

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

[DM 0822]

AUGUST 2022

Sub. Code :1506

D.M. – PAEDIATRIC NEUROLOGY

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

Q.P. Code: 161506

Time: Three Hours

Maximum: 100 Marks

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

1. Discuss the structure and function of the neuromuscular junction and briefly mention the clinical significance.
2. Describe the mechanisms involved in the control of micturition.

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

1. Commissural fibers of the brain.
2. Transgenic mice in neural development studies.
3. Neurobiology of ADHD.
4. The respiratory chain and mitochondrial complexes.
5. Anatomy of cerebral sinovenous circulation.
6. Anti-dystonia medications.
7. Folic acid and neurology.
8. Visual pathway.
9. Cobalamin metabolism.
10. Pathophysiology of neonatal seizures.

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

[DM 0124]

JANUARY 2024

Sub. Code :1506

D.M. – PAEDIATRIC NEUROLOGY

PAPER I – BASIC SCIENCES

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

Q.P. Code: 161506

Time: Three Hours

Maximum: 100 Marks

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

1. Cross-section of Spinal Cord.
2. Pathophysiology of Super-refractory Status Epilepticus .

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

1. Sanger Sequencing.
2. Triple repeats.
3. Blood supply of Internal Capsule.
4. F-waves.
5. H-Reflux.
6. Monoclonal antibodies.
7. Fenfluramine.
8. Transgenic mice in neural development studies.
9. Identification of various stages of bleeding in the MRI of the brain.
10. Role of CT vs MRI of the brain in Intensive care unit.

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

[DM 0824]

AUGUST 2024

Sub. Code :1506

D.M. – PAEDIATRIC NEUROLOGY

PAPER I – BASIC SCIENCES

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

Q.P. Code: 161506

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Discuss the pathway of the optic nerve, examination of the same with localisation of lesions.
2. Discuss role of the basal ganglia in movement disorders.

II. Write notes on:

(10 x 7 = 70)

1. Normal developmental of a child in different domains from 6 to 12 months of age.
2. Developmental reflexes in a term infant.
3. Cerebrospinal fluid formation.
4. Functional connectivity of the brain in autism spectrum disorders.
5. Chromosomal microarray.
6. Phenylalanine and monoamine metabolism.
7. Long-chain polyunsaturated fatty acids in brain development.
8. Neural tube development.
9. Pain pathway.
10. Sleep physiology in Children.

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

[DM 0225]

FEBRUARY 2025

Sub. Code :1506

D.M. – PAEDIATRIC NEUROLOGY

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

Q.P. Code: 161506

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Discuss the pathway of the optic nerve, examination of the same with localisation of lesions.
2. Discuss the role of the basal ganglia in movement disorders.

II. Write notes on:

(10 x 7 = 70)

1. Normal development of a child in different domains from 6 to 12 months of age.
2. Developmental reflexes in a term infant.
3. Cerebrospinal fluid formation.
4. Functional connectivity of the brain in autism spectrum disorders.
5. Chromosomal microarray.
6. Phenylalanine and monoamine metabolism.
7. Long-chain polyunsaturated fatty acids in brain development.
8. Therapeutic drug monitoring for anti-seizure medications.
9. Anatomy of the craniovertebral junction.
10. Apgar score and clinical significance.
