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MANIPAL UNIVERSITY

M.Ch. (NEURO SURGERY) DEGREE EXAMINATION – JULY 2009

SUBJECT: PAPER I: NEUROBASIC SCIENCES

Wednesday, July 01, 2009

Time: 14:00 - 17:00 Hrs.

Max. Marks: 100

- 1. Discuss in detail the anatomy and biomechanics of the craniovertebral junction.
- 2. Discuss the microsurgical anatomy of the anterior choroidal artery.
- 3. Discuss the metabolic response to head injury.
- 4. Discuss the blood supply of the pituitary.
- 5. Discuss the WHO classification and immunohistochemistry of meningiomas.
- 6. Aesthesioneuroblastoma.
- 7. Discuss the microsurgical anatomy of the Meckel's cave and its clinical significance.
- 8. Discuss the microsurgical anatomy of tentorial incisura.
- 9. Discuss the different methods of measuring cerebral blood flow and their advantages and limitations.
- 10. Discuss the pathological changes in the spinal cord in extramedullary cord compression.

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M.Ch. (NEURO SURGERY) DEGREE EXAMINATION – JULY 2009 SUBJECT: PAPER II: CLINICAL NEUROLOGY AND NEUROSURGERY

Thursday, July 02, 2009

Time: 14:00 - 17:00 Hrs.

Max. Marks: 100

- 1. Discuss the causes and management of cervical radiculopathy.
- 2. Discuss the clinical features and management of fractures of the skull base.
- 3. Discuss the controversies in the use of methylprednisolone for spinal cord injury.
- 4. Discuss the surgical management of epilepsy of temporal lobe origin.
- 5. Discuss the neurological manifestations of Acquired Immunodeficiency syndrome.
- 6. Discuss the non metastatic neurological manifestations of systemic malignancy.
- 7. Discuss the current role of surgery in the management spontaneous intracerebral haemorrhage.
- 8. Discuss the advantages and limitations of Neuroendoscopy.
- 9. Discuss the embryology, clinical presentation and management of spinal dermal sinuses.
- 10. Discuss the surgical management of tuberculosis of the thoracic spine.

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M.Ch. (NEURO SURGERY) DEGREE EXAMINATION – JULY 2009 SUBJECT: PAPER III: CLINICAL NEUROSURGERY INCLUDING OPERATIVE NEUROSURGERY

Friday, July 03, 2009

Time: 14:00 - 17:00 Hrs.

Max. Marks: 100

- 1. Discuss the surgical approaches to orbital tumours.
- 2. Discuss the current status of deep brain stimulation for movement disorders.
- 3. Discuss the pathophysiology, diagnosis and management of vasospasm following aneurysmal subarachnoid haemorrhage.
- 4. Discuss the surgical approaches to anterior and middle column lesions of the thoracic spine.
- 5. Discuss the nonoperative management of low back ache.
- 6. Discuss the neurosurgical management of trigeminal neuralgia.
- 7. Discuss the clinical presentation and management of intramedullary spinal cord tumours.
- 8. Discuss the pathophysiology of tethered cord syndrome.
- Discuss the indications and complications of hyperventilation in the management of head injury.
- 10. Discuss the surgical techniques of posterior cervical fusion.

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M.Ch. (NEURO SURGERY) DEGREE EXAMINATION – JULY 2009

SUBJECT: PAPER IV: RECENT ADVANCES IN NEUROSCIENCES, NEURORADIOLOGY AND HISTORY OF NEUROSURGERY

Saturday, July 04, 2009

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

- 1. Discuss the role of endovascular techniques in the management of dural venous sinus thrombosis.
- 2. Discuss the current status of intrarterial and intravenous thrombolysis in ischemic stroke.
- 3. Discuss the endovascular management of giant intracranial aneurysms.
- 4. Discuss the role of perfusion MR imaging and diffusion MR imaging in the diagnosis of ischaemic stroke.
- 5. Discuss Harvey Cushing's contributions to neurosurgery.
- 6. Discuss the role of radiosurgery in the management of pituitary tumours.
- 7. Discuss the indications, advantages, limitations and complications of radiosurgery in the management of intracranial AVMs.
- 8. Describe the recent advances in the biology of bone fusion.
- 9. Discuss the nonsurgical management of functional pituitary tumours.
- 10. Discuss the potential role of stem cells in neurosurgery.