

MARCH - 1990

44

M.Ch. DEGREE EXAMINATION, MARCH 1990

(Higher Specialities)

Branch II — Neurosurgery

Part II

NEUROANATOMY AND NEUROPHYSIOLOGY

Time : Three hours.

Answer ALL the questions.

**Describe the structure, connections and functions of
amygdala.**

**Describe the physiological processes involved in the
transmission of a nerve impulse.**

Write short notes on :

**(a) Microsurgical anatomy of the internal auditory
canal.**

(b) Human arachnoid villi.

(c) Internuclear ophthalmoplegia.

(d) Functions of oligodendroglia.

(e) Factors regulating cerebral blood flow.

**(f) Syndrome of inappropriate secretion of anti-
diuretic hormone.**

MARCH - 1990

(Five Years Course for M.B.,B.S. candidates)

M.Ch. DEGREE EXAMINATION, MARCH 1990

(Higher Specialities)

Branch II - Neurosurgery

Part II

**Paper I - NEUROANATOMY AND
NEUROPHYSIOLOGY**

Time : Three hours

SECTION

1. Describe the applied anatomy of third ventricle.
2. What are the frontal cortical areas and describe their functions.

SECTION II

3. Write notes on:
 - (a) Inhibitory function of reticular formation.
 - (b) Stimulation of deep nuclei of cerebellum.
 - (c) R.E.M. sleep.

- (d) Effect of cut injury of a peripheral nerve : anatomical and physiological considerations.
- (e) Effect of hemisection of spinal cord at cervical region.
- (f) Somatosensory evoked potentials.

SEPTEMBER - 1990

M.Ch. DEGREE EXAMINATION, SEPTEMBER 1990

(Higher Specialities)

Branch II — Neurosurgery

Part II

Paper — NEUROANATOMY AND NEUROPHYSIOLOGY

Time Three hours.

Answer ALL the questions.

1. Describe the blood supply of the spinal cord. Give its applied significance.
2. Give the current views on the hypothalamic control of hypophyseal function.

Write short notes on :

- (a) Surface marking of central sulcus and lateral sulcus.
- (b) Interpeduncular fossa.
- (c) Anatomical basis of cerebellar nystagmus.
- (d) Wallerian degeneration.
- (e) Current concepts of blood brain barrier.
- (f) Functional significance of cerebral commissures.

MARCH - 1991

M.Ch. DEGREE EXAMINATION, MARCH 1991.

(Higher Specialities)

Branch II — Neurosurgery

Part II

Paper I — NEUROANATOMY AND NEUROPHYSIOLOGY

Three hours.

Answer ALL the questions

1. Discuss cerebral blood flow, methods of assessing it, factors modifying it and its application in cerebrovascular disease.
2. With adequate diagrams describe the anatomy of fourth ventricle.

Write short notes on :

- (a) Anterior tibial nerve.
- (b) Fields of Forel.
- (c) Acetyl choline.
- (d) Brain stem auditory evoked response.
- (e) Crocodile tears.

MARCH - 1991

M.Ch. DEGREE EXAMINATION, MARCH 1991

(Higher Specialities)

Branch II Neurosurgery

[New Regulations]

Part II

NEUROANATOMY AND NEUROPHYSIOLOGY

Time Three hours Maximum 100 marks

Answer ALL the questions

1. What is muscle tone? Discuss the factors which modify muscle tone and how it is maintained. (25 marks)
2. With proper diagrams discuss the anatomy of cavernous sinus. (25 marks)
3. Write short notes on: (5 × 10 = 50)
 - (a) Olfaction.
 - (b) Radial nerve.
 - (c) Specific thalamic projections.
 - (d) Visual evoked potentials.
 - (e) Lamina terminalis.

SEPTEMBER - 1991

348

M.Ch. DEGREE EXAMINATION, SEPTEMBER 1991.

Part II — Neurosurgery

Paper I — NEUROANATOMY AND NEUROPHYSIOLOGY

Time : Three hours

Maximum : 100 marks

Answer ALL the questions.

- 1. Describe the anatomical features of lateral ventricles of the brain. Include a short note on their development. (25 marks)**

 - 2. Describe the cerebrospinal fluid pressure-volume dynamics. What is its clinical significance? (25 marks)**

 - 3. Write short notes on : (5×10=50 marks)**
 - (a) Persistent Trigeminal Artery.**
 - (b) Papez Circuit.**
 - (c) Gait Control Theory.**
 - (d) Stretch Reflexes.**
 - (e) Tentorial Hiatus.**
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MARCH - 1992

348]

M.Ch. DEGREE EXAMINATION, MARCH 1992

(Old/New Regulation)

Part II — Neurosurgery

Paper — NEUROANATOMY AND NEUROPHYSIOLOGY

Time : Three hours

Maximum : 100 marks.

Answer ALL the questions.

Describe the developmental basis of bony anomalies in the cranio-cervical region. (25 marks)

Describe the physiological processes involved in the transmission of the nerve impulse. (25 marks)

Write short notes on : (5 × 10 = 50 marks)

- (a) Ventrolateral nucleus of thalamus.**
- (b) Decerebrate rigidity.**
- (c) Anatomical substrate of memory.**
- (d) Meyer's loop.**
- (e) Mechanism of papilloedema.**

SEPTEMBER - 1992

[348]

M.Ch. DEGREE EXAMINATION, SEPTEMBER 1992.

Branch II

Part II

Paper I — NEURO ANATOMY AND NEURO PHYSIOLOGY

Time : Three hours.

Maximum : 100 marks.

Answer ALL questions.

1. Describe the nuclei of hypothalamus and their functions.
(25)
2. Discuss the role of limbic system in human behaviour.
(25)
3. Write short notes on : (5 × 10 = 50)
 - (a) Anterior spinal artery.
 - (b) Nerve growth factor.
 - (c) Calcium channel blockers.
 - (d) Feed back pathways.
 - (e) Medial Longitudinal bundle.

MARCH - 1993

1124

M.CH. DEGREE EXAMINATION MARCH, 1993

Branch II - NEURO SURGERY

OLD/ NEW REGULATIONS

PART II

NEUROANATOMY AND NEUROPHYSIOLOGY

Time: Three hours

Maximum: 100 Marks

1. Discuss in detail anatomy of Internal (25) capsule and the significance of its blood supply.
2. Discuss the pathway of pain and various (25) theories relating to appreciation of pain sensation.
3. Write short notes on: 5 x 10=50
 1. Optic chiasma.
 2. Hippocampus.
 3. Cervical sympathetic chain.
 4. REM sleep.
 5. Sensory evoked potential

NOVEMBER - 1993

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M.Ch. DEGREE EXAMINATION

(Higher Specialities)

Branch II — Neurosurgery

(Old/New Regulations)

Part II

Paper I — NEUROANATOMY AND NEUROPHYSIOLOGY

Time: Three hours.

Maximum: 100 marks.

Answer ALL questions.

1. Draw a neat labelled diagram of the Thalamus. Describe in detail its various connections and functions. (25)
2. Discuss the anatomy and various connections of the Limbic System. Describe its various functions. (25)
3. Write short notes on: (5×10=50)
 - (a) Anatomy of the cavernous sinus.
 - (b) Control of eye movements.
 - (c) Blood supply of the spinal cord.
 - (d) The cerebellar peduncles.
 - (e) The internal auditory meatus.

APRIL - 1994

(Higher Specialities)

Branch II - Neurosurgery

(Old/New Regulations)

Part II

Paper I - NEUROANATOMY AND NEUROPHYSIOLOGY

Three hours.

Max.marks:100

Answer ALL questions.

Describe in detail the anatomy of the visual pathways and the types of field defects produced by lesions at various levels. Draw fully-illustrated diagrams to explain your descriptions.

(25)

Discuss in detail the formation, composition, circulation and absorption of Cerebro-spinal fluid. Discuss the various investigative procedures for CSF rhinorrhoeas.

(25)

Write short notes on: (5 x 10 = 50)

medial longitudinal fasciculus

Corpus callosum

Visual evoked responses

Neuro-muscular junction

Axoplasmic flow

NOVEMBER - 1994

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M.Ch. DEGREE EXAMINATION,

(Higher Specialities)

Branch II — Neurosurgery

(Old/New Regulations)

Part II

Paper — NEUROANATOMY AND NEUROPHYSIOLOGY

Time Three hours.

Maximum 100 marks

Answer ALL questions.

1. Describe in detail the anatomy of the visual pathways using a neat labelled diagram. Describe the visual field defects produced by lesions at different levels and also describe these lesions. (25)
2. Describe the anatomy and physiology of the pathways for pain. Briefly enumerate various surgical procedures for relief of pain. (25)
3. Write short notes on: (5 × 10 = 50)
 - (a) Medial longitudinal fasciculus.
 - (b) C. S. F. absorption.
 - (c) The blood-brain barrier.
 - (d) Prolactin.
 - (e) Cerebral blood flow.

APRIL - 1995

M.Ch. DEGREE EXAMINATION

(Higher Specialities)

Branch II – Neurosurgery

(Old/New Regulations)

Part II

Paper I – NEUROANATOMY AND NEUROPHYSIOLOGY

Three hours

Maximum 100 marks

Answer ALL questions.

1. Describe in detail the anatomy of the Trigeminal Nerve with special reference to its microsurgical anatomy with the cerebello-pontine angle. (25)
2. Discuss in detail the centres, pathway and the control of eye movements. (25)

Write short notes on :

(5 × 10 = 50)

- (a) **Acqueduct of sylvius – anatomy.**
- (b) **Anatomy of the optic canal.**
- (c) **Spinal cord blood supply.**
- (d) **Ligaments of the atlanto-axial joints.**
- (e) **Brain death.**

APRIL - 1996

AK 45

M.Cb. DEGREE EXAMINATION

(Higher Specialities)

Branch II - Neuro Surgery

(Old/New Regulations)

Part II

Paper I - NEUROANATOMY AND NEUROPHYSIOLOGY

Time: Three hours

Max. marks:100

Answer All Questions

1. Describe anatomy and physiology of Pituitary gland.
(25)
2. Describe origin, course and functions of Oculomotor Nerve.
(25)
3. Write short notes on: (5x10=50)
 - (a) Anatomy of auditory canal
 - (b) Atlanto axial joint
 - (c) Physiology of the muscle spindle
 - (d) Vein of Galen
 - (e) Circle of Willis.

APRIL - 1997

MP 64

M.Ch. DEGREE EXAMINATION
(Higher Specialities)
Branch II - Neuro Surgery
(Revised Regulations)

Part II

Paper I - NEUROANATOMY AND NEUROPHYSIOLOGY

Time: Three hours

Max.marks:100

Answer All Questions

1. Describe the anatomy of the C.P.Angle.
Mention the contents. Enumerate the neoplasms
in the angle. (25)
2. Describe the anatomy of the 3rd ventricle
and enumerate the lesions in the 3rd
ventricle. (25)
3. Write briefly on: (5x10=50)
 - (a) Anatomy of optic chiasma
 - (b) Congenital lesions of cranio-vertebral
junction
 - (c) Anatomy of sella turcica
 - (d) Inter-vertebral disc
 - (e) Lateral cutaneous nerve of thigh.

APRIL - 1998

SV 34

M.Ch. DEGREE EXAMINATION
(Higher Specialities)
Branch II - Neuro Surgery
(Revised Regulations)

Part II

Paper I - NEUROANATOMY AND NEUROPHYSIOLOGY

Time: Three hours

Max.marks:100

Answer All Questions

1. Discuss the micro anatomy and structure of the myoneural junction. Briefly describe the physiology of muscle contraction. (25)
2. Outline the neural mechanism involved in the maintenance of consciousness. Briefly mention the causes of episodic unconsciousness. (25)
3. Write briefly on: (5x10=50)
 - (a) Somatostatin
 - Inhibitory neuro-transmitter
 - Stretch reflex
 - Proin's syndrome
 - Colour vision.

APRIL - 2000

[KB 081]

Sub. Code : 1561

M.Ch. DEGREE EXAMINATION.

(Higher Specialities)

Branch II — Neurosurgery

(Old and New Regulations)

Part II

Paper I — NEUROANATOMY AND
NEUROPHYSIOLOGY

Time : Three hours

Maximum 100 marks

1. Describe the functional anatomy of the Hypothalamus and discuss hypothalamo hypophysial relationships. (25)
2. Describe the microscopic anatomy of synapses. Discuss briefly the special synaptic organisation in Central Nervous System. Outline the physiological events occurring at the synapses. (25)
3. Write short notes on : (5 × 10 = 50)
 - (a) Vein of Galen.
 - (b) Circulation of Cerebro Spinal Fluid.
 - (c) Melatonin.
 - (d) Control of Micturition.
 - (e) Auto regulation of Cerebral Blood Flow.

OCTOBER - 2000

[KC 031]

Sub. Code : 1561

M.Ch. DEGREE EXAMINATION

(Higher Specialities)

Branch II — Neuro Surgery

(New and Revised Regulations for 5 years course)

Part II

Paper I — NEURO ANATOMY AND NEURO
PHYSIOLOGY

Time : Three hours.

Maximum : 100 marks

Answer ALL questions.

1. Discuss the anatomy of receptor and effector endings in the nervous system. (25)
2. Discuss cerebellar connections. (25)
3. Write short notes on : (5 × 10 = 50)
 - (a) Paraxial Mesoderm
 - (b) Selective neuronal vulnerability
 - (c) Endorphins
 - (d) Blood-CSF barrier
 - (e) Conus medullaris.