

(LH 034)

AUGUST 2015

Sub. Code: 1571

M.Ch. – NEURO SURGERY

THREE YEARS COURSE

Paper III – NEURORADIOLOGY AND CLINICAL NEURO SURGERY

Q.P.Code: 181571

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Discuss on principles, methodology, merits and demerits of Trans Cranial Doppler study.
Write on the clinical uses of TCD including brain death.
2. Describe in detail tuberculosis of the central nervous system with management.

II. Write notes on:

(10 x 7 = 70)

1. Meningocele.
2. Hyponatremia.
3. Neurorehabilitation.
4. Hemostasis in neurosurgery.
5. Surgery of ruptured lumbar intervertebral disc.
6. Carpal tunnel syndrome.
7. Oligodendroglioma.
8. Neurulation.
9. Glomus jugulare tumor.
10. Lumbar spondylolisthesis.

(LJ 034)

AUGUST 2016

Sub. Code: 1571

M.Ch. – NEURO SURGERY
THREE YEARS COURSE – Final – Paper - III /
SIX YEARS COURSE – Part III – Paper - I
NEURORADIOLOGY AND CLINICAL NEURO SURGERY
Q.P.Code: 181571

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on: **(2 x 15 = 30)**

1. Discuss in detail about Radiological evaluation of CV junction Pathology.
2. Describe in detail about Brain abscess-Etiology, Pathogenesis, Investigation and Management.

II. Write notes on: **(10 x 7 = 70)**

1. Lipo Myelo Meningocele.
2. Cerebral salt-wasting (CSW) syndrome.
3. Glasgow Outcome Score.
4. Thoracic disc.
5. Grading systems of Subarachnoid Hemorrhage (SAH).
6. Functional cortical mapping.
7. Aneurysm clips.
8. End tidal carbon dioxide (ETCO₂) in Neurosurgery.
9. Ossification of the posterior longitudinal ligament (OPLL).
10. Sylvian fissure.

M.Ch. – NEURO SURGERY
THREE YEARS COURSE – Final – Paper - III /
SIX YEARS COURSE – Part III – Paper - I
NEURORADIOLOGY AND CLINICAL NEURO SURGERY
Q.P.Code: 181571

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on: **(2 x 15 = 30)**

1. Describe the principles involved in a Digital Subtraction Angiogram.
Discuss on the methodology, merits and demerits of Digital Subtraction Angiogram.
Compare DSA and Conventional Angiography
Discuss the management of deep seated arteriovenous malformation with interventional radiology.
2. Discuss the clinical features, investigations, management and rehabilitation of a 21 year old male involved in a motor vehicle accident with D11, D12 fracture with partial spinal cord injury.

II. Write notes on: **(10 x 7 = 70)**

1. Diastematomyelia.
2. MR Angiography.
3. Dolichoectasia.
4. Neurocysticercosis.
5. Syndrome of Inappropriate Anti Diuretic Hormone secretion.
6. Surgical correction of Facial nerve palsy.
7. Foot drop.
8. Metopic synostosis.
9. Single Proton Emission Computed Tomography.
10. Traumatic brain contusion.

(LL 034)

AUGUST 2017

Sub. Code: 1571

M.Ch. – NEURO SURGERY

THREE YEARS COURSE – Final – Paper - III /

SIX YEARS COURSE – Part III – Paper - I

NEURORADIOLOGY AND CLINICAL NEURO SURGERY

Q.P.Code: 181571

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on: **(2 x 15 = 30)**

1. Discuss the embryology, classification, clinical features and management of Cranio synostosis.
2. Write on principles and methodology of Computerized Tomogram (CT) scanning. Discuss on the merits and demerits.
Special note on CT angiography and CT perfusion study.
Latest advancements in CT scanning.

II. Write notes on: **(10 x 7 = 70)**

1. Susceptibility weighted imaging in MRI.
2. Arachnoid cyst.
3. Embryology of spine.
4. Brachial plexus injury and surgical correction.
5. Neuroprotection.
6. Syndrome of Inappropriate ADH secretion. (SIADH)
7. Failed back syndrome.
8. Draw a neat labelled diagram of Circle of Willis.
9. Pituicytoma (Tumors of Neurohypophysis).
10. Radiosurgery.

(LM 034)

FEBRUARY 2018

Sub. Code: 1571

M.Ch. – NEURO SURGERY

THREE YEARS COURSE – Final – Paper - III /

SIX YEARS COURSE – Part III – Paper - I

NEURORADIOLOGY AND CLINICAL NEURO SURGERY

Q.P.Code: 181571

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Discuss in detail about Magnetic Resonance Spectroscopy.
2. Discuss in details about Management of Anterior Communicating Artery (Acom) Aneurysms.

II. Write notes on:

(10 x 7 = 70)

1. Radiological evaluation of Epidermoid/Dermoid.
2. Far lateral Lumbar disc herniation.
3. Trigeminal Schwannoma.
4. Lymphomas of Brain.
5. Pregnancy and Neurosurgical disorders.
6. Spinal Arteriovenous Malformation (AVM).
7. Pituitary Apoplexy.
8. Scalp Incisions in Neurosurgery.
9. Fourth Ventricle tumors.
10. Esthenio Neuroblastoma.

(LN 034)

AUGUST 2018

Sub. Code: 1571

M.Ch. – NEURO SURGERY

THREE YEARS COURSE – Final – Paper - III /

SIX YEARS COURSE – Part III – Paper - I

NEURORADIOLOGY AND CLINICAL NEURO SURGERY

Q.P.Code: 181571

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Discuss the radiological classification and management of spinal Arterio venous malformations.
2. Discuss the classification and management of chiari malformations.

II. Write notes on:

(10 x 7 = 70)

1. Failed back syndrome.
2. Growing skull fracture.
3. Neurofibromatosis I.
4. Atypical rhabdoid teratoid tumor.
5. Classify odontoid fractures and discuss their appropriate management in brief.
6. Grade meningiomas based on intraoperative excision.
7. Vertebroplasty.
8. Post traumatic epilepsy.
9. Gliosarcoma.
10. Central cord syndrome.

(LO 034)

FEBRUARY 2019

Sub. Code: 1571

M.Ch. – NEURO SURGERY

THREE YEARS COURSE – Final – Paper - III /

SIX YEARS COURSE – Part III – Paper - I

NEURORADIOLOGY AND CLINICAL NEURO SURGERY

Q.P. Code: 181571

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Discuss the clinical features, pathogenesis and Biomechanics of cervical spondylotic myelopathy.
2. Detail on WHO grading of gliomas and discuss in detail on brainstem Gliomas.

II. Write notes on:

(10 x 7 = 70)

1. Differential diagnosis of sellar lesions.
2. Types of temporal bone fractures.
3. Management of shunt infections.
4. Neuroradiological features of NPH.
5. Imaging of diffuse axonal injury.
6. Functional MRI – uses to neurosurgeon.
7. Arachnoid cyst.
8. Computed Tomographic (CT) perfusion.
9. Radiological features of meningioma.
10. Differentiate tubercular, bacterial and neoplastic meningitis.

(LP 034)

AUGUST 2019

Sub. Code: 1571

M.Ch. – NEURO SURGERY

THREE YEARS COURSE – Final – Paper - III /

SIX YEARS COURSE – Part III – Paper - I

NEURORADIOLOGY AND CLINICAL NEURO SURGERY

Q.P. Code: 181571

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Functional imaging of the Brain.
2. Discuss in detail about suprasellar space occupying lesions producing field defects in optic Nerve pathway.

II. Write notes on:

(10 x 7 = 70)

1. Emotional Lability.
2. Mesial Temporal sclerosis.
3. Cold caloric response.
4. Imaging features of Vestibular schwannomas.
5. Optokinetic Nystagmus.
6. Hyponatremia.
7. Radiological features of Normal pressure Hydrocephalus.
8. Internuclear ophthalmoplegia.
9. Superior orbital fissure syndrome.
10. Ring enhancing lesions in the brain.

(LR 034)

**NOVEMBER 2020
(AUGUST 2020 SESSION)
M.Ch. – NEURO SURGERY**

Sub. Code: 1571

**THREE YEARS COURSE – Final – Paper - III /
SIX YEARS COURSE – Part III – Paper - I
NEURORADIOLOGY AND CLINICAL NEURO SURGERY**

Q.P. Code: 181571

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on: (2 x 15 = 30)

1. Enumerate various MRI sequences and techniques in evaluation of a cerebral tumour. Describe MRI features of a high grade glioma highlighting the significance of each of these sequences and techniques.
2. Describe briefly the MRI evaluation of csf flow dynamics. Discuss in detail the evaluation, clinical correlation and decision making parameters for lesions around foramen magnum evaluated with MRI csf flow dynamics.

II. Write notes on: (10 x 7 = 70)

1. Discuss briefly the USG, CT and MRI findings in vein of Galen malformation.
2. Clinical presentation and imaging features of slit ventricle syndrome
3. Clinical, imaging and electrophysiological evaluation of carpal tunnel syndrome.
4. Clinical features and imaging evaluation of pituitary apoplexy.
5. Mention the normal CT measurement of spinal canal at various levels and describe plain radiographic, CT features of lumbar spinal canal stenosis.
6. Clinical presentation and imaging diagnosis of cerebellar haemangioblastoma.
7. Radiological diagnosis and management of radiation necrosis of brain.
8. Clinical examination of L5 nerve root.
9. Classify craniosynostosis.
10. Significance of and methodology to perform apnoea testing for brainstem death certification.

M.Ch. – NEURO SURGERY

THREE YEARS COURSE – Final – Paper - III /

SIX YEARS COURSE – Part III – Paper - I

NEURORADIOLOGY AND CLINICAL NEURO SURGERY

Q.P. Code: 181571

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on: (2 x 15 = 30)

1. Discuss in detail the stages, imaging features, medical and surgical management of cerebral abscess.
2. Discuss in detail the evaluation and management of a 40 years old patient presenting with new onset GTCS (no history of previous seizures) and post-ictal right hemiplegia.

II. Write notes on: (10 x 7 = 70)

1. Electrolyte imbalances following Intra cerebral post aneurysmal Sub arachnoid bleed.
2. Parinaud syndrome.
3. Area postrema.
4. Criteria for diagnosis of NF1 and NF2.
5. Appearance of various stages of Hemorrhage on magnetic resonance imaging.
6. House and Brackmann Facial nerve grading system.
7. Neural connections and significance of down beating nystagmus.
8. Neuroimaging protocol for pituitary tumours.
9. Draw a neatly labelled diagram of Brachial plexus.
10. Peripheral nerve sheath tumours.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[MCH 0222]

FEBRUARY 2022

Sub.Code :1571

M.Ch. – NEURO SURGERY

THREE YEARS COURSE – Final – Paper - III /

SIX YEARS COURSE – Part III – Paper - I

NEURORADIOLOGY AND CLINICAL NEURO SURGERY

Q.P. Code: 181571

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Discuss in detail about classification and management of pineal tumors.
2. Discuss in detail about chiari malformations and syringomyelia and explain about the theories in formation of syrinx.

II. Write notes on:

(10 x 7 = 70)

1. Low molecular weight heparin.
2. Radiological features of cerebello pontine angle tumors.
3. MRI features of pituitary tumors.
4. Myelomeningocele.
5. Central cord syndrome.
6. Locked in syndrome.
7. Diffuse axonal injury.
8. Subarachnoid hemorrhage.
9. Incidental aneurysm.
10. Lumbar puncture in neurosurgery.

THE TAMIL NADU DR.M.G.R. MEDICAL UNIVERSITY

(MCH 0822)

AUGUST 2022

Sub. Code: 1571

M.Ch. – NEURO SURGERY

THREE YEARS COURSE – Final – Paper - III

SIX YEARS COURSE – Part III – Paper - I

NEURORADIOLOGY AND CLINICAL NEURO SURGERY

Q.P. Code: 181571

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on: **(2 x 15 = 30)**

1. Describe in detail about spinal cord tumors, clinical presentation and the MRI evaluation of these tumours.
2. Describe about various craniometric lines of craniovertebral junction and the MRI evaluation of craniovertebral junction anomaly.

II. Write notes on: **(10 x 7 = 70)**

1. Transcranial doppler.
2. Normal pressure hydrocephalus.
3. Proton Beam therapy.
4. Cerebral digital subtraction angiography.
5. Oculogyric reflex.
6. Lumbar Meningiomyelocele clinical features and radiological evaluation.
7. Electrolyte imbalance in head injury.
8. CSF rhinorrhea and CT cisternogram.
9. Brain stem glioma.
10. Neurogenic bladder.

THE TAMIL NADU DR.M.G.R. MEDICAL UNIVERSITY

(MCH 0223)

FEBRUARY 2023

Sub. Code: 1571

M.Ch. – NEURO SURGERY

THREE YEARS COURSE – FINAL – PAPER - III

SIX YEARS COURSE – PART III – PAPER - I

NEURORADIOLOGY AND CLINICAL NEURO SURGERY

Q.P. Code: 181571

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Discuss in detail about classification and management of orbital tumors.
2. Discuss in detail about cervical spinal injuries and its management.

II. Write notes on:

(10 x 7 = 70)

1. Lateral medullary syndrome.
2. Radiological features of sellar tumors.
3. MRI features of High grade glioma.
4. Focal cortical dysplasia.
5. Von hippel lindu syndrome
6. Subependymal giant cell astrocytoma.
7. Malignant cerebral edema.
8. Hypothermia.
9. Vasospasm.
10. External ventricular drainage.

THE TAMIL NADU DR.M.G.R. MEDICAL UNIVERSITY

(MCH 0124)

JANUARY 2024

Sub. Code: 1571

M.Ch. – NEURO SURGERY

THREE YEARS COURSE – FINAL – PAPER - III

SIX YEARS COURSE – PART III – PAPER - I

NEURORADIOLOGY AND CLINICAL NEURO SURGERY

Q.P. Code: 181571

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Clinical presentation, Grading, Imaging and Management strategies of Cerebral arteriovenous malformation.
2. Describe the presentation, Radiology and treatment plan of Axis fractures.

II. Write notes on:

(10 x 7 = 70)

1. Gerstmann syndrome.
2. Radiological evaluation of Normal pressure hydrocephalus
3. Imaging differences in pediatric midline posterior fossa tumours.
4. Radiology in Morquio syndrome.
5. Carpal Tunnel Syndrome.
6. Palliative care in advanced malignant brain tumor.
7. Spontaneous Cerebrospinal fluid Rhinorrhea – causes and evaluation.
8. Types, Causes and evaluation of proptosis.
9. Temporal bone fractures.
10. Ring enhancing lesions in brain – Differential diagnosis and imaging characteristics.

THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY

(MCH 0825)

AUGUST 2025

Sub. Code: 1571

M.Ch. BRANCH II – NEURO SURGERY

THREE YEARS COURSE – FINAL – PAPER - III

SIX YEARS COURSE – PART III – PAPER - I

NEURORADIOLOGY AND CLINICAL NEURO SURGERY

Q.P. Code: 181571

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Discuss the diagnostic evaluation and management of a patient presenting with CSF rhinorrhoea.
2. Discuss the various modalities of early diagnosis of functional pituitary adenomas.

II. Write notes on:

(10 x 7 = 70)

1. Pseudo Foster Kennedy syndrome.
2. Baclofen pump.
3. Schizencephaly.
4. Chronic brain injury scale.
5. Craniosynostosis.
6. Complications of trans-sphenoidal surgeries.
7. Management of spasticity.
8. Susceptibility weighted imaging.
9. Complications of endovascular surgery.
10. Spondylolisthesis.
