Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Neuro Science Technology Degree Examination – 20-May-2025

Time: Three Hours **Max. Marks: 80 Marks**

ADVANCED NEURO SCIENCES TECHNOLOGY - I
Q.P. CODE: 2845

Your answers should be specific to the questions asked
Draw neat labeled diagrams wherever necessary

LONG ESSAYS (Answer any Two) **2 x 10 = 20 Marks**

1. What is neuro muscular junction? Describe the electro physiological findings in myasthenia gravis. Myasthenic syndrome and Botulinum toxin.
2. Explain Parkinson's disease in detail.
3. Define Evoked potentials, explain the principles of averaging and recording techniques. Add a note on the instrumentation used in general, analogue and digital.

SHORT ESSAYS (Answer any Six) **6 x 5 = 30 Marks**

4. MEP.
5. Abnormal patterns of Blink reflex.
6. Trigeminal Neuralgia.
7. Bell's palsy.
8. Normal Tibial SSEP.
9. AIDP (Acute Inflammatory Demyelinating Polyneuropathy).
10. Normal CMCT measurements.
11. Sacral plexus.

SHORT ANSWERS (Answer any Ten) **10 x 3 = 30 Marks**

12. Axonotmesis.
13. Posterior cutaneous nerve of the thigh.
14. Types of polyneuropathy.
15. **Conduction block**
16. Hydrocephalus.
17. Types of stroke.
18. Autonomic neuropathy.
19. Draw neuro muscular junction.
20. Signal to noise ratio.
21. Factors affecting VEP.
22. Median nerve.
23. CIDP.

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Neuro Science Technology Degree Examination – 22-May-2025

Time: Three Hours **Max. Marks: 80 Marks**

ADVANCED NEURO SCIENCES TECHNOLOGY - II

Q.P. CODE: 2846

Your answers should be specific to the questions asked
Draw neat labeled diagrams wherever necessary

LONG ESSAYS (Answer any Two) **2 x 10 = 20 Marks**

1. Discuss the normal wave patterns of EMG. Describe the abnormal patterns of EMG.
2. Describe the anatomy of the 5^{th} cranial nerve. Write a note on Trigeminal neuralgia.
3. Describe muscle physiology and the mechanism of action potentials in motor unit.

SHORT ESSAYS (Answer any Six) **6 x 5 = 30 Marks**

4. Difference between EEG and EMG.
5. Recording techniques of EMG (including patient preparation).
6. Surface EMG.
7. Types of needles used in EMG.
8. Cerebello pontine angle disorders.
9. Deep tendon reflexes.
10. Sympathetic skin response.
11. Computer application in EMG.

SHORT ANSWERS (Answer any Ten) **10 x 3 = 30 Marks**

12. Define Bell's palsy.
13. Spontaneous activity in EMG.
14. End plate potentials.
15 VII nerve palsy causes.
16. Jaw jerk.
17. Neurogenic patterns in EMG.
18. Draw diagram of Sural nerve conduction study.
19. Motor unit potential.
20. End plate noise.
21. Define Fibrillations.
22. Blink reflex.
23. Terminal branches if facial nerve.

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Neuro Sciences Technology Degree Examination – 20-May-2025

Time: Three Hours **Max. Marks: 100**

ADVANCED TECHNIQUE- I (RS-3)

Q.P. CODE: 3311

Your answers should be specific to the questions asked
Draw neat labeled diagrams wherever necessary

LONG ESSAYS (Second Question Choice) **2 x 10 = 20 Marks**

1. Explain Neuromuscular junction. Describe electro physiological findings of myasthenia gravis myasthenic syndrome and Botulinum toxin
2. Explain visual evoked potentials. Add a note on clinical conditions

   OR

   Define Repetitive Nerve Stimulation Test in pre-synaptic and postsynaptic disorders and explain the disorders in detail

SHORT ESSAYS (Question No 5 & 10 choice) **10 x 5 = 50 Marks**

3. Bell's palsy
4. Median nerve
5. Motor Neuron disease

   OR

   Chronic Inflammatory Demyelinating Polyneuropathy (CIDP)
6. Neuropathies associated with AIDS
7. Lumbar disc prolapse
8. Femoral nerve
9. Motor Evoked Potential
10. Lumbar plexus

    OR

    Peripheral nerve disorder
11. Auditory pathway
12. Carpal tunnel syndrome

SHORT ANSWER **10 x 3 = 30 Marks**

13. Radiculopathy
14. Wallerian degeneration
15. Types of nerve injury
16. Parasympathetic response
17. Sural nerve
18. BAER
19. Clinical conditions in MEP
20. Internal noise
21. Psychogenic weakness
22. Indications of VEP

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Neuro Sciences Technology Degree Examination – 22-May-2025

Time: Three Hours **Max. Marks: 100**

ADVANCED TECHNIQUE- II (RS-3)

Q.P. CODE: 3312

Your answers should be specific to the questions asked
Draw neat labeled diagrams wherever necessary

LONG ESSAYS (Second Question Choice) **2 x 10 = 20 Marks**

1. Describe in detail about paediatric PSG
2. Discuss in detail about sleep disorders
   OR
   Fundamentals of EMG and classify the types of needles and their uses

SHORT ESSAYS (Question No 5 & 10 choice) **10 x 5 = 50 Marks**

3. Muscle physiology
4. Anterior poliomyelitis
5. Electroencephalogram
   OR
   R-R interval
6. Autonomic function studies
7. Normal and abnormal patterns of EMG studies
8. Sympathetic skin response
9. Types of muscular dystrophies
10. Capnography
    OR
    Paediatric montages
11. REM sleep disorder
12. Obstructive hypoventilation

SHORT ANSWER **10 x 3 = 30 Marks**

13. Polyphasic EMG
14. Neurotransmitters
15. Motor Unit Potential
16. Broca’s aphasia
17. K- complex
18. Benign epileptic transient in sleep
19. Myotonia
20. Parasomnias
21. Continuous Positive Airway Pressure (CPAP)
22. Mixed apnoea

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Neuro Science Technology Degree Examination – 27-May-2025

Time: Three Hours **Max. Marks: 80 Marks**

Systemic Diseases
Q.P. CODE: 2847

Your answers should be specific to the questions asked
Draw neat labeled diagrams wherever necessary

LONG ESSAYS (Answer any Two) **2 x 10 = 20 Marks**

1. HIV / AIDS – modes of transmission and management
2. Myasthenia gravis – etiology, clinical features, investigation and management
3. Classify seizures, etiology, clinical features and management of grandma epilepsy.

SHORT ESSAYS (Answer any Six) **6 x 5 = 30 Marks**

4. **Short note on head injury**
5. Alzheimers disease
6. **Thoracic outlet syndrome**
7. Multiple sclerosis
8. Write short note on Japanese encephalitis.
9. Write a short note on post exposure prophylaxis of Rabis.
10. Cluster headache
11. Clinical features and treatment of bell's palsy

SHORT ANSWERS (Answer any Ten) **10 x 3 = 30 Marks**

12. **Mention any three types of sleep disorders**
13. **Treatment of CIDP**
14. Two contraindication of lumbar puncture
15. Clinical manifestation of Mumps
16. Clinical features of Tetanus
17. Causes for raised intracranial tension
18. **Regulation of BP**
19. Phenytoin sodium
20. Two complications of Pyogenic meningitis
21. Neurological complication of leprosy
22. Mention any four diseases caused by Human herpes virus.
23. **Mention the types of Aphasia**

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Neuro Sciences Technology Degree Examination – 27-May-2025

Time: Three Hours **Max. Marks: 100**

SYSTEMIC DISEASES (RS-3)

Q.P. CODE: 3313

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary

LONG ESSAYS (Second Question Choice) **2 x 10 = 20 Marks**

1. Write in detail on Cervical spondylosis
2. Write in detail on Inherited metabolic disease

   OR

   Explain developmental diseases of Nervous system

   Write in detail on inherited metabolic disease

   Or

   Explain in detail on Etiology, clinical features , investigations and management of Peripheral Nerve Disorder

SHORT ESSAYS (Question No 5 & 10 choice) **10 x 5 = 50 Marks**

3. Sleep disorders
4. Myasthenia Gravis
5. Regulation of BP

   OR

   Parkinsonism
6. Epileptic syndromes
7. Backache
8. Viral Encephalitis
9. Ischemic Stroke
10. Botulism

    OR

    Dysarthria
11. Leprosy
12. AIDP

SHORT ANSWER **10 x 3 = 30 Marks**

13. Hematoma
14. Physiology of Sleep
15. Treatment for Hydrocephalus
16. Types of Migraine
17. Thrombosis
18. Hemiparesis
19. Physiology of Pain
20. Types of peripheral neuropathies
21. Signs and Symptoms of Multiple sclerosis
22. Tension Headache

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Neuro Science Technology Degree Examination – 27-Oct-2025

Time: Three Hours **Max. Marks: 80**

ADVANCED NEURO SCIENCES TECHNOLOGY - I
Q.P. CODE: 2845

Your answers should be specific to the questions asked
Draw neat labeled diagrams wherever necessary

LONG ESSAYS (Answer any Two) **2 x 10 = 20 Marks**

1. Anatomy, course and function of trigeminal nerve, add a note on its clinical condition
2. Explain the physiology of recording Evoked Potentials. Describe about applications of Visual Evoked Potential
3. Describe the principles of nerve conduction studies, procedure and its applications in neurological disorders

SHORT ESSAYS (Answer any Six) **6 x 5 = 30 Marks**

4. Brainstem Auditory Evoked Response (BAER)
5. Common mode rejection
6. Tarsal tunnel syndrome
7. Normal Tibial SSEP
8. Segmental demyelination
9. Median SSEP
10. Artifacts in nerve conduction studies
11. Computer application in Evoke potential

SHORT ANSWERS (Answer any Ten) **10 x 3 = 30 Marks**

12. Filters in electrodiagnoctic tests
13. Evoke potential definition
14. Internal noise
15 Hyperpolarization
16. Causes of foot drop
17. Optic pathway
18. Signal to noise ratio
19. Frequency response
20. Axonal Reflex
21. Principle of averaging
22. Miller fisher syndrome
23. Abnormal BAER

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Neuro Sciences Technology Degree Examination – 27-Oct-2025

Time: Three Hours **Max. Marks: 100 Marks**

ADVANCED TECHNIQUE- I (RS-3)

Q.P. CODE: 3311

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary

LONG ESSAYS (Second Question Choice) **2 x 10 = 20 Marks**

1. What are the physiological and non physiological factors affecting nerve conduction studies.
2. What is Guillain barre syndrome? Describe the electrophysiological evaluations.

   OR

   What is Blink reflex? Describe the electrophysiological evaluation.

SHORT ESSAYS (Question No 5 & 10 choice) **10 x 5 = 50 Marks**

3. VEP (Visual Evoked Potential).
4. Temporal dispersion.
5. Carpal tunnel syndrome.

   OR

   AIDP.
6. S1 radiculopathy.
7. SSEP - Median.
8. F-Waves and H -Waves.
9. Sural Nerve Stimulate.
10. BAER.

    OR

    Neuropathy with AIDS.
11. **Femoral nerve conduction**
12. Amplifiers and gain in electro diagnostic tests.

SHORT ANSWER **10 x 3 = 30 Marks**

13. Sympathetic skin respone.
14. Facial nerve conduction.
15. Diagram of brachial plexus.
16. Foot drop.
17. Conduction block.
18. Interverterbral disc prolapse.
19. Psychogenic weakness.
20. Evoked potential definition.
21. Tarsal tunnel syndrome.
22. **Obturator neuropathy**

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Neuro Science Technology Degree Examination – 29-Oct-2025

Time: Three Hours **Max. Marks: 80**

ADVANCED NEURO SCIENCES TECHNOLOGY - II
Q.P. CODE: 2846

Your answers should be specific to the questions asked
Draw neat labeled diagrams wherever necessary

LONG ESSAYS (Answer any Two) **2 x 10 = 20 Marks**

1. Describe in detail about computer application in EMG
2. Discuss in detail about the principle, procedure, protocols and recording techniques used in EMG. Add a note on different types of EMG needle electrode with suitable diagram
3. Discuss in detail about autonomic function studies

SHORT ESSAYS (Answer any Six) **6 x 5 = 30 Marks**

4. Complex repetitive discharges
5. Jitter blocking
6. Jaw jerk
7. MUP
8. Myopathy
9. Sympathetic skin response
10. Patient safety in EMG
11. Anterior Horn Cell Diseases

SHORT ANSWERS (Answer any Ten) **10 x 3 = 30 Marks**

12. Macro EMG
13. **Mention the types of aphasia**
14. Motor unit potential
15 Patient preparation for EMG
16. Spontaneous Activity
17. Causes of fibrillation
18. Recruitment pattern
19. **Mention any five types of sleep disorders**
20. Draw a diagram of muscle fiber and label it
21. Fasciculations
22. **Bioclaibrations**
23. Insertional activity

Rajiv Gandhi University of Health Sciences, Karnataka

RGUHS THEORY EXAMINATION OCTOBER-2025

NODAL CENTRE:CAUVERY INSTITUTE OF HEALTH SCIENCES, MYSORE

Date: 29-10-2025 **Session: Morning**

CORRECTIONS

Subject: Advanced technique II **QP Code: 2846**

Q. No	QUESTION Appeared As	QUESTION CORRECTED As	REASON FOR CORRECTIONS
13	Sympathetic skin response	Mention the types of aphasia	Repeated question
19	R R interval	Mention any five types of sleep disorders	Repeated question
22	EMG needles types	Bioclaibrations	Repeated question

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Neuro Science Technology Degree Examination – 31-Oct-2025

Time: Three Hours **Max. Marks: 80**

Systemic Diseases

Q.P. CODE: 2847

Your answers should be specific to the questions asked
Draw neat labeled diagrams wherever necessary

LONG ESSAYS (Answer any Two) **2 x 10 = 20 Marks**

1. Write in detail on Inflammatory Myopathies
2. Write in detail on various Speech disorders
3. Classify Epilepsy. Write in detail on various Epileptic syndromes

SHORT ESSAYS (Answer any Six) **6 x 5 = 30 Marks**

4. Leprosy
5. Myotonia
6. Regulation of BP
7. Sub arachnoid Hemorrhage
8. Migraine
9. Extradural Hematoma
10. Rabies
11. Cervical Spondylosis

SHORT ANSWERS (Answer any Ten) **10 x 3 = 30 Marks**

12. Sleep disorders
13. Physiology of Pain
14. Paraplegia
15 Types of Hydrocephalus
16. Investigations for Syncope
17. Signs & Symptoms of Microcephaly
18. Investigations for Myasthenia Gravis
19. Treatment for Meningitis
20. Name few Metabolic disorders
21. Clinical features of Stroke
22. Craniofacial pains
23. Investigations for Botulism

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Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Neuro Sciences Technology Degree Examination – 29-Oct-2025

Time: Three Hours **Max. Marks: 100**

ADVANCED TECHNIQUE- II (RS-3)

Q.P. CODE: 3312

Your answers should be specific to the questions asked
Draw neat labeled diagrams wherever necessary

LONG ESSAYS (Second Question Choice) **2 x 10 = 20 Marks**

1. Explain in detail about Polysomnography (PSG).
2. Essay on muscular dystrophies.
   OR
   Explain SSR & R-R Interval

SHORT ESSAYS (Question No 5 & 10 choice) **10 x 5 = 50 Marks**

3. Aphasia.
4. Stages of sleep.
5. Paediatric montages.
   OR
   Motor unit potential.
6. Myotonia.
7. Paediatric limb movement disorder.
8. Obstructive hypoventilation.
9. Disorders of body schema.
10. Nocturnal seizures.
    OR
    Apnea and its types.
11. Electroconvulsive therapy.
12. Recording techniques in EMG.

SHORT ANSWER **10 x 3 = 30 Marks**

13. **Insertional activity**
14. Wilson’s disease.
15. Sleep spindles.
16. Positive occipital sharp transients of sleep.
17. Anton’s syndrome.
18. Macro EMG.
19. Dysarthria and Dysphagia.
20. Types of needles in EMG.
21. Biocallibration.
22. K complex and sleep spindles.

Rajiv Gandhi University of Health Sciences, Karnataka

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RGUHS THEORY EXAMINATION OCT-2025

NODAL CENTRE:LAXMI MEMORIAL COLLEGE OF NURSING

Date:29.10.2025 **Session: MORNING**

CORRECTIONS

Subject: Advanced technique II
QP Code: 3312

Q. No	QUESTION Appeared As	QUESTION CORRECTED As	REASON FOR CORRECTIONS
13	Define muscular dystrophy and its types.	Insertional activity	Repeated question

Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Sc. Neuro Sciences Technology Degree Examination – 31-Oct-2025

Time: Three Hours **Max. Marks: 100**

SYSTEMIC DISEASES (RS-3)
Q.P. CODE: 3313

Your answers should be specific to the questions asked
Draw neat labeled diagrams wherever necessary

LONG ESSAYS (Second Question Choice) **2 x 10 = 20 Marks**

1. Gullian Barre syndrome, etiology, pathogenesis, clinical features, diagnosis and management
2. Describe principles and recording technique of EMG. Classify the types of needles and activities
   OR
   Etiopathogenesis, classification and management of Ischemic stroke

SHORT ESSAYS (Question No 5 & 10 choice) **10 x 5 = 50 Marks**

3. CIDP – diagnosis and management
4. Absence seizure
5. **Myasthenia Gravis**
   OR
   Status epilepticus
6. Rabies – pathophysiology and clinical features
7. Bacterial meningitis
8. Subarachnoid hemorrhage
9. Make a note on multiple sclerosis
10. Tubercular meningitis – clinical features and management
    OR
    REM sleep disorders
11. Trigeminal neuropathy
12. Huntington's chorea

SHORT ANSWER **10 x 3 = 30 Marks**

13. Vertigo
14. Botulism
15. Classify inflammatory myopathies
16. Muscular dystrophy
17. Causes of hydrocephalus
18. Clinical features of thiamine deficiency
19. Name three causes of dementia
20. Name three causes of mitochondrial myopathies
21. Name three drugs used in migraine
22. Causes of epilepsy