 marks)



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## MANIPAL UNIVERSITY

THIRD YEAR B.P.T./B.O.T. DEGREE EXAMINATION – DECEMBER 2011

SUBJECT: NEUROSCIENCE/NEUROLOGICAL SCIENCE  
(COMMON FOR BOTH OLD & NEW REGULATION)

Tuesday, December 13, 2011

Time: 10:00-13:00 Hrs.

Maximum Marks: 80

✍ Answer any FOUR questions. Each question carries TWENTY marks.

1. Head injury
  - Causes and mechanism of head injury
  - Types of Neurological disorder following head injury
  - Management of head injury in acute stage
  
2. Myasthenia gravis - Etiopathogenesis, clinical features, management
  
3. Multiple sclerosis  
Etiopathogenesis, clinical features, management
  
4. **Short notes:**
  - 4A. Transverse myelitis
  - 4B. Radiation myelopathy
  - 4C. Dyskinesia
  - 4D. Akinetic rigid syndrome
  
5. **Short notes:**
  - 5A. Complex regional pain syndrome
  - 5B. Organophosphate poisoning
  - 5C. Beri Beri
  - 5D. Guillian Barre Syndrome



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**THIRD YEAR B.O.T. DEGREE EXAMINATION – DECEMBER 2011**  
**SUBJECT: OCCUPATIONAL THERAPY IN ORTHOPAEDICS**

Wednesday, December 14, 2011

Time: 10:00-13:00 Hrs.

Max. Marks: 80

✍ **Answer ALL the Questions.**

✍ **Draw the Diagram Wherever Necessary.**

1. Discuss about psychosocial aspect of limb loss and plan OT management for 35 yrs. old teacher with right side shoulder disarticulation.

(5+10 = 15 marks)

2. Describe the causes of LBP and explain the OT interventions for any three IADL tasks affected due to LBP.

(5+10 = 15 marks)

3. What do you mean by PPRP and explain the OT intervention at various stages for the same.

(5+10 = 15 marks)

4. Explain the pathophysiology of peripheral nerve injury and plan OT program for a 16 yrs. old student with ulnar nerve injury.

(5+10 = 15 marks)

**5. Short Notes:**

5A. Modified Duran's protocol for flexor tendon injury

5B. Home modifications for RA patient

5C. OT management for pressure sore

5D. Home program for ankylosing spondylitis

(5×4 = 20 marks)



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## MANIPAL UNIVERSITY

THIRD YEAR B.O.T. DEGREE EXAMINATION – DECEMBER 2011

SUBJECT: OCCUPATIONAL THERAPY IN NEUROLOGY

Thursday, December 15, 2011

Time: 10:00-13:00 Hrs.

Max. Marks: 80

✍ Answer ALL the questions.

1. Write in detail the pathological classification of intracranial tumors. Discuss the role of occupational therapy in postoperative ependymoma of spinal cord at cervical level.  
(8+7 = 15 marks)
2. Define Gullian Barre syndrome. Write the clinical features, prognosis and occupational therapy management for the same.  
(15 marks)
3. Discuss the four principles of Roods Approach. Compare the heavy work stabilizers and light work mobilizers as described by Roods.  
(5+5+5 = 15 marks)
4. A 50 years old bus driver was diagnosed with right MCA infarct, following acute rehabilitation, he has recovered voluntary control of arm stage 6, hand and leg to 5, according to Brunnstrom stage. Patient desires to go back to work. Identify the possible impairments, which may impede his return to work and accordingly describe the Occupational Therapy management for the same.  
(5+10 = 15 marks)
5. Short Notes:
  - 5A. Specific tests for dysmetria and dysdiachokinesisa.  
(2½+2½ = 5 marks)
  - 5B. Define Myathesia gravis. Discuss its clinical grades.  
(1+4 = 5 marks)
  - 5C. Mechanism of primary brain injury.  
(5 marks)
  - 5D. Role of occupational therapy in Wilson's disease.  
(5 marks)



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## MANIPAL UNIVERSITY

THIRD YEAR B.O.T. DEGREE EXAMINATION – DECEMBER 2011

SUBJECT: OCCUPATIONAL THERAPY IN REHABILITATION

Friday, December 16, 2011

Time: 10:00-13:00 Hrs.

Max. Marks: 80

✍ **Answer ALL the questions.**

1. Define 'rehabilitation'. Explain the role of any five team members.  
(2+13 = 15 marks)
2. Explain biofeedback instrument with the diagram. Explain the different types of biofeedback.  
(8+7 = 15 marks)
3. Define 'Hand Splint'. Explain the mechanical and fitting principles.  
(2+7+6 = 15 marks)
4. Define 'Mobility Aids'. Discuss the advantages and disadvantages of different walking frames.  
(2+13 = 15 marks)
5. **Short Notes:**
  - 5A. Differentiate between CBR and IBR
  - 5B. OT role in pressure sore management
  - 5C. New York Heart Association Functional Classification
  - 5D. Assistive technologies for blind people(5×4 = 20 marks)



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**THIRD YEAR B.O.T. DEGREE EXAMINATION – DECEMBER 2011**

**SUBJECT: BIO-ENGINEERING**

Saturday, December 17, 2011

Time: 10:00-11:30 Hrs.

Max. Marks: 40

**Answer ALL the questions. Draw diagrams and flowcharts wherever appropriate.**

1. What are the ideal characteristics of a stump? Explain the stump care and management to develop an ideal stump.  
(3+7 = 10 marks)
2. Explain the various parts of a Below Elbow Prosthesis.  
(10 marks)
3. Describe any two orthoses which can control flexion, extension, lateral flexion including rotation of cervical spine.  
(2½+2½ = 5 marks)
4. **Write short notes on any THREE of the following:**
  - 4A. SACH FOOT
  - 4B. Medial Arch support
  - 4C. A.F.O. – Plastic design
  - 4D. Pavlik Harness

(5×3 = 15 marks)

