

[LF 0212]

AUGUST 2014

Sub.Code :2513

**B.Sc. NEURO ELECTROPHYSIOLOGY
SECOND YEAR
PAPER III – EVOKED POTENTIALS AND CLINICAL NEUROLOGY**

Q.P. Code : 802513

Time: Three hours

Maximum : 100 Marks

Answer All questions

I. Elaborate on:

(3x10=30)

1. Define delirium and mention common causes of Delirium and its management.
2. Diagram of the lobes of the brain with functions.
3. Illustrate the anatomy of the visual system. Describe in detail the methods of performing flash and pattern reversal visual evoked potentials.

II. Write notes on:

(8x5=40)

1. Apoptosis.
2. Enumerate various causes of status epilepticus.
3. Clinical features of myopathy.
4. Define symptomatic epilepsy and mention important causes for symptomatic epilepsy.
5. Glasgow coma scale.
6. Mention various causes of episodic impairment of consciousness.
7. Usefulness of BAER (Brainstem auditory evoked responses) in newborn screening.
8. Draw a normal somatosensory evoked potential on median nerve and label it.

III. Short Answers on:

(10x3=30)

1. Aphasia
2. Water borne diseases.
3. Benzodiazepines.
4. Characteristics of disorders of neuromuscular junction.
5. Definition of dementia.
6. Lateral medullary syndrome.
7. Averaging in visual evoked potentials.
8. Mycobacterium tuberculosis.
9. Types of hearing loss.
10. Nosocomial infection.

[LH 0815]

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Answer All questions

I. Elaborate on:

(3 x 10 = 30)

1. Lobes of the brain and their functions.
2. What is dementia? Mention some examples with clinical features.
3. Visual pathway.

II. Write notes on:

(8 x 5 = 40)

1. Episodic loss of consciousness.
2. Newborn screening with Brainstem auditory evoked responses.
3. Draw a normal somato sensory evoked potential on tibial nerve and label it.
4. Apoptosis.
5. Subtle status epilepticus.
6. Clinical features of muscle disease.
7. Symptomatic epilepsy.
8. Glassgow coma scale.

III. Short Answers on:

(10 x 3 = 30)

1. Dysarthria.
2. Disorders of neuromuscular junction.
3. Types of hearing impairment.
4. Nosocomial infection.
5. Delirium.
6. Medial medullary syndrome.
7. Averaging in visual evoked potentials.
8. Herpes simplex virus.
9. Water borne diseases.
10. Phenobarbitone.

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Answer All questions

I. Elaborate on: **(3 x 10 = 30)**

1. Definition of seizure and epilepsy, classify seizures.
2. Causes of paraplegia and quadriplegia, both upper and lower motor neuron.
3. Brainstem auditory evoked responses, physiology and recording.

II. Write notes on: **(8 x 5 = 40)**

1. Pharmacology of barbiturates.
2. Use of electrophysiology to differentiate syncope from seizures.
3. Flash visual evoked potentials.
4. Necrosis.
5. Dystrophin protein in the human body.
6. Floppy infant.
7. Alzheimer's disease.
8. Tibial somatosensory evoked potentials.

III. Short answers on: **(10 x 3 = 30)**

1. Anticoagulants.
2. Vector borne disease.
3. Streptococcus pneumonia.
4. Hospital acquired infections.
5. Conductive hearing loss.
6. Benzodiazepines.
7. Vertigo.
8. Cranial nerve nuclei in midbrain.
9. Optic nerve.
10. Recent versus remote memory.

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Answer All questions

I. Elaborate on:

(3 x 10 = 30)

1. Movement disorders, hyperkinetic and hypokinetic – clinical features and examples.
2. Define stupor and coma, enumerate causes.
3. Somatosensory evoked potentials from tibial and median nerves, stimulation and recording procedures with clinical applications.

II. Write notes on:

(8 x 5 = 40)

1. Interpeak latencies in brainstem auditory evoked responses.
2. Myelin sheath for nerves.
3. Pharmacokinetics versus pharmacodynamics.
4. Principle of averaging in event related potentials.
5. Radialmononeuropathy.
6. Neurocysticercosis.
7. Electroretinogram.
8. Advantages of visual evoked potentials (VEP) by checkerboard pattern reversal stimulation.

III. Short answers on:

(10 x 3 = 30)

1. Differences between community and nosocomial infections.
2. Homonymous hemianopia.
3. Clinical tests of ataxia.
4. Classification of aphasia.
5. Mosquito borne diseases.
6. Neurosyphilis.
7. Sensory neural hearing impairment.
8. Carbamazepine.
9. Trigeminal nerve.
10. Disinfectants in hospital use.

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Answer All questions

I. Elaborate on: **(3 x 10 = 30)**

1. Language areas of the brain and aphasias.
2. Delirium - definition, common causes and how is it different from dementia?
3. Visual pathways and principle of acquiring visual evoked potentials.

II. Write notes on: **(8 x 5 = 40)**

1. Non convulsive status epilepticus.
2. Ataxia, definition and causes.
3. Absence epilepsy.
4. Glasgow coma scale.
5. Syncope versus seizure.
6. Newborn screening for auditory functions with evoked potentials.
7. Somatosensory evoked potentials from median nerve.
8. Cell death by apoptosis versus necrosis.

III. Short answers on: **(10 x 3 = 30)**

1. Water borne diseases.
2. Phenytoin.
3. Spastic dysarthria.
4. Herpes simplex virus.
5. Post synaptic disorders of neuromuscular junction.
6. Types of hearing impairment.
7. Duchenne muscular dystrophy.
8. Nosocomial infection.
9. Lateral medullary syndrome.
10. Averaging in evoked potentials.

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Time: Three hours

Maximum : 100 Marks

Answer All questions

I. Elaborate on: **(3 x 10 = 30)**

1. What is hypoxic brain injury? Describe the various evoked potential tests which can be used in a patient with hypoxic brain injury?
2. What is paraplegia? Describe how to perform atibial SSEP and its wave forms?
3. What are demyelinating disorders, describe various evoked potential tests which can be used in a patient with demyelinating disorder?

II. Write notes on: **(8 x 5 = 40)**

1. LED Goggles.
2. Hypoxic brain injury.
3. Dorsal columns.
4. Hemiplegia.
5. Autonomic functions tests.
6. Central motor conduction time.
7. ERG.
8. BAER in Sensory neural hearing loss.

III. Short answers on: **(10 x 3 = 30)**

1. Trans cranial magnetic stimulation.
2. Sympathetic skin response.
3. Cortical visual loss.
4. Rigidity.
5. Cognitive evoked potential.
6. Ataxia.
7. Primary dementias.
8. Botulinum toxin.
9. Ganglionopathy.
10. Facial nerve conduction.

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Maximum : 100 Marks

Answer All questions

I. Elaborate on:

(3 x 10 = 30)

1. Describe with appropriate diagrams how a visual evoked potential is performed and describe the wave forms obtained and their significance?
2. What is paraplegia? What are the common causes and how evoked potentials can help in evaluating a patient with paraplegia?
3. What are the various mechanisms of stroke? Describe the clinical features and common investigations used.

II. Write notes on:

(8 x 5 = 40)

1. Demyelinating diseases.
2. Pattern Reversal.
3. Blink Reflex.
4. Pathway for pain sensation.
5. Bell's palsy.
6. Neuromuscular Junction Disorders.
7. Optic neuritis.
8. Motor evoked potential.

III. Short answers on:

(10 x 3 = 30)

1. Cervical spondylosis.
2. Audiometry.
3. Encephalitis.
4. Sensorineural hearing loss.
5. Dystonia.
6. Cognitive evoked potential.
7. Hydrocephalus.
8. Malingering.
9. Trigeminal neuralgia.
10. Parkinson's disease.

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Time: Three hours

Maximum : 100 Marks

Answer All questions

I. Elaborate on:

(3 x 10 = 30)

1. Describe how a BAER examination is done with appropriate diagrams and describe the wave forms obtained?
2. What is autonomic dysfunction? What are the common causes? What are the symptoms the patient can have and what are the tests in neuro electrophysiology which can be used to evaluate?
3. What is acute transverse myelitis (ATM)? How can SSEP help in evaluating a patient with ATM?

II. Write notes on:

(8 x 5 = 40)

1. Maturation of VEP.
2. Non convulsive status epilepticus.
3. Pyramidal tracts.
4. Surgical monitoring.
5. Repetitive nerve stimulation.
6. SSR (Sympathetic Skin Response).
7. Hypoxic brain injury.
8. Juvenile Myoclonic epilepsy.

III. Short answers on:

(10 x 3 = 30)

1. Lumbar spondylosis.
2. P100.
3. Meningitis.
4. Conductive hearing loss.
5. Myoclonus.
6. Motor evoked potential.
7. Neuro Myelitis Optica (NMO).
8. Hydrocephalus.
9. Facial nerve stimulation.
10. Myasthenia Gravis.
