

Reg. No.

MANIPAL ACADEMY OF HIGHER EDUCATION
MS (ORTHOPAEDICS) DEGREE EXAMINATION – NOVEMBER 2025

PAPER I

Monday, November 10, 2025

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long Essays:**

1. Write the differences between primary and secondary fracture healing. Describe the stages of secondary fracture healing. What are the causes of non-union?

(5+5+5 = 15 marks)

2. Describe the structure of bone with illustrative diagram(s). Describe the vitamin D metabolism and the radiological features of rickets.

(5+5+5 = 15 marks)

3. **Short Essay Questions:**

3A. Wolff's law and Davis' law

3B. Role of Bisphosphonate therapy in Paediatric Orthopaedics

3C. Local antibiotic delivery system

3D. Chopart's amputation

3E. Surgical safety checklists

3F. Serum protein electrophoresis

3G. Definition of Orthosis and Prosthesis. Write a note on Myoelectric hand prosthesis

3H. Taylor Spatial frame

3I. Growth modulation

3J. PEEK implants

(7 marks × 10 = 70 marks)



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PAPER II

Tuesday, November 11, 2025

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long Essays:**

1. Describe the clinical features, investigations, treatment of a patient with traumatic brachial plexus palsy.

(5+6+4 = 15 marks)

2. Describe the AO classification for thoracolumbar fractures. Describe the investigations and treatment of a patient with D12 Burst fracture with neurological deficits. Add a note on Thoracolumbar injury classification and severity score (TLICS).

(4+6+5 = 15 marks)

3. **Short Essay Question:**

3A. Flail chest

3B. Coxofemoral bypass

3C. Fracture neck of femur in children

3D. Hoffa's fracture

3E. Terrible triad of the elbow

3F. Mallet finger

3G. Mangled Extremity Severity score

3H. Functional cast bracing

3I. Lisfranc injury

3J. Periprosthetic fracture of femur in THR

(7 marks × 10 = 70 marks)



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PAPER III

Wednesday, November 12, 2025

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer All Questions:**

✍ **Long Essays:**

1. Describe the Pathoanatomy of congenital talipes equinovarus (CTEV). Describe the management of CTEV in a 12-year-old child with clubfoot which has not been treated since birth.

(7+8 = 15 marks)

2. Describe the Osteotomies around the Hip.

(15 marks)

3. **Short Essay Question:**

3A. Microlumbar discectomy.

3B. Sprengel Shoulder.

3C. Split Tibialis Posterior Tendon Transfer.

3D. Brodie's abscess.

3E. Scheuermann's disease.

3F. Corticotomy and bone transport.

3G. Pulled elbow.

3H. Gout vs Pseudogout.

3I. Ely's test.

3J. DeQuervain's tenosynovitis.

(7 marks × 10 = 70 marks)



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PAPER IV

Thursday, November 13, 2025

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long Essays:**

1. Describe the management of TB spine in a paediatric age group. Write a note on Nanotechnology-Based Strategies for Bone Tuberculosis Management.

(10+5 = 15 marks)

2. Mention the differences between PS and CR TKA. Write a note on kinematic alignment in TKA.

(8+7 = 15 marks)

3. **Short Essay Question:**

3A. Scapulothoracic dissociation.

3B. Radiofrequency ablation in chronic pain management.

3C. RSA in proximal humerus fractures.

3D. Application of artificial intelligence in Orthopaedics.

3E. Lisfranc injury.

3F. Enhanced recovery after surgery.

3G. Reamer Irrigator aspirator.

3H. Bionic limbs.

3I. Synthetic grafts for ligament reconstruction.

3J. Posterior tibial tendon Insufficiency.

(7 marks × 10 = 70 marks)

