

## श्री चित्रा तिरुनाल आयुर्विज्ञान और प्रौद्योगिकीसंस्थान, तिरुवनंतपुरम्-11 SREE CHITRA TIRUNAL INSTITUTE FOR MEDICAL SCIENCES & TECHNOLOG THIRUVANANTHAPURAM—695 011

## **ENTRANCE EXAMINATION - ACADEMIC SESSION JANUARY 2019**

PROGRAMME: DM NEUROLOGY (PEDIATRICS)

Time:90 Minutes

Max. Marks: 100

(Select the most appropriate answer)

(There are no negative marks for wrong answers)

- 1. A child recognizes own gender and age, helps in dressing and washes hands by:
  - A. 30 months of age
  - B. 36 months
  - C. 42 months
  - D. 48 months
- 2. The motor skill to do skipping develops by which year of age?
  - A. 4 years
  - B. 5 years
  - C. 6 years
  - D. 7 years
- 3. Atomoxetine used in the treatment of Attention Deficit Hyperactivity Disorder, is a:
  - A. Noradrenergic reuptake inhibitor
  - B. Alpha-agonist
  - C. Presynaptic dopamine agonist
  - D. Dopamine D2 receptor blocker

- 4. "White Strawberry Tongue" is seen in infection by which among the following pathogens?
  - A. Staphylococcus Aureus
  - B. Staphylococcus epidermidis
  - C. Group B Streptococcus
  - D. Group A Streptococcus
- 5. The preferred test to diagnose-HIV-1 subtype B infection in infants and children younger than 18 months of age is:
  - A. HIV culture
  - B. IgM anti-HIV assay
  - C. HIV DNA PCR
  - D. HIV RNA PCR
- 6. Laron Syndrome involves mutation of which of the following genes?
  - A. Androgen receptor
  - B. Glucocorticoid receptor
  - C. Growth hormone receptor
  - D. Thyroxine receptor
- 7. Macrophage Activation Syndrome is a potentially life-threatening complication of:
  - A. Systemic Juvenile Idiopathic Arthritis
  - B. Treatment of HIV-1 infection
  - C. Treatment of Acute Lymphoblastic Leukemia in Infants
  - D. Histiocytosis
- 8. In which among the following nephropathies is the mesangial cells the major location of immunological injury / inflammation?
  - A. Focal Segmental Glomerulosclerosis
  - B. Hemolytic Uremic Syndrome
  - C. Goodpasture Syndrome
  - D. IgA Nephropathy

- 9. Which among the following is the classic histopathological lesion of HIV-associated nephropathy?
  - A. Thickening of basement membrane with immune complex deposits
  - B. Diffuse Proliferation
  - C. Vasculitic infarcts
  - D. Focal segmental glomerulosclerosis
- 10. Which among the following can be used to treat patients with distal renal tubular acidosis, for symptomatic hypercalciuria?
  - A. Thiazide diuretics
  - B. Calcitonin
  - C. Frusemide
  - D. Acetazolamide
- 11. Which among the following conditions in neonatal / early infantile period is most likely to be associated with Horner Syndrome?
  - A. Erb-Duchenne paralysis
  - B. Hypoxic Ischemic Encephalopathy
  - C. Klumpke paralysis
  - D. Subdural Hemorrhage
- 12. Hematopoiesis begins approximately at what gestational age in the fetal liver?
  - A. 3 weeks
  - B. 6 weeks
  - C. 8 weeks
  - D. 11 weeks
- 13. The Sonic Hedgehog Pathway plays a major role in:
  - A. Regulation of erythropoiesis
  - B. Embryogenesis and Organogenesis
  - C. Immune response and T cell signaling
  - D. Natural Killer Cell function

- 14. Which among the following serum tests is NOT a component of the Quad Screen for Down's syndrome in the 2<sup>nd</sup> trimester of pregnancy?
  - A. Pregnancy associated plasma protein
  - B. Free β-human Chorionic Gonadotropin
  - C. Inhibin
  - D. Unconjugated Estriol
- 15. The state in which a cell is having a mixture of normal and abnormal mitochondrial genome is called:
  - A. Mosaicism
  - B. Chimerism
  - C. Heteroploidy
  - D. Heteroplasmy
- 16. By what age does the sleep electroencephalogram show a mature pattern with demarcation of rapid eye movement and four stages of non-rapid eye movement sleep?
  - A. 14-18 months
  - B. 8-12 months
  - C. 4-6 months
  - D. 1-2 months
- 17. Select the true statement regarding Reactive Airway Disease Syndrome in children?
  - A. Generally, occur with a background history of previously documented chronic cough / breathlessness
  - B. Onset follows repeated exposures to an airway irritant
  - C. Symptoms typically occur after 4 weeks of exposure
  - D. Bronchial hyperresponsiveness is documented by Methacholine challenge
- 18. Choose the correct definition for recurrent pneumonia:
  - A. 3 or more episodes in a single year or 5 or more episodes ever
  - B. 2 or more episodes in a single year or 3 or more episodes ever
  - C. 2 episodes by the same bacterial pathogen or 3 episodes by the same viral pathogen
  - D. 3 episodes by the same bacterial pathogen or 5 episodes by the same viral pathogen

- 19. Which of the following medications is FDA approved for treatment of asymptomatic growing angiomyolipomas measuring larger than 3 cm in diameter, in children with Tuberous Sclerosis?
  - A. Everolimus
  - B. Eptifibatide
  - C. Denosumab
  - D. Eculizumab
- 20. A "bidirectional Glenn shunt" involves anastomosis between the:
  - A. Inferior vena cava and the pulmonary veins
  - B. Pulmonary veins to the right atrium
  - C. Superior vena cava and the pulmonary artery
  - D. Left subclavian artery to the right brachiocephalic trunk
- 21. Which among the following neurotransmitter systems is implicated in the pathogenesis of Narcolepsy with Cataplexy?
  - A. Histamine
  - B. Serotonin
  - C. Orexin
  - D. Glycine
- 22. Which among the following conditions is known to cause hypervolemic hyponatremia?
  - A. Heart failure
  - B. Syndrome of Inappropriate Antidiuretic Hormone Secretion
  - C. Hypothyroidism
  - D. Glucocorticoid deficiency
- 23. An infant with suspected inborn error of metabolism is screened during an acute worsening. The infant was found to have hyperammonemia with low normal levels of plasma glutamine. There was also metabolic acidosis with large anion gap, ketosis and hypoglycemia. Which among the following is the most likely diagnosis?
  - A. Argininemia
  - B. Argininosuccinic acidemia
  - C. Tyrosinosis
  - D. Propionic acidemia

- 24. All the following are Peroxisomal disorders EXCEPT:
  - A. Refsum disease
  - B. Canavan disease
  - C. Rhizomelic Chondrodysplasia punctata
  - D. X-linked adrenoleukodystrophy
- 25. A newly developed test to diagnose a disease "X" is applied to 100 patients proven to have the disease and 200 healthy volunteers without the disease. Of the 100 who actually have the disease, 60 test positive and 40 test negative with the newly developed test; of the 200 healthy volunteers proven to be free of the disease, 20 test positive and 180 test negative. What is the specificity of the newly developed test, for making a diagnosis of the disease?
  - A. 60%
  - B. 80%
  - C. 82%
  - D. 90%
- 26. Which among the following is the most common cause of delayed eruption of teeth?
  - A. Hypothyroidism
  - B. Familial
  - C. Calcium deficiency
  - D. Idiopathic
- 27. Familial achalasia with adrenal insufficiency and alacrima is seen in which of the following conditions?
  - A. Allgrove syndrome
  - B. Ackerman Syndrome
  - C. Alström syndrome
  - D. Alagille syndrome

8. Duration of prophylaxis for people who have had Acute Rheumatic Fever with cardition but without residual heart disease, as per the Recommendations of the American Heart Association is:	
A. 5 years or until 21 years of age, whichever is longer	
B. 5 years or until 21 years of age, whichever is shorter	
C. 10 years or until 21 years of age, whichever is longer	
D. 10 years or until 40 years of age, whichever is longer	

29.	Coronary artery abnormalities are seen	in approximately	what percentage of	untreated
	children with Kawasaki disease?			
		•		

Α.	5%
В.	10-15%
$\mathbf{c}$	20.2504

C. 20-25%D. 35-40%

30. Neural fold fusion and folding of embryo into a human-like shape occurs by:

A. 3 weeks

B. 4 weeks

C. 5 weeks

D. 6 weeks

31. Abnormality of which among the following proteins is seen in Marfan syndrome?

A. Elastin 1

B. Fibrillin 1

C. Collagen 1

D. Collagen 4

32. Klisic test is used for the diagnosis of:

A. Developmental dysplasia of hip

B. Osteochondritis Dissecans of Knee

C. Osgood-Schlatter disease

D. Anterior cruciate ligament rupture

- 33. Tris-hydroxymethyl aminomethane (THAM) is a drug useful in the treatment of:
  - A. Hypercalcemia
  - B. Arsenic poisoning
  - C. Vitamin A overdosage
  - D. Acidosis
- 34. Which among the following is the most commonly reported enzyme defect in Leigh disease?
  - A. Cytochrome C Oxidase (Complex IV)
  - B. NADH Coenzyme Q reductase (Complex I)
  - C. Pyruvate dehydrogenase
  - D. Pyruvate Carboxylase
- 35. Which among the following is a primary defect of antibody production?
  - A. Chediak-Higashi syndrome
  - B. DiGeorge Syndrome
  - C. Common variable immunodeficiency
  - D. Chronic Mucocutaneous Candidiasis
- 36. Which among the following is the treatment of choice for acute attacks of porphyria?
  - A. Hydroxychloroquine
  - B. Hemin
  - C. Beta-carotene
  - D. Phlebotomy
- 37. A six-year old girl had history of progressive psychomotor regression, ataxia and seizures and was found to have deranged liver functions during spells of infections, which used to improve partially following treatment of infections. Her earlier investigations showed abnormal visual evoked potentials, elevated CSF lactate and pyruvate levels and occipital and temporal atrophy in brain imaging. She was started on low dose sodium valproate by her pediatrician, for refractory seizures and was followed by fulminant hepatic failure to which she succumbed. Which among the following is the most likely genetic abnormality in her?
  - A. ATP7B gene
  - B. Ceruloplasmin gene

- C. Polymerase Gamma (POLG) gene
- D. PAFAH1B1 (LIS 1) gene
- 38. All of the following statements are true regarding amphotericin B, EXCEPT:
  - A. Lipid formulations of amphotericin B have a faster onset of action.
  - B. Amphotericin B generally has lesser toxicity in children compared to adults.
  - C. Taken up preferentially by organs of the reticuloendothelial system.
  - D. Acts on the fungal cytoplasmic membranes
- 39. Which of the following antimicrobial agents act by getting converted to its acidic form by a bacteria-specific enzyme and the acidic form lowering the pH to levels not tolerated by the bacteria itself?
  - A. INH
  - B. Ethambutol
  - C. Linezolid
  - D. Pyrazinamide
- 40. An infant has the following findings one minute after birth: heart rate: 94 beats / minute; cyanotic hands and feet, with pink body; good muscle tone with active movements; a strong cry; and sneezing response to a catheter placed in the nostril. This infant's Apgar score is:
  - A. 9
  - B. 8
  - C. 7
  - D. ·6
- 41. Which among the following genetic / chromosomal abnormality is associated with a favorable prognosis in B- Acute Lymphoblastic Leukemia (B-ALL)?
  - A. ETV6-RUNX1
  - B. BCR-ABL
  - C. Hypodiploidy
  - D. MLL-AF4

- 42. The "Three Tier Fetal Heart Rate Interpretation System" is used to predict:
  - A. Fetal acid-base status
  - B. Severity of cardiac dysfunction in congenital heart diseases
  - C. Neonatal sepsis
  - D. Risk of neonatal hypoglycemia
- 43. Which among the following is the brain tumor associated with Nevoid Basal Cell Carcinoma (Gorlin) syndrome?
  - A. Optic pathway glioma
  - B. Dysplastic gangliocytoma of cerebellum
  - C. Hemangioblastoma of cerebellum
  - D. Medulloblastoma
- 44. Which among the following medications taken by the mother during antenatal period is associated with persistent pulmonary hypertension of newborn?
  - A. Topiramate
  - B. Angiotensin Converting Enzyme Inhibitors
  - C. Selective Serotonin Reuptake Inhibitors
  - D. Sodium valproate
- 45. Which among the following is NOT a feature of Juvenile Myelomonocytic Leukemia (JMML)
  - A. Typically present with rashes, lymphadenopathy, splenomegaly and hemorrhagic manifestations.
  - B. Patients do not have the Philadelphia chromosome
  - C. Mutations associated with JMML lead to activation of the RAS oncogene pathway.
  - D. Bone marrow shows myelodysplasia with blasts accounting for more than 20% of the cells
- 46. Supplementation with which of the following vitamins is necessary in children with Wilson's disease treated with D-Penicillamine?
  - A. Thiamine
  - B. Pyridoxine
  - C. Riboflavin
  - D. Folic Acid

- 47. Hydrocephalus is associated with all the following transplacental infections EXCEPT:
  - A. Herpes Simplex Virus (HSV)
  - B. Lymphocytic choriomeningitis virus
  - C. Treponema pallidum
  - D. Rubella
- 48. Which among the following is the most common inherited abnormality of the red blood cell membrane?
  - A. Sickle cell anemia
  - B. Paroxysmal nocturnal hemoglobinuria
  - C. Hereditary spherocytosis
  - D. Hereditary stomatocytosis
- 49. Fecal Elastase -1 estimation is a sensitive test to assess:
  - A. Protein malabsorption
  - B. Intestinal juice secretion
  - C. Exocrine pancreatic function
  - D. Gut bacterial overgrowth
- 50. Which among the following Mucopolysaccharidoses is inherited as an X-linked disorder?
  - A. Mucopolysaccharidosis I-S (Scheie)
  - B. Mucopolysaccharidosis III-A (Sanfilippo-A)
  - C. Mucopolysaccharidosis IV-B (Morquio-B)
  - D. Mucopolysaccharidosis II (Hunter)
- 51. Which among the following deficits is a common accompaniment of Wernicke's aphasia?
  - A. Right facial weakness
  - B. Right Hemiparesis
  - C. Right hemianopia
  - D. Right hemisensory loss

- 52. Which among the following cranial nerves pass through the Dorello's canal, in close relation with the petroclinoid ligament?
  - A. Trochlear nerve
  - B. Abducens nerve
  - C. Mandibular division of trigeminal nerve
  - D. Facial nerve
- 53. Single Nucleotide Polymorphisms of *LINGO1* gene has been found to be associated with which among the following conditions?
  - A. Parkinson's disease
  - B. Multiple System Atrophy
  - C. Tourette Syndrome
  - D. Essential tremor
- 54. The efferent connections of anterior nucleus of the thalamus goes to which among the following areas?
  - A. Cingulate gyrus
  - B. Dorsolateral prefrontal cortex
  - C. Orbitofrontal cortex
  - D. Motor and premotor cortices
- 55. Charles Bonnet Syndrome is characterized by:
  - A. Visual hallucinations in elderly with defective vision
  - B. Auditory hallucinations in Parkinson's disease patients with cognitive dysfunction
  - C. Grandiose delusions in patients with Neurosyphilis
  - D. Psychosis in patients with right temporal lesions
- 56. Single fiber electromyography is most useful in the diagnosis of which among the following conditions?
  - A. Limb Girdle Muscular Dystrophy
  - B. Myotonic dystrophy
  - C. Myotubular myopathy
  - D. Myasthenia gravis

- 57. Which among the following viruses are the most common cause of Viral meningitis?
  - A. Arboviruses
  - B. Herpes Simplex Virus
  - C. Enteroviruses
  - D. Epstein Barr Virus
- 58. A 36-year-old lady who was apparently normal previously presented with hearing loss evolving sub-acutely, followed by defective vision, headache, memory loss, behavioral disturbances and a progressive encephalopathy. Her ophthalmic evaluation revealed branch retinal artery occlusions. MRI brain showed multiple small focal lesions involving supra and infratentorial regions, and both grey and white matter structures were affected; lesions were seen in corpus callosum and there was meningeal enhancement as well. What is the most likely diagnosis.
  - A. Neuro-Behcet's disease
  - B. Susac's Syndrome
  - C. Primary Central Nervous System vasculitis
  - D. Neurosarcoidosis
- 59. The treatment of choice for Segawa variant dystonia (DYT5) is:
  - A. Trihexyphenidyl
  - B. Deep Brain Stimulation of Globus Pallidus
  - C. Megadose Vitamin B6
  - D. Levodopa
- 60. The Westphal variant of Huntington's disease is characterized by:
  - A. Visual dysfunction
  - B. Parkinsonism
  - C. Normal cognition
  - D. Autosomal recessive inheritance
- 61. Which among the following nerves arise from the posterior cord of the Brachial Plexus?
  - A. Thoracodorsal nerve
  - B. Long Thoracic nerve
  - C. Nerve to subclavius muscle
  - D. Musculocutaneous nerve

- 62. A 35-year-old lady presents with acute myelitis. Which among the following features will favor a diagnosis of Neuromyelitis Optica, more than Multiple Sclerosis?
  - A. Presence of peri-ventricular T2 hyperintense lesions in MRI of Brain
  - B. Short segment and partial involvement of the spinal cord
  - C. Absence of oligoclonal bands in CSF
  - D. Presence of contrast-enhancement
- 63. Which among the following Apolipoprotein E gene alleles confer an increased risk of Alzheimer disease?
  - A. Apo E1
  - B. Apo E2
  - C. Apo E3
  - D. Apo E4
- 64. Which among the following is classified as a trigeminal autonomic cephalalgia?
  - A. Migraine
  - B. Tension Type Headache
  - C. Cluster Headache
  - D. Primary thunderclap headache
- 65. The NASCET trial studied which of the following?
  - A. Symptomatic carotid stenosis
  - B. Stroke prevention in atrial fibrillation
  - C. Thrombolytic therapy in acute ischemic stroke
  - D. Surgery Vs Intervention therapy for Intracranial aneurysms
- 66. Which among the following surgical procedures is done for medically refractory tonic or atonic seizures of Lennox-Gastaut Syndrome?
  - A. Anterior temporal lobectomy
  - B. Corpus callosotomy
  - C. Amygdalo-hippocampectomy
  - D. Hemispherectomy

67. Which among the following glaucoma and weight			n to cause rena	i Stolies,
		•		
A. Lacosamide		•		
B. Topiramate		to a special		
C. Lamotrigine	•			
D. Primidone				
•	 			

B. Manganese

in the brain?

- C. Magnesium
- D. Copper
- 69. Which among the following is a feature of Landau Kleffner Syndrome?
  - A. Visual agnosia
  - B. Visual hallucinations
  - C. Auditory hallucinations
  - D. Auditory agnosia
- 70. The term "Pallesthesia" refers to:
  - A. Sense of rotation
  - B. Spatial discrimination of tactile sensations
  - C. Sense of vibration
  - D. Emotional component of pain
- 71. The climbing fibers in the cerebellum are the terminal ramifications of fibers from:
  - A. Dentate nucleus
  - B. Red nucleus
  - C. Inferior olivary nucleus
  - D. Pontine nuclei

- 72. Mutations in the Glucocerebrosidase gene, associated with Gaucher's disease, is also the most important genetic risk factor for the development of which among the following neurodegenerative diseases?
  - A. Alzheimer's disease
  - B. Motor Neuron Disease
  - C. Parkinson's disease
  - D. Fronto-temporal dementia
- 73. Which among the following is the mechanism of action of the anti-epileptic drug, Perampanel?
  - A. Blocking of Glutamate NMDA receptor
  - B. Blocking of Glutamate AMPA receptors
  - C. GABA receptor agonist action
  - D. Stimulation of GABA release
- 74. Myotonia worsening with repetitive activity is seen in:
  - A. Paramyotonia congenita
  - B. Myotonia congenita
  - C. Proximal myotonic myopathy
  - D. Myotonic dystrophy
- 75. Which among the following conditions is allelic with susceptibility to malignant hyperthermia?
  - A. Ullrich congenital muscular dystrophy
  - B. Nemaline myopathy
  - C. Centronuclear myopathy
  - D. Central Core Disease
- 76. Heart blocks, bradycardia and macular edema are clinically important adverse effects of which among the following medications used in the treatment of multiple sclerosis?
  - A. Fingolimod
  - B. Dimethyl fumarate
  - C. Teriflunomide
  - D. Alemtuzumah

- 77. 'Lorenzo's oil' has been used for the treatment of which among the following neurological conditions?
  - A. Metachromatic Leukodystrophy
  - B. Adrenoleukodystrophy
  - C. Tangier disease
  - D. Krabbe's globoid cell leukodystrophy
- 78. All of the following are components of 'Balint's syndrome' EXCEPT:
  - A. Oculomotor apraxia
  - B. Optic Ataxia
  - C. Simultanagnosia
  - D. Achromatopsia
- 79. In Wernicke's encephalopathy due to thiamine deficiency, the memory dysfunction correlates most closely with damage to which of the following areas?
  - A. Medial temporal lobes
  - B. Hippocampus .
  - C. Amygdala
  - D. Dorsomedial thalamus
- 80. Exposure to which of the following medications in the first trimester of pregnancy has been linked to Autistic Spectrum Disorders, in epidemiological studies?
  - A. Phenobarbitone
  - B. Sodium Valproate
  - C. Trihexyphenidyl
  - D. Phenytoin
- 81. Which among the following is the characteristic MRI Brain finding in Sturge-Weber Syndrome?
  - A. Leptomeningeal angiomatosis
  - B. Sub-ependymal nodules
  - C. Cerebellar hemangioblastomas
  - D. Hemi-megalencephaly

- 82. What is the treatment of choice for 'multifocal motor neuropathy with conduction block' (MMN-CB)?
  - A. Glucocorticoids
  - B. Plasma exchange
  - C. Intravenous Immunoglobulin
  - D. Natalizumab
- 83. In which of the following neurological disorders is autonomic dysfunction generally NOT seen as a clinically significant manifestation?
  - A. Chronic inflammatory demyelinating polyradiculoneuropathy (CIDP)
  - B. Guillain Barre Syndrome
  - C. Alcoholic neuropathy
  - D. Porphyria
- 84. Which among the following is the most likely diagnosis in an infant with progressive macrocephaly, hypotonia and severe developmental delay, with the MRI of Brain showing diffuse white matter degeneration predominantly involving the cerebral hemispheres and magnetic resonance spectroscopy (MRS) showing a high peak of Nacetylaspartic acid (NAA).
  - A. Van der Knaap disease
  - B. Glutaric aciduria type II
  - C. Gaucher's disease
  - D. Canavan disease
- 85. All the following cellular components of the nervous system develop from neuroectodermal cells EXCEPT:
  - A. Oligodendrocytes
  - B. Ependymal cells
  - C. Microglia
  - D. Astrocytes

- 86. A 40-year old gentleman with unilateral foot drop is being evaluated. Which among the following abnormalities is odd for peroneal neuropathy as a cause of his foot drop?
  - A. Weakness of ankle eversion
  - B. Absent ankle jerk
  - C. Presence of sensory abnormalities on examination
  - D. Toe extension weakness
- 87. What is the pathogenic mechanism underlying Parsonage-Turner Syndrome?
  - A. Radiation necrosis
  - B. Immune mediated injury
  - C. Mechanical compression
  - D. Malignant infiltration
- 88. Increased intensity in the basal ganglia and cortical ribboning in FLAIR and diffusion weighted MRI sequences is characteristic of which of the following conditions?
  - A. Creutzfeldt-Jakob disease
  - B. Corticobasal degeneration
  - C. Machado-Joseph disease
  - D. Argyrophilic grain disease
- 89. The MRI technique "Diffusion Tensor Imaging" is useful for assessing:
  - A. Anatomy and integrity of white matter tracts
  - B. Vasogenic edema in acute stroke
  - C. Differentiation between inflammatory and neoplastic pathology
  - D. Integrity of blood brain barrier
- 90. A 28-year old male patient with Wilson's disease has the following biochemical values: Total Serum Copper: 28 microgram / dL, Serum Ceruloplasmin: 4 mg / dL. How much will be his serum free copper?
  - A. 24 microgram / dL
  - B. 20 microgram / dL
  - C. 16 microgram / dL
  - D. 12 microgram/ dL

- 91. Which among the following areas in the brain has been implicated in the development of addictive behaviors?
  - A. Substantia nigra
  - B. Nucleus basalis of Meynert
  - C. Subiculum
  - D. Ventral tegmental area and median forebrain bundle
- 92. All the following are features of Rasmussen encephalitis EXCEPT:
  - A. Epilepsia partialis continua
  - B. Intractable seizures
  - C. Photoparoxysmal epilepsy
  - D. Hemiparesis
- 93. Which among the following is the mechanism by which Rapamycin exerts beneficial therapeutic effects in animal models of neurodegenerative diseases?
  - A. Inhibition of apoptosis
  - B. Inhibition of protein misfolding
  - C. Blocking excitotoxicity
  - D. Induction of autophagy
- 94. Which among the following is TRUE regarding Holmes tremor?
  - A. Most of the cases are primary (idiopathic, without any demonstratable lesion)
  - B. It is a slow (low frequency) tremor
  - C. Rest tremor is characteristically absent
  - D. Amplitude is generally low.
- 95. Which among the following is the antibody associated with Bickerstaff encephalitis?
  - A. Anti-MOG
  - B. Anti-Glycine Receptor
  - C. Anti GQ1b
  - D. Anti-amphiphysin

- 96. Which among the following is the most common manifestation of arterial ischemic strokes in term neonates?
  - A. Lethargy
  - B. Apnea
  - C. Bulging fontanel
  - D. Seizures
- 97. Which among the following medications has been tried in the management of "persistent vegetative state" and "minimally conscious state" and has shown some benefits in clinical trials?
  - A. Amantadine
  - B. Intrathecal piracetam
  - C. Ginkgo biloba extract
  - D. Perampanel
- 98. Which among the following is the most appropriate term for the inability to correctly order or sequence a series of movements to achieve a goal, leading to trouble in carrying out the steps of a multistep task in proper order?
  - A. Conceptual apraxia
  - B. Ideational apraxia
  - C. Ideomotor apraxia, parietal variant
  - D. Ideomotor apraxia, disconnection variant
- 99. All the following are components of the 'Direct pathway' in the basal ganglia circuits, except:
  - A. Caudate Nucleus
  - B. Subthalamic nucleus
  - C. Putamen
  - D. Globus Pallidus internus (GPi)

- 100. Pittsburgh Compound B ([11C] PiB) is used in the diagnostic imaging of which among the following neurological disorders?
  - A. Alzheimer's disease
  - B. Parkinson's disease
  - C. Medial temporal lobe epilepsy due to hippocampal sclerosis
  - D. Focal cortical dysplasia