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MANIPAL ACADEMY OF HIGHER EDUCATION
MS (ORTHOPAEDICS) DEGREE EXAMINATION – APRIL 2019
SUBJECT: PAPER I: BASIC SCIENCES RELATED TO SPECIALITY

Tuesday, April 02, 2019

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Draw diagrams wherever necessary.**

✍ **Long Essays:**

1. Describe calcium metabolism. Discuss the etiology, clinical features, diagnosis and management of nutritional rickets.

(15 marks)

2. Describe the stages of fracture healing. Enumerate the factors affecting fracture healing. Discuss the role of various modalities in stimulation of osteogenesis.

(15 marks)

3. **Write short notes on:**

3A. High tibial osteotomy.

3B. Bisphosphonates and its complications.

3C. Biomechanics of the hip joint and its clinical application.

3D. Rheumatoid hand.

3E. Types of bone grafts and their properties.

3F. Synovial fluid and its analysis in various arthritis.

3G. Comparison of Jaipur foot with SACH foot and Madras foot.

3H. Role of radiofrequency in orthopaedics.

3I. Structure of growth plate.

3J. Clinical features, prevention and treatment of deep vein thrombosis.

(7 marks × 10 = 70 marks)



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MS (ORTHOPAEDICS) DEGREE EXAMINATION – APRIL 2019

SUBJECT: PAPER II: TRAUMATOLOGY AND REHABILITATION

Wednesday, April 03, 2019

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL questions.**

✍ **Long Essays:**

1. Classify and discuss the management of ankle fractures.

(15 marks)

2. Discuss management of C4 C5 fracture dislocation.

(15 marks)

3. **Write short notes on:**

3A. Bennett's fracture dislocation

3B. Meniscal injuries

3C. Galeazzi's fracture dislocation

3D. Morel Lavelle lesion

3E. Flail chest

3F. Acromioclavicular joint dislocation

3G. Debridement of open fractures

3H. Lower tibial epiphyseal injury

3I. Bone transport

3J. Trauma triage

(7 marks × 10 = 70 marks)



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MS (ORTHOPAEDICS) DEGREE EXAMINATION – APRIL 2019

SUBJECT: PAPER III: ORTHOPAEDIC DISEASES

Thursday, April 04, 2019

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions.**

✍ **Long Essays:**

1. Describe the pathoanatomy of spinal stenosis. Classify lumbar spinal stenosis. How do you manage 40 year old man with lumbar spinal stenosis?

(15 marks)

2. Describe the histology of epiphyseal plate. Classify Slipped capital femoral epiphysis. How do you treat 15 year boy with Slipped capital femoral epiphysis?

(15 marks)

3. **Write short note:**

- 3A. Complex regional pain syndrome (CRPS)
- 3B. Fish tail deformity
- 3C. Trigger thumb
- 3D. Recent treatment of Dupuytren's contracture
- 3E. Complications of hip arthroscopy
- 3F. Pavlik harness
- 3G. Ollier's disease
- 3H. Third generation cement technique
- 3I. Seronegative arthropathy
- 3J. Ochronosis

(7 marks × 10 = 70 marks)



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MANIPAL ACADEMY OF HIGHER EDUCATION

MS (ORTHOPAEDICS) DEGREE EXAMINATION – APRIL 2019

SUBJECT: PAPER IV: RECENT ADVANCES IN ORTHOPAEDIC SURGERY

Friday, April 05, 2019

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL questions.**

✍ **Draw diagrams wherever necessary.**

✍ **Long Essays:**

1. Classify neck of femur in an adult. Describe the complications of fracture neck of femur. Discuss about the recent trends in the management of fracture neck of femur.

(15 marks)

2. Describe the anatomy of rotator cuff and clinical features of rotator cuff tear. Discuss about the investigative modalities and current trends in the management of chronic rotator cuff tear.

(15 marks)

3. **Write short notes on:**

3A. Medial patellofemoral ligament reconstruction.

3B. Management of infection in joint surgeries.

3C. Comparison of cervical disc arthroplasty with cervical fusion.

3D. Bearing surfaces in total hip replacement.

3E. Comparison of Schatzer and CT based classification of proximal tibial fractures.

3F. Lumbar microdiscectomy.

3G. Limb salvage in tumor surgery.

3H. Myoelectric prosthesis.

3I. Bone cement.

3J. Multi drug resistant tuberculosis.

(7 marks × 10 = 70 marks)

