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**MANIPAL ACADEMY OF HIGHER EDUCATION**  
**MS (ORTHOPAEDICS) DEGREE EXAMINATION – DECEMBER 2023**  
**PAPER I**

Monday, December 04, 2023

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long Essays:**

1. Describe the anatomy of arches of foot. Classify flat foot and discuss and management in a 2 year old child.

(15 marks)

2. Discuss calcium metabolism. Discuss evaluation and management of Osteoporosis.

(15 marks)

3. **Write short notes on:**

3A. Ochronosis

3B. Vitamin c

3C. Stress fracture

3D. Anteversion of femur

3E. Thomas test

3F. MRSA

3G. Compound palmar ganglion

3H. Petit's triangle

3I. Bohler Braun

3J. Orthopaedic manifestations of neurofibromatosis

(7 marks × 10 = 70 marks)



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**MANIPAL ACADEMY OF HIGHER EDUCATION**  
**MS (ORTHOPAEDICS) DEGREE EXAMINATION – DECEMBER 2023**

**PAPER II**

Tuesday, December 05, 2023

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

**Answer ALL the questions.**

**Long Essays:**

1. Describe Blood supply of scaphoid. Classify scaphoid fracture. Discuss the management of nonunion of scaphoid fracture.

(15 marks)

2. Describe etipathogennesis of compartment syndrome. Discuss the prevention and management of this condition.

(15 marks)

**Write short notes on:**

3A. Essex Lopresti fracture

3B. Meniscal repair

3C. Odontoid fracture

3D. Dynamic compression plate

3E. Flail chest

3F. Seat belt injuries

3G. Myocutaneous flap

3H. Mallet finger

3I. Heterotrophic Ossification

3J. Function cast bracing

(7 marks × 10 = 70 marks)



**MANIPAL ACADEMY OF HIGHER EDUCATION**  
**MS (ORTHOPAEDICS) DEGREE EXAMINATION – DECEMBER 2023**

**PAPER III**

Wednesday, December 06, 2023

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

**Answer All Questions:**

**Long Essays:**

1. Discuss the classification, aetiopathology and clinical features of Tuberculous spondylitis at dorsolumbar junction. Describe the surgical management of Pott's paraplegia.

(3+3+3+6 = 15 marks)

2. Discuss the aetiopathology and clinical features of Osteonecrosis of Femoral Head. Describe the various investigations and management of Osteonecrosis based on Ficat and Arlet classification.

(3+3+3+6 = 15 marks)

**Write short notes on:**

3A. Deformities of hand in Rheumatoid Arthritis

3B. deQuervain's disease

3C. Calcitonin

3D. Brodie's abscess

3E. Radiological features of Osteosarcoma

3F. Prevention/Care of pressure sores in Paraplegics

3G. Anterior surgical approach to hip joint

3H. Sequelae of Tom Smith's arthritis

3I. Spontaneous and Osteonecrosis of Knee

3J. Differential diagnosis of Club foot

(7 marks × 10 = 70 marks)



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**MANIPAL ACADEMY OF HIGHER EDUCATION**  
**MS (ORTHOPAEDICS) DEGREE EXAMINATION – DECEMBER 2023**

**PAPER IV**

Thursday, December 07, 2023

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

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✍ **Answer ALL the questions.**

✍ **Long Essays:**

1. Discuss the clinical manifestations, Investigations and recent advances in the management of slipped capital femoral epiphysis

(15 marks)

2. Discuss the recent advances in the management of acetabular impingement.

(15 marks)

3. **Write Short Notes on:**

3A Tendon Transfers for foot drop

3B Columnar concept in Distal Radial fractures

3C Congenital coxa vara

3D Neoadjuvant therapy in Osteosarcoma

3E Suspensory Fixation in ACL reconstruction

3F Bio absorbable implants in Orthopaedics

3G Teriparatide in the management of Osteoporosis

3H Distraction histiogenesis

3I Stress protection phenomenon

3J Medial Patellofemoral ligament reconstruction

(7 marks × 10 = 70 marks)

