

AOZ

PROVISIONAL ANSWER KEY (CBRT)

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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. Ventriculography was introduced by
 (A) Dr. Harvey Cushing (B) Dr. Walter Dandy
 (C) Dr. Rontgen (D) Dr. Cornelius Dyke
002. The exposure time taken for initial 'X' rays of spine by Harvey Cushing was
 (A) 1 min (B) 35 min
 (C) 40 min (D) 5 min
003. All of the following are Pioneers in Neurosurgeries from USA except
 (A) Harvey Cushing (B) Victor Horsley
 (C) Charles Frazier (D) Elsberg
004. First Neuro surgeon to excise a Meningioma in 1879 was
 (A) Macewen (B) Cushing
 (C) Dandy (D) Paul Broca
005. Neuro surgical operating techniques for haemostasis was introduced by
 (A) Macewan (B) Walter Dandy
 (C) Yasargil (D) Harvey Cushing
006. First clinical micro neurosurgery using operating Microscope was done by
 (A) Leonard Malis (B) James Greenwood
 (C) Julius Jacobson (D) Theodore Kurze
007. The factor associated with maximum increase in intracranial pressure (ICP) is
 (A) Increased central venous pressure to 14 mm Hg
 (B) Hypercarbia with PaCO₂ of 50 mm Hg
 (C) Ventilation with positive end-expiratory pressure (PEEP) of 5 cm H₂O
 (D) Bucking and coughing on endotracheal tube
008. Treatment of a patient with mannitol can lead to all the following, except
 (A) Oliguria (B) Hypotension
 (C) Hypervolemia (D) Hypokalemia
009. A patient is undergoing craniotomy for subdural hematoma. During the procedure, the surgeon requests lowering the intracranial pressure. All the following can be used, except
 (A) Mannitol (B) Hyperventilation
 (C) Steroids (D) Furosemide
010. An absolute contraindication for electroconvulsive therapy (ECT) is
 (A) Hypertension (B) Pheochromocytoma
 (C) Aortic aneurysm (D) Stroke
011. Signs of air embolism in a patient include all, except
 (A) Hypertension (B) Heart murmur
 (C) Arrhythmia (D) Decreased EtCO₂
012. Most sensitive method to detect air embolism is
 (A) Trans esophageal echocardiogram (TEE)
 (B) Decreased end-tidal carbon dioxide
 (C) Increased end-tidal nitrogen
 (D) Mill wheel murmur

013. All of the following decrease cerebral blood flow (CBF), except
(A) Etomidate (B) Propofol
(C) Thiopental (D) Ketamine
014. The electrophysiological monitor most resistant to anesthetic agents is
(A) Somatosensory-evoked potentials (B) Motor-evoked potentials
(C) Brain-stem auditory-evoked potentials (D) Electroencephalography
015. The most reliable monitor for neurologic monitoring in a patient undergoing carotid endarterectomy is
(A) Electroencephalogram (B) Jugular venous oxygen saturation
(C) Awake neurologic examination (D) Stump pressure
016. All the following are true for Guillain–Barré syndrome (GBS), except
(A) Respiratory paralysis is frequent complication
(B) Presence of labile autonomic nervous system
(C) Ascending motor paralysis
(D) Exaggerated reflexes
017. True statement about autonomic hyperreflexia is
(A) Lesions below T10 is responsible for the reflex
(B) It can be treated with deep general anaesthetic
(C) It is associated with vasoconstriction above the site of injury
(D) It can be provoked by thermal stimulation
018. True statement about cerebrospinal fluid (CSF) is
(A) It is formed in the third ventricle
(B) It is absorbed in arachnoid granulations present in fourth ventricle
(C) Total volume of CSF is about 150 mL
(D) Major mechanism of formation is by passive diffusion of ions
019. The only inhalational anesthetic that can cause an isoelectric EEG among the following is
(A) Isoflurane (B) Halothane
(C) Enflurane (D) Nitrous oxide
020. Intraoperative anesthetic management of a patient undergoing cerebral aneurysm repair includes all, except
(A) Maintenance of hypotension
(B) Mannitol for facilitating surgical exposure
(C) Maintaining mild hypothermia
(D) Patient remaining intubated for 24 hours postoperatively
021. Which of the following types of neuromonitoring can be done in a patient undergoing trans sphenoidal resection of a pituitary tumor?
(A) EEG (B) Motor-evoked potentials
(C) Visual-evoked potentials (D) Auditory-evoked potentials

022. You are called to evaluate a 50-year-old patient for brain death. All the following are criteria for brain death, except
- (A) Apnea for 10 minutes (B) Absence of corneal reflex
(C) Presence of spinal reflexes (D) Decerebrate posturing
023. All the following are relative contraindications to a sitting craniotomy, except
- (A) Right-to-left cardiac shunt (B) Patent foramen ovale
(C) Ventriculoatrial shunt (D) Ventriculoperitoneal shunt
024. A 28-year-old male is being treated in the ICU for raised intracranial pressure (ICP). All the following measures can aid in decreasing ICP *quickly*, except
- (A) Corticosteroids (B) Hyperventilation to PaCO₂ of 30 mm Hg
(C) Mannitol (D) Head elevation to 30 degrees
025. Which of the following agents will have the least effect on somatosensory-evoked potentials (SSEPs)?
- (A) Vecuronium (B) Propofol
(C) Fentanyl (D) Nitrous oxide
026. Signs and symptoms of raised intracranial hypertension include all the following, except
- (A) Hypertension (B) Tachycardia
(C) Bradycardia (D) Irregular respiration
027. Identify the unmatched Pair.
- (A) Superior orbital fissure – CN III, IV, VI, V1
(B) Foramen ovale – CN V2
(C) Jugular foramen – CN 9, 10, 11
(D) Lateral wall of cavernous sinus – CN III, IV, V1, VI
028. Anterior wall of the third ventricle is formed by.
- (A) Lamina terminalis (B) Pineal body
(C) Tuber cinereum (D) Mammillary body
029. Climbing fibres arise from
- (A) Inferior olivary Nucleus (B) Red Nucleus
(C) Caudate Nucleus (D) Putamen
030. A patient Presents with right sided hemiplegia and left sided oculomotor palsy the site of lesion is
- (A) Right Midbrain (B) Left Midbrain
(C) Right Internal Capsule (D) Left Internal Capsule
031. Interpeduncular fossa contains all except .
- (A) Mammillary body (B) Posterior Perforated substance
(C) Oculomotor nerve (D) Ophthalmic nerve
032. Which area is out of the blood – brain barrier
- (A) Thalamus (B) Cerebral cortex
(C) IV Ventricle (D) Area Postrema

033. Cranial nerve that arise from both brain as well spinal cord.
 (A) Hypoglossal (B) Accessory
 (C) Vagus (D) Glossopharyngeal
034. Which cranial nerve is not involved in Wallenberg syndrome?
 (A) XII (B) IX
 (C) X (D) XI
035. Which is the content of central grey matter in section of lower part of medulla?
 (A) Hypoglossal nucleus (B) Nucleus of spinal tract of trigeminal nerve
 (C) Nucleus ambiguus (D) Spinal nucleus of XI nerve
036. Which is situated in the vicinity of vagal triangle?
 (A) Vital centres (B) Respiratory centre
 (C) Cardiovascular centre (D) Vasomotor centre
037. A saucer – Shaped nucleus situated between putamen and insula is
 (A) Claustrum (B) Globus Pallidus
 (C) Zona incerta (D) Subthalamic nuclei
038. Vein of Galen (or) great cerebral vein is formed by vein of
 (A) Right and Left internal cerebral veins (B) Occipital and transverse sinuses.
 (C) Inferior sagittal and Straight sinuses. (D) Occipital and Petrosal sinuses.
039. Which of the following arteries supply visual fibres?
 (A) Anterior and Middle Cerebral (B) Middle Cerebral
 (C) Middle and Posterior Cerebral (D) Posterior cerebral
040. Which of the following is the single most useful laboratory test to diagnose multiple sclerosis?
 (A) IgG level in serum (B) Positive ANA in serum
 (C) IgG albumin ratio in CSF (D) Oligoclonal bands in cerebro spinal fluid
041. Which one of the following proportions of patients with myasthenia gravis have thymoma?
 (A) None (B) 90%
 (C) 40% (D) 15%
042. Which of the following statement about the pathogenesis of myasthenia gravis is true?
 (A) Myasthenia gravis is the result of type II immunological hypersensitivity reaction.
 (B) Myasthenia is caused by antibody directed against presynaptic calcium channel receptors.
 (C) Myasthenia is never caused by therapeutic drugs
 (D) Pregnancy poses a huge risk of neonatal Myasthenia to the fetus.
043. Which of the following investigation is helpful in cerebral systemic lupus erythematosus (SLE) ?
 (A) Antinuclear antibodies (ANA) (B) Antineuronal antibodies
 (C) C8 levels in serum (D) C3 levels in CSF
044. Which one of the antibodies associated with paraneoplastic syndrome is associated with limbic encephalitis?
 (A) Voltage gated calcium channels (B) Aquaperin-4
 (C) Antibodies to the neuron antigen 'HU' (D) Antibodies to myelin associated glycoprotein

045. Which one of the following statements about the treatment of early severe GBs is false?
 (A) High dose intravenous immunoglobulin is the treatment of choice.
 (B) Plasma exchange was no role to play.
 (C) Treatment with corticosteroids is treatment of choice.
 (D) Antiviral therapy is the 1st line of management.
046. In the Pathophysiology of development of multiple sclerosis the following are involved except
 (A) CD4 T cells (B) HLA
 (C) CD8 T cells (D) IL – 17
047. Disorders associated with a paraprotein are as follows except
 (A) Plasmocytoma (B) CLL
 (C) Polyneuropathy (D) Myxedema
048. In brain abscess, early cerebritis stage is from
 (A) 1st to 3rd day (B) 4th to 9th day
 (C) 10th to 13th day (D) More than 14 days
049. In brain abscess, zone of edema and reactive gliosis occurs in
 (A) Early cerebritis stage (B) Late cerebritis stage
 (C) Early capsule formation stage (D) Late capsule formation stage
050. Spinal intramedullary tuberculosis is most frequently in
 (A) Cervical spinal cord (B) Thoracic spinal cord
 (C) Lumbar spinal cord (D) Sacral spinal cord
051. Capsule of intracranial tuberculoma is made of
 (A) Fibrous tissue (B) Collagen
 (C) Macrophages (D) Gliosed brain tissue
052. Most common nerve affected by leprosy is
 (A) Ulnar nerve (B) Median Nerve
 (C) Common peroneal nerve (D) Posterior tibial nerve
053. Stage of cysticerci after entering the CNS is
 (A) Vesicular (B) Colloidal
 (C) Granular-nodular (D) Nodular calcified cyst
054. Which of the following is not an absolute criteria for diagnosis of NCC
 (A) Histological demonstration of the parasite
 (B) Cystic lesion with scolex on CT/MRI
 (C) Direct visualization of subretinal parasites by fundus examination
 (D) Positive serum EITB for anticysticercal antibodies
055. Single most common cause of adult onset epilepsy in developing countries is
 (A) Trauma (B) Tumour
 (C) Tuberculoma (D) Cysticercosis

056. The most common vaccine preventable cause of encephalitis in Asia
- (A) Creutzfeldt Jacob disease (B) Subacute sclerosing panencephalitis
 (C) Japanese encephalitis (D) Herpes simplex encephalitis
057. Which one of the following indications for stereotactic biopsy of a brain lesion is LEAST appropriate?
- (A) Deep seated lesions
 (B) Infiltrative lesion
 (C) Lesions in eloquent cortex
 (D) Suspected frontal renal cell carcinoma brain metastasis
058. Which one of the following statements regarding biopsy of brainstem lesions is LEAST accurate?
- (A) Contralateral extra ventricular trans frontal approach is suited to more lateral pontine lesions
 (B) Ipsilateral trans frontal approach may have a higher risk of intraventricular hemorrhage
 (C) Is more commonly used in adults compared to children
 (D) Occipital transtentorial approach is routinely used
059. Which one of the following statements regarding average prognosis of patients presenting with Karnofsky score less than 70 is most accurate?
- (A) A Karnofsky performance score less than 70 is associated with a median survival of 2 months
 (B) A Karnofsky performance score less than 70 is associated with a median survival of 4 months
 (C) A Karnofsky performance score less than 70 is associated with a median survival of 6 months
 (D) A Karnofsky performance score less than 70 is associated with a median survival of 8 months
060. Which one of the following factors is most important in improving length of survival in gliomas?
- (A) 1p19q codeletion (B) ATRX mutation
 (C) EGFR mutation (D) IDH1/2 mutations
061. In UK, which one of the following statements regarding driving restrictions due to neurological disorders is LEAST accurate?
- (A) Driving can be reconsidered 6 months after craniotomy for a benign meningioma if there is no seizure history
 (B) Driving can be considered after 12 months for most craniotomies
 (C) Driving can be considered whenever there is no residual impairment likely to affect driving after trans-sphenoidal pituitary surgery
 (D) Driving can be considered 3 years after craniotomy for high-grade glioma if safe to do so and no evidence of tumor progression.
062. 27-year-old man presents to his primary care doctor with a low-grade fever, headache, and neck stiffness, which have become more bothersome over the past 1-2 weeks. Serum is positive for *Borrelia burgdorferi* IgM. CSF polymerase chain reaction (PCR) is also positive for this organism. The cranial nerve most commonly affected in this disease is most likely?
- (A) Abducens nerve (B) Facial nerve
 (C) Glossopharyngeal nerve (D) Oculomotor nerve

063. An 85-year-old woman has 3 days of gradually worsening fever and headache. She then develops blurry vision and a stiff neck. MRI with contrast has an enhancement pattern suggesting rhombencephalitis. CSF shows a mild pleocytosis with no organisms. All blood and CSF cultures are negative. Which one of the following is the most likely organism responsible for the patient's condition?
- (A) Borrelia burgdorferi (B) E. coli
(C) HTLV-1 (D) Listeria monocytogenes
064. A 40-year-old ex-IV drug abuser presents to the emergency room with a seizure. CT head with contrast shows 3 cm diameter ring enhancing lesion periventricular location. MRI is performed and the lesion is bright on DWI and dark on ADC map. Which one of the following would be the appropriate next step in management?
- (A) Blood cultures and external ventricular drain then start intravenous antibiotics
(B) Craniotomy and excision of abscess then start intravenous antibiotics
(C) Image-guided aspiration of abscess then start intravenous antibiotics
(D) Endoscopic aspiration and irrigation
065. A 52-year-old woman with acquired immune deficiency syndrome (AIDS) presents to the emergency room with mild left hemiparesis and altered mental status. A CT scan reveals several ring-enhancing lesions with minimal mass effect. Which one of the following is the best next step in management?
- (A) Get a cerebral angiogram
(B) Order a ventricular CSF aspiration
(C) Perform a lumbar puncture and include CSF for Epstein-Barr virus (EBV) PCR in tests ordered
(D) Stop all antiretroviral therapy
066. A 35-year-old intravenous drug abuser presents with inability to control his left hand. He reports that at times he will button his shirt with his right hand, only to find that his left hand is unbuttoning the shirt against his control. He has a history of thrush. He is alert and oriented. MRI shows an increased T2 signal affecting the subcortical white matter of the right parietal lobe without enhancement.
- (A) Cytomegalovirus (B) Herpes simplex virus
(C) HIV (D) JC virus
067. Commonest cause of pyogenic brain abscesses
- (A) E. coli (B) Klebsiella
(C) Pseudomonas (D) Viridans streptococci
068. Most common glioma
- (A) Diffuse Astrocytoma (B) Anaplastic Astrocytoma
(C) Glioblastoma multiforme (D) Gemistocyte Astrocytoma
069. Which of the following is NOT required for the diagnosis of GBM as per WHO 2007
- (A) Presence of Necrosis (B) Vascular proliferation
(C) Pleomorphism (D) Increased mitotic activity
070. The genetic hall mark of secondary GBM
- (A) Deletion of chromosomal arm 1p (B) Deletion of chromosomal arm 19p
(C) Deletion of chromosomal arm 19q (D) Presence of Tp53 mutation

071. Most common primary localization of gliosarcoma is
 (A) Frontal lobe (B) Parietal lobe
 (C) Temporal lobe (D) Occipital lobe
072. Primary glioblastoma is characterized by
 (A) EGFR amplification and mutation
 (B) Loss of heterozygosity of chromosome 10q
 (C) Detection of the phosphatase and tension homologue on chromosome 10
 (D) All the above
073. The presence of thin branching blood vessels with a CHICKEN WIRE – like appearance is the characteristic pathology findings in
 (A) Anaplastic oligodendrogliomas (B) Sub ependymal giant cell astrocytoma
 (C) Angiocentric glioma (D) Astroblastoma
074. Pleomorphic xantho Astrocytoma is often associated into
 (A) Tuberous sclerosis (B) Neurofibromatosis Type II
 (C) Sturge – Weber syndrome (D) Von Hippel – Lindau disease
075. The most common location of dysembryoplastic (DNET) neuroepithelial tumours is
 (A) Frontal lobe (B) Parietal lobe
 (C) Temporal lobe (D) Occipital lobe
076. The most common embryonal tumour in children is
 (A) Ganglioneuroblastoma (B) Medulloblastoma
 (C) Medulloepithelioma (D) Pineoblastoma
077. Cortical cystic structure with an enhancing mural module is the characteristic imaging findings in
 (A) Pilocystic Astrocytoma (B) Angiocentric glioma
 (C) Pilomyxoid Astrocytoma (D) Pleomorphic xanthoastrocytoma
078. Peritumoral cyst formation is the characteristic feature in
 (A) Hemangioblastoma (B) Medulloplasma
 (C) Astroblastoma (D) Pleomorphic xantho astrocytoma
079. Most common location of spinal cord Hemangioblastomas
 (A) Anterior to the dentate ligament (B) Posterior to the dentate ligament
 (C) Antero lateral to dentate ligament (D) Postero lateral to dentate ligament
080. Most common cause of brain metastases in adults is
 (A) Lung cancer (B) Breast cancer
 (C) Melanoma (D) Renal cancer
081. Immuno histo chemical assay which does not help in the diagnosis of meningioma
 (A) Epithelial membrane antigen (EMA) (B) S-100
 (C) Vimentin (D) Anti-Leu 7
082. Hardy classification is used for
 (A) Medulloblastoma (B) Pituitary tumor
 (C) Meningioma (D) Vestibular schwannoma

095. The most important effects of hypertension on the brain include.
 (A) Lacunar infarcts (B) Hypertensive encephalopathy
 (C) Slit hemorrhages (D) All of the above
096. A patient presents with truncal ataxia. Unsteady gait and nystagmus .He has been a drinker for a while now. His distorted memory which he compensates for by confabulation what histological feature is seen in his disorder?
 (A) Degeneration of neurons in the medial dorsal nucleus of the thalamus.
 (B) Neurofibrillary tangles.
 (C) Excess accumulation of tau proteins.
 (D) Atrophy of the frontal caudate and putamen of the brain.
097. The most common cause of intracerebral hemorrhage is associated with
 (A) Tumors (B) Cerebral amyloid angiopathy
 (C) Liver failure (D) Hypertension
098. A Patient is initially stable but later presents with headache, vomiting with seizures , later he has hypertension and Bradycardia. He received a blow to the side of his head. What kind of vessel was involved?
 (A) Bridging veins (B) Middle meningeal artery
 (C) Anterior communicating artery (D) Posterior Communicating artery
099. All of the following are functions of extrapyramidal tract except:
 (A) Adjustment of skeletal muscle bone.
 (B) Producing of fine discrete movement.
 (C) Adjustment of Postural activities.
 (D) Adjustment of muscle movement to meet present plans.
100. Which of the following will be present in cerebellar ataxia
 (A) Tremor may be absent during movement
 (B) No dysmetria
 (C) Shuffling gait is present
 (D) Overshooting of movement when removing the resistance factor
101. Secondary Somatic sensory area receive fibers from all the following except.
 (A) Thalamus (B) Primary somatic sensory area
 (C) Visual cortex (D) Wernick area
102. Which of the following structure in the spine is pain insensitive?
 (A) Nucleus pulposus (B) Dura
 (C) Annulus fibrosus (D) Longitudinal ligaments
103. MRI findings in chiari-I malformation include all except
 (A) Low lying tonsils below foramen magnum
 (B) Absent cisterna magna
 (C) Horizontal orientation of Tonsillar sulci
 (D) Short posterior arch C1

104. Dandy walker complex include all except
 (A) Encysted 4th ventricle (B) Large posterior fossa
 (C) Persistent Blake pouch cyst (D) Absent cisterna magna
105. In NF2 all are seen except
 (A) Optic nerve Glioma (B) Vestibulocochlear nerve schwannoma
 (C) Spinal cord ependymoma (D) Intracranial meningioma
106. Diagnostic clue for Von Hippel Lindau disease is
 (A) CNS Hemangioblastoma (B) Meningioma
 (C) Schwannoma (D) Ependymoma
107. All are found in Tuberous sclerosis except
 (A) Sub ependymal nodules (B) Sub cortical tubes
 (C) White matter lesions (D) Descent of cerebellar tonsils
108. Tram Track calcification is seen in
 (A) Tuberous sclerosis (B) Sturge weber syndrome
 (C) Von Hippel Lindau disease (D) NF2
109. Serpentine leptomeningeal enhancement in CECT is seen in
 (A) Tuberous sclerosis (B) Sturge – Weber syndrome
 (C) VHL disease (D) NF2
110. Epidural Hematoma – CT findings include all except
 (A) Hyperdense Biconvex Mass (B) Swirl Sign
 (C) Does not cross the Falx or tentorium (D) Associated with skull fractures
111. Imaging findings of Acute SDH include all except
 (A) Crescent shaped homogeneously hyperdense extra-axial collection
 (B) May cross sutural lines
 (C) Usually crosses the Falx
 (D) May extend along the tentorium
112. Crescent shaped multiseptated extra-axial collection is diagnostic of
 (A) Acute SDH (B) Chronic SDH
 (C) Brain Abscess (D) Acute EDH
113. Traumatic SAH more than 5 mm without any mass lesion is
 (A) Grade 1 (B) Grade 2
 (C) Grade 3 (D) Grade 4
114. Subfalcine herniation – findings are all except
 (A) Unilateral frontal lobe mass (B) Uncus displaced under the falx
 (C) Dilated contralateral ventricle (D) Displaced ACA
115. Kernohans notch is seen in
 (A) Subfalcine herniation (B) Early Transtentorial herniation
 (C) Late Transtentorial herniation (D) Ascending transtentorial herniation

116. Ascending transtentorial herniation is usually caused by
 (A) IV Ventricle SOL (B) Vertex EDH
 (C) Dandy walker malformation (D) Hydrocephalus
117. In ascending transtentorial herniation
 (A) Supra sellar cisterns are effaced. (B) Ambient cisterns deformed.
 (C) CP/Angle cisterns enlarge. (D) Quadrigeminal cistern is deformed
118. Hounsfield unit for Fat is
 (A) -30 to -50 (B) -50 to -100
 (C) >1000 (D) 0
119. According to BTF guidelines all are operative guidelines for Epidural hematoma except
 (A) EDH of thickness >15 mm (B) EDH of volume of 30 cubic cm in CT
 (C) EDH volume of 15 cubic cm in CT (D) Midline shift of >5mm
120. Pituitary adenoma has all the features except
 (A) Adenohypophysis is isointense with grey matter
 (B) Neurohypophysis appears as bright spot on T1
 (C) Neurohypophysis only enhances with contrast
 (D) Pituitary adenoma are less or non enhancing with contrast
121. Leptomenigeal cyst is
 (A) It is a congenital cyst (B) It is a traumatic cyst
 (C) CT Shows dense sclerosis (D) Enhances brightly with contrast
122. All are true about cervical degeneration except
 (A) K line is the relationship of spine to Postero inferior part of C2 to C7
 (B) K line decides the approach for surgery
 (C) More than 3 levels is preferably managed posteriorly
 (D) K line obtained by plain radiograph of standing position is similar to CT MPR images of supine position.
123. Which is not true in thoracolumbar injury according to modified AO classification
 (A) NX implies unable to do neurological examination
 (B) M1, indeterminate integrity of posterior ligamentous complex
 (C) N1 indicates complete spinal cord injury
 (D) N0, neurologically intact patient
124. The following lines are used to assess basilar invagination except
 (A) McRae's line (B) Fischgold's line
 (C) Fischer's line (D) Wackenheims clivus – canal line
125. Investigation most useful in concussion syndrome is
 (A) CT Brain (B) MRI Brain
 (C) Diffuse Tensor Imaging (DTI) (D) PET
126. The least common cause of EDH is injury to
 (A) Middle Meningeal artery (B) Anterior Meningeal Artery
 (C) Sagittal sinus (D) Transverse Sinus

127. Duret Hemorrhages are seen in
 (A) Frontal lobe (B) Temporal Lobe
 (C) Brain stem (D) Hippocampus
128. The most Significant clinical localization sign is
 (A) II Nerve palsy (B) III Nerve palsy
 (C) VI Nerve palsy (D) VII Nerve Palsy
129. False localising sign include all except
 (A) Kernohan's notch phenomena (B) III N Palsy
 (C) Papilledema (D) Homonymous hemianopia
130. "Fungus Cerebri" is seen in
 (A) Skull Bone defect (B) Fungal infection of Brain
 (C) MRI finding in meningitis (D) Viral Encephalitis
131. The most common cranial neuropathy after closed TBI is
 (A) Anosmia (B) Blindness
 (C) Ptosis (D) Deviation of angle of mouth
132. All are complications of TBI except
 (A) SIADH (B) Cerebral salt wasting syndrome
 (C) Hypopituitarism (D) Hypotension
133. For bone grafting in TBI common Donor sites are all except
 (A) Iliac crest (B) Vertebra
 (C) Rib (D) Skull vault
134. Drug given for spasticity in TBI include all except
 (A) Bactofen (B) Gabapentin
 (C) Diazepam (D) Buspirone
135. Hyperventilation in TBI causes all except
 (A) Decrease CBF (B) Lowers ICP
 (C) Causes Hypocapnia (D) Causes Vasodilation
136. Active endogenous neurogenesis is seen in
 (A) Insula (B) Dentate gyrus
 (C) Uncus (D) Orbito - Frontal cortex
137. Conditions with increased risk of Post traumatic seizures include all except
 (A) ICH (B) GCS less than 10
 (C) Late seizures after 3 days (D) Alcohol abuse
138. Primary Lesion of Rotational Acceleration/Deceleration head injury is
 (A) Contusion (B) SDH
 (C) EDH (D) DAI
139. The Intra-cranial segment of Optic nerve measures
 (A) 2 mm (B) 5 mm
 (C) 10 mm (D) 15 mm

140. Cushings Triad include all except
 (A) Hypertension (B) Bradycardia
 (C) Cushings ulcer (D) Respiratory irregularity
141. Factors causing intracranial Hypertension include all except
 (A) Cerebral edema (B) Cerebral Hyperemia
 (C) Venous sinus thrombosis (D) Hypotension
142. Therapy for intracranial hypertension include all except
 (A) Barbiturate therapy (B) Hypothermia
 (C) Hyperventilation (D) Hypotensive therapy
143. Drugs used to treat edema in head injury include all except
 (A) Phenobarbitone (B) Lasix
 (C) Mannitol (D) Dexamethasone
144. Fractures of clivus are associated with all except
 (A) Olfactory Nerve injury (B) Abducent Nerve injury
 (C) CSF Leak (D) Diabetes Insipidus
145. Indication for surgery in EDH include all except
 (A) Volume > 30 cm³ (B) Thickness > 15 mm
 (C) Midline shift > 5 mm (D) GCS > 8
146. Artery of Bernasconi and cassinari is a branch of
 (A) ICA (B) MCA
 (C) ACA (D) PCA
147. Foster Kennedy syndrome is characterized by all except
 (A) Ipsilateral anosmia (B) Ipsilateral central scotoma
 (C) Contralateral central scotoma (D) Contralateral papilledema
148. Pterional craniotomy was designed by
 (A) Dandy (B) Crushing
 (C) Yasargil (D) Fischer
149. Modified Fisher scale is used for grading
 (A) SAH (B) DAI
 (C) Diffuse cerebral edema (D) EDH grading
150. Recurrent artery of Hubner is a branch of
 (A) A1 segment (B) A2 segment
 (C) A3 segment (D) A4 segment
151. All the following trials are concerned with aneurysms except
 (A) ISAT (B) BRAT
 (C) ARUBA (D) UCAS
152. Acute paralysis of Left lower limb with lesser involvement of Left upper limb would be most likely to occur in
 (A) Anterior cerebral artery occlusion (B) Middle cerebral artery occlusion
 (C) Posterior cerebral artery occlusion (D) Anterior spinal artery occlusion

153. The most common cause of non-traumatic bleeding into sub arachnoid space
 (A) Aneurysm (B) AVM
 (C) Intracranial tumor (D) Blood Dyscrasias
154. The cranial nerve most often involved in polyneuritis is
 (A) V (B) VII
 (C) IX (D) X
155. Paget's Disease
 (A) Produces platybasia early
 (B) Often produces blindness
 (C) Usually causes disability only when skull (or) spine is involved
 (D) Infrequently causes facial palsy
156. The Neurologic finding of acute polyphyria include
 (A) Dysarthria (B) Facial diplegia
 (C) Amblyopia (D) Normal tendon reflexes
157. In Sydenham's chorea
 (A) Cellular degeneration and varying degrees of arteritis are found
 (B) Lesions are demonstrated in basal ganglia
 (C) Onset is usually abrupt
 (D) Muscle tone is normal
158. Collagen disease
 (A) Involves CNS and not muscles. (B) Involves muscles and not CNS.
 (C) Does not involve spinal cord (D) Involves peripheral nervous system
159. In Stokes- Adams syndrome
 (A) Attacks are related to posture
 (B) Convulsive movements occur
 (C) Syncope occurs during asystole but ventricular fibrillation does not occur
 (D) Prodromal signs are present.
160. In Cluster head ache
 (A) Ipsilateral Horner's syndrome may be present.
 (B) Pain is usually bilateral.
 (C) Attacks typically last for 8-10 hours and then subside.
 (D) Women are affected more often than men.
161. If tapping of Pes Anserinus causes bilateral twitching of the facial muscles one would expect.
 (A) Meningitis (B) Hypoglossal lesions
 (C) Pseudo bulbar palsy (D) Tetany
162. In a supine patient if one leg is raised, the pressure on the bed by the contralateral heel does not increase in
 (A) Tabes dorsalis (B) Myasthenia gravis
 (C) Thoracic cord tumour (D) Hysteria

163. If both jaw jerk and arm jerk are exaggerated the lesion is usually
 (A) Just below foramen magnum (B) At foramen magnum
 (C) In the medulla (D) Above pons
164. Meniere's disease
 (A) One of the most frequent causes of dizziness.
 (B) Is rarely familial, begins in middle life.
 (C) Causes bilateral hearing loss.
 (D) Causes vertigo lasting for one hour.
165. In Tic Douloureux
 (A) Eye may close and have tears.
 (B) Pain is almost constant.
 (C) Small areas of hypalgesia may be present.
 (D) Disseminated sclerosis may be present in 25% of cases.
166. Tremor of extrapyramidal origin
 (A) Is slower and greater in amplitude than tremor of thyrotoxicosis
 (B) Has a very specific anatomic site of origin
 (C) Is faster than that of anxiety
 (D) In faster than that of intoxications
167. The symptoms associated with a cervical rib
 (A) More common in males. (B) Begin with pain most often.
 (C) Frequently include Horner's syndrome. (D) Are more motor than sensory.
168. Brainstem infarct involving the midbrain affects following cranial nerve
 (A) III N (B) V N
 (C) VI N (D) VIII N
169. Vertical nystagmus is due to lesion in
 (A) Vestibular nucleus (B) Vestibular Pathway
 (C) Brainstem (D) Ocular pathway
170. Non Nystagmus ocular oscillations are the following except
 (A) Ocular flutter (B) Opsoclonus
 (C) Ocular bobbing (D) Oscillopsia
171. The following about jaw jerk are true except
 (A) Absent jaw jerk is very significant
 (B) Jaw moves upwards on tapping
 (C) Disease like psudobulbar palsy, motor neuron disease are expressed
 (D) Exaggrated jerk is indicative of localization
172. Bilateral UMN facial palsy occurs in
 (A) Cerebrovascular accidents (B) Heerfordt's syndrome
 (C) Pseudobulbar palsy (D) Motor Neuron disease

173. Unilateral recurrent laryngeal nerve palsy is caused by all except
 (A) Aortic aneurysm (B) Cervical IVDP
 (C) Malignant thyroid gland (D) Enlarged cervical glands
174. LMN type of lesion of hypoglossal nerve is caused by
 (A) Syringomyelia (B) Profound hemiplegia
 (C) Amyotrophic lateral sclerosis (D) Parkinsonism
175. Hypotonia – common causes are,
 (A) Gegenhalten (B) Parkinsonism
 (C) Sydenhams chorea (D) Spinal cord tumour
176. Nerve Grafts are usually taken from
 (A) Anterior Tibial nerve (B) Sural Nerve
 (C) Saphenous nerve (D) Post. Tibial nerve
177. Type A nerve injuries include all except
 (A) Nerve Transection (B) Contusion
 (C) Traction (D) Injection
178. Contents of the carpal tunnel are all except
 (A) Median nerve (B) Flexor digitorum superficialis
 (C) Flexor digitorum profundus (D) Ulnar nerve
179. Complications after spinal surgery include all except
 (A) Infection (B) DVT
 (C) Vision loss (D) SIADH
180. All are true regarding brachial plexus injury, except -
 (A) Preganglionic lesions have a better prognosis than postganglionic lesions
 (B) Erb's palsy causes paralysis of the abductors and external rotators of the Shoulder
 (C) In Klumpke's palsy, Horner's syndrome may be present on the ipsilateral side
 (D) Histamine test is useful to differentiate between the preganglionic and Postganglionic lesions
181. Median nerve injury at the wrist causes -
 (A) Claw hand (B) Loss of apposition of thumb
 (C) Policeman's tip deformity (D) Saturday Night palsy
182. A pole vaulter had a fall during pole vaulting and had paralysis of the arm. Which of the Following investigations gives the best recovery prognosis
 (A) Electromyography (B) Muscle biopsy
 (C) Strength Duration Curve (D) Creatine phosphokinase
183. All the following nerves are involved in entrapment neuropathy except -
 (A) Femoral nerve (B) Median nerve
 (C) Ulnar nerve (D) Lateral cutaneous nerve of thigh

195. The most common incomplete spinal cord injury is
(A) Posterior cord syndrome (B) Anterior cord syndrome
 (C) Central cord syndrome (D) Brown- Sequard syndrome
196. Characteristic "Cock robin" head position is seen in
(A) Atlanto occipital dislocation (B) Atlanto axial rotatory subluxation
(C) Anterior atlanto axial dislocation (D) Posterior atlanto axial dislocation
197. The most common type of burst fracture of thoraco lumbar region is
(A) fracture of both end plates (B) fracture of superior end plates
(C) fracture of inferior end plates (D) Burst rotation
198. Meralgia paraesthetica is due to involvement of a nerve which has the following root value
(A) T12, L1 (B) L1, L2
 (C) L2, L3 (D) L3, L4
199. Principal ligaments stabilizing atlanto-axial joints are all except
(A) Cruciate ligament (B) Transverse ligament
(C) Alar ligament (D) Ligamentum flavum
200. Association between a nerve and its function is
 (A) Median nerve / flexion of the wrist
(B) Ulnar nerve / abduction of the little finger
(C) Obturator nerve / thigh adduction
(D) Common peroneal nerve / extension and flexion of the ankle