

APRIL - 2001

[KD 039]

Sub. Code : 1584

M.Ch. DEGREE EXAMINATION.

(Higher Specialities)

Branch II — Neurosurgery

(Revised Regulations for 2 year course)

Paper IV — RECENT ADVANCES IN
NEUROSURGERY

Time : Three hours

Maximum : 100 marks

All questions to be answered.

1. Discuss the various indications, advantages and disadvantages of neuroendoscopy. (30)
2. Discuss stereotactic and functional neurosurgery. (30)
3. Write short notes on : (4 × 10 = 40)
 - (a) Neuro Prostheses
 - (b) Boron Neutron Capture therapy of Brain Tumors
 - (c) Functional MRI
 - (d) Brain protection.

NOVEMBER - 2001

[KE 039]

Sub. Code : 1584

M.Ch. DEGREE EXAMINATION

(Higher Specialities)

(Revised Regulations for 2 Years Course)

Branch II — Neurosurgery

**Paper IV — RECENT ADVANCES IN
NEUROSURGERY**

Time : Three hours

Maximum : 100 marks

All questions to be answered.

1. Discuss endovascular treatment for intracranial aneurysms. (30)
2. Discuss the various modern neurosurgical approaches to the skull base. (30)
- 3 Write short notes on : (4 × 10 = 40)
 - (a) Functional radiosurgery
 - (b) Neurosurgery and the internet
 - (c) Use of fibrin glue in neurosurgery
 - (d) Gene therapy in neurological diseases.

MARCH - 2002

[KG 039]

Sub. Code : 1584

M.Ch. DEGREE EXAMINATION.

(Higher Specialities)

(Revised Regulations for 2 years course)

Branch II — Neuro Surgery

**Paper IV — RECENT ADVANCES IN NEURO
SURGERY**

Time : Three hours

Maximum : 100 marks

ALL questions to be answered.

1. Discuss the role of radio surgery. (30)
2. Discuss the management of chronic intractable pain. (30)
3. Write Short notes on : (4 × 10 = 40)
 - (a) Spect.
 - (b) Current status of Psychosurgery
 - (c) Gene Therapy.
 - (d) Giant Aneurysm.

SEPTEMBER - 2002

[KH 039]

Sub. Code : 1584

M.Ch. DEGREE EXAMINATION

(Higher Specialities)

(Revised Regulations for 2 Year Course)

Branch II — Neurosurgery

**Paper IV — RECENT ADVANCES IN
NEUROSURGERY**

Time : Three hours

Maximum : 100 marks

All questions to be answered

1. Discuss the present status and future directions in surgery for Parkinson's disease. (30)
 2. Discuss the current status and recent advances in epilepsy surgery. (30)
 3. Write short notes on : (4 × 10 = 40)
 - (a) Neurogenetic surgery
 - (b) Radiosurgery
 - (c) Endoscopic spine surgery
 - (d) Brain trauma monitoring.
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FEBRUARY - 2005

[KM 039]

Sub. Code : 1584

M.Ch. DEGREE EXAMINATION.

(Higher Specialities)

(Revised Regulations for 3 years course)

Branch II — Neuro Surgery

Paper IV — 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 recent advances in surgery for Parkinson's disease.

(2) What are the treatment options for cerebral A.V. Ms. with indication for each?

II. Short questions : (10 × 5 = 50)

(a) Robotics in neurosurgery

(b) Monitoring in Neurosurgical I.C.U.

(c) Endoscopic assisted neurosurgery

(d) MR Spectroscopy

(e) Transcranial Doppler (TCD) in Neurosurgery

(f) Current status of Carotid endarterectomy

(g) Visual evoked potentials

(h) Baloon angioplasty

(i) Neuroneavigation

(j) Radiosurgery.

AUGUST - 2006

[KP 039]

Sub. Code : 1584

M.Ch. DEGREE EXAMINATION.

(Higher Specialities)

(Revised Regulations for 3 years course)

Branch II — Neuro Surgery

**Paper IV — RECENT ADVANCES IN
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 :

(1) Discuss various strategies for cerebral protection during temporary arterial occlusion in aneurysm surgery. (20)

(2) Discuss the pathology, clinical characteristics and management of paediatric temporal lobe tumors. (15)

(3) Neurosurgical management of Parkinsonism. (15)

II. Write short notes on : (6 × 5 = 30)

(a) Imaging in hippocampal sclerosis

(b) Early ischaemic changes on non contrast CT

(c) Hemostatic therapy for hypertensive intracerebral haemorrhage.

(d) Hypertonic saline in critical care management

(e) Evaluation and management of dissecting aneurysms of vertebral artery

(f) Genetic aberrations in pituitary tumors

FEBRUARY - 2007

[KQ 039]

Sub. Code : 1584

M.Ch. DEGREE EXAMINATION.

(Higher Specialities)

(Revised Regulations for 3 years course)

Branch II — Neuro Surgery

Paper IV – RECENT ADVANCES IN 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.

Draw suitable diagram wherever necessary.

I. Essay questions :

1. How will you manage a unconscious patient suspected to have head injury. What are the treatment options for acute intracranial hematomas following trauma. (20)

2. What are the advantages in doppler studies in stroke. Describe the evolution of surgical management of stroke with its present status. (15)

3. What are the indications and surgical options for intractable epilepsy?

II. Write short notes on : (6 × 5 = 30)

1. Deep brain stimulation.

2. Brain Oximetry.

3. Genetics in Neurosurgery.

4. Brain computer interphase.

5. Brainstem auditory evoked potential.

6. Monitoring in Neurosurgical I.C.U.

[KR 039]

Sub. Code : 1584

M.Ch. DEGREE EXAMINATION.

(Higher Specialities)

(Revised Regulations for 3 years course)

Branch II — Neuro Surgery

Paper IV — RECENT ADVANCES IN 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 :

(1) Describe briefly microsurgical anatomy of lateral ventricle with appropriate diagrams. Discuss the merits and demerits of endoscopic versus microneurosurgical approach to common trigonal lesions. (20)

(2) Discuss the pathogenesis, clinical features relevant investigations and management of Dandy-Walker malformation. (15)

(3) Discuss the different hypothesis for syringomyelia and discuss the merits and disadvantages of presently practiced surgical procedures. (15)

II. Write short notes on : (6 × 5 = 30)

(a) Discuss general principles involved in positioning a patient for intracranial microsurgery

(b) Surgical treatment for intractable epilepsy

(c) Neuro prosthesis

(d) Merits and demerits of endoscopic disc surgery

(e) Current controversies in the treatment of intracranial aneurysms

(f) Evaluate the advantages and disadvantages of radio frequency lesion versus posterior fossa M.V.D. for trigeminal neuralgia.

[KS 039]

Sub. Code : 1584

M.Ch. DEGREE EXAMINATION.

(Higher Specialities)

(Revised Regulations for 3 years course)

Branch II — Neuro Surgery

**Paper IV — RECENT ADVANCES IN NEURO
SURGERY**

Q.P. Code : 171584

Time : Three hours

Maximum : 100 marks

Draw suitable diagram wherever necessary.

Answer ALL questions.

I. Write essay questions :

1. Write an essay on radio-surgery. (20)

**2. Discuss the management of incidental findings on
MRI of brain and spine. (20)**

II. Write short notes on : (10 × 6 = 60)

(1) Window period in HIV.

(2) Medical treatment of neurogenic bladder.

(3) Nosocomial infection.

(4) Spinal fixation.

(5) Physiological changes in astronauts.

(6) Aspirin in neurosurgical practice.

(7) DBS.

(8) Stem cells.

(9) Chemotherapy for gliomas.

**(10) Write abstract of your dissertation/research
paper of M.Ch. for submission to J. of Neurological
Society of India.**

FEBRUARY – 2009

[KU 039]

Sub. Code: 1584

**M.CH DEGREE EXAMINATIONS
(Higher Specialities)
(Revised Regulations for 3 years course)
Branch II – Neuro Surgery
Paper IV –RECENT ADVANCES IN NEURO SURGERY
*Q.P. Code: 171584***

Time: Three hours

Maximum: 100 Marks

ANSWER ALL QUESTIONS

Draw suitable diagrams wherever necessary.

I. Essays: 2 x 20 = 40 Marks

1. Describe the aetiopathology of vasospasm and its management.
2. Real time Neuro Navigation.

II. Write short notes on: 10 X 6 = 60 Marks

1. Baclofen pump for spasticity.
2. Intra operative MRI.
3. Artificial disc replacement.
4. Alternative modes of treating prolapsed disc.
5. Neurosurgical investigative armamentarium of intensive care.
6. Coiling of aneurysm, its merits and demerits.
7. Management of osteoporotic fractures.
8. BEAR.
9. Trans cranial Doppler.
10. Prognosticating factors of growth and recurrence of glioma.

August 2009

[KV 039]

Sub. Code: 1584

**M.Ch. DEGREE EXAMINATIONS
(Super Specialities)
(New and Revised Regulations)
(Common to both 5 years and 3 years course)**

**Branch II – Neuro Surgery
Paper IV –RECENT ADVANCES IN NEURO SURGERY
*Q.P. Code: 181584***

Time: Three hours

Maximum: 100 Marks

**ANSWER ALL QUESTIONS
Draw suitable diagrams wherever necessary.**

I. Essays:

2 x 20 = 40 Marks

1. Describe the blood supply of spinal cord. Enumerate the types of intra-medullary tumors and discuss the management of common intra-medullary tumors.
2. Discuss the management of extra-cranial carotid vascular disease. Enumerate the various trials conducted. Also evaluate the merits/demerits of stenting v/s endarterectomy.

II. Write short notes on:

10 X 6 = 60 Marks

1. Artificial implants used in disc surgery.
2. Deep brain stimulation.
3. Management of spontaneous ICH.
4. Endoscopy assisted microneurosurgery.
5. Newer antiepileptic drugs.
6. Vertebroplasty.
7. Materials used in endovascular procedure.
8. EC-IC bypass.
9. WHO classification of meningioma.
10. Management of cerebral cavernoma.

February 2010

[KW 039]

Sub. Code: 1584

M.Ch. DEGREE EXAMINATIONS
(Super Specialities)
(New and Revised Regulations)
(Common to both 5 years and 3 years course)

Branch II – Neuro Surgery
Paper IV –RECENT ADVANCES IN NEURO SURGERY
Q.P. Code: 181584

Time: Three hours

Maximum: 100 Marks

ANSWER ALL QUESTIONS
Draw suitable diagrams wherever necessary.

I. Essays:

2 x 20 = 40 Marks

1. Alternative therapeutic modalities for gliomas.
2. Management of a head injury patient in ICU – recent advances.

II. Write short notes on:

10 X 6 = 60 Marks

1. Surgery for intractable epilepsy.
2. HIV in a neurosurgery patient.
3. Growing fracture.
4. Molecular neuropathology.
5. Recent advances in radiotherapy.
6. Recent advances in embolisation procedures.
7. Neurosurgical management of pain.
8. Neuronavigation.
9. Endoscopic versus microscopic pituitary tumour excision
10. Endoscopic repair of CSF leak.

August 2011

[KZ 039]

Sub. Code: 1584

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

BRANCH II – NEURO SURGERY

RECENT ADVANCES IN NEURO SURGERY

Q.P. Code: 181584

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 current status of endovascular treatment of Intracranial aneurysms. | 11 | 35 | 15 |
| 2. Discuss the role of deep brain stimulation in movement disorders. | 11 | 35 | 15 |

II. Write notes on :

- | | | | |
|---|---|----|---|
| 1. Cyberknife. | 4 | 10 | 7 |
| 2. Techniques of laminoplasty. | 4 | 10 | 7 |
| 3. Jugular foramen schwannomas. | 4 | 10 | 7 |
| 4. Rheumatoid arthritis and the craniovertebral junction. | 4 | 10 | 7 |
| 5. Anterior plagiocephaly. | 4 | 10 | 7 |
| 6. Aqueduct stenosis – current management options. | 4 | 10 | 7 |
| 7. Prevention of shunt infection. | 4 | 10 | 7 |
| 8. Surgical options for the management of idiopathic intracranial hypertension. | 4 | 10 | 7 |
| 9. Delayed traumatic intracerebral haemorrhage. | 4 | 10 | 7 |
| 10. Thunderclap headache. | 4 | 10 | 7 |

[LB 039]

AUGUST 2012

Sub. Code: 1584

M.Ch – NEURO SURGERY

PART II – FIVE YEARS COURSE

Paper – IV RECENT ADVANCES IN NEURO SURGERY

Q.P. Code: 181584

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. Management strategies for solid craniopharyngiomas. | 16 | 35 | 15 |
| 2. Surgery for intractable seizures in a 4-year-old child with right infantile hemiplegia. | 16 | 35 | 15 |

II. Write notes on:

- | | | | |
|---|---|----|---|
| 1. Diagnosis and management of cranial dural arteriovenous fistulae. | 4 | 10 | 7 |
| 2. Management of sacral chordomas. | 4 | 10 | 7 |
| 3. Management of os odontoideum. | 4 | 10 | 7 |
| 4. Management of tuberculum sellae meningiomas. | 4 | 10 | 7 |
| 5. The role of positron emission tomography in neurosurgery. | 4 | 10 | 7 |
| 6. The technique of cerebrovascular bypass grafting. | 4 | 10 | 7 |
| 7. Management of hypothalamic hamartomas. | 4 | 10 | 7 |
| 8. Management of cavernous sinus cavernomas. | 4 | 10 | 7 |
| 9. Management of anterior skull base fungal granuloma. | 4 | 10 | 7 |
| 10. The role of decompressive craniectomy in acute neurosurgery care. | 4 | 10 | 7 |

(LD 039)

AUGUST 2013

Sub. Code: 1584

M.Ch. – NEURO SURGERY
FIVE YEARS COURSE – PART – II
Paper – IV RECENT ADVANCES IN NEURO SURGERY
Q.P.Code: 181584

Time: Three Hours

Maximum: 100 marks

I. Elaborate on:

(2X15=30)

1. Discuss the current strategies employed in the management of basilar invagination.
2. What is the basis for diffusion and perfusion magnetic resonance imaging? Describe the utility of diffusion and perfusion imaging in management of a patient with a brain lesion.

II. Write notes on:

(10X7=70)

1. Management of hydrocephalus in an infant.
2. Management options in a 2cm tuberculoma sellae meningioma.
3. World Federation of Neurosurgical Societies (WFNS) grading of subarachnoid haemorrhage and its relation to management outcomes.
4. Spinal dural arteriovenous fistula.
5. Intraoperative mapping of central sulcus.
6. Unruptured saccular aneurysm.
7. Cranioplasty.
8. Trapped fourth ventricle.
9. Gabapentin.
10. Stereotactic radiosurgery for intracranial arteriovenous malformations.
