

APRIL - 2001

[KD 034]

Sub. Code : 1571

M.Ch. DEGREE EXAMINATION

(Higher Specialities)

Branch II — Neurosurgery

(New and Revised Regulations for 5 years course)

Part III

Paper I — NEURORADIOLOGY AND CLINICAL
NEUROSURGERY

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Discuss the clinical approach, neuroradiological and neurophysiological evaluation of a patient with unilateral tinnitus and deafness. Mention what abnormalities are expected in a patient with 3 cms right acoustic neuroma. (25)
2. Discuss the causes, investigations and management of CSF fistula. (25)
3. Write short notes on : (5 × 10 = 50)
 - (a) Transcranial Doppler ultrasonography
 - (b) Neurosurgical aspects of HIV-1 infection
 - (c) Foster-Kennedy Syndrome
 - (d) Pseudotumor cerebri
 - (e) Carpel Tunnel syndrome.

NOVEMBER - 2001

[KE 034]

Sub. Code 1571

M.Ch. DEGREE EXAMINATION

(Higher Specialities)

(New and Revised Regulations for 5 Years Course)

Branch II — Neurosurgery

Part III

**Paper I — NEURORADIOLOGY AND CLINICAL
NEUROSURGERY**

Time : Three hours

Maximum : 100 marks

Answer ALL questions

1. Discuss the localization, etiology and management of a 15 year old patient complaining of seizures. (25)
 2. Discuss the management of a mass located in the conus medullaris. (25)
 3. Write short notes on : (5 × 10 = 50)
 - (a) MRI picture of raised intracranial tension
 - (b) Spastic elbow
 - (c) MRI picture of lumbar disc herniation
 - (d) Localization of anisocoria
 - (e) Anterior communicating artery aneurysm.
-

MARCH - 2002

[KG 034]

Sub. Code : 1571

M.Ch. DEGREE EXAMINATION.

(Higher Specialities)

(New and Revised Regulations for 5 years course)

Branch II — Neurosurgery

Part III

Paper I — NEURORADIOLOGY AND CLINICAL
NEUROSURGERY

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Discuss the neuroradiological and neurophysiological evaluation and management of a patient with medically intractable temporal lobe epilepsy. (25)
2. Discuss the pathophysiology, evaluation, investigations, monitoring and management of severe closed head injury. (25)
3. Write short notes on : (5 × 10 = 50)
 - (a) Central Cord Syndrome.
 - (b) Cerebral vasospasm and Delayed Ischemic Injury.
 - (c) CT and MRI Angiography.
 - (d) Brain death.
 - (e) Syringomyelia.

SEPTEMBER - 2002

[KH 034]

Sub. Code : 1571

M.Ch. DEGREE EXAMINATION.

(Higher Specialities)

(New and Revised Regulations for 5 years course)

Branch II — Neuro Surgery

Part III

Paper I — NEURORADIOLOGY AND CLINICAL
NEUROSURGERY

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Discuss the pathophysiology, investigations and management of growth hormone secreting pituitary adenomas. (25)
2. Discuss the pathology, diagnosis and management of Medulloblastomas. (25)
3. Write short notes on : (5 × 10 = 50)
 - (a) Brachycephaly
 - (b) Carotid-Cavernous fistulas
 - (c) Atlanto-axial dislocation
 - (d) Tethered cord syndrome
 - (e) Acute Subdural Hematoma.

APRIL - 2003

[KI 034]

Sub. Code : 1571

M.Ch. DEGREE EXAMINATION.

(Higher Specialities)

(New and Revised Regulations for 5 years course)

Branch II — Neurosurgery

Part III

Paper I — NEURO RADIOLOGY AND CLINICAL
NEUROSURGERY

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

1. Discuss the pathophysiology and management of spinal cord injuries. (25)
 2. Discuss the pathophysiology, diagnosis and management of obstructive hydrocephalus due to aqueductal stenosis. (25)
 3. Write short notes on : (5 × 10 = 50)
 - (a) Otogenic brain abscess
 - (b) Vein of Galen malformations
 - (c) Cushing's syndrome
 - (d) Failed back syndrome
 - (e) Intracranial germ cell tumours.
-

OCTOBER - 2003

[KJ 034]

Sub. Code : 1571

M.Ch. DEGREE EXAMINATION.

(Higher Specialities)

(New and Revised Regulation for Five Year Course)

Branch II — Neurosurgery

Part III

Paper I — NEURORADIOLOGY AND CLINICAL
NEUROSURGERY

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
sheet 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 rehabilitation of a person having posttraumatic quadriplegia.
2. Discuss the importance of MRI brain in head injury.

Write short notes on the following question :

(5 marks each)

3. How do you determine age of the subdural haemotoma on C T Scan head?
4. Enumerate features to diagnose ADH.
5. Types and localization of neurogenic bladder.
6. Enumerate clinico-imageological features to diagnose reverse herniation.
7. Enumerate a few common false localizing signs.
8. Importance of study of bone window in CT Scan head of various brain tumors.
9. Central cord syndrome.
10. Imageological differences in Koch's spine and metastasis to spine.
11. Differential diagnosis of large head.
12. Enumerate the diseases, which may cause only motor deficits in the lower limb.

[KJ 034]

APRIL - 2004

[KK 034]

Sub. Code : 1571

M.Ch. DEGREE EXAMINATION.

(Higher Specialities)

(New and Revised Regulations for 5 years course)

Branch II — Neuro Surgery

Part III

Paper I — NEURORADIOLOGY AND CLINICAL
NEURO SURGERY

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 epidemiology, management and prognosis of a neurysural sub-arach noid haemorrhage.

(2) Discuss the classification and radiological diagnosis of developmental anomalies of Cranio vertebral junction.

B. Short notes : (10 × 5 = 50)

(1) Central transtentorial herniation

(2) MR spectroscopy

(3) Taylor-Haughten lines

(4) Classification of Spinal AV Malformations

(5) Growing skull fracture

(6) Management of Chiari Malformation

(7) Vertebroplasty

(8) Split cord Malformation

(9) Post traumatic epilepsy

(10) Epidermoid tumours of central nervous system.

AUGUST - 2004

[KL 034]

Sub. Code : 1571

M.Ch. DEGREE EXAMINATION.

(Higher Specialities)

(New and Revised Regulations for 5 years course)

Part III

Branch II — Neuro Surgery

Paper I — NEURORADIOLOGY AND CLINICAL
NEURO SURGERY

Time : Three hours

Maximum : 100 marks

Theory : Two hours and

Theory : 80 marks

forty minutes

M.C.Q. : Twenty minutes

M.C.Q. : 20 marks

Answer ALL questions.

I. Essay questions : (2 x 15 = 30)

(1) Discuss the radiological classification and management of spinal arteriovenous malformation.

(2) Discuss the differential diagnosis and management of an 8 month old infant with a large head.

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

(a) Indications and techniques of intracranial pressure monitoring.

(b) Incidence and risk factors for post traumatic epilepsy.

(c) Radiological classification of odontoid fractures.

(d) Radiological differential diagnosis of a cystic cerebellopontine angle mass.

(e) Grading and long term outcome after surgical excision of meningiomas.

(f) Predictors of poor outcome in patients with cerebral astrocytomas.

(g) Spetzler martin grading of arteriovenous malformations and its utility.

(h) Surgical options for brain abscesses and their relative benefits.

(i) Adjuvant therapy for medullo blastoma.

(j) Clinical presentation of tethered cord.

FEBRUARY - 2005

[KM 034]

Sub. Code : 1571

M.Ch. DEGREE EXAMINATION.

(Higher Specialities)

(New and Revised Regulations for 5 Years Course)

Branch II — Neuro Surgery

Part III

**Paper I — NEURORADIOLOGY AND CLINICAL
NEURO SURGERY**

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 :

(2 × 15 = 30)

(1) What are the M.R.I. findings in intracerebral
hematoma? (15)

(2) What are the clinical features and how will
you diagnose a pineal neoplasm? (15)

II. Write Short Notes : (10 × 5 = 50)

- (a) Fat suppression
- (b) Ganglio glioma
- (c) Von Hippel Lindane disease
- (d) Epty delta sign
- (e) Significance of calcification in plain X-ray
skull
- (f) Vein of Galen aneurysm
- (g) Neurofibromatosis II
- (h) Collapsing cord sign
- (i) Prolactinomas
- (j) Radiologic findings CT, scan and plain X-ray
in hydrocephalus.

FEBRUARY - 2006

[KO 034]

Sub. Code : 1571

M.Ch. DEGREE EXAMINATION.

(Higher Specialities)

(New and Revised Regulations for 5 Year Course)

Branch II — Neurosurgery

Part III

Paper I — NEURORADIOLOGY AND CLINICAL
NEUROSURGERY

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 how to make early diagnosis of various functional pituitary adenomas.

(2) Discuss functional imageological studies in neurosurgical practice.

II. Write short notes on :

(10 × 5 = 50)

- (a) Autonomic disturbances in high cervical cord trauma
- (b) Small head
- (c) Arrested hydrocephalus
- (d) Astereognosis
- (e) Mono-ocular diplopia
- (f) Confrontation tests for visual field examination
- (g) Define various vascular malformations
- (h) Early signs of raised Intracranial pressure
- (i) Causes of surgically treatable dementia
- (j) Suprasellar cistern.

FEBRUARY - 2007

[KQ 034]

Sub. Code : 1571

M.Ch. DEGREE EXAMINATION.

(Higher Specialities)

(New and Revised Regulations for 5 Year Course)

Branch II — Neuro Surgery

Part III

Paper I — NEURORADIOLOGY AND CLINICAL
NEURO SURGERY

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

I. Essay Questions :

1. How will you classify Cranio Vertebral Junction Anomalies? What are the Neuroradiological investigations required to diagnose them? Write in brief the management of Atlanto Axial Instability. (20)
2. Imaging of Posterior fossa Tumours. (15)
3. Management of Metastatic Brain Tumours. (15)

II. Write short notes on :

(6 × 5 = 30)

1. Anterior Communicating Artery Aneurysm.
2. Failed Back Syndrome.
3. Growing fracture of Skull.
4. Neuro Protection.
5. Gene Therapy.
6. Diastematomyelia.

August-2007

[KR 034]

Sub. Code : 1571

M.Ch. DEGREE EXAMINATION.

(Higher Specialities)

(New and Revised Regulations for 5 Year Course)

Branch II — Neuro Surgery

Part III

**Paper I — NEURORADIOLOGY AND CLINICAL
NEURO SURGERY**

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 clinical features and management of
chiari malformations. (20)**

**(2) Discuss functional imaging studies in
neurosurgical practice. (15)**

(3) Phakomatosis. (15)

II. Write short notes on :

(6 × 5 = 30)

(a) Arrested hydrocephalus.

(b) D.D. of calcification seen in CT scan of head.

(c) Neurocysticercosis.

(d) Pulsatile proptosis.

(e) Babinski sign.

(f) Tumour markers.

[KS 034]

Sub. Code : 1571

M.Ch. DEGREE EXAMINATION.

(Higher Specialities)

(New and Revised Regulations for 5 Year Course)

Branch II — Neuro Surgery

Part — III

Paper I — NEURORADIOLOGY AND CLINICAL
NEURO SURGERY

Q.P.Code: 181571

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

I. Essay questions:

1. Describe the radiological diagnosis of Anterior circulation aneurysms with a brief outline of neuro-radiological interventional procedures used in their management. (20)

2. Discuss the clinical features and management of conus – cauda lesions. (20)

II. Short notes : (10 × 6 = 60)

(1) Management of traumatic Cerebrospinal fluid leaks.

(2) Trans-cranial Doppler.

(3) Parinaud's syndrome.

(4) Clinical localization of Parietal lobe lesions with relevant anatomical substrates.

(5) Post – radio therapy Brain necrosis – diagnosis and management.

(6) Clinical features of Trigeminal neuralgia and radiological studies for diagnosis.

(7) Pathology of Diffuse Axonal Injury.

(8) Brain Herniation syndromes.

(9) Pituitary apoplexy.

(10) Eloquent areas of the Brain and their relevance in operative neurosurgery.

February 2009

[KU 034]

Sub. Code: 1571

MASTER OF CHIRURGIAE (M.Ch.) DEGREE EXAMINATIONS

(Higher Specialities)

(New and Revised Regulations for 5 years course)

Branch II – Neuro Surgery

PART - III

Paper I – NEURORADIOLOGY AND CLINICAL NEURO SURGERY

Q.P. Code: 181571

Time: Three hours

Maximum: 100 Marks

Answer ALL questions

Draw suitable diagrams wherever necessary.

I. Essays:

(2 x 20 = 40)

1. Describe the role of multidetector CT in Neurosurgical practice.
2. Describe the Epidemiology, Microbiology, Pathogenesis, Clinical features and therapy of ventriculities.

II. Write short notes on:

(10 x 6 = 60)

1. Deep Brain stimulation.
2. Briefly enumerate the vascular anomalies of the scalp and their management.
3. Bio-mechanism of head injury.
4. Stem cell therapy in neurosurgical disorders.
5. Cerebral contusions.
6. Cubital tunnel syndrome.
7. Intra Tumoral Haemorrhage.
8. Pathogenesis and therapeutic implications peritumoral brain oedema.
9. Describe lumboperitoneal shunt surgery, its usefulness and complications.
10. Neurotrophic factors: Their role in development, Trauma and Disease.

August 2009

[KV 034]

Sub. Code: 1571

MASTER OF CHIRURGIAE (M.Ch.) DEGREE EXAMINATIONS

(Super Specialities)

(New and Revised Regulations for 5 years course)

Branch II – Neuro Surgery

PART - III

Paper I – NEURORADIOLOGY AND CLINICAL NEURO SURGERY

Q.P. Code: 181571

Time: Three hours

Maximum: 100 Marks

Answer ALL questions

Draw suitable diagrams wherever necessary.

I. Essays:

(2 x 20 = 40)

1. Describe the recent advances in Neuro-imaging techniques for the evaluation of tumour growth, vascular permeability and angiogenesis of cerebral gliomas.
2. Describe the anatomy, Histopathology, clinical features, diagnostic studies and different management options for tumors of the pineal region.

II. Write short notes on:

(10 x 6 = 60)

1. Define diffuse axonal injury. Describe its pathogenesis, diagnosis and management.
2. Describe diffusion tensor tractography and its application in neurosurgery.
3. Briefly describe prognosis and outcome in head injury.
4. Describe pathogenesis and management of cerebral metastases.
5. Describe various fungal infections of the central nervous system.
6. Application of a computer support system for neurological anatomical diagnosis.
7. Describe the genetic basis of neurosurgical disorders.
8. Bio-mechanism of head injury.
9. Role of Radiofrequency ablation in neurosurgical disorders.
10. Describe spinal cord stimulation and its usefulness in neurosurgical practice.

August 2011

[KZ 034]

Sub. Code: 1571

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

BRANCH II – NEURO SURGERY

NEURORADIOLOGY AND CLINICAL NEURO SURGERY

Q.P. Code: 181571

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 pathogenesis of syringomyelia and the rationale of various management options for syringomyelia. | 11 | 35 | 15 |
| 2. Discuss the diagnostic evaluation and management of a Patient presenting with CSF rhinorrhea. | 11 | 35 | 15 |

II. Write notes on :

- | | | | |
|---|---|----|---|
| 1. Management of prolactinoma. | 4 | 10 | 7 |
| 2. Encephalocele. | 4 | 10 | 7 |
| 3. Tuberculous brain abscess. | 4 | 10 | 7 |
| 4. Chemotherapy for gliomas. | 4 | 10 | 7 |
| 5. Radiological features of meningioma. | 4 | 10 | 7 |
| 6. Intraoperative monitoring in Neurosurgery. | 4 | 10 | 7 |
| 7. Major Indian contributions to Neurosurgery. | 4 | 10 | 7 |
| 8. Evaluation of failed back syndrome. | 4 | 10 | 7 |
| 9. Management of Venticuloperitoneal shunt injection. | 4 | 10 | 7 |
| 10. Congenital dermal sinus. | 4 | 10 | 7 |

[LB 034]

AUGUST 2012

Sub. Code: 1571

M.Ch – NEURO SURGERY

THREE YEAR COURSE – PART II

Paper – I NEURORADIOLOGY AND CLINICAL NEURO SURGERY

Q.P. Code: 181571

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. Describe the management of Subarachnoid haemorrhage.
Briefly outline the neuroradiological interventional procedures used in the diagnosis and management of Anterior Circulation aneurysms. 16 35 15
2. Discuss how to make early diagnosis of various Functional pituitary adenomas. 16 35 15

II. Write notes on:

1. Management of conus cauda lesions. 4 10 7
2. Discuss Post radiotherapy Brain necrosis, Discuss diagnosis and management. 4 10 7
3. Management of Diffuse Axonal injury. 4 10 7
4. Management of Failed Back Syndrome. 4 10 7
5. Diagnosis and management of Diastatomyelia. 4 10 7
6. Surgical approaches of C.P angle lesions. 4 10 7
7. Treatment of Growing Fracture Skull. 4 10 7
8. Diagnosis and Management of Arrested Hydrocephalus. 4 10 7
9. Clinical application of Transcranial Doppler. 4 10 7
10. Eloquent areas of Brain and their relevance in operative Neurosurgery. 4 10 7

(LD 034)

AUGUST 2013

Sub. Code: 1571

M.Ch. – NEURO SURGERY
THREE YEARS/FIVE YEARS COURSE – PART – II/ PART – III
Paper – I NEURORADIOLOGY AND CLINICAL NEURO SURGERY
Q.P.Code: 181571

Time: Three Hours

Maximum: 100 marks

I. Elaborate on:

(2X15=30)

1. What is magnetic resonance spectroscopy? Discuss its utility and limitations in the diagnosis and management of a patient with an intra axial brain lesion.
2. Describe the radiological classification of brain stem gliomas. Discuss the management of a brain stem mass in a six year old child.

II. Write notes on:

(10X7=70)

1. Split cord malformation.
2. Recurrent meningitis in a young adult.
3. Solitary brain metastasis.
4. Choroid plexus papilloma.
5. Diffuse axonal injury.
6. Computed tomography (CT) findings in tuberculous meningitis.
7. Differential diagnosis of a suprasellar mass.
8. Carotico cavernous fistula.
9. Mesial temporal sclerosis.
10. Clinical features of a cauda equina lesion.

M.Ch. – NEURO SURGERY
THREE YEARS/FIVE YEARS COURSE – PART – II/ PART – III
Paper – I NEURORADIOLOGY AND CLINICAL NEURO SURGERY

Q.P.Code: 181571

Time: Three Hours

Maximum: 100 marks

I. Elaborate on:

(2X15=30)

1. What is the basis for diffusion weighted magnetic resonance imaging? Discuss the role of diffusion and perfusion imaging in the diagnosis and management of neoplastic and non neoplastic brain lesions.
2. Describe the pathophysiology and radiological features of a brain abscess. Outline the clinical features and management of an otogenic cerebellar abscess.

II. Write notes on:

(10X7=70)

1. Aqueductal stenosis.
2. Clinical features of an intradural extramedullary tumour and its anatomical basis.
3. Draw a labelled diagram of the fourth ventricular floor.
4. Solitary lytic skull lesion.
5. C5-6 locked facet.
6. Spontaneous cerebrospinal fluid (CSF) rhinorrhoea.
7. Differential diagnosis of a right frontal lobe haematoma in a 22 year old male.
8. Spinal dural arteriovenous fistula.
9. Cerebellar haemangioblastoma.
10. Chronic subdural haematoma.

[LF 034]

AUGUST 2014

Sub. Code: 1571

M.Ch. – NEURO SURGERY

THREE YEARS / FIVE YEARS / SIX YEARS COURSE

PART – I / PART – II

Paper I – NEURORADIOLOGY AND CLINICAL NEURO SURGERY

Q. P. Code: 181571

Time: Three Hours

Maximum: 100 Marks

Answer ALL questions in the same order.

I. Elaborate on:

(2 x 15 = 30)

1. Discuss the pathogenesis and the rationale of the various treatment options in syringomyelia.
2. Discuss the basic physics and the recent advances in Magnetic Resonance Imaging technology.

II. Write notes on:

(10 x 7 = 70)

1. Management of low grade glioma in the eloquent area of the brain.
2. The various management strategies for craniopharyngioma – the merits and demerits.
3. ICP (Intracranial Pressure) versus CPP (Cerebral Perfusion Pressure) targeted management in head injury.
4. Presurgical evaluation of patients with Intractable epilepsy.
5. Wilder Penfield.
6. Prognostic factors in Medulloblastoma.
7. Imaging features in vestibular schwannomas and their therapeutic implications.
8. Management of cerebral vasospasm.
9. Management of traumatic CSF Rhinorrhea.
10. Surgical classification and management of Encephaloceles.
