

MANIPAL UNIVERSITY**MS (ORTHOPAEDICS) DEGREE EXAMINATION – APRIL 2009****SUBJECT: PAPER I: BASIC SCIENCES**

Wednesday, April 01, 2009

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ Answer ALL the questions.

1. Describe the structure of an epiphyseal plate. Discuss the pathological changes seen in the epiphyseal [in metabolic disorders, infections and multiple exostoses. Correlate them with the clinical and radiological features.

(30 marks)

2. Describe the normal gait cycle. Discuss different types of abnormal gait cycle seen in various orthopaedic disorders.

(30 marks)

3. **Write short notes on:**

3A. Pseudo- gout syndrome.

3B. Bursae around the knee.

3C. Charcot's joint.

3D. Strength duration curve.

(10×4 = 40 marks)



MANIPAL UNIVERSITY

MS (ORTHOPAEDICS) DEGREE EXAMINATION – APRIL 2009

SUBJECT: PAPER II: TRAUMATOLOGY

Thursday, April 02, 2009

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ Answer ALL the questions.

1. Discuss in brief the important anatomical features of the talus in relation to talar fractures. How do you classify fractures of the neck of the talus? Discuss their management. Enumerate the complications.

(30 marks)

2. Describe the stabilizing structures of the shoulder joint. Discuss the classification and diagnosis of shoulder dislocations. How will you manage a case of anterior dislocation of the shoulder?

(30 marks)

3. Write short notes on:

- 3A. Thomas splint.
3B. Jefferson's fracture.
3C. March fracture.
3D. Mangled extremity score.

(10×4 = 40 marks)



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MANIPAL UNIVERSITY

MS (ORTHOPAEDICS) DEGREE EXAMINATION – APRIL 2009

SUBJECT: PAPER IV: RECENT ADVANCES

Saturday, April 04, 2009

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

☞ **Answer ALL the questions.**

1. Describe the patho-physiology of Perthes' disease. Discuss the recent trends in the investigating modalities and treatment of Perthes' disease.

(30 marks)

2. Discuss chronic ligament instability of the knee and role of MRI in diagnosis of knee disorders.

(30 marks)

3. **Write short notes on:**

3A. Bone cement.

3B. Endoscopic carpal tunnel release.

3C. HKAFO.

3D. Chondrodiastasis.

(10×4 = 40 marks)



MANIPAL UNIVERSITY

MS (ORTHOPAEDICS) DEGREE EXAMINATION – OCTOBER 2009

SUBJECT: PAPER I: BASIC SCIENCES

Monday, October 05, 2009

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ Answer all questions.

1. Describe calcium homeostasis. Briefly describe the clinical features, investigations and management of rickets in a 6 year old male child.
(30 marks)

2. Describe the gross and microscopic anatomy of the articular cartilage. Discuss the pathological changes of articular cartilage in osteoarthritis and rheumatoid arthritis.
(30 marks)

3. Write short notes on:
 - 3A. Bohler's angle.
 - 3B. Syme's amputation.
 - 3C. Tension band principle.
 - 3D. Spinal cord monitoring.

(10×4 = 40 marks)



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HEALTH SCIENCES LIBRARY

MANIPAL UNIVERSITY

MS (ORTHOPAEDICS) DEGREE EXAMINATION – OCTOBER 2009

SUBJECT: PAPER II: TRAUMATOLOGY

Tuesday, October 06, 2009

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

Answer all questions.

1. Discuss the different zones and pulley system on the palmar surface of the hand. How will you manage flexor tendon injuries in Zone II?
(30 marks)

2. What are the stabilizing structures of the shoulder joint? Describe the pathological abnormalities seen in recurrent dislocation of the shoulder joint. Discuss briefly the principles of management.
(30 marks)

3. Write short notes on:
 - 3A. Neutralization plate
 - 3B. Bauman's angle in supracondylar fracture of the humerus
 - 3C. Pivot shift test
 - 3D. Herbert screw

(10×4 = 40 marks)



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HEALTH SCIENCES LIBRARY

MANIPAL UNIVERSITY

MS (ORTHOPAEDICS) DEGREE EXAMINATION – OCTOBER 2009

SUBJECT: PAPER III: GENERAL ORTHOPAEDICS

Wednesday, October 07, 2009

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer all questions.**

1. Briefly describe the osteotomies around the hip. Discuss the role of osteotomies in primary osteoarthritis of the hip.
(30 marks)

2. A 2 year old boy presents with an angular deformity of the tibia. Discuss the differential diagnosis and management.
(30 marks)

3. Write short notes on:
 - 3A. Thomas splint
 - 3B. Singh's index
 - 3C. Glomus tumor
 - 3D. Anterior drawer sign of the ankle
(10×4 = 40 marks)



MANIPAL UNIVERSITY

MS (ORTHOPAEDICS) DEGREE EXAMINATION – OCTOBER 2009

SUBJECT: PAPER IV: RECENT ADVANCES

Thursday, October 08, 2009

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ Answer all questions.

1. Discuss the classifications of bone tumors. How do you grade benign bone tumors as per the clinical and radiological features? Describe briefly the surgical staging of bone tumors and its importance in the management of bone tumors.
(30 marks)

2. A woman aged 50 years has a partial collapse of the body of L-2 vertebra. How will you proceed to investigate and manage this patient?
(30 marks)

3. Write short notes on:
 - 3A. Hydroxyapatite
 - 3B. Vitallium
 - 3C. Continuous passive mobilization (CPM)
 - 3D. Chondrodiastasis and distraction epiphysiolysis
(10×4 = 40 marks)

