

## AON

### PROVISIONAL ANSWER KEY (CBRT)

Name of The Post	Associate Professor, Neurology (Neuro Medicine), General State Service, Class-1
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### Instructions / સૂચના

**Candidate must ensure compliance to the instructions mentioned below, else objections shall not be considered: -**

- (1) All the suggestion should be submitted in prescribed format of suggestion sheet Physically.
- (2) Question wise suggestion to be submitted in the prescribed format (Suggestion Sheet) published on the website.
- (3) All suggestions are to be submitted with reference to the Master Question Paper with provisional answer key (Master Question Paper), published herewith on the website. Objections should be sent referring to the Question, Question No. & options of the Master Question Paper.
- (4) Suggestions regarding question nos. and options other than provisional answer key (Master Question Paper) shall not be considered.
- (5) Objections and answers suggested by the candidate should be in compliance with the responses given by him in his answer sheet. Objections shall not be considered, in case, if responses given in the answer sheet /response sheet and submitted suggestions are differed.
- (6) Objection for each question shall be made on separate sheet. Objection for more than one question in single sheet shall not be considered & treated as cancelled.

**ઉમેદવારે નીચેની સૂચનાઓનું પાલન કરવાની તકેદારી રાખવી, અન્યથા વાંધા-સૂચન અંગે કરેલ રજૂઆતો ધ્યાને લેવાશે નહીં**

- (1) ઉમેદવારે વાંધા-સૂચનો નિયત કરવામાં આવેલ વાંધા-સૂચન પત્રકથી રજૂ કરવાના રહેશે.
- (2) ઉમેદવારે પ્રશ્નપ્રમાણે વાંધા-સૂચનો રજૂ કરવા વેબસાઈટ પર પ્રસિધ્ધ થયેલ નિયત વાંધા-સૂચન પત્રકના નમૂનાનો જ ઉપયોગ કરવો.
- (3) ઉમેદવારે પોતાને પરીક્ષામાં મળેલ પ્રશ્નપુસ્તિકામાં છપાયેલ પ્રશ્નક્રમાંક મુજબ વાંધા-સૂચનો રજૂ ન કરતા તમામ વાંધા-સૂચનો વેબસાઈટ પર પ્રસિધ્ધ થયેલ પ્રોવિઝનલ આન્સર કી (માસ્ટર પ્રશ્નપત્ર)ના પ્રશ્ન ક્રમાંક મુજબ અને તે સંદર્ભમાં રજૂ કરવા.
- (4) માસ્ટર પ્રશ્નપત્ર માં નિર્દિષ્ટ પ્રશ્ન અને વિકલ્પ સિવાયના વાંધા-સૂચન ધ્યાને લેવામાં આવશે નહીં.
- (5) ઉમેદવારે જે પ્રશ્નના વિકલ્પ પર વાંધો રજૂ કરેલ છે અને વિકલ્પ રૂપે જે જવાબ સૂચવેલ છે એ જવાબ ઉમેદવારે પોતાની ઉત્તરવહીમાં આપેલ હોવો જોઈએ. ઉમેદવારે સૂચવેલ જવાબ અને ઉત્તરવહીની જવાબ ભિન્ન હશે તો ઉમેદવારે રજૂ કરેલ વાંધા-સૂચન ધ્યાનમાં લેવાશે નહીં.
- (6) એક પ્રશ્ન માટે એક જ વાંધા-સૂચન પત્રક વાપરવું. એક જ વાંધા-સૂચન પત્રકમાં એકથી વધારે પ્રશ્નોની રજૂઆત કરેલ હશે તો તે અંગેના વાંધા-સૂચનો ધ્યાને લેવાશે નહીં.

001. Which of the following statements is correct regarding temporal lobe?  
 (A) The primary auditory area is situated in the inferior wall of lateral sulcus  
 (B) The major projection fibers to auditory area arise from thalamus.  
 (C) The sensory speech area of Wernicke is localised in the inferior temporal gyrus in the dominant hemisphere.  
 (D) A unilateral lesion of the auditory area produces complete deafness in both ears
002. Which of the following is the most prevalent neurological disorder in latest epidemiological studies in India?  
 (A) Stroke  (B) Headache  
 (C) Movement disorders  (D) Epilepsy
003. Which of the following is not true regarding Epigenetics?  
 (A) The changes may involve DNA Methylation  
 (B) DNA sequence is altered  
 (C) The changes can occur in response to environmental signals  
 (D) Can cause Imprinting
004. Which of the following is not true regarding Montreal Cognitive Assessment (MOCA)?  
 (A) The total score ranges from 0-30  
 (B) Does not assess the executive function  
 (C) The test has excellent sensitivity in differentiating mild cognitive impairment (90%) from healthy controls  
 (D) It is free to clinicians
005. Which of the following is wrong?  
 (A) Gastrocnemius muscle flexes the knee joint  
 (B) Tibialis posterior assists in plantar flexion of ankle joint  
 (C) Peroniuslongus assists in plantar flexion of ankle joint  
 (D) Tibialis anterior everts the foot
006. Which of the following is not true regarding locked in syndrome?  
 (A) Also called as de – efferented state.  
 (B) The lesion is in dorsal pons  
 (C) Aetiology can be stroke or demyelination  
 (D) A similar state can be seen with neuromuscular blocking drugs
007. Which of the following is not a component of FOUR (Full Outline of UnResponsiveness) score?  
 (A) Eye response  (B) Verbal response  
 (C) Motor response  (D) Respiration
008. Which of the following conditions is most likely to cause ptosis without any weakness of extraocular muscles?  
 (A) Botulism  (B) Inclusion body myositis  
 (C) Myotonic dystrophy  (D) Dermatomyositis

009. Which of the following is the most common premonitory symptom experienced at the start of a migraine episode?
- (A) Changes in the concentration                      (B) Fatigue  
(C) Mood change    (D) Sweet craving
010. DBS for treatment of epilepsy is done on which nucleus of thalamus?
- (A) Anterior nucleus    (B) Ventromedian nucleus  
(C) Medial dorsal nucleus                                      (D) Centromedian nucleus
011. Which of the following muscles is not innervated by the facial nerve?
- (A) Buccinator    (B) Tensor tympani  
(C) Stylohyoid    (D) Posterior belly of the digastric
012. Which of the following is incorrect regarding the anterior choroidal artery?
- (A) It supplies the posterior limb of the internal capsule  
(B) It supplies a part of the hippocampus  
(C) It supplies a part of the geniculocalcarine tract  
(D) It supplies the anterior limb of the internal capsule
013. Which of the following treatments has been shown to improve visual outcomes in patients with optic neuritis who fail to respond to high dose corticosteroid treatment?
- (A) Azathioprine    (B) ACTH therapy  
(C) IV Immunoglobulin(IVIg)                                      (D) Plasma Exchange
014. To differentiate between a lesion of the lower trunk and one of the medial cord, the most useful muscle to test is the
- (A) flexor pollicis longus    (B) abductor pollicis brevis  
(C) first dorsal interosseous                                      (D) extensor indicis proprius
015. The most common location of neurogenic gastrointestinal ulceration after an acute hypothalamic lesion is the
- (A) upper esophagus    (B) lower esophagus  
(C) fundus of the stomach    (D) ileum
016. Which of the following is the least affected in kernicterus, a syndrome associated with cerebral palsy?
- (A) Hippocampus    (B) Cortex  
(C) Brainstem nuclei    (D) Anterior horn cells of spinal cord
017. Which of the following drugs does not exacerbate the neuromuscular blockade in myasthenia gravis?
- (A) acyclovir    (B) Clindamycin  
(C) Quinidine    (D) Interferon alfa
018. Which of the following is not true regarding Hoover sign?
- (A) Demonstrates functional weakness of hip extension  
(B) Can be false positive in cortical neglect  
(C) Contra lateral hip flexion is tested against resistance  
(D) Ipsilateral hip flexion is tested against resistance

019. Which of the following is not a functional gait disorder?  
 (A) Dragging dait (B) Tightrope walker's gait  
 (C) Astasia-abasia (D) Frankenstein gait,
020. Which of the following dose of estrogen in OC pills is linked with increased incidence of brain stroke ?  
 (A) 20µg (B) 30µg  
 (C) 10µg (D) 80µg
021. The spontaneous EEG signals in routine scalp EEG arise from  
 (A) Cortical Pyramidal cell postsynaptic potentials  
 (B) Cortical Pyramidal cell presynaptic potentials  
 (C) Glial cells  
 (D) None of the above
022. Which of the following statements is not true ?  
 (A) Laplacian montage is a referential montage  
 (B) EEG amplitude increases with increasing interelectrode distance  
 (C) The common reference montage produces maximum attenuation of widespread fields  
 (D) All are true
023. Which of the following is not true regarding Spindle delta brushes in EEG?  
 (A) They are principal landmarks of prematurity  
 (B) They first appear at 26 weeks conceptional age  
 (C) First appear in temporal region  
 (D) They disappear at 36-37 weeks conceptional age
024. Which of the following muscles is suitable for biopsy for immunocytochemical studies of neuromuscular junction (NMJ)?  
 (A) External intercostal muscle (B) VestusLateralis  
 (C) Peroniusbrevis (D) Triceps
025. Immune related myasthenia gravis is most closely associated with the use of which of the following treatments ?  
 (A) Calcitonin gene related peptide antibodies  
 (B) Compliment inhibitors  
 (C) Immune checkpoint inhibitors  
 (D) Chimeric antigen receptor T cells
026. Patients with Lambert – Eaton myasthenicsyndrome caused by antibodies to P/Q voltage – gated calcium channels are most likely to develop which of the following conditions ?  
 (A) Hemiplegic migraine (B) Optic neuritis  
 (C) Pancerebellar syndrome (D) Recurrent meningitis

027. A woman who has a myopathy caused by mitochondrial DNA mutation located within the mitochondria, will on average, transmit the mutation to which of the following?
- (A) All of her children
  - (B) All her sons and none of her daughters
  - (C) Half of her sons and non of her daughters
  - (D) Half of her daughters and non of her sons
028. Women with typical preeclampsia or eclampsia require diagnostic imaging in the following circumstances except
- (A) seizures arising before week 20 of pregnancy
  - (B) postpartum eclampsia
  - (C) blood pressure >140/90 mm of Hg
  - (D) persistent visual symptoms
029. Which of the following therapeutic strategies is currently used in visual rehabilitation for hemianopias?
- (A) Cortical visual prostheses
  - (B) Full-lens prism glasses
  - (C) Inverting lenses
  - (D) Peli prism lenses
030. Which of the following statements is most accurate regarding fetal exposure to radiation during a noncontrast head CT scan of the pregnant mother?
- (A) it is equivalent to the dose scattered throughout the mother's body
  - (B) it is offset by use of a lead shield
  - (C) it may be up to 10 times higher than radiation from the environment
  - (D) the greatest risk is after week 20
031. Which of the following migraine abortive or prophylactic medications should be strictly avoided during breast-feeding?
- (A) sumatriptan
  - (B) dihydroergotamine
  - (C) nortriptyline
  - (D) propranolol
032. Fabry disease is most commonly associated with strokes in which of the following arterial distributions?
- (A) anterior cerebral artery
  - (B) posterior circulation
  - (C) lenticulostriate arteries
  - (D) middle cerebral artery
033. Which of the following cognitive functions is more often abnormal in the early stages of Alzheimer disease than in the early stages of dementia with Lewy bodies?
- (A) visuospatial skill
  - (B) executive function
  - (C) language comprehension
  - (D) recent memory
034. Which of the following conditions is most likely in a 34-year-old woman with headaches, rapid cognitive decline, episodes of abrupt change in vision and sudden hearing loss?
- (A) dipeptidyl-peptidase-like protein-6 (DPPX) encephalitis
  - (B) Susac syndrome
  - (C) N-methyl-D-aspartate (NMDA) antibody encephalitis
  - (D) steroid-responsive encephalopathy associated with autoimmune thyroiditis

035. Which of the following processes is characteristic of consolidation?
- (A) lists of items often being recalled in groups categorized by similarity  
 (B) memories becoming less dependent on medial temporal lobe structures over time  
 (C) pairing of an unconditioned stimulus with a conditioned stimulus producing a conditioned response  
 (D) repeated nonreinforcement of a response leading to decreased response strength
036. Which of the following aphasia features is commonly seen in semantic variant primary progressive aphasia?
- (A) difficulty with repetition  
 (B) greater difficulty with concrete than abstract nouns  
 (C) no difficulty naming pictured objects  
 (D) profound agrammatism
037. Which of the following neurologic diseases has been associated with an increase in suicidal ideation but not suicide attempts?
- (A) epilepsy (B) Huntington disease  
 (C) Parkinson disease (D) multiple sclerosis
038. Which of the following recommendations for aerobic exercise is most appropriate for a patient with neurogenic orthostatic intolerance?
- (A) avoidance of exercise (B) dancing  
 (C) tennis  (D) swimming
039. Jitteriness is characterised by all of the following except
- (A) Precipitated by stimulation  
 (B) Associated with low threshold for Moro reflex  
 (C) Usually occurs in newborn with perinatal asphyxia  
 (D) Treated with carbamazepine
040. Ingestion of food products is most likely to be the mode of contracting meningitis from which of the following bacteria ?
- (A) Haemophilus influenzae  (B) Listeria monocytogenes  
 (C) Neisseria meningitidis (D) Staphylococcus aureus
041. Which of the following visual symptoms is most likely to occur after a midbrain stroke ?
- (A) Achromatopsia  (B) Hallucinations  
 (C) Prosopagnosia (D) Metamorphopsia
042. All of the following are true regarding Hyperekplexia except
- (A) Both autosomal dominant and recessive forms exist  
 (B) Rigidity persists in sleep  
 (C) Intellectual disability develops in due course  
 (D) Treated with clonazepam
043. In which of the following conditions is FDG-PET most likely useful ?
- (A) Arteritic ischemic optic neuropathy (B) NMO spectrum disorders  
 (C) Toxic optic neuropathy (D) Traumatic optic neuropathy

044. Which of the following is the most common neurologic manifestation of Zika virus infection in adults?
- (A) Encephalitis (B) GB Syndrome  
(C) Meningitis (D) Myopathy
045. Neuroma formation is most likely to occur when which of the following structure is cut ?
- (A) Endoneurium (B) Epineurium  
(C) Perineurium (D) Vasa nervorum
046. All of the following are major features of Tuberous Sclerosis except
- (A) Cortical tuber (B) Cardiac rhabdomyoma  
(C) Shagreen patch (D) Bony cysts
047. Which of the following is recommended as the primary test for rapid diagnosis of Cryptococcal meningitis?
- (A) Cryptococcal antigen in CSF (B) Cryptococcal antigen in serum  
(C) India ink microscopy in CSF (D) India ink microscopy in serum
048. Which of the following is the most common complication of microvascular decompression performed for the treatment of trigeminal neuralgia?
- (A) Aseptic meningitis (B) CSF leak  
(C) Ipsilateral hearing loss (D) Trochlear nerve damage
049. In patients with HIV infection, which of the following is a risk factor for developing HIV – associated neurocognitive disorder(HAND) ?
- (A) Age younger than 40 yrs  
(B) Hypertension  
(C) Cocaine use  
(D) CD4+ T –cell count greater than 200 cells/mm<sup>3</sup>
050. An enzyme- linked immunoelectrotransfer blot (EITB)of a sample from which of the following sources is the most sensitive and specific test for past or present neurocysticercosis ?
- (A) CSF (B) Serum  
(C) Stool (D) Saliva
051. Which of the following causes of chronic meningitis most commonly affects older adults?
- (A) IgG4 –related pachymeningitis (B) Neurosarcoidosis  
(C) Vogt-Koyanagi-Harada syndrome (D) Sjogren syndrome
052. Which portion of the circuit of Papez is injured in Korsakoff syndrome?
- (A) Hippocampus (B) Mammillary bodies  
(C) Entorhinal cortex (D) Fornix
053. All of the following are true about tramadol except?
- (A) Mu-opioid receptor agonist (B) Serotonin reuptake inhibitor  
(C) Norepinephrine reuptake inhibitor (D) Decreases risk of seizures
054. Which is the key distinction between vestibular neuritis and labyrinthitis?
- (A) Direction of nystagmus (B) Sensation of rotating vs. undulating ground  
(C) Hearing loss (D) Loss of balance

055. After segmentation of the neural tube during development, which of the following structures will ultimately give rise to the thalamus?
- (A) Mesencephalon (B) Rhombencephalon  
(C) Metencephalon (D) Prosencephalon
056. The neurotoxin psilocybin, which causes euphoria, hallucinations, mydriasis, tachycardia, and seizures, can be found in which of the following?
- (A) Mushrooms (B) Puffer fish  
(C) Home-distilled ethanol (D) Shellfish
057. Which of the following is the most common treatable cause of neuropathy in the world?
- (A) Hypothyroidism (B) Diabetes  
(C) Paraproteinemia (D) Leprosy
058. Which of the following is innervated by the anterior interosseous nerve?
- (A) Abductor pollicis brevis (B) Pronator teres  
(C) Extensor indicis proprius (D) Flexor pollicis longus
059. In using cyclophosphamide for the treatment of autoimmune disorders, which of the following is not a clinical risk to be addressed or monitored?
- (A) Osteopenia (B) Infertility  
(C) Hemorrhagic cystitis (D) Immunosuppression
060. For which of the following hereditary neuropathies is an enzyme replacement therapy available?
- (A) Refsum disease (B) Porphyria  
(C) Fabry disease (D) Charcot-Marie-Tooth disease (CMT)
061. Which is true of Fukuyama congenital muscular dystrophy?
- (A) Causative gene not known  
(B) Weakness is mild, so most can exercise normally  
(C) Often associated with lissencephaly  
(D) Inherited in an X-linked recessive manner
062. Which of the following has not been putatively associated with an increased risk of multiple sclerosis (MS)?
- (A) Smoking (B) Vitamin D deficiency  
(C) Certain infections (D) Birth order
063. Which of the following immunotherapies acts exclusively through a purine analog metabolite?
- (A) Azathioprine (B) Cyclophosphamide  
(C) Cyclosporine (D) Rituximab
064. Pancake like gadolinium enhancement on MRI is seen in
- (A) NMOSD (B) spinal AVMs  
(C) spondylotic myelopathy (D) spinal cord tumours
065. All of the following nerves are commonly preferred for biopsy except
- (A) Sural nerve (B) Musculocutaneous nerve  
(C) Superficial radial nerve (D) superficial peroneal nerves



066. Which of the following neuropathies is not associated with hypopigmentation?  
 (A) Sarcoidosis (B) Leprosy  
 (C) POEMS (D) All of them cause hypopigmentation
067. Posterior interosseous neuropathy is characterised by all except  
 (A) Dropped fingers  
 (B) Radial SNAP is absent  
 (C) Radial deviation of wrist on wrist extension  
 (D) Extensor carpi ulnaris is weak
068. In a typical case of Lead neuropathy, weakness commences first in the extensors of  
 (A) Middle and ring fingers (B) Index and little fingers  
 (C) Thumb (D) Wrist
069. Froment sign is due to weakness of  
 (A) Adductor pollicis (B) Flexor pollicis longus  
 (C) Flexor pollicis brevis (D) Abductor pollicis longus
070. Cheiralgia parasthetica is mononeuropathy of  
 (A) Musculocutaneous nerve  
 (B) Superficial dorsal sensory branch of radial nerve  
 (C) Posterior interosseous nerve  
 (D) Anterior interosseous nerve
071. Ohtahara syndrome is characterised by all of the following except  
 (A) Epileptic spasms are the predominant seizure type  
 (B) EEG shows burst – suppression pattern  
 (C) Structural and genetic causes are more common in the etiology  
 (D) Metabolic disturbances are more common cause of the syndrome
072. Regarding Isoniazid neuropathy - which is wrong statement ?  
 (A) It is a dose related chronic sensory motor neuropathy  
 (B) Fast acetylators are more prone to neuropathy  
 (C) Optic neuropathy can occur  
 (D) INH inhibits pyridoxal phosphokinase
073. Which of the following patients are not benefited by plasma exchange?  
 (A) IgA MGUS associated poly neuropathy  (B) Ig M MGUS associated poly neuropathy  
 (C) Refsum's disease (D) LGI1 associated encephalitis
074. Which of the following is not correct with regard to Lennox- Gastaut syndrome ?  
 (A) Atonic seizures are difficult to control  
 (B) Vagal nerve stimulation is useful for atonic seizures  
 (C) Rufinamide can control drop attacks  
 (D) Interictal EEG shows Burst suppression pattern

075. Apraxia of speech is a feature of which of the following?  
 (A) Non fluent type of primary progressive aphasia  
 (B) Logopenic variant of primary progressive aphasia  
 (C) Semantic variant primary progressive aphasia  
 (D) None of the above
076. Which of the following is not a cause of primary microcephaly ?  
 (A) Intra uterine infections (B) Chromosomal disorders  
 (C) Agenesis of corpus callosum (D) Microcephaly vera
077. Which of the following is not a seizure pattern in new born child?  
 (A) Apnea with tonic stiffening of body (B) Benign nocturnal myoclonus  
 (C) Multifocal clonic limb movements (D) Paroxysmal laughing
078. Which of the following statements is false?  
 (A) Motor seizures rarely progress to a simple somatosensory seizure  
 (B) Sensory seizures progress to motor seizures  
 (C) Sensory seizures often end abruptly  
 (D) Motor seizures end abruptly
079. Which of the following is not a Nonconvulsive form of Status Epilepticus(NCSE)?  
 (A) Adversive status (B) Typical absence status  
 (C) Aphasic status (D) Atypical absence status
080. With regards to epilepsy associated with Ring chromosome 20, which of the following is not true?  
 (A) Age at onset of seizures varies from infancy to 17 years  
 (B) Repeated nonconvulsive status occur daily  
 (C) The characteristic EEG finding is of long runs of bilateral high amplitude slow wave with or without a spike component, with a bifrontal predominance  
 (D) Majority of patients have microcephaly
081. Which of the following statements is not true regarding Neurulation?  
 (A) It refers to formation and closure of the neural tube  
 (B) Disorders of Neurulation occur in the 1-4 weeks of gestation  
 (C) Secondary Neurulation occurs in most caudal regions of spinal cord  
 (D) Cerebellar hypoplasia is because of defective Neurulation
082. All of the following neuropathies predominantly involve upper limb except  
 (A) Familial amyloid neuropathy type 2 (B) Lewis-Sumner variant of CIDP  
 (C) Tangier disease (D) Fabry disease
083. The following are true regarding Slow – Channel Congenital Myasthenic syndrome except  
 (A) Intrinsic hand muscles and digit extensors are weak and atrophic  
 (B) Single nerve stimulation produces repetitive discharges  
 (C) Autosomal recessive inheritance  
 (D) Improvement with Fluoxetine

084. Which of the following is not true regarding Botulism?
- (A) Presynaptic neuromuscular disorder  
 (B) Postural hypotension and urinary retention occur  
 (C) Single fiber EMG (SFEMG ) shows increased jitter  
 (D) Treatment consists of antibiotics
085. Horner's syndrome can be seen in
- (A) Carotid artery dissection (B) Migraine  
 (C) Cluster headache  (D) All the above
086. Which of the following medications should be discontinued for 48 hours after a CT angiogram?
- (A) Apixaban (B) Aspirin  
 (C) Metformin (D) Lisinopril
087. Which of the following clinical parameters has been shown to correlate with the total cerebral burden of white matter hyperintensities of presumed vascular origin?
- (A) auditory acuity  
 (B) gait velocity  
 (C) ulnar nerve compound motor action potential amplitude  
 (D) saccade velocity
088. In a patient with ischemic stroke and patent foramen ovale detected on echocardiography, all of the following features increases the likelihood that the patent foramen ovale is the causal mechanism of stroke except -
- (A) age less than 50 years (B) non-hypertensive  
 (C) mitral stenosis on echocardiography (D) large intracardiac shunt
089. Efforts to enhance stroke recovery by developing monoclonal antibodies targeting myelin-associated glycoprotein, oligo-myelin glycoprotein, or Nogo-A are based on the fact that all three of these proteins are present at increased levels after stroke and they all do which of the following?
- (A) hyperpolarize neurons  (B) inhibit axon outgrowth  
 (C) initiate activation of sensitized T cells (D) stimulate autophagy
090. The best available data support the benefit of oral anticoagulation over antiplatelet therapy in stroke prevention for which of the following conditions?
- (A) aortic arch atherosclerosis  (B) atrial fibrillation  
 (C) cervical artery dissection (D) embolic stroke of undetermined source
091. In a patient with 75% stenosis of an internal carotid artery and a stroke in the territory of that artery, how long after the stroke must the patient remain free of new symptoms before his risk of future stroke is the same as if he had never experienced any ischemic symptoms?
- (A) this will never happen  (B) 6 months  
 (C) 1 year (D) 10 years

092. The presence of which of the following features may be useful in distinguishing paroxysmal sympathetic hyperactivity due to primary neurologic disease from paroxysmal sympathetic hyperactivity due to sepsis?
- (A) tachypnea involving use of the accessory muscles  
 (B) hyperthermia over 39.2°C (102.5°F)  
 (C) rapid-onset tachycardia  
 (D) severe muscle rigidity
093. Staining of skin biopsy specimens with which of the following compounds is most likely to be diagnostic in a patient with vivid, frightening dreams and dream-enactment behavior?
- (A) Congo red  (B) phosphorylated  $\alpha$ -synuclein  
 (C) protein gene product 9.5 (D) vasoactive intestinal polypeptide
094. Which of the following medications is a common cause of generalized hyperhidrosis?
- (A) benzotropine  (B) sertraline  
 (C) ipratropium bromide (D) oxybutynin
095. Which of the following electrophysiologic findings confirms identification of cortical myoclonus?
- (A) enhanced long-latency EMG reflexes to peripheral nerve stimulation  
 (B) enlarged cortical waves in somatosensory evoked potentials  
 (C) epileptiform activity on EEG that correlates with the myoclonus EMG discharges  
 (D) myoclonic EMG discharges of less than 100 ms
096. A 15-year-old boy experienced a respiratory arrest due to an asthma attack. At what point would a chronic multifocal action myoclonus be expected to develop?
- (A) following partial recovery of mental status  
 (B) 15 minutes after the start of respiratory arrest  
 (C) prior to arrest once oxygen saturation reaches 65 mm Hg  
 (D) within 24 to 28 hours of arrest only if the patient remains Unresponsive
097. Which of the following conditions, although usually benign, requires further workup with imaging as it may be associated with an underlying malignancy?
- (A) Spasmus nutans (B) idiopathic dystonia of infancy  
 (C) paroxysmal tonic upgaze of infancy (D) Sandifer syndrome
098. The presence of which of the following pathologic findings differentiates corticobasal degeneration from progressive supranuclear palsy?
- (A) astrocytic plaques (B) coiled bodies  
 (C) tufted astrocytes (D) 4-repeat tau
099. All of the following are the major clinical subtypes of Paraproteinemic neuropathy (PPN) except
- (A) Distal demyelinating symmetric neuropathy  
 (B) Chronic inflammatory demyelinating polyneuropathy (CIDP) – like  
 (C) Axonal sensorimotor peripheral neuropathy  
 (D) Pure motor neuropathy

100. The following are the reflex movements seen in brain death and do not preclude the diagnosis of brain death except
- (A) Deep tendon reflexes (B) Triple flexion  
(C) Babinski sign (D) Decorticate rigidity
101. Which of the following is the first line therapy for epilepsy associated with glucose transporter type 1 (GLUT 1) deficiency ?
- (A) Valproic acid (B) Ketogenic diet  
(C) Vagal nerve stimulation (D) Corpus Callosotomy
102. Which of the following antidepressants is associated with an increased risk of seizures ?
- (A) Bupropion (B) Citalopram  
(C) Mirtazapine (D) Venlafaxine
103. Which of the following antiepileptic drugs can be effectively administered one time per day ?
- (A) Perampanel (B) Lamotrigine  
(C) Rufinamide (D) Lacosamide
104. Which of the following clinical features of normal pressure hydrocephalus should be present for consideration of shunt surgery?
- (A) Gait abnormality (B) Incontinence  
(C) Impaired executive function (D) Psychomotor slowing
105. Which of the following is not true regarding myocymic discharges?
- (A) Grouped repetitive discharges with irregular interburst interval  
(B) Resemble the sound of marching soldiers on the loud speaker  
(C) Can be seen in brainstem glioma  
(D) The generator is motor nerve fiber
106. Which of the following is not a true statement?
- (A) Myotonia is often easier to define on neurological examination than on EMG examination  
(B) Acid maltase disease consistently shows myotonic potentials on EMG with absent clinical myotonia.  
(C) In myotonic syndromes repetitive stimulation at 5–10 Hz leads to a decrement in the compound muscle action potential (CMAP).  
(D) Myotonia is not painful
107. Which of the following is false regarding subdural grid electrodes?
- (A) Placed through craniotomy  
(B) Used when epileptogenic lesions are adjacent to eloquent cortex  
(C) Inferior to Stereo EEG  
(D) All are true
108. Lacunar infarcts in which of the following locations are associated with greatest negative impact on cognitive performance?
- (A) Lobar white matter (B) Thalamus  
(C) Pons (D) Internal capsule

109. In Alexia without agraphia the site of lesion  
 (A) Angular gyrus (B) Left medial occipital lobe and splenium  
 (C) Bilateral occipitotemporal cortex (D) Left supramarginalgyrus
110. Which of the following is not true regarding Callosal Apraxia?  
 (A) Apraxia is confined to non dominant hand  
 (B) Patient cannot pantomime with their left hand  
 (C) Cannot identify gestures  
 (D) Can have alien hand.
111. Repetition is preserved in which of the following aphasia?  
 (A) Conduction aphasia (B) Broca's aphasia  
 (C) Transcortical aphasia (D) Wernicke aphasia
112. Which of the following statements is not correct regarding diabetes and stroke?  
 (A) Duration of diabetes mellitus of more than 3 years increases the risk of stroke by 74%  
 (B) A glycatedhemoglobin goal of less than 7% has been recommended to prevent microvascular complications of type II diabetes  
 (C) Intensive glucose control reduces stroke risk  
 (D) In patients who have diabetes mellitus, an aggressive blood pressure reduction to a systolic blood pressure <120 mm Hg reduced the risk of any stroke by 41%
113. "Pseudo CSF" sign in the MRI of orbit is seen in which of the following condition?  
 (A) Optic nerve glioma  
 (B) Optic nerve meningioma  
 (C) Anti MOG Ig G antibody associated optic neuritis  
 (D) Autoimmune GFAP-IgGastrocytopathy
114. Which of the following statements is false?  
 (A) The dorsal cochlear nucleus contributes to sound localization  
 (B) The superior olivary complex is the first central auditory centre to receive binaural innervation  
 (C) The primary auditory cortex is located on the posterior aspect of the superior temporal gyrus.  
 (D) 75% of non-syndromic hearing loss is inherited in an autosomal-dominant pattern
115. Which of the following is fully human monoclonal antibody?  
 (A) Rituximab (B) Ocrelizumab  
 (C) Ofatumumab (D) Natalizumab
116. Which of the following infections has the strongest evidence of a causal relationship for the development of multiple sclerosis?  
 (A) Cytomegalo virus (B) Epstein – Barr virus  
 (C) Herpes simplex (D) Measles
117. Flushing is the common adverse effect of which of the following drugs used in the treatment of Multiple Sclerosis  
 (A) Fingolimod (B) Dimethyl fumarate  
 (C) Teriflunomide (D) Glatiramer acetate

118. What is the mechanism of action of Natalizumab?
- (A) Cell Lysis (B) Compliment Fixation  
 (C) Prevention Of Leucocyte Adherence (D) DNA Cross Linking
119. According to the latest law - Rights of Persons with Disability Act 2016 (RPWD Act 2016), which of the following is not correct?
- (A) Person with altered sensorium like patients with vegetative state cannot be certified  
 (B) Disability due to the involvement of cranial nerves was excluded from new guidelines  
 (C) Multiple sclerosis (MS) has been added as a neurological disability  
 (D) Modified Rankin scale (mRS) score of 3 amounts to 80% disability
120. To localize the epileptogenic focus in the insulo- opercular area, which of the following EEG is useful?
- (A) Grid electrodes  (B) Stereo-Electroencephalography  
 (C) Strip electrodes (D) Surface EEG
121. Which multiple sclerosis disease-modifying therapy requires monitoring for drug level before cessation of birth control?
- (A) Dimethyl Fumerate (B) Rituximab  
 (C) Teriflunomide (D) Ocrelizumab
122. A 22 month old boy presents with irregular rapid eye movements and generalized myoclonus. Which of the following conditions must be definitely ruled out?
- (A) Lyme disease (B) Sarcoidosis  
 (C) Neuroblastoma (D) Testicular embryonal cell carcinoma
123. Which of the following has absolute responsiveness to Indomethacin?
- (A) Cluster headache  
 (B) Hemicrania continua  
 (C) Short lasting unilateral Neuralgiform Headache Attacks  
 (D) Chronic migraine
124. Which of the following is not a feature of sympathetic hyperactivity from primary neurologic disease?
- (A) Skin pallor and piloerection (B) Hyperthermia  
 (C) Hypoxemia (D) Muscle rigidity
125. What is the first line treatment for cortical myoclonus?
- (A) Valproic acid (B) Clonazepam  
 (C) Levetiracetam (D) Brivaracetam
126. All of the following are the features of Gastaut type of occipital lobe epilepsy except
- (A) Onset at 3-16 yrs (mean, 8-9) of age  
 (B) Visual hallucinations  
 (C) Duration of seizure is more than 5 minutes  
 (D) Fixation off sensitivity

127. Which region of the brain has been suggested to contribute to the development of psychogenic movement disorder through its involvement in the modulation of neural circuit for self-agency?
- (A) Hypothalamus (B) Prefrontal cortex  
 (C) Temporoparietal junction (D) Thalamic reticular nucleus
128. Biotinidase deficiency is characterized by
- (A) Alopecia (B) Kinky hair  
 (C) Balding (D) Hirsutism
129. NMO Spectrum disorders occur decades after which of the following other neurologic disorders at higher rates than would be expected?
- (A) Febrile seizures  (B) Myasthenia gravis  
 (C) Viral meningitis (D) Neurosarcoidosis
130. Which of the following neurological signs can be seen in patients with essential tremor?
- (A) Ataxia (B) Dysphagia  
 (C) Dysarthria (D) Nystagmus
131. Which of the following is not correct regarding GeneXpert Mycobacterium Tuberculosis test?
- (A) It is based on real-time heminested PCR  
 (B) Results are available in approximately 2 hours  
 (C) It determines the susceptibility to Isoniazid  
 (D) The reported sensitivity of the assay is about 80% for the diagnosis of TBM
132. Which of the following situation is an example of phenotypic pleiotropy?
- (A) Linkage of different loci to the same phenotype in a large population  
 (B) Mutations in several different genes resulting in the same phenotype  
 (C) Different mutations in a single gene resulting in significantly different phenotypes  
 (D) Single nucleotide non- synonymous variants that do not alter protein function
133. Which of the following is the characteristic MRI feature of IgG4-Related Disease of Orbit?
- (A) T2 Hyperintensity  (B) T2 Hypointensity  
 (C) No contrast enhancement (D) Destruction of bone
134. What is the FDA approved time window for thrombolysis with IV – tPA for ischemic stroke?
- (A) 3 hours (B) 4.5 hours  
 (C) 6 hours (D) 9hours
135. Which of the following genetic tests would best detect a balanced chromosomal translocation?
- (A) Chromosomal microarray  
 (B) Karyotype  
 (C) Whole genome sequencing  
 (D) Multiplex ligation - dependent probe amplification
136. Detrusor weakness is seen in which of the following disease?
- (A) Myotonic dystrophy (B) LGMD 2A  
 (C) Desferlinopathy (D) Bethlem myopathy



137. Slimmer's palsy is type of  
 (A) Bulbar palsy (B) Facial palsy  
 (C) Peroneal neuropathy (D) Ulnar neuropathy
138. Which of the following eccrine sweat glands are not chiefly involved in thermoregulation?  
 (A) Forehead  (B) Palms and soles  
 (C) Upper limbs (D) Trunk
139. Polymicrogyria is most likely caused by a disruption of which of the following processes?  
 (A) Cell proliferation (B) Neuronal differentiation  
 (C) Postmigrational development (D) Neurulation
140. What is the antibody associated with Gluten sensitivity ataxia?  
 (A) Anti –glutamic acid decarboxylase (GAD) antibodies  
 (B) Tissue transglutaminase antibodies  
 (C) Guanosine triphosphate (GTP) cyclohydrolase 1 deficiency  
 (D) None of the above
141. Which of the following is the strongest risk factor for sudden unexpected death in epilepsy (SUDEP)?  
 (A) Antiseizure medication polytherapy  (B) Uncontrolled generalized tonic-clonic seizures  
 (C) Alcohol and other substance abuse (D) Concomitant psychiatric illness
142. All of the following are associated with T2 hyperintensity (brain MRI) in the bilateral inferior Olivary nuclei except  
 (A) Adult onset Alexander disease (B) Ataxia with Gluten sensitivity  
 (C) POLG ataxia  (D) Fragile X tremor-ataxia syndrome
143. Which of the following epileptic encephalopathies has the best overall prognosis?  
 (A) Continuous spike and wave in slow wave sleep  
 (B) Landau – Kleffner syndrome  
 (C) Early myoclonic Epilepsy  
 (D) Lennox – Gaustat syndrome
144. All of the following are true regarding Cannabidiol except  
 (A) Indicated for treatment of seizures associated with LG syndrome  
 (B) It has no interaction with Clobazam  
 (C) It increases liver enzymes  
 (D) Does not interact with the cannabinoid receptor CB1
145. When should the Glasgow coma scale score be assessed after traumatic brain injury (TBI) in order to best distinguish mild from moderate TBI ?  
 (A) Immediately after the inciting event (B) Within 5 minutes of the inciting event  
 (C) Within 15 minutes of the inciting event  (D) 30 minutes or later post injury
146. Which of the following chromosomes appears to be enriched with genes mutated in patients with intellectual developmental disorder?  
 (A) X (B) Y  
 (C) 4 (D) 21

147. Pseudohypertrophy is not seen in which of the following conditions?  
 (A) Sarcoglycanopathies (LGMD2C–F) (B) Dystrophinopathy  
 (C) LGMD 2I (D) LGMD2A
148. Which of the following is not true regarding Statin induced Immune-mediated necrotizing myopathy?  
 (A) Onset is months to years after starting statins  
 (B) Very high serum creatine kinase (>5000 iu/L)  
 (C) Biopsy — necrotizing myopathy with plenty of inflammatory cells  
 (D) May respond to IV IG
149. SCA 10 is characterized by  
 (A) CAG repeats (B) CTG repeats  
 (C) ATTCT repeats (D) CCTG repeats
150. Continuous spikes in slow wave sleep (CSWS/ESCS) is characterized by all except  
 (A) Regression of language and cognitive function  
 (B) Diagnosed when 85% or more of slow wave sleep is occupied by spike and slow waves  
 (C) Role of thalamus in the genesis of ESCS is suggested  
 (D) Carbamazapine is the drug of choice
151. Which of the following is not true regarding catamenial epilepsy?  
 (A) Three patterns of catamenial epilepsy are described  
 (B) Allopregnanolone has anticonvulsant potential  
 (C) Antimullerian hormone has epileptogenic potential  
 (D) Acetazolamide has been used in the treatment
152. Clinical worsening after treatment with IV Methyl Prednisolone most commonly occurs with which of the following spinal cord disorders?  
 (A) Epidural hematoma  
 (B) Ischemia after thoraco abdominal aortic surgery  
 (C) Spinal dural arteriovenous fistula  
 (D) Metastatic cord compression
153. Which of the following is accurate regarding late -onset Friedreich ataxia as compared to earlier -onset form of this disorder?  
 (A) Associated with larger trinucleotide expansion number  
 (B) Lower rates of cardiomyopathy and other non-neurologic manifestations  
 (C) More rapid progression following symptom onset  
 (D) More severe disease phenotype
154. Most common Neurological manifestation of COVID 19 is:  
 (A) Seizures (B) Headache  
 (C) Altered sensorium (D) Hiccups
155. Recommended therapy for acute spinal cord infarction includes which of the following?  
 (A) Corticosteroids (B) Thrombolytic  
 (C) Lumbar CSF drainage (D) Neuroprotective agents

156. Which of the following MRI abnormalities would be most likely in a patient with spinal neurocysticercosis?
- (A) Diastematomyelia (B) Enlarged central canal  
(C) Tethered spinal cord (D) Intracranial cysts
157. For patients with acute traumatic spinal cord injury, class I evidence of efficacy is available for which of the following medications?
- (A) Riluzole (B) Methylprednisolone  
(C) Minocycline (D) None
158. What type of neuropathic pain is most likely to be refractory to first-line treatments?
- (A) Chemotherapy-induced neuropathy (B) Painful diabetic neuropathy  
(C) Postherpetic neuralgia (D) Trigeminal neuralgia
159. Which of the following is the most common lower urinary tract symptom in Parkinson disease?
- (A) Dysuria (B) Incomplete bladder emptying  
(C) Nocturia (D) Urgency
160. Which of the following clinical features is most consistent with the diagnosis of idiopathic trigeminal neuralgia?
- (A) Bilateral pain (B) Tingling in the face  
(C) Paroxysms of pain lasting 1 hour (D) Spontaneous remissions
161. Which of the following disorders is most likely to be associated with the development of renal insufficiency due to high bladder pressures?
- (A) Hereditary spastic paraplegia (B) Multiple sclerosis  
(C) Multiple system atrophy (D) Spinal cord injury
162. A 16-year-old girl is referred for evaluation of episodes of collapsing. She reports that when she laughs she develops profound muscle weakness progressing over 20 to 30 seconds, and she falls to the ground. During the episodes, she is fully aware of what is going on around her but cannot move. What is the most likely diagnosis?
- (A) Cataplexy (B) Gelastic seizure  
(C) Transient ischemic attack (D) Psychogenic pseudo syncope
163. A 60-year-old man with chronic renal failure is admitted to the hospital with urinary tract infection. On the third day, he becomes confused and appears sedated. The following day, he develops myoclonus and is witnessed to have a generalized seizure. Which of the following medications is most likely to cause this constellation of symptoms?
- (A) Cefazolin (B) Cefepime  
(C) Ceftazoline (D) Cephalexin
164. Keraunoparalysis is transient paralysis caused by which of the following environmental-related conditions?
- (A) Acute mountain sickness (B) Decompression sickness  
(C) Hyperthermia (D) Lightning strike
165. Which of the following solid organ transplantations are associated with the highest risk for *Toxoplasma gondii* infection?
- (A) Heart (B) Kidney  
(C) Liver (D) Lung



175. Which of the following is a low risk PFO (patent foramen ovale)
- (A) PFO with atrial septal aneurysm
  - (B) PFO without atrial septal aneurysm but with spontaneous right-to-left shunt
  - (C) PFO without atrial septal aneurysm but with large shunt during Valsalva manoeuvre
  - (D) PFO without atrial septal aneurysm with small or moderate shunt size during Valsalva manoeuvre
176. Solitary sclerosis is a type of
- (A) Clinically isolated syndrome
  - (B) Systemic sclerosis
  - (C) Primary progressive Multiple Sclerosis
  - (D) None of the above
177. Which of the following is a not higher cognitive function?
- (A) Abstract thinking
  - (B) Language
  - (C) Problem solving
  - (D) Judgment
178. Conduction aphasia is produced by
- (A) Lesion involving SupramarginalGyrus
  - (B) Lesion involving Arcuate fasciculus
  - (C) Both of the above
  - (D) None of the above
179. All of the following are features of Amnestic syndrome except
- (A) Impaired anterograde memory
  - (B) Impaired procedural memory
  - (C) Confabulation
  - (D) Preserved remote memory
180. Which of the following is the pathological hallmark of Progressive Multiple Sclerosis?
- (A) Active plaque
  - (B) Smoldering plaque
  - (C) Inactive plaque
  - (D) Shadow plaque
181. Which of the following produces Myotonia on needle EMG examination?
- (A) Chloroquine
  - (B) Colchicine
  - (C) Alcohol
  - (D) Emetine
182. Gepants are a class of drugs which are
- (A) Calcitonin gene-related peptide (CGRP) receptor antagonists
  - (B) 5-HT<sub>1B/1D</sub>-receptor agonist
  - (C) 5-HT<sub>1F</sub> Receptor Agonists
  - (D) 5-HT<sub>1B/1D</sub>-receptor antagonist
183. Which of the following is most accurate regarding the use of the IntracerebralHemorrhage Score and other prognostic scores in patients presenting with acute intracerebralhemorrhage?
- (A) Initial examination should always be used, not an examination following stabilization
  - (B) Scores can only predict outcomes at time of hospital discharge
  - (C) Scores may be associated with a self-fulfilling prophecy and premature limitations in care
  - (D) Scores rely on variables that are not readily available clinically
184. Which of the following factors is associated with worse functional outcomes for patients in status epilepticus?
- (A) Male sex
  - (B) Convulsive status epilepticus
  - (C) History of epilepsy
  - (D) Age older than 60 years

185. Which of the following best describes the pattern and distribution of symptoms seen in patients with intensive care unit-acquired weakness?
- (A) Facial muscles are often preferentially involved
  - (B) Ocular muscles are most commonly spared
  - (C) Respiratory muscles are rarely involved
  - (D) Weakness is usually accompanied by hyperreflexia
186. Which of the following chemotherapeutic agents can induce antithrombin III deficiency?
- (A) Cytarabine
  - (B) 5-Fluorouracil
  - (C) Asparaginase
  - (D) Ifosfamide
187. Which of the following medications has been US Food and Drug Administration (FDA)-approved to treat irritability and aggression in children with autism spectrum disorder?
- (A) Amitriptyline
  - (B) Risperidone
  - (C) Clonidine
  - (D) Fluoxetine
188. All are true regarding dystonic storm except:
- (A) It is a rare life-threatening state of generalised, unremitting severe dystonic spasm
  - (B) It usually responds to standard antidystonia oral medications.
  - (C) It is often triggered by medication adjustment/withdrawal
  - (D) Intrathecal Baclofen can sometimes help refractory cases
189. All are true about Hyperglycemic hemiballism except:
- (A) It is more common in males
  - (B) It develops following severe non-ketotic hyperglycaemia
  - (C) The movements often dissipate within hours of correcting the hyperglycaemia
  - (D) The hemiballism may persist for over 3 months in 20%
190. All are true regarding Deep Brain Stimulation except:
- (A) People with DBS devices need prophylactic antibiotics for minor procedures
  - (B) placement of DBS device can interfere with the ECG trace
  - (C) Cardiac pacing may be hazardous in DBS patient
  - (D) The presence of a cardiac pacemaker is a contraindication to DBS implantation
191. All of the following are included in the core features of Posterior Cortical Atrophy except:
- (A) Relatively spared anterograde memory
  - (B) Relatively spared behaviour and personality
  - (C) Relatively spared visual language function
  - (D) Relatively spared executive function
192. An important exclusion criteria to diagnose Posterior Cortical Atrophy is:
- (A) Presence of limb apraxia
  - (B) Presence of afferent visual pathway disorder
  - (C) Presence of acalculia
  - (D) Presence of homonymous visual field defect

193. Which of the following CSF tests is most specific for neurosyphilis?  
 (A) chemokine CXCL13  
 (B) fluorescent treponemal antibody-absorption (FTA-ABS) test  
 (C) microhemagglutination assay for Treponema pallidum antibodies(MHA-TP)  
 (D) Venereal Disease Research Laboratory (VDRL)
194. All of the following are red flags for diagnosis of Multiple Sclerosis except  
 (A) Family history of neurologic disease other than MS  
 (B) Leptomeningeal disease  
 (C) Severe optic neuritis with poor recovery  
 (D) Transverse myelitis
195. Myelin oligodendrocyte glycoprotein antibody (MOG-IgG) disease typically involves which anatomic location?  
 (A) conus medullaris (B) corpus callosum  
 (C) inferior temporal pole (D) optic chiasm
196. Most accurate statement about use of Tranexamic acid in Traumatic Brain Injury(TBI)  
 (A) Most effective when used in patients with TBI within 3hrs  
 (B) It can be used in patients with TBI irrespective of GCS  
 (C) It can be used in patients with intracranial and extracranial bleeding  
 (D) It is effective in reducing long term disability
197. Cenobamate is a novel drug used for  
 (A) Chronic migraine (B) Tics  
 (C) Uncontrolled focal seizures (D) Dyskinesias in Parkinson's disease
198. All are false about Golodirsen except  
 (A) Results in exon 53 skipping  
 (B) Results in exon 51 skipping  
 (C) Promotes ribosomal read-through of nonsense (stop) mutations  
 (D) Recommended dose is 10mg/kg orally
199. Which of the following symptoms is more prominent in Lambert-Eaton myasthenic syndrome than in myasthenia gravis?  
 (A) Diplopia (B) Dry mouth  
 (C) Dysarthria (D) Dyspnea
200. Interferon gamma release assays for tuberculosis, such as QuantiFERON-TB Gold, have which of the following advantages over purified protein derivative skin testing?  
 (A) They are less expensive  
 (B) They are more reliable in patients who need annual testing  
 (C) They are unaffected by prior immunization with bacilli Calmette-Guerin (BCG) vaccine  
 (D) They can be used to monitor response to antituberculous treatment