

August 2009

[KV 068]

Sub. Code: 1451

D.M. DEGREE EXAMINATION

(Higher Specialities)

(Revised Regulations)

Branch I –Neurology

**Paper I– BASIC SCIENCES (Consisting of Neuro anatomy,
Neuro-physiology, Neuro chemistry, Neuro pathology, Neuro Microbiology,
Parasitology, Immunology, Epidemiology and Genetics)**

Q.P. Code: 161451

Time: Three hours

Maximum: 100 Marks

ANSWER ALL QUESTIONS

Draw suitable diagrams wherever necessary.

I. Essays:

2 x 20 = 40 Marks

1. Neurological complications of AIDS.
2. Describe the neuro anatomy and neuro physiological characteristics of the cerebellum.

II. Write short notes on:

10 x 6 = 60 Marks

1. Dermatome.
2. Poly microbial meningitis.
3. Substance –P.
4. Parkin Gene.
5. Neuro cysticercosis.
6. Evidence based medicine.
7. Kennedy syndrome.
8. Patho physiology of myoclonus.
9. Pedunculo pontine nucleus.
10. Sural nerve.

February 2010

[KW 068]

Sub. Code: 1411

D.M. DEGREE EXAMINATION

(Super Specialities)

(Candidates admitted from 2006-07 onwards)

Branch I –Neurology

**Paper I– BASIC SCIENCES (Consisting of Neuro anatomy,
Neuro-physiology, Neuro chemistry, Neuro pathology, Neuro Microbiology,
Parasitology, Immunology, Epidemiology and Genetics)**

Q.P. Code: 161411

Time: Three hours

Maximum: 100 Marks

ANSWER ALL QUESTIONS

Draw suitable diagrams wherever necessary.

I. Essays:

2 x 20 = 40 Marks

1. Discuss formation, circulation and absorption of cerebrospinal fluid.
2. Discuss neurobiology of memory.

II. Write short notes on:

10 x 6 = 60 Marks

1. Triplet repeat disorders.
2. Circle of Wills.
3. Toxoplasmosis.
4. Ion channels.
5. Visual pathway.
6. Pathophysiology of migraine.
7. Immunopathology of acute inflammatory demyelinating neuropathy.
8. Beta amyloid protein.
9. Parapontine reticular formation.
10. Tumefactive demyelination.

August 2011

[KZ 068]

Sub. Code: 1411

**DOCTORATE OF MEDICINE (D.M.) DEGREE EXAMINATION
(SUPER SPECIALITIES)**

BRANCH I – NEUROLOGY

BASIC SCIENCES

**(CONSISTING OF NEURO ANATOMY, NEURO-PHYSIOLOGY,
NEURO CHEMISTRY, NEURO PATHOLOGY, NEURO MICROBIOLOGY,
PARASITOLOGY, IMMUNOLOGY, EPIDEMIOLOGY AND GENETICS)**

Q.P. Code: 161411

**Time : 3 hours
(180 Min)**

Maximum : 100 marks

Answer ALL questions in the same order.

I. Elaborate on :

	Pages (Max.)	Time (Max.)	Marks (Max.)
1. Describe the anatomy, connections of Basal Ganglia and discuss the pathophysiology of Parkinson's Disease.	11	35	15
2. Describe the anatomical substrate for memory and Pathophysiology of memory disturbances.	11	35	15

II. Write notes on :

1. Medial Longitudinal Fasciculus.	4	10	7
2. Caloric tests.	4	10	7
3. Acetyl Choline Receptors.	4	10	7
4. Neurofibrillary Tangles.	4	10	7
5. Axoplasmic Flow.	4	10	7
6. Oculomotor nuclei.	4	10	7
7. Internal Capsule.	4	10	7
8. Cerebral edema.	4	10	7
9. Queckenstedt's test.	4	10	7
10. Ragged Red Fibres.	4	10	7

February 2012

[LA 068]

Sub. Code: 1411

DOCTORATE OF MEDICINE (D.M.) DEGREE EXAMINATION

(SUPER SPECIALITIES)

BRANCH I – NEUROLOGY

**BASIC SCIENCES (CONSISTING OF NEURO ANATOMY,
NEURO-PHYSIOLOGY, NEURO CHEMISTRY, NEURO PATHOLOGY,
NEURO MICROBIOLOGY, PARASITOLOGY, IMMUNOLOGY,
EPIDEMIOLOGY AND GENETICS)**

Q.P. Code: 161411

**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 neurogenic control of Bladder and give an account of the various abnormalities of bladder function in neurologic disorders and their management. | 16 | 35 | 15 |
| 2. Classify Sleep disorders and discuss the clinical features, diagnosis and management of Parasomnias. | 16 | 35 | 15 |

II. Write notes on :

- | | | | |
|--|---|----|---|
| 1. Anatomy of Brachial plexus and brachial plexus lesions. | 4 | 10 | 7 |
| 2. Mechanism of Seizure initiation and propagation. | 4 | 10 | 7 |
| 3. Monoclonal antibodies. | 4 | 10 | 7 |
| 4. Prion Proteins. | 4 | 10 | 7 |
| 5. Laboratory evaluation of Hypercoagulable states. | 4 | 10 | 7 |
| 6. Supranuclear pathways for horizontal gaze. | 4 | 10 | 7 |
| 7. Autonomic function tests. | 4 | 10 | 7 |
| 8. Hypocretin. | 4 | 10 | 7 |
| 9. Interferon Beta. | 4 | 10 | 7 |
| 10. Nerve Biopsy. | 4 | 10 | 7 |

[LB 068]

AUGUST 2012
D.M – NEUROLOGY
Paper – I BASIC SCIENCES
Q.P. Code: 161411

Sub. Code: 1411

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 anatomy of venous dural sinuses and superficial and deep venous drainage system and pathophysiology of venous occlusion in cranium. | 16 | 35 | 15 |
| 2. Describe Neurophysiology, Neurotransmitter, Neuropathology and clinical pharmacology of various Movement disorders. | 16 | 35 | 15 |

II. Write notes on:

- | | | | |
|---|---|----|---|
| 1. Muscle Tone maintenance and its disorders. | 4 | 10 | 7 |
| 2. Sensory receptors – types, distribution & functions. | 4 | 10 | 7 |
| 3. Pathogenesis of Migraine. | 4 | 10 | 7 |
| 4. Dopamine receptors – types & specific functions. | 4 | 10 | 7 |
| 5. Anatomy & Physiology of CSF circulation. | 4 | 10 | 7 |
| 6. Rabies viral infection pathogenesis & prophylaxis. | 4 | 10 | 7 |
| 7. Pathogenesis of cerebral malaria. | 4 | 10 | 7 |
| 8. Epidemiology of Multiple Sclerosis. | 4 | 10 | 7 |
| 9. Calcium channel Disorders. | 4 | 10 | 7 |
| 10. Immunosuppressive drugs uses in neurological disorders. | 4 | 10 | 7 |

FEBRUARY 2013

[LC 068]

Sub. Code: 1411

D.M-NEUROLOGY
Paper – I BASIC SCIENCES
Q.P. Code:161411

Time: 3 hours
(180 Min)

Maximum: 100 Marks

I.Elaborate on:

(2x15 marks=30 marks)

1. Anatomy and physiology of limbic system. Write in detail about various manifestations of dysfunctions of limbic System.
2. Write in detail about venous drainage of brain and brain stem, Pathophysiology of cerebral venous thrombosis and its clinical manifestations.

II Write short notes on:

(10x 7 marks=70 marks)

1. Clinical manifestations of Vernet syndrome.
2. Biochemistry and clinical features of syndrome of inappropriate ADH.
3. Describe the clinical features of Superior orbital fissure syndrome.
4. Write about Myophosphorylase deficiency muscle diseases.
5. Embryology and clinical features of basilar invagination.
6. Biochemistry of arterial thrombus formation.
7. Neurological manifestations of Herpes Simplex Virus infection.
8. Describe about Plasmodium falciparum infestation of the nervous system.
9. Write about Genetically inherited epilepsies.
10. Usefulness of Sural nerve biopsy in diagnosis of various Peripheral neuropathies

(LD 068)

AUGUST 2013

Sub. Code:1411

D.M. – NEUROLOGY
Paper – I BASIC SCIENCES
Q.P.Code: 161411

Time: Three Hours

Maximum: 100 marks

I. Elaborate on:

(2X15=30)

1. Illustrate gross anatomy of thalamus. Discuss the connections and functions of thalamic nuclei.
2. Discuss the various stages of sleep and sleep disorders, investigations and management.

II. Write notes on:

(10X7=70)

1. Mossy fibers.
2. Broca's area.
3. Muscle biopsy.
4. Pathophysiology of cerebral infarction.
5. Lacosamide.
6. Cerebellar nuclei.
7. Onion bulb appearance.
8. Quinto thalamic tract.
9. Genetic counseling.
10. Epidemiology of febrile seizures.

(LF 068)

AUGUST 2014

Sub. Code:1411

D.M. – NEUROLOGY
Paper – I BASIC SCIENCES
Q.P.Code: 161411

Time: Three Hours

Maximum: 100 marks

I. Elaborate on:

(2X15=30)

1. Discuss pathobiology of cerebral edema.
2. Discuss the pathophysiology of Epilepsy.

II. Write notes on:

(10X7=70)

1. Genetic anticipation.
2. EEG maturation.
3. Pharmacotherapy of dementia.
4. Circle of Willis.
5. Antioxidants in neurology.
6. Human gait cycle.
7. Structure, formation and function of myelin.
8. Stretch reflex.
9. Epidemiology of Migraine.
10. Hippocampus and limbic system.

(LH 068)

AUGUST 2015

Sub. Code:1411

D.M. – NEUROLOGY
Paper I – BASIC SCIENCES
Q.P.Code: 161411

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Neurology of aging.
2. Anatomy and physiology of sleep.

II. Write notes on:

(10 x 7 = 70)

1. Hypoglossal nerve.
2. Cheynes Stokes breathing.
3. Pupillary reflex.
4. Aberrant innervations.
5. Viral myelitis – causative organism and pathology.
6. Genetics of parkinsonism.
7. Statistical analysis.
8. Aspergilloma of brain.
9. Occipital lobe functions.
10. Common peroneal nerve.

(LJ 068)

AUGUST 2016

Sub. Code:1411

D.M. – NEUROLOGY
Paper I – BASIC SCIENCES
Q.P.Code: 161411

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Discuss the anatomy of basal ganglia and physiology of its connections.
2. Vascular supply of spinal cord.

II. Write notes on:

(10 x 7 = 70)

1. Olfactory nerve.
2. Optokinetic nystagmus.
3. Blink reflex.
4. Median nerve.
5. Neurosarcoidosis.
6. Myelin basic protein.
7. Lissauer tract.
8. Pathogenesis of migraine.
9. Parietal lobe functions.
10. Stroke genetics.

(LK 068)

FEBRUARY 2017

Sub. Code:1411

D.M. – NEUROLOGY

Paper I – BASIC SCIENCES

Q.P.Code: 161411

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Illustrate gross anatomy of cerebellum. Discuss its connections and functions.
2. Discuss pathogenesis and laboratory diagnosis of Tubercular Meningitis.

II. Write notes on:

(10 x 7 = 70)

1. Auditory pathway.
2. Functional anatomy of hypothalamus.
3. Onuf's nucleus.
4. Trinucleotide repeat disorders.
5. Supranuclear control of eye movements.
6. Brachial Plexus.
7. Auto-antibodies in paraneoplastic neurological disorders.
8. Lysosomal disorders.
9. Physiology of neuromuscular transmission.
10. Epidemiology of Amyotrophic Lateral Sclerosis.

(LL 068)

AUGUST 2017

Sub. Code:1411

D.M. – NEUROLOGY

Paper I – BASIC SCIENCES

Q.P.Code: 161411

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Illustrate visual pathway and various field defects caused by different sites of lesion.
2. Discuss neural control of micturition in Human being and discuss about the various bladder dysfunctions and its management.

II. Write notes on:

(10 x 7 = 70)

1. Functional anatomy of inter-hemispheric connections.
2. Disorders of Neuronal Migration.
3. Quality of life in health and Neurological disease.
4. Describe functional anatomy of skeletal muscle.
5. Lumbosacral plexus.
6. Cerebral blood flow and auto regulation.
7. Acetyl choline receptors.
8. Describe arterial supply of spinal cord.
9. Mirror Neurons.
10. Physiology of Memory.

(LM 068)

FEBRUARY 2018

Sub. Code: 1411

D.M. – NEUROLOGY

Paper I – BASIC SCIENCES

Q.P.Code: 161411

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Discuss the anatomy of cerebellum and its various connections.
2. Describe the innervation of urinary bladder and discuss about the various bladder dysfunctions and its management.

II. Write notes on:

(10 x 7 = 70)

1. Parapontine Reticular Formation (PPRF).
2. Neuronal plasticity.
3. Muscle tone.
4. GABA.
5. Edaravone.
6. Wallerian degeneration.
7. Prion diseases.
8. Neurocysticercosis.
9. Genetics of epilepsy.
10. Acetyl choline receptors.

(LN 068)

AUGUST 2018

Sub. Code: 1411

D.M. – NEUROLOGY

Paper I – BASIC SCIENCES

Q.P.Code: 161411

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Anatomy of thalamus and its connections.
2. Discuss the neural control of muscle tone and pathophysiology of altered tone.

II. Write notes on:

(10 x 7 = 70)

1. Pedunculo pontine nucleus.
2. Cerebellar nuclei.
3. Tau protein.
4. Dopamine receptors.
5. Droxidopa.
6. Kindling phenomenon.
7. Long loop reflex.
8. Fungal meningitis.
9. Supra orbital fissure.
10. Polymerase chain reaction in neurology.

(LP 068)

AUGUST 2019

Sub. Code: 1411

D.M. – NEUROLOGY

Paper I – BASIC SCIENCES

Q.P. Code: 161411

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Discuss CSF (Cerebrospinal fluid) formation, circulation, flow dynamics in normal state and how it is altered in pathological conditions?
2. Neuropathology of HIV (Human Immunodeficiency Virus) infection.

II. Write notes on:

(10 x 7 = 70)

1. Mirror Neurons.
2. Operculum.
3. Physiology of Pain.
4. Monoclonal antibody therapy in neurology.
5. Epileptic foci.
6. Parietal lobe functions.
7. Hippocampal sclerosis.
8. Pathological changes in dementia.
9. Lafora body.
10. Frataxin.

(LR 068)

**NOVEMBER 2020
(AUGUST 2020 SESSION)
D.M. – NEUROLOGY**

Sub. Code: 1411

Paper I – BASIC SCIENCES

Q.P. Code: 161411

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Functional anatomy and physiology of hippo campus
2. Discuss the anatomy, functional organization and biochemistry of basal ganglia.

II. Write notes on:

(10 x 7 = 70)

1. Genetic screening for carbamazepine reactions.
2. Delta – aminolevulinic acid
3. Coenzyme Q10
4. Endorphins
5. Pathophysiology of spasticity
6. Superior orbital fissure
7. Artery of percheron
8. Neuronal plasticity
9. Posterior cerebral artery
10. Antistriational antibody

(DM 0221)

FEBRUARY 2021

Sub. Code: 1411

D.M. – NEUROLOGY
Paper I – BASIC SCIENCES
Q.P. Code: 161411

Time: Three Hours

Maximum: 100 Marks

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

1. Discuss the Neuromuscular junction and its various receptors and their role in Neuromuscular Junction Disorders.
2. Pathophysiology of neurological complications of Bacterial Meningitis.

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

1. Epileptogenesis.
2. Corpus Collosum.
3. Papez Circuit.
4. Oral Disease Modifying agents.
5. Blood Brain Barrier.
6. Anterior Choroidal artery.
7. Midodrine.
8. Serotonin Syndrome.
9. Para Pontine Reticular formation.
10. Genetics of Epilepsy.

(DM 0821)

AUGUST 2021

Sub. Code: 1411

D.M. – NEUROLOGY
Paper I – BASIC SCIENCES
Q.P. Code: 161411

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Anatomy of Basal Ganglia and its connections.
2. Discuss the Physiological Aspects of Pain.

II. Write notes on:

(10 x 7 = 70)

1. Blood supply of corpus callosum.
2. Inferior cerebellar penducle.
3. Papez circuit.
4. Synucleinopathies.
5. Newer anticoagulants – advantages and disadvantages.
6. Narcolepsy.
7. Central tegmental tract.
8. Meyer's loop.
9. Apolipoprotein E.
10. Cowdry bodies.

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

[DM 0222]

FEBRUARY 2022

Sub.Code :1411

D.M. – NEUROLOGY

Paper I – BASIC SCIENCES

Q.P. Code: 161411

Time: Three Hours

Maximum: 100 Marks

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

1. Anatomy & Physiology of Limbic system and discuss the various manifestations of dysfunctions of limbic system.
2. Describe the pathophysiology of Migraine and discuss about various types of migraine and its management and recent advances.

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

1. Pedunculo pontine nucleus.
2. Beta amyloid protein.
3. cerebral edema.
4. Lacosamide.
5. Monoclonal antibodies.
6. Prion proteins.
7. Nerve biopsy.
8. Internal capsule and its blood supply.
9. Neurocysticercosis.
10. Triplet repeat disorders.

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

[DM 0822]

AUGUST 2022

Sub. Code :1411

D.M. – NEUROLOGY

**Paper I – BASIC SCIENCES (CONSISTING OF NEURO ANATOMY,
NEURO-PHYSIOLOGY, NEURO CHEMISTRY, NEURO PATHOLOGY,
NEURO MICROBIOLOGY, PARASITOLOGY, IMMUNOLOGY,
EPIDEMIOLOGY AND GENETICS)**

Q.P. Code: 161411

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Anatomy of cerebellum and its connections.
2. Discuss the physiological aspects of sleep and discuss about sleep-wake cycle.

II. Write notes on:

(10 x 7 = 70)

1. Auditory pathway.
2. Blood supply of spinal cord.
3. Frontal-subcortical circuits.
4. Sensory afferents.
5. Monoclonal antibodies in neurology.
6. Brachial plexus.
7. Arcuate fasciculus.
8. Amyloid precursor protein.
9. Negri bodies.
10. Laboratory diagnosis of herpes simplex encephalitis.

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

[DM 0223]

FEBRUARY 2023

Sub. Code: 1411

D.M. – NEUROLOGY

**PAPER I – BASIC SCIENCES (CONSISTING OF NEURO ANATOMY,
NEURO-PHYSIOLOGY, NEURO CHEMISTRY, NEURO PATHOLOGY,
NEURO MICROBIOLOGY, PARASITOLOGY, IMMUNOLOGY,
EPIDEMIOLOGY AND GENETICS)**

Q.P. Code: 161411

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Discuss Anatomy and Physiology consideration of Thalamus and its function.
2. Discuss normal development and deviation in development of the nervous system.

II. Write notes on:

(10 x 7 = 70)

1. Lateral medullary syndrome
2. Burn Nystagmus.
3. Ascending auditory pathways.
4. Juvenile Myoclonic Epilepsy.
5. Somnambulism.
6. Delirium.
7. Clinical effects of Occipital lobe lesion.
8. Pure word blindness.
9. Glymphatic System.
10. Pedunculopontine Nucleus.

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

[DM 0823]

AUGUST 2023

Sub. Code: 1411

D.M. – NEUROLOGY

**PAPER I – BASIC SCIENCES (CONSISTING OF NEURO ANATOMY,
NEURO-PHYSIOLOGY, NEURO CHEMISTRY, NEURO PATHOLOGY,
NEURO MICROBIOLOGY, PARASITOLOGY, IMMUNOLOGY,
EPIDEMIOLOGY AND GENETICS)**

Q.P. Code: 161411

Time: Three Hours

Maximum: 100 Marks

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

1. Discuss Anatomy and Physiology of Supranuclear control of Eye movements.
2. Discuss briefly clinical varieties of Aphasia.

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

1. Substantia nigra.
2. Ictal nystagmus.
3. Vestibular reflex pathways.
4. Absence variant.
5. Night Terrors and Nightmares.
6. Acute confusional state.
7. Clinical effects of parietal lobe lesion.
8. Pure word deafness.
9. Edinger-Westphal nucleus.
10. Cross section of cervical cord at C2 Level.

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

[DM 0124]

JANUARY 2024

Sub. Code: 1411

D.M. – NEUROLOGY

**PAPER I – BASIC SCIENCES - (CONSISTING OF NEURO ANATOMY,
NEURO-PHYSIOLOGY, NEURO CHEMISTRY, NEURO PATHOLOGY,
NEURO MICROBIOLOGY, PARASITOLOGY, IMMUNOLOGY,
EPIDEMIOLOGY AND GENETICS)**

Q.P. Code: 161411

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Describe the anatomical substrate on memory and pathophysiology of memory disturbance.
2. Describe the anatomy of venous dural sinuses and superficial and deep venous drainage system and pathophysiology of cortical vein thrombosis.

II. Write notes on:

(10 x 7 = 70)

1. Cerebellar nuclei.
2. Human gait cycle.
3. Autoantibodies in paraneoplastic disorders.
4. Cerebral edema – types and mechanisms.
5. Syndrome of Inappropriate secretion of antidiuretic hormone.
6. Parinaud syndrome.
7. Visual agnosias.
8. Pathophysiology of migraine.
9. Sural nerve biopsy.
10. Types of genetic testing.

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

[DM 0824]

AUGUST 2024

Sub. Code: 1411

D.M. – NEUROLOGY

**PAPER I – BASIC SCIENCES - (CONSISTING OF NEURO ANATOMY,
NEURO-PHYSIOLOGY, NEURO CHEMISTRY, NEURO PATHOLOGY,
NEURO MICROBIOLOGY, PARASITOLOGY, IMMUNOLOGY,
EPIDEMIOLOGY AND GENETICS)**

Q.P. Code: 161411

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Describe Neurophysiology, Neurotransmitter, Neuropathology and Clinical pharmacology of various movement disorders.
2. Describe the innervation of urinary Bladder and discuss about the various bladder dysfunction and its management.

II. Write notes on:

(10 x 7 = 70)

1. Muscle Tone maintenance and its disorder.
2. Oculomotor Nuclei.
3. Epileptogenic zone.
4. What are prions?
5. Autoantibodies in Neuromuscular junction disorder.
6. Myelin Basic Protein.
7. Functional Anatomy of skeletal muscle.
8. Optokinetic nystagmus.
9. Newer anticoagulants.
10. Migraine genetics.

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

[DM 0225]

FEBRUARY 2025

Sub. Code: 1411

D.M. – NEUROLOGY

**PAPER I – BASIC SCIENCES – (CONSISTING OF NEURO ANATOMY,
NEURO PHYSIOLOGY, NEURO CHEMISTRY, NEURO PATHOLOGY,
NEURO MICROBIOLOGY, PARASITOLOGY, IMMUNOLOGY,
EPIDEMIOLOGY AND GENETICS)**

Q.P. Code: 161411

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Neuro anatomy and physiology of Basal ganglia and its connections.
2. Anatomy and Blood supply of spinal cord. Discuss about various Spinal cord syndromes.

II. Write notes on:

(10 x 7 = 70)

1. Patterns of breathing.
2. ICP waves.
3. Stages of sleep.
4. Amyloid plaque.
5. Pathogenesis of Demyelination.
6. Genetics in Parkinson's disease.
7. Dystrophin gene.
8. Dopamine metabolism.
9. Neurocysticercosis.
10. Somatosensory areas.

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

[DM 0825]

AUGUST 2025

Sub. Code: 1411

D.M. – NEUROLOGY

PAPER I – BASIC SCIENCES

**(CONSISTING OF NEURO ANATOMY, NEURO PHYSIOLOGY,
NEURO CHEMISTRY, NEURO PATHOLOGY, NEURO MICROBIOLOGY,
PARASITOLOGY, IMMUNOLOGY, EPIDEMIOLOGY AND GENETICS)**

Q.P. Code: 161411

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Discuss the cross-sectional anatomy of brain stem. Discuss the cranial, sensory motor system organization. Add a brief note on related brainstem syndromes.
2. Elaborate on Cytoarchitecture of sarcolemmal striated muscle membrane and its proteins. Discuss in brief about various muscle disorders associated with the dysfunctional membrane proteins.

II. Write notes on:

(10 x 7 = 70)

1. Sodium channel: neurological disorders.
2. Diaschisis.
3. Mollaret meningitis.
4. Development of language.
5. Fronto-subcortical networks.
6. Next generation genome sequencing.
7. Pursuit system.
8. Congenital Aqueductal stenosis.
9. Patho physiology of ALS.
10. Ontogeny of sleep wake cycles through age groups.
