ARB

PROVISIONAL ANSWER KEY (CBRT)

Name of The Post	**Assistant Professor, Neuro Surgery, 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.

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

(1) ઉમેદ્વારે વાંધા-સૂચનો નિયત કરવામાં આવેલ વાંધા-સૂચન પત્રકથી રજૂ કરવાના રહેશે.

(2) ઉમેદ્વારે પ્રશ્નપ્રમાણે વાંધા-સૂચનો રજૂ કરવા વેબસાઈટ પર પ્રસિધ્ધ થયેલ નિયત વાંધા-સૂચન પત્રકના નમૂનાનો જ ઉપયોગ કરવો.

(3) ઉમેદ્વારે 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) ઉમેદ્વારે જે પ્રશ્નના વિકલ્પ પર વાંધો રજૂ કરેલ છે અને વિકલ્પ રૂપે જે જવાબ સૂચવેલ છે એ જવાબ ઉમેદ્વારે પોતાની ઉત્તરવહીમાં આપેલ હોવો જોઈએ. ઉમેદ્વારે સૂચવેલ જવાબ અને ઉત્તરવહીનો જવાબ ભિન્ન હશે તો ઉમેદ્વારે 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 is false of seizure foci?

(A) Epileptic foci are slower in binding and removing acetylcholine than normal cortex.

(B) Firing of neurons in the focus is reflected by periodic spike discharges in the electroencephalogram (EEG).

(C) If unchecked, cortical excitation may spread to the subcortical nuclei.

(D) The change in seizure discharge from the tonic phase to the clonic phase results from inhibition from the neurons surrounding the focus.

002. An abnormal optokinetic response is more likely to be obtained by rotating the optokinetic nystagmus drum

(A) away from an occipital lobe lesion **(B)** away from a parietal lobe lesion

(C) toward an occipital lobe lesion **(D)** toward a parietal lobe lesion

003. Which of the following drugs is least effective in the treatment of trigeminal neuralgia?

(A) baclofen **(B)** carbamazepine

(C) phenytoin **(D)** ketorolac

004. Which of the following is true of papilledema?

(A) Absence of venous pulsations is a reliable indicator of papilledema.

(B) Pupillary light reflexes remain normal.

(C) The congested capillaries derive from the central retinal vein.

(D) Visual acuity usually decreases.

005. Which of the following is not a feature of Parinaud's syndrome?

(A) dissociated light-near response **(B)** nystagmus retractorius

(C) paralysis of upgaze **(D)** third nerve palsy

006. Which of the following is true of tuberculous meningitis?

(A) Headache is usually absent.

(B) If untreated, the clinical course is self-limited.

(C) The inflammatory exudate is found mainly at the convexities.

(D) The protein content of the cerebrospinal fluid (CSF) is almost always elevated

007. Each of the following is true of myasthenia gravis except

(A) A decrementing response to peripheral nerve stimulation is typical.

(B) Aminoglycoside antibiotics may worsen the symptoms.

(C) Females predominate in the subset of patients with a thymoma.

(D) 10% to 15% of patients have no antibodies to the acetylcholine receptor.

008. Each of the following is characteristic of a diabetic third nerve palsy except that

(A) it develops over a few hours **(B)** it spares the pupil

(C) it is usually painless **(D)** the lesion involves the centre of the nerve

009. Which of the following is not a characteristic of Adie's syndrome?

(A) degeneration of the ciliary ganglia and postganglionic parasympathetics

(B) more common in women than in men

(C) no reaction to 0.1% pilocarpine solution

(D) paralysis of segments of the pupillary sphincter

010. The motor unit potential in myopathy is of

(A) decreased voltage and decreased duration

(B) decreased voltage and increased duration

(C) decreased voltage and normal duration

(D) normal voltage and decreased duration

011. Subacute combined degeneration of the spinal cord is caused by a deficiency of

(A) cobalamin **(B)** folic acid

(C) nicotinic acid **(D)** pyridoxine

012. Deviation of the eyes to the right is most likely to occur with occlusion of the

(A) calcarine artery bilaterally

(B) calcarine artery on the contralateral side

(C) contralateral paramedian branch of the basilar artery

(D) ipsilateral superior cerebellar artery

013. Which of the following antiepileptic drugs has the shortest half-life?

(A) carbamazepine **(B)** phenobarbital

(C) phenytoin **(D)** valproate

014. Biochemical studies of neurons from a seizure focus have shown all of the following except

(A) increased levels of extracellular potassium in glial scars near seizure foci

(B) decreased rate of binding and removing acetylcholine in the foci

(C) deficiency of y-aminobutyric acid (GABA)

(D) decreased glycine levels

015. Fasciculation potentials indicate

(A) motor nerve fiber irritability **(B)** motor nerve fiber destruction

(C) motor unit denervation **(D)** muscle atrophy

016. What characteristics of motor unit potentials are typical soon after reinnervation?

(A) prolonged, high amplitude, and polyphasic

(B) prolonged, low amplitude, and polyphasic

(C) shortened, high amplitude, and polyphasic

(D) shortened, low amplitude, and polyphasic

017. Which of the following ocular findings is not seen in myasthenia gravis?

(A) abnormal pupillary response to accommodation

(B) normal pupillary response to light

(C) weakness of extraocular muscles

(D) weakness of eye closure

018. Which of the following signs or symptoms occurring in a young person is the most suggestive of multiple sclerosis?

(A) bilateral internuclear ophthalmoplegia **(B)** gait ataxia

(C) Lhermitte's sign **(D)** optic neuritis

019. The muscles most often involved in thyroid ophthalmopathy are the

(A) inferior, superior, and medial recti **(B)** inferior rectus and superior oblique

(C) lateral and superior recti **(D)** lateral rectus and superior oblique

020. Most cases of "idiopathic" hemifacial spasm are thought to result from

(A) ephaptic transmission **(B)** hypersensitivity of facial muscles

(C) hypocalcemia **(D)** psychiatric disorders

021. The lesion in hemiballismus is localized to the contralateral

(A) brachium conjunctivum
(B) caudate nucleus
(C) dorsomedial nucleus of the thalamus
(D) subthalamic nucleus

022. The long thoracic nerve innervates the

(A) latissimus dorsi
(B) levator scapulae
(C) rhomboids
(D) serratus anterior

023. The von Hippel-Lindau disease has been associated with all of the following except

(A) defect on chromosome 3
(B) dominant inheritance
(C) iris hamartomas
(D) pancreatic cysts

024. Gerstmann's syndrome classically involves a lesion in the

(A) dominant frontal lobe
(B) dominant parietal lobe
(C) dominant temporal lobe
(D) nondominant parietal lobe

025. Wernicke's area corresponds most closely to Brodmann's area(s)

(A) 17
(B) 19
(C) 22
(D) 41 and 42

026. Each of the following is consistent with a cholinergic crisis in a patient with myasthenia gravis being treated with pyridostigmine except

(A) bradycardia
(B) diarrhea
(C) increased strength after the Tensilon test
(D) miosis

027. Each of the following is true of central pontine myelinolysis except

(A) marked inflammatory response with destruction of nerve cells in thepons is seen.
(B) It is associated with rapid correction of hyponatremia.
(C) It is associated with chronic alcoholism.
(D) Quadriplegia, pseudobulbar palsy, and a locked in syndrome can occur.

028. Dressing apraxia is associated with a lesion in the

(A) dominant frontal lobe
(B) dominant parietal lobe
(C) nondominant frontal lobe
(D) nondominant parietal lobe

029. The axillary nerve innervates the

(A) coracobrachialis
(B) rhomboids
(C) supraspinatus
(D) teres minor

030. The normal sensory nerve conduction velocity in the median and ulnar nerves is approximately

(A) 10 meters per second (mls)
(B) 25 m/s
(C) 50 m/s
(D) 100 m/s

031. Which of the following CSF findings is least consistent with tuberculous meningitis?

(A) glucose of 30 mg/dL
(B) lymphocytic predomination after 1 week of illness
(C) opening pressure of 200 mm CSF
(D) protein of 35 mg%

032. The syndrome of PICA occlusion results in all of the following except

(A) contralateral Horner's syndrome

(B) contralateral loss of pain and temperature over the body

(C) ipsilateral ataxia

(D) ipsilateral numbness of the limbs

033. Monoplegia without muscular atrophy is most often secondary to a lesion in the

(A) brainstem (B) cortex

(C) internal capsule (D) peripheral nerve

034. The most common finding on audiography in patients with acoustic neuromas is

(A) flat loss (B) high-frequency loss

(C) low tone loss (D) normal audiogram

035. Repetition is least likely to be affected by a

(A) broca's aphasia (B) conduction aphasia

(C) global aphasia (D) transcortical sensory aphasia

036. The most common cause of viral meningitis is

(A) enterovirus (B) human immunodeficiency virus (HIV)

(C) leptospirosis (D) lymphocytic choriomeningitis

037. Each of the following is true of Meniere's disease except

(A) Distention of the endolymphatic duct occurs.

(B) Hearing loss is usually unilateral.

(C) High tone loss occurs early in the disease.

(D) Horizontal nystagmus occurs during an acute attack.

038. Historically, one of the treatment modalities of Parkinson's disease was surgical ligation of the

(A) anterior cerebral artery (B) anterior choroidal artery

(C) middle cerebral artery (D) posterior communicating artery

039. Which of the following is not characteristic of diabetic mononeuritis multiplex?

(A) Lower extremities are more commonly affected than upper extremities.

(B) painful neuropathy

(C) Recovery is usual.

(D) symmetric neuropathy

040. Which of the following is least suggestive of cluster headaches?

(A) associated with lacrimation and rhinorrhea

(B) bilateral location

(C) daily occurrence for 2 months

(D) male predominance

041. Organophosphate poisoning is characterized by all of the following except

(A) bronchial spasms (B) dry mouth

(C) miosis (D) sweating

042. Prosopagnosia is associated with lesions of the

(A) anterior corpus callosum (B) bilateral antero-inferior temporal lobes

(C) bilateral medial temporo-occipital lobes (D) occipital poles

043. A lesion of the supplementary motor cortex produces

(A) echolalia (B) palilalia

(C) poverty of spontaneous speech (D) receptive aphasia

044. Lesions of be peroneal nerve produce weakness of the

(A) abductor hallucis and gastrocnemius

(B) extensor digitorum longus and brevis and abductor hallucis

(C) gastrocnemius and flexor hallucis longus

(D) tibialis anterior and extensor digitorum longus and brevis

045. Which of the following deficits is least characteristic of Alzheimer's disease?

(A) corticospinal tract dysfunction (B) dysnomia

(C) Korsakoff s amnesic state (D) personality change

046. The second-order neuron in the sympathetic pathway to the pupil arises from the

(A) ciliary ganglion to the iris

(B) Edinger-Westphal nucleus to the ciliary ganglion

(C) hypothalamus to the lateral horn cells at C8 to T3

(D) lateral horn cells at C8 to T3 to the superior cervical ganglion

047. The treatment of choice for CNS toxoplasmosis is

(A) penicillin (B) praziquantel

(C) pyrimethamine and sulfadiazine (D) rifampin and nafcillin

048. Main Input structure of basal ganglia is :

(A) Substantia Nigra pars compacta (SNc) (B) Internal segment of globus pallidus (GPi)

(C) Striatum (D) Substantia Nigra pars reticulata (SNr)

049. Cardinal feature (triad) of Parkinson disease include:

(A) Bradykinesia, tremor at motion, and muscular rigidity

(B) Bradykinesia, tremor at rest, and muscular rigidity

(C) Bradykinesia, tremor at rest, and muscular spasticity

(D) Bradykinesia, tremor at motion, and muscular spasticity

050. All is true in Parkinson disease except:

(A) It is characteristically a symmetrical disease

(B) Motor signs are predominant.

(C) Decreased dopaminergic transmission in the motor portions of the basal ganglia

(D) Progressive loss of dopaminergic neurons in the substantia Nigra pars compacta (SNc)

051. Chorea is:

(A) Nonrhythmic, rapid, involuntary movements

(B) Rhythmic, rapid, involuntary movements

(C) Nonrhythmic, slow, involuntary movements

(D) Rhythmic, slow, involuntary movements

052. True about Tremors is all except:

(A) Physiologic tremor generally have frequency of 8 to 12 Hz.

(B) Pill-rolling tremors is classically seen in Parkinson disease

(C) Cerebellar tremor characterized by jerky, high-frequency low amplitude action tremor.

(D) Essential tremors involves upper limbs more than lower limbs

053. Movement disorder least responsive to Deep Brain Stimulus is:

(A) Essential Tremors **(B) Idiopathic Parkinson's Disease**

(C) Progressive supranuclear palsy **(D) Primary cervical dystonia**

054. True regarding Deep Brain Stimulus in Parkinson disease is:

(A) Subthalamic nucleus (STN) causes greater decrease in levodopa requirement

(B) Globus Pallidus Internus causes post operative weight gain

(C) Subthalamic nucleus causes lower chances of cognitive decline

(D) Globus Pallidus Internus is easier surgical target than STN

055. Deep Brain Stimulus likely to improves all symptoms of Parkinson disease except:

(A) Rigidity **(B) Tremors**

(C) Autonomic functions **(D) Dyskinesia**

056. All is true about Duret Haemorrhage except:

(A) It is due to upward displacement of brainstem

(B) Also known as secondary haemorrhage of herniation

(C) Due to dislodge vessels within the midbrain and pons

(D) Difficult to distinguish from hypertensive pontine

057. All is true in case of head injury except:

(A) Cerebral perfusion pressure(CPP) = Mean arterial pressure(MAP) – Intra cranial pressure (ICP)

(B) In normal adult the CPP > 50 mmHg

(C) ICP above 20 is a significant independent determinant of outcome

(D) Decrease cerebral metabolism result in increase in Cerebral blood flow as response to autoregulation.

058. All is true for hyperosmolar therapy in head injury except:

(A) Hypertonic saline has an advantage over mannitol in hypovolemic patients

(B) Hypertonic saline crosses the blood-brain barrier and may aggravate edema

(C) Mannitol can cause renal failure

(D) Hypertonic saline may lead to bleeding secondary to decreased platelet aggregation

059. All is true regarding monitoring or traumatic brain injury except:

(A) Jugular oxygen saturation (SjVO2) will be elevated when there is a large cerebral infarct.

(B) For proper SjVO2 values catheter tip on a lateral cervical radiograph should be below lower border of C1.

(C) Thermal diffusion flowmetry (TDF) provides only a focal CBF value from a small volume of brain.

(D) In Cerebral microdialysis if Lactate Pyruvate ratio is increased and lactate level is high cerebral Ischemia is a probable cause.

060. Management in case of head injury all is true except:

(A) Intracranial pressure(ICP) should be monitored in all salvageable severe head injury patient

(B) Goal is to keep ICP <20 mm Hg and Cerebral perfusion pressure >50 mm Hg

(C) Brain tissue oxygen tension should be maintained >25 mm Hg

(D) Barbiturates helpful due to vasodilatation and mitochondrial stabilization

061. True regarding Growing skull fracture is all except:

(A) Common after skull fracture in children.

(B) Mainly due to widely separated fracture and a dural tear

(C) Mostly in child below 3 years of age

(D) During surgery dural closure is mandatory

062. True regarding Cerebro Spinal fluid (CSF) fistula all except:

(A) Anosmia is common **(B)** Target sign may indicate CSF leak

(C) May cause meningitis **(D)** Mostly require surgical repair.

063. Central cord syndrome true is:

(A) It's a complete spinal cord injury

(B) Greater motor deficit in lower limb than upper limb

(C) Mostly due to hyperextension injury

(D) Finger movement improves earlier than lower limb movement

064. Jefferson fracture true is:

(A) It's a burst fracture of C1

(B) Usually occur after sudden deacceleration injury

(C) Quadriparesis is most common symptom

(D) Rarely associated with C2 fracture

065. Odontoid Fracture true is all except:

(A) Sudden extension is most common mechanism of injury

(B) Neck pain is common complain

(C) Anderson & D'Alonzo Classification used

(D) Type II fracture is most common

066. True about post traumatic autonomic Hyperreflexia is all except:

(A) Exaggerated autonomic response to normal innocuous stimulus

(B) Mostly within 3 months of injury

(C) Occur in patients with lesion above T6

(D) Urinary Bladder distention is most common stimulus

067. Basal ganglia consist all the following structure except:

(A) Nucleus accumbens **(B)** olfactory tubercle

(C) Globus pallidus **(D)** Hippocampus

068. Papez circuit connect pathway of all except:

(A) Caudate nucleus **(B)** Hippocampal formation

(C) Mamillary body **(D)** Anterior nucleus of thalamus

069. Anterior odontoid screw fixation contraindications is:

(A) Disruption of the transverse ligament, **(B)** Significant comminution of the C2 body,

(C) Osteopenia **(D)** All of the above

070. True about hangman's fracture is all except:

(A) Bilateral fracture through pars interarticularis of C2

(B) Mostly due to hyperextension injury

(C) Mostly unstable requiring surgery

(D) Levine classification done for these fractures

071. True about odontoid fracture is:

(A) Type 1 fracture is most common
(B) Type 2 fracture is mostly unstable
(C) Type 3 fracture is through base of dens
(D) Neck pain is typically absent

072. True about clay shoveler's fracture is:

(A) Avulsion of spinous process of C7
(B) Avulsion of transverse process of T1
(C) Fracture passing through lateral mass of C6 and C7
(D) Fracture of C6 and C7 lamina

073. All is true about diffuse axonal injury except:

(A) May result in severe impairment despite lack of gross parenchymal contusions,
(B) In Grade 1 Classification there is lesion in cerebral peduncle
(C) retraction balls seen histologically
(D) often associated with Strich hemorrhages

074. True about Carpel tunnel syndrome is all except:

(A) Complain of pain in the median nerve distribution in the hand which increases in night due to venous stasis
(B) Diabetes mellitus and rheumatoid arthritis may be associated
(C) Phalen test is more sensitivity and specificity than Durkan compression test
(D) steroids are more effective than NSAIDs or diuretics for pain relief

075. Suggestion of preganglionic injury in brachial plexus is all except:

(A) Horner syndrome
(B) Paralysis of rhomboids
(C) Paralysis of Serratus Anterior
(D) Paralysis of pectoralis minor

076. False about slit ventricle syndrome is

(A) Intermittent headache
(B) Slowly filling reservoir
(C) Continuous severe headache
(D) Small ventricle

077. Risk associated with ventriculoatrial shunt is

(A) Thromboembolism
(B) Pulmonary hypertension
(C) Shunt nephritis
(D) All of the above

078. Enlargement of arachnoid cyst is due to

(A) Osmotic pressure gradient
(B) Active secretion by the cyst wall lining or ectopic choroid-like structures
(C) CSF movement into the cyst during venous or arterial pulsations
(D) All of the above

079. Most prevalent organism causing CSF shunt infections in neonates is

(A) Coagulase-negative Staphylococcus
(B) H. influenzeae
(C) Streptococci
(D) E. Coli

080. True about optic pathway hypothalamic glioma is

(A) Majority are high grade glioma
(B) Majority are low grade glioma
(C) They are more common in middle age group
(D) They are more common in elderly population

081. Classic fried egg appearance in cranial histopathological examination is most commonly associated with

(A) Medulloblastoma (B) Glioblastomamultiforme

(C) Acoustic schwannoma (D) Oligodendroglioma

082. All are true about Subependymal giant cell astrocytoma (SEGA) except

(A) It is commonly associated with tuberous sclerosis

(B) They typically appear within the lateral ventricle

(C) Classically present in 6th decade of life

(D) These are low grade tumor

083. All are Primitive neuroectodermaltumors (PNET) except

(A) Ependymoma (B) Medulloblastoma

(C) CNS ganglioneuroblastoma (D) CNS Neuroblastoma

084. Which sub group of Medulloblastoma has the best prognosis?

(A) WNT Medulloblastoma (B) Sonic Hedgehog (SHH) Medulloblastoma

(C) Group 3 (D) Group 4

085. Triad of Diffuse Intrinsic Pontine Glioma is all except

(A) Cerebellar dysfunction (B) Long tract signs

(C) Irregular respiration (D) Cranial neuropathy

086. Use of beeswax to stop bleeding was contributed by

(A) Victor Horsley (B) Harvey Cushing

(C) William Macewan (D) Walter Dandy

087. Pneumoencephalography was developed by

(A) Wilhelm Rontgen (B) Walter Dandy

(C) Harvey William Cushing (D) Sir Godfrey Newbold Hounsfield

088. Most common location of germinal matrix in developing brain is

(A) Cerebellar Vermis (B) Subependyma of the ventricular walls

(C) Sub cortical area of cerebral cortex (D) Cervico medullary junction

089. Thalamostriate vein is:

(A) lateral to foramen of monro (B) medial to foramen of monro

(C) superior to foramen of monro (D) not related to foramen of monro

090. Transient memory disturbances following ETV is due to traction of?

(A) thalamus (B) corpus callosum

(C) fornix (D) infundibular recess

091. Basilar complex is

(A) anterior to mammillary bodies (B) posterior to mammillary bodies

(C) lateral to mammillary bodies (D) none of the above

092. Cherry red spot / pinkish orange spot in the third ventricular floor is

(A) mammillary bodies (B) dorsum sella

(C) lamina terminalis (D) infudibular recess

093. Chang staging is used for

(A) Ependymoma (B) Medulloblastoma

(C) pilocytic astrocytoma (D) Hemangioblastoma

094. All are features of Perinaud's syndrome except

(A) pupillary accommodative paresis (B) light-near dissociation

(C) retraction nystagmus (D) respiratory irregularity

095. Diagnostic Criteria for Type 1 Neurofibromatosis includes all except

(A) One or more café au lait macules

(B) Two or more neurofibromas or one plexiform neurofibroma

(C) Freckling of the axilla or groin

(D) Optic pathway glioma

096. Triad of Tuberous Sclerosis is all except

(A) Seizures (B) Cataract

(C) Developmental delay (D) Facial angiofibromas

097. Hadad-Bassagasteguy nasoseptal flap in the repair of sellar floor is a vascular flap based on

(A) Posterior septal artery (B) Posterior palatine artery

(C) Posterior sphenopalatine artery (D) Posterior ethmoidal artery

098. Acoustic neuroma most commonly arise from

(A) Superior vestibular nerve (B) Inferior vestibular nerve

(C) Cochlear nerve (D) None of the above

099. Reasonably good approach for intracanalicular tumour with preserved hearing is

(A) Middle fossa approach. (B) Retromastoidsuboccipital.

(C) Translabyrinthine approach. (D) Transpetrosalretrosigmoid.

100. % of space occupied by CSF in intracranial cavity is

(A) 6% (B) 9%

(C) 15% (D) 20%

101. Quantitative CBF measurement can be done by all except:

(A) Stable Xenon enhanced Computed Tomography

(B) PET

(C) SPECT

(D) MRI

102. Normal rate of CBF is

(A) 50-60 mL/100g/min (B) 70-90 mL/100g/min

(C) 25-30 mL/100g/min (D) 16-20 mL/100g/min

103. Common causes of Haemorrhagic strokes are following except:

(A) Chronic hypertension (B) Cerebral venous thrombosis

(C) Cerebral amyloid angiopathy (D) Vasculitis

104. ICH score includes the following parameters except:

(A) Size of haemorrhage

(B) GCS score

(C) Location of hematoma

(D) Previous episodes of intracranial haemorrhage

105. Which among the following is the "Gold standard" for diagnostic imaging in acute stroke?

(A) MRI Brain- DWI & GRE (B) NCCT Head

(C) Lumbar puncture (D) Diagnostic angiography

106. Role of intravenous t-PA administration for acute ischemic stroke is well established within _____ hours of onset of symptoms

(A) 6 **(B)** 4.5

(C) 8 **(D)** 12

107. Trials related to decompressive surgery for malignant cerebral edema are all except:

(A) DECIMAL Trial **(B)** DESTINY Trial

(C) ESCAPE Trial **(D)** HAMLET Trial

108. Which is the gold standard investigation to evaluate cerebral aneurysm?

(A) DSA **(B)** CTA

(C) MRA **(D)** Dual image video angiography

109. Unruptured intracranial aneurysm are recommended to be treated except:

(A) SAH from another aneurysm

(B) Symptomatic aneurysm

(C) Aneurysm of >7-10 mm in patients with life expectancy of 12 years or more.

(D) Aneurysm < 5 mm if young or middle aged.

110. Factors limiting successful endovascular aneurysm occlusion using Guglielmi coils are all except:

(A) Dome neck ratio <2 **(B)** Neck width >4 mm

(C) Unstable intraluminal thrombus **(D)** Aneurysm diameter >3 mm

111. True about Hunt & Hess scale are all except:

(A) Grading is from 1-5

(B) Grade 5 is deep coma

(C) Grade 3 is stupor or moderate hemiparesis

(D) Grade 2 has no neurological deficit other than cranial nerve deficit.

112. Duration & dosage of Nimodipine for treatment of SAH is

(A) 60 mg every 8 hrly for 21 days **(B)** 60 mg every 4 hrly for 21 days

(C) 30 mg every 6 hrly for 21 days **(D)** 60 mg every 6 hrly for 21 days

113. Following statement about Rebleeding in SAH are true except:

(A) Most important cause of early death after aneurysm rupture are rebleed and early brain injury.

(B) Early aneurysm occlusion reduces risk of rebleeding.

(C) Rebleed within 72 hrs of SAH occurs in 8%-23% of cases.

(D) Risk factors for rebleed includes poor clinical grade, small aneurysm and high blood pressure.

114. Following measures are taken for brain relaxation in cerebrovascular surgery except:

(A) Ventriculostomy **(B)** Opening up of cisterns

(C) Intravenous hypertonic saline **(D)** Keeping patient in Trendelenburg position.

115. Identify false statement among the following related to anterior cerebral artery (ACA) :

(A) Perforators arising from A1 segment of ACA are commonly referred to as medial lenticulostriates.

(B) Artery of Heubner most commonly arises from A2 segment of ACA.

(C) Most perforators from Anterior communicating artery arises from anterior and inferior surfaces.

(D) Anterior communicating artery aneurysm arises from confines of lamina terminalis cistern.

116. According to Code of Medical Ethics Regulations, 2002 Medical records pertaining to indoor patients are to be maintained for a period of _____ duration from date of commencement of treatment?

(A) 3 years (B) 5 years

(C) 7 years (D) 10 years

117. Which is the false statement in context to "valid informed consent" obtained for Neurosurgery?

(A) Consent should be obtained from patient, spouse, parents or adult children.

(B) Composition of ideal consent form includes site & side of surgery.

(C) Implied consent is better than Informed consent.

(D) Informed consent should provide information to patient about alternative treatment options.

118. Following aspects of radiographic evaluation of Anterior communicating artery (ACoA) aneurysm are true except:

(A) Angiography of ACoA aneurysm has highest false negative rate seen in angiography of any intracranial aneurysm.

(B) Cross compression study should always be performed during angiographic evaluation to visualize ACoA region completely.

(C) ACoA aneurysm have intimate relationship with 12 vessels and their perforators.

(D) CT findings of SAH in interhemispheric fissure or hemorrhage in gyrus rectus is indicative of ruptured ACoA aneurysm.

119. Which is the most common location of Middle Cerebral Artery (MCA) aneurysm?

(A) Proximal M1 segment. (B) Bifurcation of MCA.

(C) M3 segment. (D) Distal MCA.

120. Which is the ventricular access point used during MCA aneurysm surgery for intraoperative brain relaxation?

(A) Paine's Point. (B) Kocher's Point.

(C) Keen's Point. (D) Tubbs' point

121. Which one of the pathologies has "Target Sign" appearance on CECT Head?

(A) Oligodendroglioma. (B) Acute SDH.

(C) Giant aneurysm. (D) Type 4 AVM.

122. Most common location of Infectious aneurysms is

(A) Distal MCA. (B) Distal ACA.

(C) Basilar Artery. (D) Posterior Communicating Artery.

123. Cerebral revascularization is done with the following vessels except:

(A) Saphenous Vein. (B) Radial Artery.

(C) Ulnar Artery. (D) Superficial Temporal Artery.

124. Spetzler Martin grading system for AVM is based on all of the following except:

(A) Size of AVM (B) Ruptured or Unruptured

(C) Location (D) Venous drainage

125. Embolic agents used for embolization of brain AVMs are all except:

(A) N-butyl cyanoacrylate (B) Polyurethane

(C) Polyvinyl alcohol (D) Ethylene vinyl alcohol copolymer

126. Normal Perfusion Pressure Breakthrough is a post-operative complication seen in surgery of

(A) AVM
(B) Aneurysm
(C) Cavernous angioma
(D) Dural AVF

127. Which is the most common spinal vascular malformation?

(A) Intradural Dorsal Arteriovenous Fistulas
(B) Intramedullary Arteriovenous Malformations
(C) Extradural-Intradural Arteriovenous Malformations
(D) Extradural Arteriovenous Fistulas

128. True about Artery of Adamkiewicz is

(A) It arises on the right between T9 and L2
(B) It arises on the left between T8 and L2
(C) It arises on the left between T9 and L2
(D) It arises on the right between T8 and L2

129. The spinal "watershed" zone lies in the region of

(A) T2-4
(B) T4-6
(C) T6-9
(D) C5-7

130. Which fluid is used for irrigation in Neuroendoscopy?

(A) 0.9% NS
(B) RL
(C) ISO-P
(D) DNS

131. Traction on the floor of third ventricle in ETV can lead to these intraoperative complications except?

(A) Bradycardia
(B) Tachycardia
(C) Hypothermia
(D) Hyperthermia

132. Early post-operative complications in Neuroendoscopy are all except:

(A) Delayed awakening
(B) Fever
(C) Subdural collection
(D) Stoma closure

133. In which year was the Neurological Society of India constituted?

(A) 1954
(B) 1953
(C) 1952
(D) 1951

134. Who is the only neurosurgeon to have won the Nobel prize?

(A) Dr M.G Yasargil
(B) Dr Harvey Cushing
(C) Dr Egas Moniz
(D) Dr Walter Dandy

135. He is credited for devising Ether Charts, use of silver clips and electrocautery for hemostasis, meticulous handling of tissues. His medical biography "Life of Sir William Osler" won him Pulitzer prize. Who is the neurosurgeonwe are enquiring about?

(A) Dr W.S Halstead
(B) Dr Walter Dandy
(C) Dr Victor Horsley
(D) Dr Harvey Cushing

136. He is credited for his pioneering work on brain mapping and epilepsy, He established the value of cortical excision for medically refractory epilepsy and was the head of famous neurological centre at the McGill University, Montreal. He was the author of novel "No Other Gods". Who is the neurosurgeon we are elaborating about?

(A) Dr Arthur Elvidge
(B) Dr Wilder Penfield
(C) Dr Theodore Rasmussen
(D) Dr Herbert Olivecrona

137. Which one of the following is Type 1 Level of Evidence in research?

(A) Systematic Reviews (B) Randomized Control Trials

(C) Cohort Studies (D) Case Control Studies

138. CONSORT Statement is an evidence-based minimum set of recommendations for reporting _____

(A) Prospective Cohort Studies (B) Case Control Studies

(C) Randomized Control Trials (D) Meta-analysis

139. The floor of frontal horn is formed by

(A) Rostrum (B) Genu

(C) Head of caudate nucleus (D) Thalamus

140. All are correct regarding 4th ventricular floor, except:

(A) Floor is divided longitudinally into symmetrical halves by the sulcus limitans

(B) The sensory nuclei are located lateral to the sulcus limitans

(C) The pontine part is characterized by two rounded prominences, the facial colliculi

(D) The junctional part is characterized by the striae medullary

141. The shape of insula resembles

(A) Pyramid (B) Sphere

(C) Oval (D) Pear

142. Which among the following is false regarding Posterior Inferior Cerebellar Artery?

(A) Tonsillo-medullary segment forms the cranial loop

(B) Anterior medullary segment lies in front of the medulla

(C) Lateral medullary segment courses lateral to the medulla

(D) Junction of the posterior medullary and supratonsillar segments is called the choroidal point

143. Facial and Vestibulocochlear nerves pass through internal acoustic meatus, which of the following is false

(A) Facial nerve in the anterosuperior quadrant

(B) Cochlear nerve in the posteroinferior quadrant

(C) Superior vestibular nerve in the posterosuperior quadrant

(D) Inferior vestibular nerve in the posteroinferior quadrant

144. Following structures form the boundaries of Kawase's triangle except:

(A) Anterior boundary by arch connecting the foramen ovale and the foramen spinosum

(B) Medial boundary by superior and inferior petrosal sinuses

(C) Posterior boundary by cochlea and the anterior wall of the internal acoustic canal

(D) Lateral boundary by greater superficial petrosal nerve

145. All are true regarding choroidal fissure, except:

(A) The body part of the choroidal fissure is between the body of the fornix and the thalamus

(B) Atrial part is between the crus of the fornix and the pulvinar of the thalamus

(C) The temporal part is between the fimbria of the fornix and the stria terminalis of the thalamus

(D) The choroid plexus is attached to the fornix and to the thalamus by ependymal coverings called taeniachoroideaand taeniafornicis respectively.

146. The middle cerebral artery is divided into four segments, M1 through M4, which of the following is false?

(A) M1 is insular segment

(B) M3 is opercular segment

(C) M4 is cortical segment

(D) The loop of the most posterior M3 segment branch that exits from the sylvian fissure is called the M point or sylvian point

147. The anterior perforated substance (APS) is the entry site for the perforating arteries from

(A) Internal carotid artery **(B)** Anterior cerebral artery

(C) Anterior choroidal artery **(D)** All of the above

148. Most of the cortical mantle has six identifiable layers. The six layers from superficial to deep are as follows

(A) Molecular, external granular, external pyramidal, internal granular, internal pyramidal, multiform

(B) Molecular, external pyramidal, external granular, internal pyramidal, internal granular, multiform

(C) Multiform, external pyramidal, external granular, internal pyramidal, internal granular, molecular

(D) Multiform, external granular, external pyramidal, internal granular, internal pyramidal, molecular

149. In common aphasia syndromes, following is true

(A) Transcortical motor aphasia – good comprehension and good repetition

(B) Wernicke's aphasia – good fluency and good comprehension

(C) Broca's aphasia – good fluency and good comprehension

(D) Mixed cortical aphasia – good comprehension and good repetition

150. Earliest fundus examination finding in papilledema is

(A) Humping of vessels crossing the disc margin

(B) Disc hyperemia

(C) Loss of spontaneous venous pulsations

(D) Elevation of disc surface

151. Contralateral incongruous homonymous hemianopia is caused by the lesion of following

(A) Optic nerve **(B)** Optic chiasm

(C) Optic tracts **(D)** Visual cortex

152. Vernet's syndrome involves all the following cranial nerves, except

(A) 9^{th} **(B)** 10^{th}

(C) 11^{th} **(D)** 12^{th}

153. All the following are correct about lesion at geniculate ganglion, except

(A) Loss of taste sensation **(B)** Hyperacusis

(C) Increased tearing **(D)** Pain in the region of ear and mastoid

154. The ischemic penumbra represents

(A) Area on inner aspect of low perfusion coefficient

(B) Area on outer aspect of low perfusion coefficient

(C) Area between low perfusion coefficient and low diffusion coefficient

(D) None of the above

155. The study of choice in the initial evaluation and follow-up of patients with Cavernoma is

(A) MRI
(B) MRA
(C) DSA
(D) CTA

156. In this image of DSA, what is the structure indicated by the arrow

(A) ICA aneurysm
(B) MCA aneurysm
(C) Acom artery aneurysm – inferiorly directed
(D) Acom artery aneurysm – superiorly directed

157. Vacuum disk phenomena occur at sites of negative pressure in the intervertebral disk, following is the representing gas

(A) Nitrogen
(B) Hydrogen
(C) Oxygen
(D) Nitric oxide

158. Schmorl's node is

(A) Herniation of disc through vertebral end plate
(B) Intradural disc herniation
(C) Herniation and migration of disc one level above the affected intervertebral disc
(D) Herniation and migration of disc one level below the affected intervertebral disc

159. Which of the following is not the part of internal capsule?

(A) Anterior and posterior limbs
(B) Genu
(C) Retro-lentiform part
(D) Thalamic part

160. Hippocampus occupies which part of the temporal horn

(A) Medial part of the floor
(B) Lateral part of the floor
(C) Medial part of the roof
(D) Lateral part of the roof

161. Normal intracranial pressure in adults is

(A) 5-10 mm Hg
(B) 10-15 mm Hg
(C) 15-20 mm Hg
(D) < 5 mm Hg

162. The inhibitor of angiogenesis is

(A) Angiostatin
(B) Tenascin C
(C) VEGF
(D) HGF-SF

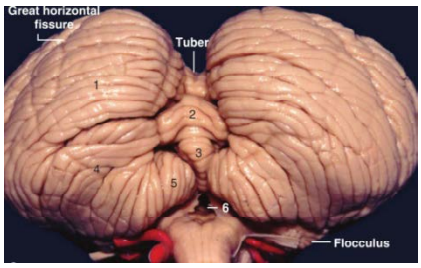
163. The following structure is not included in basal ganglia

(A) Nucleus Accumbens
(B) Substantia Nigra
(C) Subthalamic nucleus
(D) Red nucleus

164. Which of the following is not the branch of posterior cerebral artery?

(A) Medial posterior choroidal artery
(B) Lateral posterior choroidal artery
(C) Calcarine artery
(D) Anterior temporal artery

165. The following figure is showing the suboccipital surface of cerebellar hemispheres and vermis. What is the name of structure labelled as 3



(A) Pyramid
(B) Uvula
(C) Nodule
(D) Tonsil

166. In MR Spectroscopy, the size of one voxel is approximately

(A) 1 mm3
(B) 2 mm3
(C) 1 cm3
(D) 2 cm3

167. Dural tail can be visible in which of the following tumor

(A) Meningioma
(B) Lymphoma
(C) Exophytic gliomas
(D) All of the above

168. Which of the following the imaging findings is not associated with a Pituitary microadenoma?

(A) Deviation of the infundibulum away from the side of the gland containing the adenoma
(B) Asymmetrical convexity of the superior border of the gland
(C) Abnormal contour of the sella turcica floor
(D) None of the above

169. Which of the following statement is not true regarding facial nerve?

(A) Motor root contains about 70 % fibers
(B) Sensory root contains about 30 % fibers
(C) Sensory root forms the nervus intermedius of Wrisberg
(D) Sensory root contains only autonomic fibers

170. Extra-axial masses frequently exhibit the following characteristics on MRI, except

(A) Expansion of the cortex
(B) Displacement or compression of adjacent cortex
(C) Contrast enhancement and thickening of dura, leptomeninges, or cranial nerves
(D) Invasion of adjacent bone

171. 2016 WHO classification of CNS tumors is based on

(A) Histopathology
(B) Immunohistochemistry
(C) Molecular parameters
(D) All of the above

172. Following is the new entity in 2016 WHO classification of CNS tumors

(A) IDH-mutant glioblastoma
(B) Epithelioid glioblastoma
(C) Glioblastoma with primitive neuronal component
(D) Multinodular and vacuolated pattern of ganglion cell tumor

173. Most common mutation in secondary Glioblastoma is

(A) TP53 mutation (B) PTEN mutation

(C) ATRX mutation (D) TERT mutation

174. Which of the following variant of Medulloblastoma carries better prognosis?

(A) Medulloblastoma WNT activated

(B) Medulloblastoma SHH activated, TP53- mutant

(C) Medulloblastoma group 3

(D) Medulloblastoma group 4

175. In new classification, Atypical Meningioma is diagnosed when

(A) Mitotic count < 4 (B) Mitotic count > 4

(C) Mitotic count > 4 and brain invasion (D) None of the above

176. How many net ATPs are produced during glycolysis?

(A) 1 (B) 2

(C) 3 (D) 4

177. Blood brain barrier permeability is increased by all except

(A) Steroids (B) Bradykinin

(C) Serotonin (D) Tumor necrosis factor-a

178. The following are the causes of cytotoxic oedema except

(A) Anoxia (B) Braintumors

(C) Infarction (D) Trauma

179. This tumour is an osteolytic lesion having female preponderance, usually arises from long bones but when involves the spine mostly affects the posterior elements. Thoracic spine is mostly involved. On CT & MRI they show the cortical egg shell Appearance with fluid fluid levels. Symptomatic patients are treated with embolization& surgery. The tumour being described is

(A) Giant cell tumour (B) Osteosarcoma

(C) Ewings sarcoma (D) Aneurysmal bone cyst

180. The most common benign spinal axis tumour (primary spinal tumour) is

(A) Aneurysmal bone cyst (B) Haemangioma

(C) Plasmacytoma (D) Multiple myeloma

181. Which of the following statement regarding hydrocephalus due to choroid plexus tumour is not correct?

(A) Hydrocephalus occurs due to CSF overproduction

(B) Hydrocephalus occurs due to obstruction to CSF outflow

(C) Hydrocephalus can occur due to ventriculitis

(D) Complete removal of tumour results in complete resolution of hydrocephalus

182. Choroid plexus tumours of the IV ventricle derive their blood supply from

(A) Anterior and posterior choroidal arteries

(B) Medial and lateral posterior choroidal arteries

(C) Posterior inferior cerebellar and superior cerebellar arteries

(D) Posterior inferior cerebellar and anterior inferior cerebellar arteries

183. **Which of the following statement regarding Medulloblastoma is not correct?**

(A) Most common primary CNS tumour in children

(B) Desmoplastic variant has greater connective tissue component

(C) Arises usually from inferior medullary velum

(D) Involvement of cerebellar hemisphere is common in children

184. **Most common site of extraneural metastasis of Medulloblastoma occurs in**

(A) Subarachnoid space **(B) Bone marrow**

(C) Lungs **(D) Liver**

185. **WHO classification of embryonal central nervous system tumours classifies into four variants. The most commonly seen variant is**

(A) Desmoplastic/Nodular medulloblastoma

(B) Medulloblastoma with extensive nodularity

(C) Anaplastic medulloblastoma

(D) Large cell medulloblastoma

186. **In modified Chang classification for Medulloblastoma a tumour more than or equal to 3cms in maximal diameter with extension to aqueduct of sylvius, foramen of magendie or luschka producing hydrocephalus. There is no brain stem invasion should be categorised into**

(A) T2 **(B) T3A**

(C) T3B **(D) T4**

187. **In modified Chang classification for Medulloblastoma presence of extraneural Metastasis should be categorised into**

(A) M1 **(B) M2**

(C) M3 **(D) M4**

188. **Indications of permanent shunting / III ventriculostomy in a patient operated for Medulloblastoma is all except-**

(A) The external ventricular drain (EVD) continues to drain at a height above 20 cms

(B) Progressive hydrocephalus on serial CT/ MRI

(C) Development of pseudomeningocele

(D) If complete tumor excision could not be done

189. **Cerebellar mutism occurring after excision of intra-axial cerebellar tumours occurs due to involvement of**

(A) Fastigial nucleus **(B) Dentate nucleus**

(C) Emboliform nucleus **(D) Globose nucleus**

190. **All the first line antitubercular drugs cross the blood brain both in presence and absence of inflammation except:**

(A) Rifampicin **(B) Isoniazid**

(C) Pyrazinamide **(D) Ethambutol**

191. **In stages of abscess formation day 10-13 corresponds to**

(A) Early cerebritis **(B) Late cerebritis**

(C) Early capsule formation **(D) Late capsule formation**

192. **The most common site of intracranial arachnoid cyst after sylvian fissure or middle fossa is**

(A) Suprasellar region **(B) Posterior fossa**

(C) Quadrigeminal cistern **(D) Interhemispheric area**

193. **The antibiotics found in antibiotic impregnated shunts include all except:**

(A) Rifampicin **(B) Clindamycin**

(C) Minocycline **(D) Vancomycin**

194. **Most common histological variant of a in paediatric Craniopharyngioma age group is**

(A) Adenomatous variety **(B) Squamous papillary variety**

(C) Mixed variety **(D) Glial variety**

195. **Which of the following statement regarding squamous papillary variety of Craniopharyngioma is not correct?**

(A) They have finger like projections that invade the hypothalamus

(B) They tend to be solid and may occur within the III ventricle

(C) They are less likely to develop calcification

(D) They have lower rate of recurrence following gross total removal

196. **The most common hormonal deficiency in paediatric age group Craniopharyngioma is**

(A) Prolactin **(B) Growth hormone**

(C) LH & FSH **(D) ACTH**

197. **Second most common hormonal deficiency in paediatric age group Craniopharyngioma is**

(A) Prolactin **(B) Growth hormone**

(C) LH & FSH **(D) ACTH**

198. **According to WHO classification of brain tumours all of them are categorised in Grade I tumours except:**

(A) Pleomorphic xanthoastrocytoma **(B) Sub ependymal giant cell astrocytoma**

(C) Desmoplastic infantile astrocytoma **(D) Myxopapillaryependymoma**

199. **The following MRI sequences help to differentiate between arachnoid cyst and epidermoid cyst**

(A) TI weighted **(B) T2 weighted**

(C) T1 contrast **(D) Diffusion weighted**

200. **A patient with acoustic neuroma is diagnosed as having VII nerve involvement. The finding of moderate dysfunction (obvious but not disfiguring), forehead with slight to moderate movement, complete eye closure with maximal effort according to House – Brackman grading would grade this patient into**

(A) Grade 2 **(B) Grade 3**

(C) Grade 4 **(D) Grade 5**