

DM Neurology

Test Booklet Serial No.....

Series No. :

Number of Questions : 120

Time Allowed : 2 hours

Booklet Contains Pages : 36

Max. Marks : 480

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1. Lhermitte sign is seen in –
 - (A) Fluorosis
 - (B) Multiple sclerosis
 - (C) High cord Tumor
 - (D) Meningoradiculitis

2. Earliest Symptoms of Alzheimer's disease relate to –
 - (A) Parietal lobe
 - (B) Frontal lobe
 - (C) Temporal lobe
 - (D) Occipital lobe

3. Which drug may worsen myoclonus –
 - (A) Phenytoin
 - (B) Carbamazepine
 - (C) Lacosamide
 - (D) Phenobarbitone

4. A patient on Sodium valproate complains of vomiting and confusion which investigation would you order –
 - (A) SGOT/SGPT
 - (B) Ammonia level
 - (C) Serum electrolytes
 - (D) None of the above

5. All are Phakomatosis except –
- (A) Tuberos sclerosis
 - (B) Neurofibromatosis
 - (C) Alexender disease
 - (D) Klippel Trenaunay syndrome
6. Pulvinar sign is seen in –
- (A) vCJD
 - (B) PD
 - (C) FTD
 - (D) MSA
7. NMDA receptor encephalitis is characterized by all except –
- (A) Oculofacial dyskinesia
 - (B) Altered sensorium
 - (C) Vision diminution
 - (D) Autonomic disturbances
8. Sunflower cataract is seen in –
- (A) Marinesco sjogreen syndrome
 - (B) Wilson's disease
 - (C) Progressive rubella encephalopathy
 - (D) Xeroderma pigmentosa

9. Earliest sign of papilloedema is –
- (A) Absence of venous pulsations
 - (B) Heaping of optic disc
 - (C) Disc hemorrhages
 - (D) Disc exudates
10. CSF Oligoclonal bands are not seen in –
- (A) Multiple sclerosis
 - (B) NMO
 - (C) ADEM
 - (D) SSPE
11. Jaw jerk centre is present in –
- (A) Mesencephalic nucleus
 - (B) Main sensory nucleus
 - (C) Spinal sensory nucleus
 - (D) Motor sensory nucleus
12. In stiffman syndrome antibodies are seen against –
- (A) AMPA receptor
 - (B) GAD receptor
 - (C) VGKC receptor
 - (D) Glycine receptor

13. Lennox gestaut syndrome has all features except –
- (A) Atypical absences
 - (B) Slow spike wave on EEG
 - (C) Hypsarrhythmia
 - (D) Mental retrogression
14. Post LP headache lasts –
- (A) 0-12 hrs
 - (B) 12-48 hrs
 - (C) 48-72 hrs
 - (D) > 72 hrs
15. A 24 years old male presents with wrist drop. What could be probable cause –
- (A) Arsenic
 - (B) Lead
 - (C) Thallium
 - (D) Gold
16. A 36 years old myasthenic patient presents with fasciculations and severe weakness. What is your probable diagnosis ?
- (A) Cholinergic crises
 - (B) Myasthenic crises
 - (C) None of the above
 - (D) Motor neuron disease

17. What part of brain is affected in parkinson's disease ?
- (A) Substantia nigra
 - (B) Locus ceruleus
 - (C) Nucleus basalis of meynert
 - (D) Putamen
18. A 37 years old patient with RHD present with large Haemorrhagic infarct on CT head. Your treatment for her in first week would comprise of –
- (A) Antiedema + anticoagulant
 - (B) Antiedema + antiplatelets
 - (C) Antiedema measures + Neuroprotective agents
 - (D) None of the above
19. A 25 years old female present with seizures, altered sensorium and vision loss. What possibility would you consider –
- (A) Reversible posterior leucoencephalopathy
 - (B) Multiple sclerosis
 - (C) Neuromyelitisoptica
 - (D) Wilson's disease
20. A 30 years old c/o post-partum CVT, is on oral anticoagulant. How long you plan to continue it –
- (A) 6 months
 - (B) 1 yr
 - (C) 3 yrs
 - (D) Life long

21. An obese female of 50 yrs age has history of nocturnal headaches and frequent awakening with day time naps which investigation you ask for –
- (A) CT Head
 - (B) ABG
 - (C) Serum electrolytes
 - (D) None of the above
22. A 55 yrs old male with epidermoid in CP angle suddenly presents with unexplained headaches and vomitings. What investigation you would prefer –
- (A) CSF
 - (B) MRI Brain
 - (C) SPECT
 - (D) None of the above
23. Betz calls form how much part corticospinal tract –
- (A) 97%
 - (B) 50%
 - (C) 3%
 - (D) 30%
24. Visual cortex is denoted by Brodmann area –
- (A) 16,17,18
 - (B) 17,18,19
 - (C) 18,19,20
 - (D) 20,21,22

25. Spatial navigation is a function of –
- (A) Amygdala
 - (B) Superior temporal gyrus
 - (C) Inferior temporal gyrus
 - (D) Hippocampus
26. Semantic memory is impaired in damage to –
- (A) Medial temporal lobe
 - (B) Lateral temporal lobe
 - (C) Cerebellum
 - (D) Amygdala
27. Alexia without Agraphia is caused by lesion of –
- (A) Right angular gyrus
 - (B) Left angular gyrus
 - (C) Left occipital lobe and corpus callosum
 - (D) Right superior parietal Lobule
28. Features of Gerstmann's syndrome are all except –
- (A) Finger agnosia
 - (B) Acalculia
 - (C) Right left disorientation
 - (D) Alexia

29. Kozevnikov's syndrome is –
- (A) Epilepsia partialis continua
 - (B) Generalized absence SE
 - (C) Electrographic SE
 - (D) Complex partial SE
30. Preferred target for DBS in generalized dystonia is –
- (A) Substantia nigra
 - (B) Subthalamic nucleus
 - (C) Globus pallidus interna
 - (D) Thalamus
31. All are true for K-F ring except –
- (A) Due to copper deposition in Descemet's membrane
 - (B) Found in almost 100% of the patient with neurological presentation in Wilson's disease
 - (C) Pathognomonic for Wilson's disease
 - (D) May disappear with effective treatment
32. Posterior Part of Mid brain is known as –
- (A) Tegmentum
 - (B) Tectum
 - (C) Rednuclei
 - (D) Quadrigeminalum

33. A transient injury of nerve is known as –
- (A) Neuropraxia
 - (B) Neurometesis
 - (C) Axonamatesis
 - (D) None of the above
34. Which of the following is not true for Neuroanthocytosis –
- (A) Chorea
 - (B) Age of onset between 30-40 yrs
 - (C) Self-mutilation
 - (D) Fluctuating weakness
35. A 28 yrs old male present with meningomyeloradiculitis, What could be the probable cause –
- (A) Lyme borreliosis
 - (B) Churg strauss disease
 - (C) Spontaneous CSF leak
 - (D) Isolated CNS angitis
36. A 6 yrs old boy had multiple episodes of eye lid fluttering with poor school performance, what will be the EEG findings –
- (A) 3 Hz spike and wave pattern
 - (B) Slow spike and wave pattern
 - (C) Polyspike and wave pattern
 - (D) None of the above

37. A 30 yrs old male present with acute onset severe headache and vomitings with left hemiparesis. What investigation would you ask for in emergency room ?
- (A) Plain CT Head
 - (B) MRI Brain
 - (C) CSF Examination
 - (D) CT Angiovenogram
38. A 50 yrs old individual reported to emergency room with status epilepticus and his CT reveals multiple NCC. What treatment would you select for him ?
- (A) Steroids + AED
 - (B) Steroid + AED + antihelminthetics
 - (C) AED
 - (D) None of the above
39. An 18 yrs male reports with 1 month history of twitching of muscle in his left upper limb with cramps and stiffness. He is likely to suffer with –
- (A) Anterior horn cell disease
 - (B) Neuromyotonia
 - (C) Poliomyelitis
 - (D) Paramyotonia
40. Which intra cranial wave would be the importance in raised intracranial pressure ?
- (A) Tidal wave (a)
 - (B) Percussion wave (b)
 - (C) Dichotic wave (c)
 - (D) All the above

41. A patient of multiple sclerosis suddenly develops seizures, altered sensorium with large white matter lesion on MRI. He might be on –
- (A) Interferon
 - (B) Natalizumab
 - (C) Azathiopirine
 - (D) Finglolimod
42. Treatment modality for post-polio syndrome is –
- (A) Ivig
 - (B) IV methylprednisolone
 - (C) Plasma exchange
 - (D) Supportive
43. All are responsible for recurrent bilateral LMN facial palsy except –
- (A) Lyme' disease
 - (B) Sarcoidosis
 - (C) GBS
 - (D) Fluorosis
44. Funicular pain are characteristic of –
- (A) Extradural lesion of spinal cord
 - (B) Intradural lesion of spinal cord
 - (C) Intramedullary lesion of spinal cord
 - (D) Cauda equine lesion of spinal cord

45. Following disease are associated with nucleotide repeat sequence except –
- (A) Freidrich's ataxia
 - (B) Fragile X syndrome
 - (C) Cokayne syndrome
 - (D) Myotonic dystrophy
46. Kerne-Sayre syndrome involves all except –
- (A) PEO
 - (B) Cardiac conduction defects
 - (C) Hearing impairment
 - (D) Recurrent strokes
47. Fasciculations may be seen in all except –
- (A) Motor neuron disease
 - (B) Poliomyelitis
 - (C) Spinomuscular atrophy
 - (D) Thyrotoxicosis
48. A 47 yrs old male present with paraparesis following an episode of hypotension. What possibility you would consider ?
- (A) Hypoxic Injury to brain
 - (B) Spinal cord Infarction
 - (C) Guillain-Barre syndrome
 - (D) Inflammatory muscle disease

49. Most common presentation with MGUS Neuropathy is –
- (A) Distal symmetrical sensorimotor
 - (B) Pure motor proximal symmetrical
 - (C) Pure motor distal symmetrical
 - (D) Mononeuritis multiplex
50. Most sensitive test in Myasthenia gravis is –
- (A) Single fibre EMG
 - (B) Ach R antibody level
 - (C) Neostigmine test
 - (D) RNS
51. A 35 yrs old hypothyroid female patient with nocturnal paresthesias, pain and loss of dexterity of right hand. Diagnosis is –
- (A) Carpal tunnel syndrome
 - (B) Cervical Radiculopathy
 - (C) Cubital tunnel syndrome
 - (D) Thoracic outlet syndrome
52. Rolandic epilepsy occurs during –
- (A) Sleep (Nocturnal)
 - (B) Post awakening
 - (C) Hyperventilation
 - (D) Watching TV

53. Martin gubler Anastomosis in between –
- (A) Median and Ulnar
 - (B) Median and Radial
 - (C) Radial and Ulnar
 - (D) None
54. Which is not useful in evaluating a patient of syncope ?
- (A) Holter monitoring
 - (B) Tilt-table test
 - (C) Implantable loop recorder
 - (D) FDS-Positron emission tomography
55. What is the duration for the fulfillment of the definition of “sleep apnea” ?
- (A) 40 seconds
 - (B) 30 seconds
 - (C) 20 seconds
 - (D) 10 seconds
56. What is not true about Juvenile myoclonic epilepsy ?
- (A) Generalized tonic clonic seizures
 - (B) Absence seizures
 - (C) Polygenic inheritance
 - (D) Responsive to phenytoin

57. Which of the following is not expected in high cervical cord injury ?
- (A) Flaccid paralysis
 - (B) Diaphragmatic breathing
 - (C) Increase rectal sphincter tone
 - (D) Priapism
58. A 38-year-old patient presents with thunderclap headache, 3rd nerve palsy and altered sensorium. Which of the following is the most likely diagnosis ?
- (A) Intracerebral hemorrhage
 - (B) Non-aneurysmal subarachnoid hemorrhage
 - (C) Aneurysmal subarachnoid hemorrhage
 - (D) Ophthalmoplegic migraine
59. All of the following may be seen in an extra-medullary lesion except –
- (A) Prominent radicular symptoms
 - (B) Early sacral sensory loss
 - (C) Late involvement of the bladder
 - (D) Brown-Sequard syndrome
60. Which of the following will not be affected in damage to the somatosensory cortex ?
- (A) Perception of pressure
 - (B) Perception of pain
 - (C) Localisation of touch
 - (D) Assessment of tactile movements

61. Which of the following is the only recommended agent for thrombolysis in an appropriate candidate of ischemic stroke ?
- (A) Urokinase
 - (B) Streptokinase
 - (C) Pro-urokinase
 - (D) Alteplase
62. All of the following are congenital myopathies except –
- (A) Central core myopathy
 - (B) Nemaline myopathy
 - (C) Walker-warburg syndrome
 - (D) Centronuclear myopathy
63. Which of the following is a “must rule out” in a patient presenting with acute onset flaccid quadriparesis ?
- (A) Hyponatremia
 - (B) Hypocalcemia
 - (C) Hypomagnesemia
 - (D) Hypokalemia
64. Which of the following is not true about Creutzfeldt-Jacob disease ?
- (A) It is a prion disorder
 - (B) Brain biopsy is definitive
 - (C) Tau protein may be specific in cerebrospinal fluid
 - (D) Myoclonus is rarely seen

65. APACHE-II score includes all except –
- (A) Age
 - (B) Sex
 - (C) PaO₂
 - (D) Respiratory rate
66. Which of the following is the most common genetic risk factor for venous thromboembolism ?
- (A) Antithrombin deficiency
 - (B) Protein C deficiency
 - (C) Factor V Leiden mutation
 - (D) Protein S deficiency
67. Which of the following is best suited in a patient with malignancy to prevent recurrent thromboembolic episodes ?
- (A) Low-molecular-weight heparin
 - (B) Ancrod
 - (C) Aspirin
 - (D) Warfarin
68. Which of the following sequences differentiate a colloid cyst from epidermoid cyst ?
- (A) T1 and T2
 - (B) DWI and T1
 - (C) FLAIR and T2
 - (D) DWI and GRE

69. The ability to recognize familiar faces rests in –
- (A) Amygdala
 - (B) Anterior superior temporal sulcus
 - (C) Ventral prefrontal cortex
 - (D) Fusiform gyrus
70. Wernicke's aphasia is most commonly accompanied by –
- (A) Agrammatism
 - (B) Visual agnosia
 - (C) Homonymous hemianopsia
 - (D) Hemisensory deficit
71. Which thalamic nucleus does not project to the cerebral cortex and inhibits the other thalamic nuclei through γ -aminobutyric acid ?
- (A) Anterodorsal
 - (B) Interlaminar
 - (C) Medial dorsal
 - (D) Reticular
72. Impaired ability to translate irregular orthography to phonology is known as –
- (A) Apperceptive alexia
 - (B) Peripheral alexia
 - (C) Surface alexia
 - (D) Phonologic alexia

73. Which of the following antiepileptic drug is most likely to cause mood swings in a patient with epilepsy ?
- (A) Lacosamide
 - (B) Levetiracetam
 - (C) Oxcarbamazepine
 - (D) Eslicarbazepine
74. Agitated delirium is most closely associated with strokes in the territory of which of the following arteries ?
- (A) Left anterior cerebral artery
 - (B) Left anterior inferior cerebellar artery
 - (C) Left posterior cerebral artery
 - (D) Left posterior inferior cerebellar artery
75. 'Cortical ribboning' in Creutzfeldt-Jacob disease is best evident in which of the following sequence of MRI ?
- (A) Diffusion-weighted
 - (B) T2-weighted
 - (C) Fluid attenuated inversion recovery
 - (D) Inversion recovery
76. Which of the following leukodystrophies is associated with cataracts ?
- (A) Adrenoleukodystrophy
 - (B) Canavan disease
 - (C) Cerebrotendinous xanthomatosis
 - (D) Krabbe disease

77. Which of the following features is an essential feature of delirium ?
- (A) Agitation
 - (B) Delusional thinking
 - (C) Disorientation
 - (D) Impaired attention
78. Which of the following findings is most likely to be found at autopsy in frontotemporal degeneration-ALS ?
- (A) Argyrophilic-positive inclusions
 - (B) Lewy bodies
 - (C) Tau inclusions
 - (D) TDP-43 protein
79. Which of the following features best associates with fabry disease ?
- (A) Acroparesthesia
 - (B) Nystagmus
 - (C) Macular dystrophy
 - (D) Xanthoma
80. In patients with Dementia with Lewy Bodies. Which of the following parameter performed on folstein Min-mental state examination is most likely to be abnormal ?
- (A) Orientation to place
 - (B) Copying a complex figure
 - (C) Repeating three words
 - (D) Writing a sentence

81. Which of the following behavioral or personality change in an elderly needs extensive search for an organic substrate ?
- (A) Mania
 - (B) Insomnia
 - (C) Irritability
 - (D) Indecisiveness
82. Pendular nystagmus is characteristic of which of the following Leukodystrophies ?
- (A) Alexander disease
 - (B) Canavan disease
 - (C) Cerebrotendinous xanthomatosis
 - (D) Pelizaeus-Merzbacher disease
83. Which of the following lifestyle modifications may reduce the risk of developing Alzheimer disease ?
- (A) Abstention from alcohol
 - (B) Daily use of ibuprofen
 - (C) Mediterranean-type diet
 - (D) High-fat, low-protein diet
84. Which of the following sleep disorders is most common in patients with Parkinson disease ?
- (A) Bruxism
 - (B) REM sleep behavior disorder
 - (C) Central sleep apnea
 - (D) Delayed sleep phase syndrome

85. Progressive supranuclear palsy is characteristically associated with accumulation of which of the following substances in neuronal and glial cytoplasm ?
- (A) Amyloid- β
 - (B) Progranulin
 - (C) Tau
 - (D) α -synuclein
86. UK Parkinson's Disease Society Brain clinical diagnostic criteria for the diagnosis of "definite" Parkinson disease mandate the presence of which of the following feature –
- (A) Bradykinesia
 - (B) Rigidity
 - (C) Tremors
 - (D) Postural instability
87. When does the peak clinical effect occur following the injection of botulinum toxin into muscle ?
- (A) 1 week
 - (B) 2 weeks
 - (C) 3 weeks
 - (D) More than 3 weeks
88. Approximately what percentage of woman with dystrophin mutations will manifest clinical symptoms ?
- (A) 0%
 - (B) 10%
 - (C) 20%
 - (D) 30%

89. Which of the following opioid medications has been associated with prolongation of the QT interval ?
- (A) Hydrocodone
 - (B) Hydromorphone
 - (C) Methadone
 - (D) Oxycodone
90. Which of the following stimuli preferentially activate d and C nociceptors ?
- (A) Change in joint position
 - (B) Ethanol evaporation
 - (C) Extreme temperature
 - (D) Vibration
91. Seizures associated with menstrual period are related to –
- (A) Estrogen-induced activation of NMDA receptors
 - (B) Estrogen-induced inhibition of γ -aminobutyric acid B receptors
 - (C) Estrogen-induced inhibition of muscarinic receptors
 - (D) Progesterone-induced blockade of γ -aminobutyric acid A receptors
92. Which of the following metabolic abnormality is most commonly associated with unilateral choreiform movements ?
- (A) Hyperammonemia
 - (B) Ketoacidosis
 - (C) Metabolic alkalosis
 - (D) Hyperosmolarity

93. Which of the following is the most likely cause of weight loss in a middle-aged lady with 10-year duration of levodopa-responsive Parkinson disease ?
- (A) It is associated with increased energy expenditure
 - (B) It is due to anorexia associated with chronic levodopa therapy
 - (C) It is usually due to dysphagia, silent aspiration and infection
 - (D) It reflects protein malabsorption due to lewy body accumulation in the gut
94. Which of the following hormonal therapies has not been associated with a clear increased risk of stroke or venous thrombosis ?
- (A) High-estrogen (greater than 50 µg) oral contraceptives
 - (B) Low-estrogen (Lower than 50 µg) oral contraceptives
 - (C) Raloxifene
 - (D) Testosterone
95. Reduction of stage 3 (non-REM) sleep results in the impairment of pulsatile release of which hormone ?
- (A) Cortisol
 - (B) Oxytocin
 - (C) Growth hormone
 - (D) Testosterone
96. Which of the following medications is most likely to be beneficial in patients with congenital slow-channel myasthenic syndrome ?
- (A) 3,4-diaminopyridine
 - (B) Diazepam
 - (C) Fluoxetine
 - (D) Pyridostigmine

97. Which of the following patterns of weakness would be most typical of myasthenia gravis ?
- (A) Ankle plantar flexion weaker than ankle dorsiflexion
 - (B) Knee extension weaker than hip flexion
 - (C) Neck flexion weaker than neck extension
 - (D) Wrist flexion weaker than wrist extension
98. Which pair of muscles would be most likely to become weak at about the same time in a patient at the early stage of amyotrophic lateral sclerosis ?
- (A) Left deltoid and right deltoid
 - (B) Left abductor pollicis brevis and left first dorsal interosseous
 - (C) Left hypoglossus and left supraspinatus
 - (D) Left iliopsoas and left gluteus maximus
99. For which of the following known organophosphate nerve agents is oxime therapy least likely to be effective ?
- (A) Cyclosarin
 - (B) Sarin
 - (C) Tabun
 - (D) Soman
100. A 58-year-old gentleman presents with increased fatigue and is found to have hemoglobin of 6g/dl, folic acid 82 ng/ml, B12 63 pg/mL, serum iron 180 µg/dl and MCV at 110 fl. On which lines should he be investigated –
- (A) Iron deficiency anemia
 - (B) Vitamin B12 deficiency
 - (C) Folic acid deficiency
 - (D) Pyridoxine deficiency

101. A 15-year-old boy has a 1-minute episode of generalized tonic-clonic seizure after falling from his bike while driving. He regains consciousness in 5 minutes, thereafter he is oriented and conversant with generalized headache and mild dizziness. The neurological examination of the patient is normal and the computed tomography with bone window does not reveal any abnormality. Electroencephalography (EEG) is suggestive of intermittent generalized slowing. What will you do ?
- (A) Load with antiepileptic medication
 - (B) Observation and reassurance
 - (C) Long-term EEG
 - (D) Conventional EEG after 1 month
102. A 32 year-old-lady presents to the neurological emergency with acute onset right-sided diminution of vision of 2 days, limited to perception of hand-movement. Past history is non-contributory and there is no relevant drug history. Neurological examination is suggestive of afferent pupillary defect and disc edema on the right side, without and focal neurological deficits. Which is the most crucial issue in managing this case ?
- (A) Resumption of normal vision
 - (B) Whether to initiate corticosteroids or not
 - (C) To subject the patient to assess the visual evoked potential
 - (D) Initiation of immunomodulator therapy
103. An elderly lady is brought for evaluation by her daughter, who is quite concerned about her mother's tendency to repeat herself constantly. Her housekeeping skills and personal hygiene have declined, and she no physician's question several times. When asked to repeat the names of three objects, she becomes focused on the name of the first object and repeats it, seemingly unaware that three words were to be remembered. Injury to which of the following areas may be associated with this tendency to repeat a given behavior inappropriately ?
- (A) Dorsolateral prefrontal cortex
 - (B) Orbitofrontal regions
 - (C) Medial temporal lobe
 - (D) Temporoparietal cortex

104. A 45-year-old gentleman comes for follow-up 4 months after an ischemic stroke. He complains that after the stroke he lost the pleasurable feeling of body relaxation that he had previously experienced after smoking a cigarette, taking a hot shower, or receiving a massage. Which of the following areas is most likely to be affected ?
- (A) Left lateral temporal cortex
 - (B) Right anterior insula
 - (C) Right posterior cingulate cortex
 - (D) Right supramarginal gyrus
105. A 74-year-old lady is brought to the neurological facility with an atypical manifestation of visual perception. Past history is significant in the form of diabetes mellitus for 32 years and hypertension for 26 years. She underwent a cardiac angioplasty 10 years back for coronary artery disease. Her MRI of the brain showed bilateral strokes involving the lateral temporo-parietal regions. Which of the following neurologic deficit could have been her presenting abnormality of visual perception ?
- (A) Achromatopsia
 - (B) Akinetopsia
 - (C) Prosopagnosia
 - (D) Visual agnosia
106. A young woman in late twenties is brought to the emergency in an unresponsive state, with a history of bizarre behavior, disorganized thinking, and severe anxiety of 3 weeks. She had a fluctuating course in terms of her behavior as well as autonomic functions during the subsequent 2 weeks of extensive diagnostic testing, when she was found to be seropositive for NMDA receptor antibody. Which of the following associated diagnoses is most likely ?
- (A) Adenocarcinoma of breast
 - (B) Small cell lung carcinoma
 - (C) Testicular germ cell tumor
 - (D) Ovarian teratoma

107. A 58-year-old chronic alcoholic with a history of alcoholic hepatitis and esophageal varices is brought to the emergency department in a state of confusion and unsteady gait for 2 days. He supposedly does not take any medications besides the frequent use of over-the-counter medications for his gastrointestinal symptoms. Examination reveals severe confusion, restricted eye movements in all directions with both horizontal and vertical nystagmus, and ataxic gait. Which of the following toxic or metabolic abnormalities explain his present state ?

- (A) Vitamin B 12 deficiency (B) Bismuth toxicity
(C) Vitamin B 1 deficiency (D) Vitamin B3 deficiency

108. A 55-year-old lady is referred to the neurological facility after undergoing an emergency surgery for a ruptured aortic aneurysm. On her sixth hospital day in the intensive care unit, she begins to exhibit a fluctuating level of awareness. She says she feels fine, and except for her mental status, her general physical and neurologic examinations are normal. Which of the following diagnostic tests would have the lowest yield ?

- (A) Chest x-ray (B) Complete blood count
(C) Lumbar puncture (D) Electrocardiogram

109. A 42-year-old woman, diagnosed with essential tremor of 5-year duration is referred for further management to the neurological facility for worsening of head-tremors. She has had only mild benefit from trials of oral medications including propranolol and primidone. Examination shows a lateral "no-no" tremor of the head. Botulinum toxin injections into which of the following muscles bilaterally is most likely to be helpful in this patient ?

- (A) Scalene group (B) Semispinalis capitis
(C) Splenius capitis (D) Trapezius

110. A 58-year-old man develops fever and rigidity 3 days after admission to the hospital for a ruptured intestinal diverticulum. He has a 10-year history of severe Parkinson disease complicated by motor fluctuations. His medications at home include carbidopa/levodopa, amantadine, selegiline, and entacapone. Examination shows fever, lethargy, generalized muscle rigidity, and tremulousness. Serum creatine kinase is 3420 U/L. Acute withdrawal from which of his medications is most likely to be the cause of his clinical picture ?

- (A) Amantadine (B) Levodopa
(C) Selegiline (D) Entacapone

111. An 18-year-old woman is being evaluated for progressive imbalance, gait difficulties, and slurred speech, gradually developing over the past 8 years. Examination shows mild ataxic dysarthria, head titubation, gait ataxia, and positive Romberg sign. She also has mild limb ataxia, distal lower extremity weakness, pes cavus, areflexia, Babinski sign, and loss of joint position and vibration sense in the fingers and toes. A test for frataxin mutation is negative. Which of the following laboratory tests should be performed next in this patient ?

- (A) Arylsulfatase A in Leukocytes
(B) Plasma α -fetoprotein
(C) Serum β -lipoproteins
(D) Serum vitamin E

112. A 26-year-old man with a history of attention deficit hyperactivity disorder has been having difficulty in performing his job as an office worker due to inattention. He is presently not on any medications but has a history of amphetamine abuse. He has no other significant medical history. Which of the following medications would be most appropriated for this patient ?

- (A) Atomoxetine (B) Bupropion
(C) Dextroamphetamine (D) Methylphenidate

113. A 12-year-old girl is being evaluated for myoclonic epilepsy, progressive visual loss, and ataxia. Examination reveals a macular cherry-red spot, mild dystonia, and cerebellar ataxia. Reduced activity of which of the following enzymes can be detected in leukocytes or skin fibroblasts of this patient ?
- (A) Galactocerebrosidase (B) A-galactosidase
(C) A-hexosaminidase A (D) A-neuraminidase
114. A 23-year-old man is evaluated for progressive deafness, night blindness, and gait difficulties. He has also noticed progressive loss of the sense of smell. Examination shows anosmia, retinitis pigmentosa, sensorineural deafness, sensory ataxia, distal weakness and sensory loss in the hands and feet, and ichthyosis. Nerve conduction studies indicate a demyelinating neuropathy. Which of the following is most likely to be found in this patient ?
- (A) Decreased arylsulfatase A activity in leukocytes
(B) Decreased galactocerebrosidase activity in leukocytes
(C) Increased plasma phytanic acid
(D) Monoclonal IgG λ peak
115. A 20-year-old woman with a history of cerebral palsy is referred for further evaluation. As per her previous records, her cerebral palsy occurred reportedly due to complications from a prolonged birth. She has no history of seizures. Examination shows that she has moderate cognitive and visual deficits, severe dysarthria, and mild quadriparesis. Which of the following investigations is most appropriate at this time ?
- (A) Brain CT
(B) Brain MRI
(C) Routine EEG
(D) 24-hour video-EEG monitoring

116. A 60-year-old woman is referred to neurology with a 2-day history of left supraorbital pain and diplopia. Her past medical history is remarkable for type-1 diabetes mellitus for the past 20 years controlled on insulin. On examination, her blood pressure is 135/85 mm Hg. She has a partial left ptosis, and the left eye is deviated inferiorly and laterally. All extraocular muscles of the left eye except for lateral rectus and superior oblique demonstrate weakness. The pupils are of 3 mm bilaterally and reactive to light. There is no meningismus. The remainder of her neurologic examination is essentially normal, sedimentation rate is 25, and a fasting glucose is 135 mg/dl. A CT of the head is normal. Which of the following is the most appropriate next step in management ?

- (A) Cerebral angiography
- (B) Lumber puncture
- (C) Observation
- (D) Temporal artery biopsy

117. A 55-year-old man with a 10-year history of type 2 diabetes mellitus presents with a 6-month history of burning pain in both feet. This pain is worse with touch, particularly the touch of the bed sheets at night. He notes erectile dysfunction for the past 5 years. On examination, his blood pressure is 130/75 mm Hg lying and standing. Strength is normal throughout. Deep tendon reflexes are slightly reduced at the ankle. There is a stocking loss to pin and temperature sensation. Vibration and joint position sense are preserved. Which of the following studies is least likely to show an abnormality in this patient ?

- (A) Cardiovascular autonomic function testing
- (B) Electromyography
- (C) Nerve conduction study
- (D) Quantitative sudomotor axon reflex testing

118. A 80-year-old woman presents with burning pain in the left lower thoracic dermatomes, 2 months after an episode of herpes zoster in the same location. Lidocaine patches are helpful for the associated allodynia but do not help the continuous burning pain. She has a history of cardiac dysrhythmia and cannot tolerate tricyclic antidepressants. In choosing between gabapentin and pregabalin, which of the following factors favors gabapentin over pregabalin ?
- (A) Drug cost
 - (B) Interaction with antihypertensive drugs
 - (C) Risk of drug side effects
 - (D) Speed of titration to an effective dosage
119. A hypertensive 80-year-old woman with an implanted defibrillator presents with abrupt onset of left hemianesthesia affecting the face and left hemibody. No other signs or symptoms are present. Over the next 2 weeks the anesthesia improves, but she develops a deep aching, gnawing pain in the left hemibody. A CT of the brain demonstrates diffuse small vessel changes in the deep gray and white matter but no evidence of hemorrhage. Which of the following medications would likely be most helpful in treating her pain from the standpoint of efficacy and fewest adverse effects ?
- (A) Amitriptyline
 - (B) Duloxetine
 - (C) Gabapentin
 - (D) Venlafaxine
120. A researcher studying phantom limb pain notes that patients with phantom pain in an amputated right arm are able to activate the contralateral hand area of both primary sensory and motor cortex on fMRI by moving their lips. This finding suggests a role for which of the following brain mechanisms in the development of phantom pain ?
- (A) Bilateral innervation
 - (B) Ephaptic transmission
 - (C) Plasticity
 - (D) Programmed cell death

Space for Rough Work

Space for Rough Work

Deal