

Reg. No.

MANIPAL UNIVERSITY

M.Ch. (NEURO SURGERY) DEGREE EXAMINATION – JULY 2011

SUBJECT: PAPER I: NEUROBASIC SCIENCES

Tuesday, July 05, 2011

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **All questions carry TEN marks each.**

1. Discuss the microsurgical anatomy of the third ventricle.
2. Describe the anatomy of the deep venous system of the brain.
3. Rexed's laminae.
4. Discuss the microsurgical anatomy of the cerebellopontine angle.
5. Discuss the anatomy of the intervertebral foramen.
6. Discuss the pathophysiology of cervical spondylosis.
7. Discuss muscle spindle.
8. Describe the biomechanics of functional spinal unit.
9. Describe the physiological changes in the brain in increased intracranial pressure.
10. Discuss in detail CSF circulation.



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M.Ch. (NEURO SURGERY) DEGREE EXAMINATION – JULY 2011

SUBJECT: PAPER II: CLINICAL NEUROLOGY AND NEUROSURGERY

Thursday, July 07, 2011

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **All questions carry TEN marks each.**

1. Discuss the clinical features and management of hindbrain related syringomyelia.
2. Discuss the complications of aneurysmal subarachnoid haemorrhage and their management.
3. Discuss the current role of surgery in heamorrhagic stroke.
4. Discuss the pathophysiology of ossification of the posterior longitudinal ligament.
5. Discuss the surgical options in the management of cervical spondylotic meylopathy.
6. Discuss the biomechanics of head injury.
7. Discuss the current indications and limitations of endoscopic third ventriculostomy.
8. Discuss the current role of radiosurgery in the management of small and medium sized vestibular schwannoma.
9. Discuss the surgical options for sagittal synostosis.
10. Discuss the surgical approaches for the management of middle cerebral artery aneurysms.



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M.Ch. (NEURO SURGERY) DEGREE EXAMINATION – JULY 2011

SUBJECT: PAPER III: CLINICAL NEUROSURGERY INCLUDING OPERATIVE NEUROSURGERY

Saturday, July 09, 2011

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

☞ All questions carry TEN marks each.

1. Discuss the various types of cervical laminoplasty.
2. Discuss the pros and cons of anterior cervical discectomy with and without fusion.
3. Discuss the surgical options in the management of colloid cyst of the third ventricle.
4. Discuss the biomechanics and the indications for surgery in orbital fractures.
5. Discuss the operative management of basilar invagination.
6. Discuss the management options for low grade gliomas of the cerebral hemispheres in adults.
7. Discuss the current management options for extracranial carotid stenosis.
8. Discuss the surgical management of thoracolumbar fractures.
9. Discuss the surgical management of split cord malformations.
10. Discuss the indications, advantages and limitations of endoscopic lumbar discectomy.



MANIPAL UNIVERSITY**M.Ch. (NEURO SURGERY) DEGREE EXAMINATION – JULY 2011****SUBJECT: PAPER IV: RECENT ADVANCES IN NEUROSCIENCES,
NEURORADIOLOGY AND HISTORY OF NEUROSURGERY**

Monday, July 11, 2011

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

☞ All questions carry TEN marks each.

1. Discuss in detail the role of Cyberknife in neurosurgery.
2. Discuss the current role of endovascular stents in the management of intracranial vascular lesions.
3. Discuss the recent advances in C1 –C2 fusion.
4. Discuss the clinical applications of diffusion weighted MRI.
5. Discuss the neurosurgical implications of MR tractography.
6. Discuss the potential role of nanotechnology in neurosurgery.
7. Discuss the pros and cons of microsurgery and radiosurgery in the management of vestibular schwannoma.
8. Discuss the MR spectroscopic findings in common intracranial neoplasms.
9. Discuss the role of electrocorticography in the surgical management of epilepsy.
10. Discuss the role of functional MRI in the management of lesions in eloquent areas of brain.

