

MANIPAL UNIVERSITY**MS (ORTHOPAEDICS) DEGREE EXAMINATION – APRIL 2012****SUBJECT: PAPER I: BASIC SCIENCES**

Monday, April 02, 2012

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ Answer ALL the questions.

1. Discuss the factors that influence bone healing after a fracture. What are the causes of non-union? Describe the radiological features.

(30 marks)

2. Describe the structure of the growth plate. Discuss its relevance in epiphyseal plate injuries and metabolic bone disorders.

(30 marks)

3. **Write short notes on:**

- 3A. Bladder function in a paraplegic patient
3B. Bone metastasis
3C. Pharmacological treatment of rheumatoid arthritis
3D. Sprengel's shoulder

(10×4 = 40 marks)



MANIPAL UNIVERSITY**MS (ORTHOPAEDICS) DEGREE EXAMINATION – APRIL 2012****SUBJECT: PAPER II: TRAUMATOLOGY**

Tuesday, April 03, 2012

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

1. Define poly-trauma. Discuss the management of poly-trauma based on a trauma scoring system.
(30 marks)

2. Discuss the applied anatomy of the cruciate ligaments of the knee. Describe the clinical features and management of an acute anterior cruciate ligament injury.
(30 marks)

3. **Write short notes on:**
 - 3A. Myo-cutaneous flap
 - 3B. Mallet finger
 - 3C. Functional cast brace
 - 3D. Heterotrophic ossification

(10×4 = 40 marks)



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MANIPAL UNIVERSITY

MS (ORTHOPAEDICS) DEGREE EXAMINATION – APRIL 2012

SUBJECT: PAPER III: GENERAL ORTHOPAEDICS

Wednesday, April 04, 2012

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

 Answer ALL the questions.

1. Discuss the pathology in tuberculosis of the spine with paraplegia. How will you manage a case of tuberculosis of the spine at D 8 – D 9 level with paraplegia?

(30 marks)

2. Discuss the patho-physiology of osteomyelitis. How do you manage a case of tibial non-union following chronic osteomyelitis in a 10 year old child?

(30 marks)

3. Write short notes on:

- 3A. Kienbock's disease
3B. Calcaneal spur
3C. Grice- Green extra-articular arthrodesis
3D. Mallet finger

(10×4 = 40 marks)



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MANIPAL UNIVERSITY
MS (ORTHOPAEDICS) DEGREE EXAMINATION – APRIL 2012
SUBJECT: PAPER IV: RECENT ADVANCES

Thursday, April 05, 2012

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ Answer ALL the questions.

1. Discuss Enneking's surgical staging system for bone tumors. Discuss its role in limb salvage surgeries in malignant bone tumors.

(30 marks)

2. Discuss the biomechanics of the hip joint and the scientific principles underlying the design of the total hip prosthesis.

(30 marks)

3. **Write short essays on:**
 - 3A. Joshi's external stabilization system
 - 3B. Gallium bone scan
 - 3C. Laminar air flow
 - 3D. Locked compression plates

(10×4 = 40 marks)

