

Reg. No.

MANIPAL UNIVERSITY

M.Ch. (NEURO SURGERY) DEGREE EXAMINATION – JULY 2017

SUBJECT: PAPER I: BASIC SCIENCES

Monday, July 10, 2017

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

☞ **All questions are compulsory.**

☞ **Long essay:**

1. Describe the pathophysiology of raised intracranial pressure and describe the cerebral herniation syndromes
2. Surgical anatomy of the fourth ventricle

(20 marks × 2 = 40 marks)

3. **Write briefly on:**

- 3A. Auditory pathway and Brain stem auditory evoked response
- 3B. Hyponatremia in neurosurgery
- 3C. Diabetes insipidus
- 3D. Grade II meningiomas
- 3E. Blood supply to the spinal cord
- 3F. Tumour markers

(10 marks × 6 = 60 marks)



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M.Ch. (NEURO SURGERY) DEGREE EXAMINATION – JULY 2017

SUBJECT: PAPER II: CLINICAL NEUROLOGY AND NEUROSURGERY

Tuesday, July 11, 2017

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

☞ **All questions are compulsory.**

☞ **Long essay:**

1. Discuss the management strategies in a child with medulloblastoma.
2. Failed back surgery – causes and management principles.

(20 marks × 2 = 40 marks)

3. **Short essays:**

- 3A. Craniosynostosis – classification and management principles
- 3B. Recurrent craniopharyngiomas – management dilemmas
- 3C. Idiopathic intracranial hypertension
- 3D. Dandy walker cyst
- 3E. Spinal AVM - classification
- 3F. Mycotic aneurysms

(10 marks × 6 = 60 marks)



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M.Ch. (NEURO SURGERY) DEGREE EXAMINATION – JULY 2017

SUBJECT: PAPER III: CLINICAL NEUROSURGERY

Wednesday, July 12, 2017

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **All questions are compulsory.**

✍ **Essay:**

1. Management of a patient with an unstable cervical spine fracture and quadriparesis
2. Management of Odontoid fractures

(20 marks × 2 = 40 marks)

3. **Short Essays:**

- 3A. Diffuse axonal injury
- 3B. Motion preserving spine surgery
- 3C. Carpal tunnel syndrome
- 3D. Post traumatic seizures
- 3E. Management of facial nerve palsy following cerebellopontine angle surgery
- 3F. Lumbar canal stenosis – diagnosis and management

(10 marks × 6 = 60 marks)



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M.Ch. (NEURO SURGERY) DEGREE EXAMINATION – JULY 2017

SUBJECT: PAPER IV: RECENT ADVANCES, NEURORADIOLOGY

Thursday, July 13, 2017

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ Answer ALL questions.

✍ Draw diagrams wherever necessary.

✍ Essay:

1. Surgery for refractory epilepsy

2. Spinal Arterio venous malformations – classification and management

(20 marks × 2 = 40 marks)

3. Short notes:

3A. Fetal neurosurgery

3B. Role of DTI (Diffusion tensor imaging) in neurosurgery

3C. PET in neurosurgery

3D. MoyaMoya disease

3E. Functional MRI

3F. Brain stem gliomas

(10 marks × 6 = 60 marks)

