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MANIPAL ACADEMY OF HIGHER EDUCATION
DM (NEUROLOGY) DEGREE EXAMINATION – DECEMBER 2023

PAPER I

Monday, December 11, 2023

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL questions.**

✍ **Illustrate with diagrams wherever necessary.**

✍ **Essay Questions:**

1. Describe the vascular anatomy of internal carotid artery and its branches. Describe in detail clinical presentations of stroke syndromes in territory of internal carotid artery and its branches. Outline management of malignant middle cerebral artery infarction.

(20 marks)

2. Describe the neuroanatomy and physiology of pain pathways. Outline the treatment options in management of neuropathic pain.

(20 marks)

3. **Short Answers:**

3A. Pedunculo-pontine nucleus

3B. Bell's palsy

3C. Trigemino-vascular complex

3D. Tau protein and its disorders

3E. Aquaporin in neurological disorders

3F. Dystrophin complex

(10 marks × 6 = 60 marks)



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MANIPAL ACADEMY OF HIGHER EDUCATION
DM (NEUROLOGY) DEGREE EXAMINATION – DECEMBER 2023

PAPER II

Tuesday, December 12, 2023

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL questions.**

✍ **Illustrate with diagrams wherever necessary.**

✍ **Essay questions:**

1. Define drug resistant epilepsy. Write notes on presurgical evaluation of epilepsy and epilepsy surgery.

(20 marks)

2. Write notes on aetiopathogenesis, clinical features, evaluation and management of Alzheimer's disease and its variants.

(20 marks)

3. **Short Answers:**

3A. Deep brain stimulation in movement disorders.

3B. Central sleep apnea disorders.

3C. Thrombolysis in stroke.

3D. Cerebral Amyloid angiopathy.

3E. Subarachnoid hemorrhage.

3F. Posterior reversible encephalopathy syndrome.

(10 marks × 6 = 60 marks)



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MANIPAL ACADEMY OF HIGHER EDUCATION
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PAPER III

Wednesday, December 13, 2023

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL questions.**

✍ **Illustrate with diagrams wherever necessary.**

✍ **Essay Questions:**

1. Write in detail on classification, clinical features and diagnosis and management of limb girdle muscular dystrophies.

(20 marks)

2. Write in detail on classification, etiology, clinical features, diagnosis and management of non-compressive myelopathies.

(20 marks)

3. **Short Notes:**

3A. Congenital myasthenic syndromes.

3B. Neuroleptic malignant syndrome.

3C. Carpal tunnel syndrome.

3D. Treatment modalities in myasthenia gravis.

3E. Inclusion body myositis.

3F. Hirayama's disease.

(10 marks × 6 = 60 marks)



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MANIPAL ACADEMY OF HIGHER EDUCATION
DM (NEUROLOGY) DEGREE EXAMINATION – DECEMBER 2023

PAPER IV

Thursday, December 14, 2023

Time: 14:00 – 17:00 Hrs.

Max. Marks: 100

✍ **Answer ALL questions.**

✍ **Long Essays:**

1. Discuss current concepts of basal ganglia dysfunction in Parkinsons disease, Huntingtons disease and Dystonia.

(20 marks)

2. Neuroprosthetics and next generation implant technology (e-dura) – Discuss their role in diagnosis and treatment of neurological disorders

(20 marks)

3. **Short Essays:**

3A. Glucocerebrosidase in Parkinsons disease

3B. Non motor fluctuations in Parkinson disease subtypes

3C. Neurofibrillary tangles

3D. P 300

3E. Cerebrospinal fluid biomarkers in CSF

3F. Oligomeropathies

(10 marks × 6 = 60 marks)

