Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Neuro Science Technology Degree Examination – 14-Jan-2022

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

Basic Electroencephalography

Q.P. CODE: 2841

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 the type of artefacts encountered in EEG recording. What are the measures taken to minimize those EEG artefacts
2. a) Write down in detail about the types of montages
   b) Essay on Alzheimer
3. Explain in detail about the international 10:20 system

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

4. Filters used in EEG
5. Activation procedure
6. a) Stages of sleep
   b) Explain about four invasive electrodes
7. Advantages and disadvantages of EEG
8. Dementia
9. Hydrocephalous
10. Neat diagram of EEG machine diagram
11. a) Note on resistors and capacitors
    b) Common mode rejection ratio and time constant

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

12. Impedance
13. Alpha rhythm
14. a) POSTS b) PLEDs
15 EEG in brain death
16. Sharp waves
17. K complexes
18. Delta wave
19. a) Low frequency filter
    b) Definition of montages
20. Name three physiological artefacts
21. Drugs affecting EEG
22. Paper speed
23. Transistor

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Neuro Science Technology Degree Examination – 17-Jan-2022

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

Basic of Nerve Conduction Study (NCS)

Q.P. CODE: 2842

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. Detail on Median nerve. Add a note on CTS.
2. Anatomy, course and function of trigeminal nerve. Add a note on its clinical conditions.
3. Discuss in detail about Neuropathies associated with AIDS.

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

4. F-Response.
5. Sciatic nerve and its electrophysiological study.
6. Normal Tibial SSEP.
7. H-Reflex.
8. Polyneuropathy.
9. GBS.
10. Obturator nerve.
11. Femoral neuropathy.

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

12. Axillary nerve function and its muscle supply.
13. Maintenance of electrodes.
14. Multi focal motor neuropathy.
15 Tarsal tunnel syndrome.
16. Axonal Neuropathy.
17. Patient preparation for NCS.
18. Demyelinating neuropathy.
19. CMAP.
20. CTS.
21. Meralgia paresthesia.
22. Inching technique median.
23. Conduction block.

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Neuro Science Technology Degree Examination – 21-Jan-2022

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

Pharmacology Related to Neuroscience Technology
Q.P. CODE: 2844

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 various factors affecting drug action with an example for each.
2. Classify Antihypertensives. Write mechanism of action, uses and adverse effects of ACE inhibitors (Captopril)
3. Classify Glucocorticoids with two examples for each. Write the mechanism of action, uses and adverse effects of corticosteroids.

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

4. Heparin
5. Metformin
6. Aspirin
7. Depolarizing skeletal muscle relaxants (Succinylcholine)
8. Therapeutic index
9. Isoniazid
10. Amoxicillin
11. Dapsone

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

12. Mention three uses of Paracetamol
13. Mention three adverse effects of Morphine
14. Mention three drugs used in Glaucoma
15 Mention two route of administration of Insulin and one use
16. Mention two used and one adverse effect of Warfarin
17. Mention one drug of choice for status epilepticus, Warfarin toxicity and Anaphylactic shock
18. Mention the class (group) these drugs belongs to- Ketoconazole, Phenytoin and Dopamine
19. Mention three Teratogenic drugs
20. Mention any three drug receptors
21. Mention one use, one adverse effect and one route of administration of Diazepam
22. Mention three uses of Alcohol
23. Mention an antidote for poisoning from Morphine, Paracetamol and Heparin

Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Neuro Sciences Technology Degree Examination – 14-Jan-2022

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

BASIC ELECTROENCEPHALOGRAPHY (EEG) – (RS-3)

Q.P. CODE: 3307

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. Define epilepsy, classification of epilepsy.
2. Enumerate the stages of sleep. Write a brief note on sleep disorders.
   OR
   Essay on digital signal processing and add a not eon advantages of DSP and filters.

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

3. Photic stimulation.
4. Montages.
5. Spike and wave complexes.
   OR
   Electrical silence.
6. Dementia.
7. Impedance.
8. SSPE.
9. Narcolepsy.
10. Polyspikes
    OR
    Intra Operative Monitoring.
11. CMR.
12. Advantages and disadvantages of EEG

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

13. Voltage.
14. Alpha Rhythm.
15. Calibration.
16. EMG artefacts.
17. Sampling rate.
18. Management of Ischemic stroke.
19. PLEDS.
20. Central sleep apnea.
21. Block diagram of EEG.
22. Mu rhythm.

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Neuro Sciences Technology Degree Examination – 17-Jan-2022

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

BASICS OF NERVE CONDUCTION STUDY (NCS) – (RS-3)

Q.P. CODE: 3308

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. Principle, procedure and techniques of nerve conduction study.
2. Anatomy, course and branches of radial nerve with diagram. Add a note on its clinical conditions.

   OR

   Essay on sacral plexus and its injuries with diagram.

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

3. CTS.
4. Ulnar Nerve conduction studies.
5. Action potential.

   OR

   Common peroneal nerve.
6. H-Reflex.
7. CIDP.
8. Patient preparation for NCS.
9. Electrical safety and safety rules.
10. Nerve Injury.

    OR

    Cervical Radiculopathy.
11. Brachial plexus.
12. Femoral nerve conduction.

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

13. Phalen's maneuver.
14. Claw hand.
15. Conduction block.
16. Recording techniques for Sural NCS.
17. Conduction velocity.
18. Inching technique.
19. Musculocutaneous nerve.
20. Management of Cubital tunnel syndrome.
21. Etiology of brachial plexopathy.
22. Stimulator.

Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Neuro Sciences Technology Degree Examination – 19-Jan-2022

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

Applied Anatomy and Physiology Related to Neuroscience Technology (RS-3)

Q.P. CODE: 3309

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. Essay on function, divisions, connections and applied aspects of cerebellum.
2. Blood supply of the brian. Add a note on Circle of Willis.
   OR
   Write an essay on spinal cord.

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

3. Nervous system.
4. Frontal Lobe.
5. Difference between UMN and LMN lesions.
   OR
   Histology of Cerebrum.
6. Functions of Thalamus.
7. Facial Nerve.
8. Sympathetic Nervous system.
9. Visual pathway.
10. Cavernous sinus.
    OR
    Histology of peripheral nerve.
11. Action potential.
12. Subarachnoid cisterns.

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

13. Electrical synapse.
14. Arch cerebellum.
15. Oculomotor nerve.
16. Name the ventricle of brian.
17. Parts of Carpus collosum
18. Spina bifida.
19. Name any four sulci of cerebrum.
20. Dopamine.
21. Wernicke's are.
22. Wilsons's disease.

Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Neuro Sciences Technology Degree Examination – 21-Jan-2022

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

PHARMACOLOGY (RS-3)

Q.P. CODE: 3310

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. Classify antiepileptics. Discuss the mechanism of action, adverse effects and uses of phenytoin sodium.
2. Classify oral antidiabetic drugs. Discuss the mechanism of action, adverse effects and uses of any one of them.

   OR

   Name four Glucocorticoid preparations. Discuss the uses and adverse effects of glucocorticoids.

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

3. Reversible anticholinesterases.
4. Antiplatelet drugs.
5. Angiotensin – converting enzyme (ACE) inhibitors.

   OR

   Ketoconazole.
6. Central neurotransmitters.
7. Heparin.
8. Frusemide.
9. Uses of opioid analgesics.
10. Centrally acting muscle relaxants.

    OR

    Levodopa.
11. Plasma half life.
12. Uses and adverse effects of aspirin.

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

13. Name three drugs used in angina.
14. List three drugs used in alcohol dependence.
15. List three antitubercular drugs.
16. List three anti-inflammatory drugs.
17. List three drugs used as preanaesthetic medication.
18. List three oral anticoagulants.
19. List three CNS stimulants.
20. Mention three adverse effects of carbamazepine.
21. Mention three uses of diazepam.
22. Name three Mydriatics.

Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Neuro Science Technology Degree Examination – 18-Jul-2022

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

Basic Electroencephalography

Q.P. CODE: 2841

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. Explain in detail about the international 10.20 system
2. a) Write down in detail about the abnormal patterns of EEG
   b) Essay on Parkinson
3. Essay on Digital Signal Processing and add a note on advantages of DSP and filters

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

4. Normal background activity EEG
5. GTCS
6. a) Types of artefacts and explain physiological artefacts in detail
   b) Ambulatory EEG
7. Bipolar montage in EEG
8. Write a short note types of stroke
9. Neat diagram of EEG machine diagram
10. Management of seizure
11. a) Note on transistors and amplifiers
    b) Filters used in EEG

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

12. Beta rhythm
13. Paroxysmal alpha
14. a) Insomnia
    b) Causes of Parkinson and drugs used for treatment
15 Drugs used in epilepsy
16. Vertex sharp waves
17. Resistor
18. Paper speed
19. a) Time speed
    b) Name three mechanical artefacts
20. Name the activation procedure
21. 10:10 system
22. Sampling rate
23. Photic stimulation

Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Neuro Science Technology Degree Examination – 20-Jul-2022

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

Basic of Nerve Conduction Study (NCS)

Q.P. CODE: 2842

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 are the types of demyelinating diseases? Note on Multiple sclerosis.
2. Explain Brachial Plexus. Short note on brachial plexus injuries.
3. Essay on action potential.

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

4. Difference between Trigeminal neuralgia and Bell's palsy.
5. GBS.
6. Radial Nerve
7. H-Reflex
8. SNAP of upper limbs
9. Peripheral neuropathies
10. Facial nerve
11. Sciatic nerve.

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

12. Foot drop
13. Sural nerve
14. Phalen's test
15 Axonal wave
16. Visual Evoked Potentials.
17. Diabetic neuropathy
18. Parkinsonism
19. Dementia
20. Hydrocephalus
21. Temporal dispersion
22. Wallerian degeneration
23. Axonal temesis.

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Neuro Science Technology Degree Examination – 22-Jul-2022

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

Applied Anatomy and Physiology Related to Neuroscience Technology
Q.P. CODE: 2843

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. Essay on ANS and its applied anatomy
2. Describe the lateral ventricle in details. Add a note on its clinical aspects.
3. Essay on function, divisions, connections and applied anatomy of cerebellum

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

4. Trigeminal nerve
5. Visual pathway
6. Functions of autonomic nervous system
7. NMJ and its disorders
8. Short note on sympathetic division of ANS
9. Brief note on parietal lobe with diagram
10. Short note on Neuron and its function
11. Brief note on Frontal lobe with diagram

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

12. Trigeminal neuralgia
13. Spina bifida
14. Schematic diagram of neuron
15 Short note on synapsis
16. CSF
17. Multiplan neuron labeled diagram
18. Blood brain barrier
19. Function and types of neuron
20. Segments of spinal cord and add a note on disorders of spinal cord
21. Hormone regulation
22. Neuroglia
23. Sense of hearing

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Neuro Science Technology Degree Examination – 25-Jul-2022

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

Pharmacology Related to Neuroscience Technology
Q.P. CODE: 2844

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. Classify antihypertensive drugs. Discuss the therapeutic uses and adverse effects of Calcium Channel blockers.
2. Classify Opioid Analgesics. Discuss the therapeutic uses and contraindication of Morphine.
3. Classify Glucocorticoids. Discuss the therapeutic uses and adverse effects of Glucocorticoids.

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

4. Nitroglycerine
5. Preanaesthetic Medication
6. Drug therapy of Glaucoma
7. Therapeutic uses and adverse effects of Aspirin
8. Metformin
9. Diazepam
10. Succinyl choline
11. Iron preparations

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

12. Drug synergism
13. Name three first line antitubercular drugs.
14. Name three drugs used to treat lepra reaction.
15 Lignocaine + Adrenaline. Justify.
16. Mention three therapeutic uses of Ethyl Alcohol.
17. Define teratogenecity. Name two teratogenic drugs.
18. Name two Miotics and mention one use for each.
19. Mannitol
20. Superinfection
21. Name three antihelimentic drugs.
22. Name the antidote in heparin overdose with its source and route of administration.
23. Name any three antifungal drugs.

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Neuro Sciences Technology Degree Examination – 18-Jul-2022

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

BASIC ELECTROENCEPHALOGRAPHY (EEG) – (RS-3)

Q.P. CODE: 3307

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 the international 10-20 system of electrode placements of standard EEG and diagram.
2. Enumerate the EEG artifacts, their recognition and elimination.
   OR
   Neurophysiological basis of EEG.

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

3. Alpha blocking.
4. EEG in hypoxic brain injury.
5. Progressive myoclonic epilepsy.
   OR
   Photic drive.
6. Polysomnography.
7. Usefulness of EEG recording in ICU.
8. EEG patterns in absence seizures.
9. Various activation methods.
10. Infantile spasms (west syndrome).
    OR
    Glasgow coma scale.
11. FIRDA.
12. Benign rolandic epilepsy.

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

13. EEG in brain death.
14. Sleep spindles.
15. Sphenoidal electrodes.
16. Alpha wave.
17. Burse suppression.
18. Breach rhythm.
19. EEG in CJD.
20. Febrile seizures.
21. Hot water epilepsy.
22. EEG in hepatic failure.

Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Neuro Sciences Technology Degree Examination – 20-Jul-2022

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

BASICS OF NERVE CONDUCTION STUDY (NCS) – (RS-3)

Q.P. CODE: 3308

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. Draw a diagram of the brachial plexus and describe its electrophysiological evaluation.
2. Nerve conduction in cranial neuropathies.
   OR
   Name a disorder of the anterior horn cells and describe its electrophysiological evaluation.

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

3. Phrenic nerve stimulation.
4. F wave.
5. Peripheral neuropathy.
   OR
   Brachial Plexus.
6. Nerve conduction in carpal tunnel syndrome.
7. Nerve conduction techniques.
8. Repetitive nerve stimulation.
9. Normal values for common nerve conduction studies.
10. Electro diagnosis of C5-6 Radiculopathy.
    OR
    Resting membrane potential.
11. CMR
12. Inching technique.

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

13. Jilter.
14. Blink reflex.
15. EMG needle electrodes.
16. Temporal dispersion.
17. PLEDS
18. Neurogenic pattern in EMG.
19. Artifacts in nerve conduction study.
20. Femoral nerve stimulation.
21. Positive sharp waves.
22. Erbis point stimulation – technique and utility.

Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Neuro Sciences Technology Degree Examination – 22-Jul-2022

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

Applied Anatomy and Physiology related to Neuroscience Technology (RS-3)

Q.P. CODE: 3309

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 the origin, course, termination and functions of corticospinal tract. Add a note on Hemiplegia.
2. Blood supply of brain. Add a note on circle of Willis.
   OR
   Describe formation, circulation and functions of CSF. Add a note on hydrocephalus.

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

3. Parasympathetic nervous system.
4. Synaptic transmission.
5. Thalamus.
   OR
   Fasciculus Gracilis and Fasciculus cuneatus.
6. Arterial supply of the cerebellum.
7. Write a note on Temporal lobe with diagram.
8. Ventricle of Brain.
9. BBB
10. Parkinson's disease.
    OR
    External features of Pons.
11. Properties of reflexes.
12. 10^{th} cranial nerve.

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

13. Functions of cerebellum.
14. Cauda equina.
15. Basilar artery.
16. Synapse.
17. Draw a neat labelled diagram of Neuron.
18. Blood supply of the medulla.
19. Classification of ANS.
20. Multiple sclerosis.
21. Babinski sign.
22. Red nucleus.

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Neuro Sciences Technology Degree Examination – 25-Jul-2022

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

PHARMACOLOGY (RS-3)

Q.P. CODE: 3310

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. Classify skeletal muscle relaxants. Write the mechanism of action, adverse effects and uses of pancuronium.
2. Classify non-steroidal anti-inflammatory drugs (NSAIDs). Write the mechanism of action, uses and adverse effects of aspirin.

   OR

   Classify antiparkinsonian drugs. Write the mechanism of action and adverse effects of levodopa.

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

3. Warfarin – mode of action, indication and dose.
4. Define Miotics give example and indication of Miotics.
5. Pentothal sodium – Indication and adverse effect.

   OR

   Uses of prednisolone and dose.
6. Compare and contrast neostigmine and physostigmine.
7. Name three drugs in the treatment of angina. Write the mechanism of action of any one of them.
8. List four oral antidiabetic drugs. Write a note on any one of them.
9. Classify Aminoglycosides and explain the mode of action of aminoglycosides.
10. Penicillin G – indication and adverse effect.

    OR

    Mannitol – mode of action and indication.
11. Sodium valproate – mode of action and indication.
12. Neurotransmitters of autonomic nervous system.

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

13. List three of uses of diazepam.
14. List three coagulants.
15. Name three adverse effects of phenytoin.
16. Name three general anaesthetics.
17. Name three antifungal drugs.
18. Name three drugs used in tuberculosis.
19. List three antiplatelet drugs.
20. List drugs used in status epilepticus.
21. Name three drugs used in Acquired Immunodeficiency Syndrome.
22. List three uses of lignocaine.

Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Neuro Science Technology Degree Examination – 23-Dec-2022

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

Basic Electroencephalography

Q.P. CODE: 2841

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. Enumerate the stages of sleep.
2. Classify cerebrovascular accident. Add a note on TIA. Enumerate the treatment and diagnosis of stroke.
3. International 10-20 system.

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

4. Stages of sleep.
5. Abnormal EEG **rhythm**
6. CMR.
7. Anti-epileptic drugs.
8. Obstructive sleep apnea.
9. Montage and its types.
10. Adult EEG montage.
11. EEG changes in sleep.

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

12. Block diagram of EEG.
13. Sensitivity.
14. Periodic leg movement syndrome.
15. EEG calibration.
16. Gamma rhythm.
17. EKG artifact.
18. **Special electrodes in EEG**
19. Blink artifact.
20. Paper speed.
21. Meningitis.
22. Alpha and beta rhythm.
23. Patient preparation for EEG.

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Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Neuro Science Technology Degree Examination – 26-Dec-2022

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

Basic of Nerve Conduction Study (NCS)
Q.P. CODE: 2842

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 down in detail about the anatomy of median nerve and a short on CTS
2. a) Write down the detail about brachial plexus
   b) Write down the principles indication and descriptive notes on nerve conduction studies
3. Discuss in detail about AIDP add a note on GBS.

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

4. Normal CMAP and its parameters
5. Wrist drop
6. a) Motor unit potential
   b) Trigeminal neuralagia
7. Brachial plexopathy
8. CIDP
9. Mono neuropathy and its types
10. Action potential
11. a) Artefacts in NCS
    b) Patient preparation of NCS

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

12. Root value and the branches of lumbar plexus
13. Symptoms of trigeminal neuralgia
14. a) Bell phenomena
    b) Tibial SSEP
15 Peroneal nerve
16. Resting membrane potential
17. Conduction block
18. Saturday night palsy
19. a) Phalen's sign
    b) Name the late response in NCS
20. Inching technique
21. Define SNAP
22. Axon reflex
23. Sural nerve

Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Neuro Science Technology Degree Examination – 28-Dec-2022

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

Applied Anatomy and Physiology Related to Neuroscience Technology
Q.P. CODE: 2843

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. Essay on cerebrum. Mention a note on Broncha and Wernicke's areas and its clinical condition.
2. Blood supply of the brain. Add a note on circle of wills.
3. Describe corticospinal tract in detail. Add a note on hemiplegia.

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

4. Parasymphatic division of ANS.
5. Arterial supply of spinal cord.
6. Subarachnoid haemorrhage.
7. Brief note on frontal lobe with diagram.
8. Function of cerebellum.
9. Thyroid gland.
10. NMJ and its disorders.
11. Horizontal section of spinal cord.

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

12. Parkinsons features.
13. Disorders of adrenal cortex.
14. Khyphosis.
15 Multiple sclerosis.
16. Mid brain.
17. Action potential.
18. Diabetes mellitus.
19. DMD.
20. Functions of hypothalamus.
21. Red nucleus.
22. Blood brain barrier.
23. Pineal gland.

Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Neuro Science Technology Degree Examination – 30-Dec-2022

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

Pharmacology Related to Neuroscience Technology
Q.P. CODE: 2844

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. Classify Antianginal drugs. Discuss the mechanism of action, therapeutic uses and adverse effects of Nitroglycerine.
2. Define Bioavailability. Discuss the various factors affecting drug bioavailability.
3. Classify Non Steroidal Antiinflammatory drugs. Discuss the therapeutic uses and adverse effects of Aspirin.

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

4. Therapeutic uses and contraindications of Morphine
5. ACE inhibitors
6. Ketaconazole
7. Warfarin Sodium
8. Therapeutic uses of β blockers
9. Drug Antagonism
10. Chemoprophylaxis
11. Antiplatelet agents

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

12. Define Styptic. Name two styptics.
13. Name three local anesthetic agents.
14. Mention three classes of drugs used in Preanesthetic medication with one example for each.
15 Name three antiepileptic drugs.
16. Edrophonium test
17. Mention three uses of furosemide.
18. Mention three important adverse effects of Glucocorticoids.
19. Name three antiviral agents.
20. Mention three specific adverse effects of Aminoglycosides.
21. Name any three insulin analogues.
22. Name three centrally acting skeletal muscle relaxants.
23. Mention the antidote for the overdose of a) Heparin b) Iron c) Diazepam.

Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Neuro Sciences Technology Degree Examination – 23-Dec-2022

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

BASIC ELECTROENCEPHALOGRAPHY (EEG) – (RS-3)

Q.P. CODE: 3307

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. Define **artifacts.** Explain the typs of EEG **artifacts.**
2. Enumerate EEG abnormal waveforms.
   OR
   Video EEG and Ambulatory EEG.

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

3. Hyper ventilation.
4. Absence seizures.
5. Write a brief note maintenance of electrodes and mode of application.
   OR
   Photic drive.
6. TIA
7. Bipolar Montages.
8. Capacitors.
9. Patient preparation for EEG.
10. Triphasic sharp waves.
    OR
    EEG in brain death.
11. Management of seizures.
12. Hydrocephalus.

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

13. Draw a neat diagram of international 10-20 system.
14. **Beta** rhythm
15. Signal to noise ratio.
16. Sphenoidal electrodes.
17. Adverse effects of phenytoin.
18. Infantile spasms.
19. Clinical features of Parkinson's disease.
20. Notch filter.
21. Lambda waves.
22. High-Frequency filter.

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II Year B.Sc. Neuro Sciences Technology Degree Examination – 26-Dec-2022

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

BASICS OF NERVE CONDUCTION STUDY (NCS) – (RS-3)

Q.P. CODE: 3308

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. Essay on lumbar plexus and its injuries with diagram.
2. Anatomy, course and branches of ulnar nerve with diagram. Add a note on its clinical conditions.
   OR
   Polyneuropathies.

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

3. F-wave.
4. SNAP.
5. Radial neuropathy in axilla.
   OR
   Common peroneal neuropathy.
6. Difference between axonal and demyelinating neuropathy.
7. Bell's palsy.
8. Tibial neuropathy.
9. GBS.
10. Blink reflex.
    OR
    Axonal transport.
11. Sural nerve.
12. Brachial plexopathy.

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

13. Median nerve conduction studies.
14. Etiology of CTS.
15. **Sural Nerve Conduction**
16. **Wallerian Degeneration**
17. Draw a neat diagram of Neuron.
18. Miller Fisher syndrome.
19. Braches of Radial Nerve.
20. Wrist drop.
21. Meralgia Paresthetica.
22. Clinical features of peroneal nerve palsy

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II Year B.Sc. Neuro Sciences Technology Degree Examination – 28-Dec-2022

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

Applied Anatomy and Physiology Related to Neuroscience Technology (RS-3)

Q.P. CODE: 3309

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 is meant by dementia? What are common causes of dementia?
   Or
   Write a note on cerebral hemispheres. Explain in detail on Frontal lobe and its functions.
2. Describe the autonomic pathway and symptoms of autonomic dysfunction.
   OR
   Symptoms and signs of menigo Encephalitis, causes and diagnosis.

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

3. Multiple sclerosis.
4. Floor of fourth ventricle.
5. Guillain Barre Syndrome.
   OR
   Basal Ganglia.
6. Parkinson's disease.
7. Visual pathway.
8. Facial palsy.
9. Features of LMN lesion.
10. Lumbar puncture.
    OR
    Histology of Cereberum.
11. Hypothyroidism and neurology.
    Or
    Physiology of Neuromuscular Junction
12. Trigeminal nerve.

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

13. Cervical dystonia
14. Hemiplegia.
15. Horner's syndrome.
16. Transient Ischemic Attach (TIA).
17. Carpal tunnel syndrome.
18. Hepatic Encephalopathy.
19. Myesthenic crisis.
20. Sub dural hematoma.
21. Tremor.
22. Small fibre neuropathy.

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II Year B.Sc. Neuro Sciences Technology Degree Examination – 30-Dec-2022

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

PHARMACOLOGY (RS-3)
Q.P. CODE: 3310

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. Enumerate local anesthetics. Write the mechanism of action, uses and adverse effects of Lignocaine.
2. Classify anticoagulants. Write the therapeutic uses, adverse effects and contraindications of Warfarin.

   OR

   Classify antiparkinsonian drugs. Write the mechanism of action of levodopa. Give rationale for combining carbidopa with levodopa.

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

3. Pre anesthetic medication.
4. CNS neurotransmitters.
5. Penicillin G

   OR

   Uses and adverse effects of aspirin.
6. Uses of Glucocorticoids.
7. Compare and contrast neostigmine and physostigmine.
8. Enumerate the drugs used in the treatment of angina. Write the mechanism of action of organic nitrates.
9. Phenytoin mode of action and indication.
10. Drugs used in treatment of shock.

    OR

    Diazepam.
11. Thiazide diuretics.
12. Streptokinase.

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

13. List three drugs used in status epilepticus.
14. Name three centrally acting muscle relaxants.
15. Mention three central nervous system stimulants.
16. Write the uses of opioid analgesics.
17. Advantages of intravenous route of drug administration.
18. Write a note on adverse drug reactions.
19. Define plasma half life with example.
20. Name three neurotransmitters of autonomic nervous system.
21. Write three uses of mannitol.
22. Name three antiarrythmic drugs.