

APRIL - 2001

[KD 035]

Sub. Code : 1572

M.Ch. DEGREE EXAMINATION

(Higher Specialities)

Branch II — Neurosurgery

(New and Revised Regulations for 5 years course)

Part III

**Paper II — OPERATIVE NEUROSURGERY AND
RECENT ADVANCES**

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Discuss in detail surgical approaches to Suprasellar region. (25)
2. Discuss the surgical management of Trigeminal Neuralgia. (25)
3. Write short notes on : (5 × 10 = 50)
 - (a) Endoscopic Neurosurgery
 - (b) Interleukin-2 (IL-2) and adoptive immunotherapy
 - (c) Colloid cyst of third ventricle
 - (d) Spinal Instability-Assessment and management
 - (e) Intraoperative imaging.

NOVEMBER - 2001

[KE 035]

Sub. Code : 1572

M.Ch. DEGREE EXAMINATION.

(Higher Specialities)

(New and Revised Regulations for 5 Years Course)

Branch II — Neurosurgery

Part III

**Paper II — OPERATIVE NEUROSURGERY AND
RECENT ADVANCES**

Time : Three hours

Maximum : 100 marks

Answer ALL questions

1. Discuss the role of ablative neurosurgical procedures in the management of lower limb spasticity.
(25)
 2. Discuss the management of a tumor located anteriorly at the CV Junction.
(25)
 3. Write short notes on : (5 × 10 = 50)
 - (a) Complications of trans-sphenoidal excision of pituitary adenoma
 - (b) Spinal metastasis
 - (c) Neuronavigation
 - (d) Neurological picture of AIDS
 - (e) Complications of stereotactic biopsy.
-

MARCH - 2002

[KG 035]

Sub. Code : 1572

M.Ch. DEGREE EXAMINATION

(Higher Specialities)

(New and Revised Regulations for 5 years course)

Branch II — Neurosurgery

Part III

**Paper II — OPERATIVE NEUROSURGERY AND
RECENT ADVANCES**

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Discuss the surgical approaches to intra lateral ventricular tumors. (25)
2. Discuss the adjunctive therapy of cerebral gliomas. (25)
3. Write short notes on : (5 × 10 = 50)
 - (a) Failed back surgery syndrome.
 - (b) Endoscopic 3rd ventriculostomy.
 - (c) Infections of cerebro-spinal shunts and their management.
 - (d) Carotid endarterectomy.
 - (e) Radiosurgery.

SEPTEMBER - 2002

[KH 035]

Sub. Code : 1572

M.Ch. DEGREE EXAMINATION.

(Higher Specialities)

Branch II — Neuro Surgery

(New and Revised Regulations for 5 year course)

Part III

Paper II — OPERATIVE NEUROSURGERY AND
RECENT ADVANCES

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Classify Gliomas. Discuss in detail the current concepts in the management of malignant gliomas. (25)
 2. Discuss in detail the microsurgical anatomy of the cavernous sinus. Describe the operative approaches to this structure. (25)
 3. Write short notes on : (5 × 10 = 50)
 - (a) Endoscope-Assisted Microsurgery
 - (b) Management of Hypertensive intracerebral hematomas
 - (c) Parasagittal meningiomas
 - (d) Mesial temporal sclerosis
 - (e) Complications of anterior cervical discectomy.
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APRIL - 2003

[KI 035]

Sub. Code : 1572

M.Ch. DEGREE EXAMINATION.

(Higher Specialities)

(New and Revised Regulations for 5 years course)

Branch II — Neurosurgery

Part III

**Paper II — OPERATIVE NEUROSURGERY AND
RECENT ADVANCES**

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Discuss the principles and application of image guided surgery in neurosurgery. (25)
 2. Discuss the pathology, clinical features, diagnosis and management of clival chordomas. Describe the various surgical approaches to the clivus (25)
 3. Write short notes on : (5 × 10 = 50)
 - (a) Ultrasound in neurosurgery
 - (b) Asymptomatic carotid artery stenosis
 - (c) Optic nerve gliomas
 - (d) Complications of trans-sphenoidal surgery
 - (e) Adjuvant therapy for gliomas.
-

OCTOBER - 2003

[KJ 035]

Sub. Code : 1572

M.Ch. DEGREE EXAMINATION.

(Higher Specialities)

(Revised Regulation for Five Year Course)

Branch II — Neurosurgery

Part III

Paper II — OPERATIVE NEUROSURGERY AND
RECENT ADVANCES

Time : Three hours

Maximum : 100 marks

MCQ : Twenty minutes

MCQ : 20 marks

Theory : Two hours and
forty minutes

Theory : 80 marks

MCQ must be answered SEPARATELY on the answer
book provided as per the instruction on the first page of
MCQ Booklet.

Answer ALL questions.

Draw suitable diagram wherever necessary.

Write essay on following questions :
(15 marks each)

1. Discuss the recent advances in the management of spasticity.
2. Discuss instrumentation for spinal fixation.

Write short notes on the following questions :
(5 marks each)

3. Corpectomy.
4. Enumerate various surgical procedures for syringohydromyelia.
5. Complications of CSF diversion procedures performed before the closure of cranial bone sutures.
6. Extent of resection in various lobectomies of various lobes of the brain.
7. Tele medicine.
8. Bioinformatics.
9. Enumerate causes of failed back syndrome.
10. Enumerate surgical approaches to colloid cyst of the third ventricle.
11. Complication of third ventriculostomy.
12. Indications of various surgical procedures in Parkinsonism.

APRIL - 2004

[KK 035]

Sub. Code : 1572

M.Ch. DEGREE EXAMINATION.

(Higher Specialities)

(New and Revised Regulations for 5 years course)

Branch II — Neuro Surgery

Part III

Paper II — OPERATIVE NEURO SURGERY AND
RECENT ADVANCES

Time : Three hours

Maximum : 100 marks

Theory : Two hours and
forty minutes

Theory : 80 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

Answer ALL questions.

A. Essay Questions :

(2 × 15 = 30)

(1) Discuss the various factors in the decision making for selection of the operative approach for acoustic neurinoma and describe any one approach in detail.

(2) Discuss the presurgical evaluation and surgical treatment of intractable temporal lobe epilepsy.

B. Short notes :

(10 × 5 = 50)

(1) Normal pressure perfusion break through syndrome.

(2) Posterior communicating artery aneurysm.

(3) Wilder penfield.

(4) Gene therapy for stroke.

(5) Diabetes insipidus.

(6) Esthesioneurablastoma.

(7) Management of prolactinomas.

(8) Nitric oxide in subarachnoid haemorrhage.

(9) Locked in syndrome.

(10) Clinical features of cushing syndrome.

AUGUST - 2004

[KL 035]

Sub. Code : 1572

M.Ch. DEGREE EXAMINATION.

(Higher Specialities)

(New and Revised Regulations for 5 years course)

Branch II — Neuro Surgery

Part III

**Paper II — OPERATIVE NEURO SURGERY AND
RECENT ADVANCES**

Time : Three hours

Maximum : 100 marks

**Theory : Two hours and
forty minutes**

Theory : 80 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

Answer ALL questions.

I. Essay questions : (2 × 15 = 30)

(1) Discuss the surgical approaches to a middle cerebral artery bifurcation aneurysm. (15)

(2) Discuss the advantages and disadvantages of different operative approaches to a mass in the trizone of the left lateral ventricle. (15)

II. Write short notes on : (5 marks each)

(a) Indications, benefits and limitations of endoscopic lumbar discectomy.

(b) Use of magnetic resonance spectroscopy (MRS) in neuro surgical patients.

(c) Recent advances in the management of patients with residual non functioning pituitary macro adenomas.

(d) Complications and their management following trans oral odontoidectomy.

(e) List the procedures and implants for posterior stabilization of the subaxial cervical spine.

(f) Complications following excision of a third ventricular colloid cyst.

(g) Endo vascular management of carotico cavernous fistula.

(h) Contributions of Wilder Penfield.

(i) Benefits and limitations of intraoperative magnetic resonance imaging.

(j) Indications and current targets for non-lesional surgery in patients with Parkinson's disease.

FEBRUARY - 2005

[KM 035]

Sub. Code : 1572

M.Ch. DEGREE EXAMINATION.

(Higher Specialities)

(New and Revised Regulations for 5 Years Course)

Branch II — Neuro Surgery

Part III

**Paper II — OPERATIVE NEURO SURGERY AND
RECENT ADVANCES**

Time : Three hours

Maximum : 100 marks

**Theory : Two hours and
forty minutes**

Theory : 80 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

Answer ALL questions.

I. Write essays on :

(2 × 15 = 30)

**(1) What are the approaches to cerebello pontine
angle? What are the advantages and disadvantages?(15)**

**(2) What is the role of stereotaxy in hypodense
non enhancing lesions of brain? (15)**

II. Write Short Notes on : (10 × 5 = 50)

- (a) Cranioplasty.**
- (b) Hemostasis in neuro surgery.**
- (c) SIADH and cerebral salt wasting in Neuro surgery.**
- (d) Endoscopic third ventriculostomy.**
- (e) Hearing preservation in acoustic shwanommas.**
- (f) Tumour markers in brain tumours.**
- (g) Post operative akinitic mutism.**
- (h) Tonsillar herniation.**
- (i) Per operative fluid administration in neuro surgical operation.**
- (j) Surgery for cerebral revascularisation.**

FEBRUARY - 2006

[KO 035]

Sub. Code : 1572

M.Ch. DEGREE EXAMINATION.

(Higher Specialities)

(New and Revised Regulations for 5 Year Course)

Branch II — Neurosurgery

Part III

**Paper II — OPERATIVE NEUROSURGERY AND
RECENT ADVANCES**

Time : Three hours

Maximum : 100 marks

**Theory : Two hours and
forty minutes**

Theory : 80 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

Answer ALL questions.

I. Write essays on :

(2 × 15 = 30)

**(1) Discuss the management of middle cerebral
artery aneurysm.**

(2) Discuss nutrition in neurosurgical cases.

II. Write short notes on :

(10 × 5 = 50)

**(a) Methods to reduce vascularity of
meningioma**

(b) Invasive pituitary adenoma

(c) Nano technology in neurosurgery

(d) Stem cell in neurosurgery

(e) Enumerate various bio-implants

(f) Selective motor fasciculotomy.

**(g) Neuromonitoring during intra-cranial
surgeries**

(h) Surface marking of sylvian fissure

(i) Cloning

(j)

FEBRUARY - 2007

[KQ 035]

Sub. Code : 1572

M.Ch. DEGREE EXAMINATION.

(Higher Specialities)

(New and Revised Regulations for 5 Year Course)

Branch II — Neuro Surgery

Part III

**Paper II — OPERATIVE NEURO SURGERY AND
RECENT ADVANCES**

Time : Three hours

Maximum : 100 marks

**Theory : Two hours and
forty minutes**

Theory : 80 marks

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

Answer ALL questions.

I. Essay Questions :

1. Discuss the clinical features and investigations of Cerebello Pontine Angle Tumours. Discuss in detail The Management of Bilateral Acoustic Schwanommas. (20)

2. Clinical features, Diagnosis and Management of Carotico Cavernous Fistula. (15)

3. Refractory status Epilepticus. (15)

II. Write short notes on :

(6 × 5 = 30)

1. Stereotactic Craniotomy

2. Os odontoideum.

3. Cerebral Revascularisation.

4. Neuro intensive care unit.

5. Clinical and ethical issues in brain death

6. Evoked potentials in Neuro surgery.

August-2007

[KR 035]

Sub. Code : 1572

M.Ch. DEGREE EXAMINATION.

(Higher Specialities)

(New and Revised Regulations for 5 Years Course)

Branch II — Neuro Surgery

Part III

**Paper II — OPERATIVE NEURO SURGERY AND
RECENT ADVANCES**

Time : Three hours

Maximum : 100 marks

**Theory : Two hours and
forty minutes**

Theory : 80 marks

M.C.Q. : Twelfth minutes

M.C.Q. : 20 marks

Answer ALL questions.

I. Essay questions :

1. Discuss the clinical features, investigations and various surgical management of colloid cyst of anterior third ventricle. (20)

2. Describe briefly the history, technique principles and application of stereotaxy in modern neurosurgery. (15)

3. Discuss Intra-thecal drug delivery pumps. (15)

II. Write short notes on :

(6 × 5 = 30)

(a) Neural Prosthesis

(b) Brain Stem Auditory Evoked Response.
{BAER}

(c) Awake Craniotomy

(d) Trans Oral Odontoidectomy

(e) Carotid Endarterectomy

(f) Neuroendoscopy

[KS 035]

Sub. Code : 1572

M.Ch. DEGREE EXAMINATION.

(Higher Specialities)

(New and Revised Regulations for 5 Years Course)

Branch II — Neuro Surgery

Part III

**Paper II — OPERATIVE NEURO SURGERY AND
RECENT ADVANCES**

Q.P. Code : 181572

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

I. Essay questions :

Each question carries 20 marks.

1. Discuss in detail the management strategies and operative approaches for Brain stem cavernomas. (20)
2. Describe the management options and operative approaches for Orbital neoplasms. (20)

II. Short notes :

(10 × 6 = 60)

Each question carries 6 marks.

- (1) Mono-ocular diplopia.
- (2) Gazi M. Yasargil.
- (3) Hereditary Brain tumours.
- (4) Microanatomy of Lateral ventricle.
- (5) Surgical management of Obstructive Hydrocephalus.
- (6) Blood supply of spinal Cord.
- (7) Recent advances and trends in the management of Gliomas.
- (8) Minimally Invasive Spine Surgery.
- (9) Management of Brachial Plexus Injuries.
- (10) Magnetic Resonance Tractography-Basics and applications.

February 2009

[KU 035]

Sub. Code: 1572

MASTER OF CHIRURGIAE (M.Ch.) DEGREE EXAMINATIONS

(Higher Specialities)

(New and Revised Regulations for 5 years course)

Branch II – Neuro Surgery

PART - III

Paper II – OPERATIVE NEURO SURGERY AND RECENT ADVANCES

Q.P. Code: 181572

Time: Three hours

Maximum: 100 Marks

Answer ALL questions

Draw suitable diagrams wherever necessary.

I. Essays:

(2 x 20 = 40)

1. Enumerate the Etiology of cranial defects, Indications, techniques and results of cranioplasties.
2. Describe the recent advances in the management of Neurotrauma.

II. Write short notes on:

(10 x 6 = 60)

1. Briefly describe neurogenic bladder and its management.
2. Describe myelomeningocele, its management and outcome.
3. Arachnoid cysts and their surgical options.
4. Describe the spontaneous regression of syringomyelia, review the current etiological theories and their implications for surgery.
5. Role of blood brain barrier in CNS infections.
6. Describe brain oedema and its management.
7. Describe the pathophysiology, diagnosis and treatment of Neurogenic claudication.
8. Parinaud syndrome.
9. Describe the surgical management of traumatic intracranial haematomas.
10. Describe the destructive procedures for the treatment of non malignant pain and review the literature.

August 2009

[KV 035]

Sub. Code: 1572

MASTER OF CHIRURGIAE (M.Ch.) DEGREE EXAMINATIONS

(Super Specialities)

(New and Revised Regulations for 5 years course)

Branch II – Neuro Surgery

PART - III

Paper II – OPERATIVE NEURO SURGERY AND RECENT ADVANCES

Q.P. Code: 181572

Time: Three hours

Maximum: 100 Marks

Answer ALL questions

Draw suitable diagrams wherever necessary.

I. Essays:

(2 x 20 = 40)

1. Describe the etiology, pathogenesis, diagnostic evaluation and management options for lumbar canal stenosis.
2. Recent advances in the diagnosis and treatment of central nervous system germ cell tumours.

II. Write short notes on:

(10 x 6 = 60)

1. Describe briefly the cranial nerve injuries associated with basilar skull fractures.
2. Tarsal tunnel syndrome.
3. Describe minimally invasive procedures for the treatment of failed back surgery syndrome.
4. Cryoneurolysis.
5. Describe the practical utility of immunohistochemical markers in brain tumour diagnosis and prognosis.
6. Describe percutaneous vertebral augmentation and its application in neurosurgical practice.
7. Describe the neurobiology of the epileptogenesis in the temporal lobe.
8. C.T. guided fluoroscopy.
9. Role of brain and brainstem implant technology in the treatment of neurosurgical disorders.
10. Describe briefly the indications, advantages, disadvantages and complications of intrathecal medications.

August 2011

[KZ 035]

Sub. Code: 1572

**MASTER OF CHIRURGIAE (M.Ch.) DEGREE EXAMINATION
(SUPER SPECIALITIES)**

BRANCH II – NEURO SURGERY

OPERATIVE NEURO SURGERY AND RECENT ADVANCES

Q.P. Code: 181572

Time : 3 hours

Maximum : 100 marks

(180 Min)

Answer ALL questions in the same order.

I. Elaborate on :

**Pages Time Marks
(Max.) (Max.) (Max.)**

- | | | | |
|--|----|----|----|
| 1. Discuss the various surgical approaches to the lesions in the third ventricle. | 11 | 35 | 15 |
| 2. Discuss the clinical presentation and management of Anterior circulation aneurysms. | 11 | 35 | 15 |

II. Write notes on :

- | | | | |
|--|---|----|---|
| 1. Diffusion tensor imaging. | 4 | 10 | 7 |
| 2. Neural prosthesis. | 4 | 10 | 7 |
| 3. Minimally invasive procedures for intractable trigeminal Neuralgia. | 4 | 10 | 7 |
| 4. Endoscopic third ventriculostomy. | 4 | 10 | 7 |
| 5. Surgical approaches to petroclival meningiomas. | 4 | 10 | 7 |
| 6. Posterior dynamic stabilization for lumbar spine. | 4 | 10 | 7 |
| 7. Surgery for intracranial arachnoid cysts. | 4 | 10 | 7 |
| 8. Radiosurgery. | 4 | 10 | 7 |
| 9. Carotid endarterectomy. | 4 | 10 | 7 |
| 10. Cervical disc replacement. | 4 | 10 | 7 |

[LB 035]

AUGUST 2012

Sub. Code: 1572

M.Ch – NEURO SURGERY

THREE YEARS COURSE – PART II

Paper – II OPERATIVE NEURO SURGERY AND RECENT ADVANCES

Q.P. Code: 181572

Time : 3 hours
(180 Min)

Maximum : 100 marks

Answer ALL questions in the same order.

I. Elaborate on:

Pages Time Marks
(Max.)(Max.)(Max.)

- | | | | |
|--|----|----|----|
| 1. Discuss the clinical features of Posterior III rd Ventricular lesions, investigations and various Surgical management of the same. | 16 | 35 | 15 |
| 2. Describe briefly the history, technique, principles and applications of Sterotaxy in Modern Neurosurgery. | 16 | 35 | 15 |

II. Write notes on:

- | | | | |
|--|---|----|---|
| 1. Basics and applications of Magnetic Resonance Tractography. | 4 | 10 | 7 |
| 2. Discuss about Neural Prosthesis. | 4 | 10 | 7 |
| 3. Write briefly about Endoscopic Assisted Neurosurgical Procedures. | 4 | 10 | 7 |
| 4. Discuss carotid endarterectomy after Acute Ischemic Stroke. | 4 | 10 | 7 |
| 5. Clinical and ethical issues of Brain death. | 4 | 10 | 7 |
| 6. Various cranioplasty methods - Discuss. | 4 | 10 | 7 |
| 7. Clinical features and management of Hyponatremia. | 4 | 10 | 7 |
| 8. Discuss the Adjuvant therapy for gliomas. | 4 | 10 | 7 |
| 9. Management of Hypertensive ICH. | 4 | 10 | 7 |
| 10. Discuss the uses of Radiosurgery. | 4 | 10 | 7 |

M.Ch. – NEURO SURGERY
THREE YEARS/FIVE YEARS COURSE – PART – II/ PART – III
Paper – II OPERATIVE NEURO SURGERY AND RECENT ADVANCES
Q.P.Code: 181572

Time: Three Hours

Maximum: 100 marks

I. Elaborate on:

(2X15=30)

1. Discuss the operative approaches for the management of a suprasellar craniopharyngioma with multiple cysts and hydrocephalus.
2. Discuss the differential diagnosis in a five year old child with an enhancing lesion in the right temporal lobe presenting with recurrent seizures for one year. Outline the presurgical evaluation and management in this patient.

II. Write notes on:

(10X7=70)

1. Hemostatic agents in neurosurgery.
2. Intraoperative ultrasound in neurosurgery.
3. Somatosensory evoked potential.
4. Rotary atlanto axial dislocation.
5. Endoscopic anatomy of sphenoid sinus and sella.
6. Management of a 1.5cm vestibular schwannoma in a 30 year old female.
7. Intraventricular cysticercal cyst.
8. Lumbar dermal sinus in a two year old child.
9. Complications of ventriculoperitoneal shunt.
10. Prolactinoma.

M.Ch. – NEURO SURGERY
THREE YEARS/FIVE YEARS COURSE – PART – II/ PART – III
Paper – II OPERATIVE NEURO SURGERY AND RECENT ADVANCES

Q.P.Code: 181572

Time: Three Hours

Maximum: 100 marks

I. Elaborate on:

(2X15=30)

1. Discuss the various approaches for management of tuberculous spondylitis at C1-2 level in a twenty year old male with neck pain and minimal neurological deficits with no functional impairment.
2. Discuss the management options in a twenty five year old male with an insular glioma who presented with one episode of complex partial seizure.

II. Write notes on:

(10X7=70)

1. Frontal sinus mucocoele.
2. Motor evoked potential.
3. Lumbosacral lipomyelomeningocoele.
4. Growing skull fracture.
5. Complications of endoscopic third ventriculostomy.
6. Giant cavernous carotid aneurysm.
7. Subdural empyema.
8. Vertebral haemangioma.
9. Compound depressed fracture of parietal bone.
10. Acromegaly.

M.Ch. – NEURO SURGERY
THREE YEARS / FIVE YEARS COURSE – PART – II / PART – III
Paper – II OPERATIVE NEURO SURGERY AND RECENT ADVANCES
Q.P.Code: 181572

Time: Three Hours

Maximum: 100 marks

I. Elaborate on: **(2X15=30)**

1. Discuss the surgical approaches in the tumours of the lateral ventricle.
2. Discuss the present status of functional Neurosurgery.

II. Write notes on: **(10X7=70)**

1. Single and two piece orbitozygomatic craniotomy
2. Surgical approaches to cervicothoracic junction of spine
3. Hemispherectomy for intractable epilepsy
4. Real time Neuronavigation
5. Cervical arthroplasty
6. Primary central nervous system Lymphoma
7. Timing of surgery in Intracranial Aneurysms
8. Fluorescence guided resection of Gliomas
9. Magnetic resonance spectroscopy in intracranial lesions
10. Foetal Neurosurgery

M.Ch. – NEURO SURGERY

THREE YEARS COURSE

Paper IV – OPERATIVE NEURO SURGERY AND RECENT ADVANCES

Q.P.Code: 181572

Time: Three Hours

Maximum: 100 Marks

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

1. Discuss in detail the principle on which the neuroendoscope works.
Describe how you will perform a neurosurgical procedure with an endoscope and clinical application of intra cranial and intra spinal endoscopy.
2. Surgical management of brain and spinal metastatic disease.

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

1. Radiotherapy of gliomas.
2. Diffuse axonal injury.
3. Stereotaxic surgery – principles and application.
4. Tethered cord syndrome.
5. Classify fractures of spine and discuss on the clinical features and management.
6. Colloid cyst of third ventricle.
7. Bipolar coagulation.
8. Thromboembolism in neurosurgery.
9. Hyponatremia.
10. Blood transfusion reactions and complications.

(LJ 035)

AUGUST 2016

Sub. Code: 1572

M.Ch. – NEURO SURGERY
THREE YEARS COURSE – Final – Paper - IV /
SIX YEARS COURSE – Part III – Paper II
OPERATIVE NEURO SURGERY AND RECENT ADVANCES
Q.P.Code: 181572

Time: Three Hours

Maximum: 100 Marks

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

1. Discuss briefly about the role of Neuroendoscopy.
2. Discuss briefly about Modern Neurosurgical approaches in skull base lesion.

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

1. Immunotherapy of Brain tumors.
2. Newer antiepileptic drugs.
3. Cranioplasty.
4. Gama knife.
5. Disability evaluation.
6. Functional MRI.
7. Deep Brain stimulation.
8. Monitoring in Neurosurgical ICU.
9. Neuronavigation.
10. Recent advances in management of CSF leak.

(LK 035)

FEBRUARY 2017

Sub. Code: 1572

M.Ch. – NEURO SURGERY
THREE YEARS COURSE – Final – Paper - IV /
SIX YEARS COURSE – Part III – Paper - II
OPERATIVE NEURO SURGERY AND RECENT ADVANCES

Q.P.Code: 181572

Time: Three Hours

Maximum: 100 Marks

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

1. Classify tumors of pituitary gland.
Discuss the pathology, clinical features, management of lesions of pituitary gland with detailed description of the various surgical approaches.
2. Write in detail on endovascular neurosurgery, pre-procedural evaluation, methodology, complication avoidance and application in various fields of neurosurgery.

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

1. C2 fracture – axis fracture.
2. Cavitron Ultrasonic Suction Aspirator.
3. Walter Dandy.
4. Indications and steps of anterior cervical discectomy.
5. Fibrin glue.
6. Spinal abscess.
7. Cerebral Edema.
8. Acute subdural hematoma.
9. Dandy walker malformation.
10. Three pin head fixator.

(LL 035)

AUGUST 2017

Sub. Code: 1572

M.Ch. – NEURO SURGERY

THREE YEARS COURSE – Final – Paper - IV /

SIX YEARS COURSE – Part III – Paper - II

OPERATIVE NEURO SURGERY AND RECENT ADVANCES

Q.P.Code: 181572

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Classify lesions affecting pineal gland.
Discuss the pathology, clinical features and surgical approaches and management of pineal lesions.
2. Surgical management of cerebellar tumor in children.

II. Write notes on:

(10 x 7 = 70)

1. Syringomyelia.
2. Extra dural hematoma.
3. Neurosurgical aspects of HIV 1 infection.
4. Somatosensory evoked potential.
5. Harvey Cushing.
6. Laser in Neurosurgery.
7. Endoscopic discectomy.
8. Meralgia paraesthetica.
9. Malignant Hypertension.
10. Hypothalamic hamartoma.

(LM 035)

FEBRUARY 2018

Sub. Code: 1572

M.Ch. – NEURO SURGERY

THREE YEARS COURSE – Final – Paper - IV /

SIX YEARS COURSE – Part III – Paper - II

OPERATIVE NEURO SURGERY AND RECENT ADVANCES

Q.P.Code: 181572

Time: Three Hours

Maximum: 100 Marks

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

1. Discuss about modern spinal stabilization methods.
2. Real time Neuronavigation.

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

1. EC-IC bypass.
2. Aneurysm clipping-merits and demerits.
3. Neurological Manifestations of AIDS.
4. Transcranial Doppler.
5. Surgical management of Pituitary tumors.
6. Hypertonic saline in Neurosurgery.
7. Functional Neurosurgery.
8. List the methods of determining the motor cortex in MRI with notes on intra-operative localization of motor cortex.
9. Father of Modern Neurosurgery.
10. Trapped fourth ventricle.

(LN 035)

AUGUST 2018

Sub. Code: 1572

M.Ch. – NEURO SURGERY

THREE YEARS COURSE – Final – Paper - IV /

SIX YEARS COURSE – Part III – Paper - II

OPERATIVE NEURO SURGERY AND RECENT ADVANCES

Q.P.Code: 181572

Time: Three Hours

Maximum: 100 Marks

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

1. Describe the recent advances in the management of Neurotrauma.
2. Classify clival lesions. Discuss the pathology, clinical features and management of clival chordomas.

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

1. Optic nerve gliomas.
2. Complications of transsphenoidal surgeries.
3. Carotid endarterectomy.
4. Endoscopic third ventriculostomy.
5. Differential diagnosis of cerebellopontine angle lesions.
6. Management of spasticity.
7. Colloid cyst of third ventricle.
8. Mesial temporal sclerosis.
9. Japanese ortho association score for grading cervical compressive myelopathy.
10. Differentiate cerebral salt wasting syndrome from diabetes insipidus.

(LO 035)

FEBRUARY 2019

Sub. Code: 1572

M.Ch. – NEURO SURGERY

THREE YEARS COURSE – Final – Paper - IV /

SIX YEARS COURSE – Part III – Paper - II

OPERATIVE NEURO SURGERY AND RECENT ADVANCES

Q.P. Code: 181572

Time: Three Hours

Maximum: 100 Marks

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

1. Classify craniopharyngiomas radiologically and discuss the various approaches to surgical excision of craniopharyngioma.
2. Discuss in detail the pathogenesis of split cord malformation and its management.

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

1. Current concepts of hypothermia in managing traumatic brain injury.
2. Carpal tunnel syndrome.
3. Differences between neurofibroma and schwannoma.
4. Nascis trials.
5. Advantages of endoscopic removal over microscopic removal of pituitary adenoma.
6. Neurocysticercosis.
7. Trigeminal neuralgia.
8. Radionecrosis. Differentiate radionecrosis from recurrence of glioma.
9. Chronic sub dural hematoma membranes.
10. Selective amygdalohippocampectomy.

(LP 035)

AUGUST 2019

Sub. Code: 1572

M.Ch. – NEURO SURGERY

THREE YEARS COURSE – Final – Paper - IV /

SIX YEARS COURSE – Part III – Paper - II

OPERATIVE NEURO SURGERY AND RECENT ADVANCES

Q.P. Code: 181572

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Discuss intramedullary spinal cord tumors and its management. How will you manage intraoperative spinal cord bulge?
2. Endovascular neurosurgery for AVMs.

II. Write notes on:

(10 x 7 = 70)

1. Brain oedema and its management.
2. Immunohistochemical markers in brain tumors and its significance.
3. Cranioplasty.
4. Newer Antiepileptic Drugs.
5. Foetal Neurosurgery.
6. Growing skull fracture.
7. Prolactinoma.
8. Management of 5mm colloid cyst in an 30yrs female.
9. Neuronavigation in spinal surgery.
10. Neuroendoscopy in Cerebello pontine angle tumors.

(LR 035)

**NOVEMBER 2020
(AUGUST 2020 SESSION)**

Sub. Code: 1572

**M.Ch. – NEURO SURGERY
THREE YEARS COURSE – Final – Paper - IV /
SIX YEARS COURSE – Part III – Paper - II
OPERATIVE NEURO SURGERY AND RECENT ADVANCES**

Q.P. Code: 181572

Time: Three Hours

Maximum: 100 Marks

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

1. Enumerate the various surgical approaches to the pineal region. Discuss in detail with neatly labelled diagrams the factors that influence the choice of surgical approach for a lesion in the pineal region.
2. Discuss in detail the setting up of a neurosurgical operating room and the precautions to be taken by the neurosurgical team in the operating room in the current situation of Covid 19 pandemic.

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

1. Discuss briefly the management options for Von hippel lindau disease
2. Arterial spin labelling MR perfusion imaging
3. Write briefly about stereotactic radiosurgery for brain AVMs
4. Recent advances in deep brain stimulation for Parkinson's disease.
5. Intra-operative facial nerve monitoring
6. Management of pseudo meningocele following lumbar disc surgery
7. Recent advances in imaging for CSF rhinorrhoea
8. Dynamic spine stabilisation
9. Neuro-otological work up of a patient with vestibular schwannoma
10. Discuss the various sites of burrhole and the trajectory from each burrhole to cannulate lateral ventricle for placement of cranial end in ventriculo peritoneal shunt.

(MCH 0821)

AUGUST 2021

Sub. Code: 1572

M.Ch. – NEURO SURGERY

THREE YEARS COURSE – Final – Paper - IV /

SIX YEARS COURSE – Part III – Paper - II

OPERATIVE NEURO SURGERY AND RECENT ADVANCES

Q.P. Code: 181572

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Discuss in detail the operative approaches to the terminal basilar artery.
2. Discuss in detail the indication, surgical techniques, relevant anatomy and complications of endoscopic third ventriculostomy.

II. Write notes on:

(10 x 7 = 70)

1. Diffuse tensor imaging and MR fibre tractography.
2. Clinical features and management of growth hormone secreting pituitary adenoma.
3. Neuroimaging and biomarkers workup of pineal region tumours.
4. Surgical management for MOYAMOYA disease.
5. Draw a labelled diagram of the ligamentous anatomy of the midline sagittal plane of craniovertebral junction.
6. Draw a labelled diagram of lumbosacral plexus.
7. Pupillary examination in Horner's syndrome.
8. UMN Foot drop.
9. Intra-operative neuro monitoring.
10. Imaging classification of cranial sub arachnoid bleed.

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

[MCH 0222]

FEBRUARY 2022

Sub.Code :1572

M.Ch. – NEURO SURGERY

THREE YEARS COURSE – Final – Paper - IV /

SIX YEARS COURSE – Part III – Paper - II

OPERATIVE NEURO SURGERY AND RECENT ADVANCES

Q.P. Code: 181572

Time: Three Hours

Maximum: 100 Marks

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

1. Classify low grade gliomas and discuss the management of low grade glioma in a eloquent cortex with a note on intraoperative neuromonitoring.
2. Discuss in detail about pathogenesis and management of AV malformations.

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

1. Amygdalohippocampectomy.
2. ISAT.
3. Functional MRI.
4. Carotid endarterectomy.
5. Recent classification of medulloblastomas.
6. Giant aneurysm.
7. Endoscopic third ventriculostomy.
8. Blood patch.
9. Adjuvant treatment of glioblastoma multiforme.
10. OLIF.

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

(MCH 0822)

AUGUST 2022

Sub. Code: 1572

M.Ch. – NEURO SURGERY

THREE YEARS COURSE – Final – Paper - IV

SIX YEARS COURSE – Part III – Paper - II

OPERATIVE NEURO SURGERY AND RECENT ADVANCES

Q.P. Code: 181572

Time: Three Hours

Maximum: 100 Marks

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

1. Describe the lateral ventricular tumours and various surgical approaches to each locations.
2. Describe about sellar and suprasellar Craniopharngioma and discuss about different corridor and surgical approaches to this lesion.

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

1. External ventricular drainage.
2. Anterior cervical dissection and fusion.
3. Cavitron ultrasonic aspirator.
4. Colloid cyst.
5. Arteriovenous malformation of brain- classification and management Protocol.
6. Minimally invasive spine surgery.
7. Carpel tunnel syndrome.
8. Stereotactic radiosurgery.
9. Surgical management for scaphocephaly.
10. Preoperative tumour embolization.

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

(MCH 0124)

JANUARY 2024

Sub. Code: 1572

M.Ch. – NEURO SURGERY

THREE YEARS COURSE – FINAL – PAPER - IV

SIX YEARS COURSE – PART III – PAPER - II

OPERATIVE NEURO SURGERY AND RECENT ADVANCES

Q.P. Code: 181572

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Discuss the types of chiari malformations and add a note on surgical management of chiari malformations.
2. Discuss the classification, clinical features, investigation and various surgical approaches of a clinoidal meningioma.

II. Write notes on:

(10 x 7 = 70)

1. Hypothalamic gliomas.
2. Microlumbar discectomy.
3. Vasospasm management.
4. Cavernoma.
5. Non-dominant temporal lobe lesions.
6. Odontoidectomy.
7. Hemostasis in neurosurgery.
8. Cranial prosthesis.
9. Tumour markers.
10. Vertebroplasty.

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

(MCH 0824)

AUGUST 2024

Sub. Code: 1572

**M.Ch. BRANCH II – NEURO SURGERY
SIX YEARS COURSE**

PART - III

PAPER II - OPERATIVE NEURO SURGERY AND RECENT ADVANCES

Q.P. Code: 181572

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Describe the various surgical approaches to the cerebellopontine angle lesion and the factors influencing the choice of approach.
2. Describe the steps of Endoscopic pituitary adenoma surgery and the extended endoscopic surgery for anterior skull base.

II. Write notes on:

(10 x 7 = 70)

1. Ventriculoperitoneal shunt.
2. Microlumbar discectomy.
3. Neuronavigation.
4. Middle cerebral artery aneurysm – clipping.
5. Medulloblastoma – Management.
6. Microvascular decompression for Trigeminal Neuralgia.
7. Chemotherapy for glioma.
8. Flow diverter.
9. Cervical spinal canal stenosis management.
10. Paediatric head injury management.

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

(MCH 0225)

FEBRUARY 2025

Sub. Code: 1572

M.Ch. BRACH II – NEURO SURGERY

THREE YEARS COURSE – FINAL – PAPER - IV

SIX YEARS COURSE – PART III – PAPER - II

OPERATIVE NEUROSURGERY AND RECENT ADVANCES

Q.P. Code: 181572

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Discuss the classification, clinical features and management of Petroclival meningiomas.
2. Discuss the pathogenesis, clinical features, investigations and treatment options for a patient with cervical spondylotic myelopathy.

II. Write notes on:

(10 x 7 = 70)

1. Deep brain stimulation.
2. Embolic agents in Neurosurgery.
3. Classification and treatment of odontoid fractures.
4. Kyphoplasty.
5. Vertebra plana.
6. Spinal arterio-venous malformations, diagnosis and treatment.
7. Spinal endoscopy.
8. Walter dandy.
9. Endoscopic Third ventriculostomy.
10. External carotid – Internal carotid bypass.

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

(MCH 0825)

AUGUST 2025

Sub. Code: 1572

M.Ch. BRANCH II – NEURO SURGERY

THREE YEARS COURSE – FINAL – PAPER - IV

SIX YEARS COURSE – PART III – PAPER - II

OPERATIVE NEURO SURGERY AND RECENT ADVANCES

Q.P. Code: 181572

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Discuss the operative anatomy and various craniometric lines of CVJ. Write briefly on the management of occipito-atlantal dislocation.
2. A 24-year-old female from a low socioeconomic group has come to OPD with sudden onset of right sided weakness and had one episode of complex partial seizures. Discuss the differential diagnosis and add a brief note on management of Brain abscess.

II. Write notes on:

(10 x 7 = 70)

1. Cervical braces.
2. Immunotherapy of brain tumours.
3. NIH Stroke scale.
4. Jackson's syndrome.
5. Juvenile pilocytic astrocytoma.
6. Petrosal craniotomy.
7. Pseudo aneurysms.
8. Lumboperitoneal shunt.
9. Carotid endarterectomy.
10. Caroticocavernous fistula.
