



श्री चित्रा तिरुनाल आयुर्विज्ञान और प्रौद्योगिकी संस्थान, त्रिवेंद्रम , केरल- 695 011
(एक राष्ट्रीय महत्व का संस्थान, विज्ञान एवं प्रौद्योगिकी विभाग, भारत सरकार)
SREE CHITRA TIRUNAL INSTITUTE FOR MEDICAL SCIENCES AND TECHNOLOGY, TRIVANDRUM
KERALA – 695 011

Entrance Examination 2020- MCh _ Neurosurgery (After MS)

Sl No	Question	Answer	OptionA	OptionB	OptionC	OptionD
1	Pegvisomant is used for the treatment of	A	Acromegaly	Prolactinoma	Meningioma	Leptomeningeal gliomatosis
2	The band of Giacomini is located in	A	Temporal lobe	Occipital lobe	Insula	Orbitofrontal cortex
3	A 30 year old man has insidious onset upgaze paresis, convergence retraction nystagmus, light near dissociation and retracted eyelids. The most likely lesion diagnosis is	A	Pineocytoma	Pontine glioma	Pulvinar tuberculoma	4th Ventricular Ependymoma
4	A far lateral disc prolapse at L4-5 is most likely to cause the following deficit.	C	Toe dorsiflexion weakness	Plantar flexion weakness	Foot inversion weakness	Foot eversion weakness
5	A pituitary tumor that secretes excessive amounts of growth hormone is likely to cause decreased:	D	Plasma concentration of insulin-like growth factor I (IGF-I)	Uptake of amino acids by muscle	Plasma concentration of free fatty acids	Tolerance to a glucose load
6	An artery of Percheron territory infarct would result in	B	Bilateral pontine infarcts	Bilateral thalamic and mesencephalic infarcts	Unilateral thalamic and diffuse brain stem infarcts	Hypothalamic and medullary infarcts
7	A palliative surgical option for primary generalised epilepsy would be	D	Selective amygdalohippocam pectomy	Multilobar resection	Posterior quadrant disconnection	Vagus nerve stimulation
8	Which of the following tumour entities has been deleted from the WHO 2016 classification of CNS tumors	B	Astroblastoma	Gliomatosis cerebri	Pineoblastoma	Meningeal melanocytosis
9	The parahippocampal gyrus continues by a small isthmus into the following	A	Cingulate gyrus	Lateral occipito temporal gyrus	Dentate gyrus	Parieto occipital gyrus
10	The Welcher's basal angle limit above which is diagnostic of platybasia is	B	120 degrees	140 degrees	160 degrees	100 degrees
11	The artery of Bernasconi and Cassinari is a branch of	A	Internal carotid artery	Thalamoperforators	Basilar artery	Medial posterior choroidal artery
12	Vein of Labbé connects	B	Deep middle cerebral vein and transverse sinus	Superficial sylvian vein and transverse sinus	Superficial middle cerebral vein and superior petrosal sinus	Superficial middle cerebral vein and sphenoparietal sinus
13	In a patient with complete hemisection of the right side of the spinal cord at the level of the T10 segment, the deficit which is likely will be	B	Loss of pain and temperature sensation in lower limb on the left side	Altered touch sensations in the right lower limb	Hyperactive stretch reflexes in the lower limb on the left side	Absent stretch reflexes in the right lower limb
14	Melanocytes in the nervous system are concentrated in	A	Ventral medulla	Amygdala	Red nuclei	Septum pellucidum
15	Which of the following structures is derived from basal plate of the neural tube?	B	Lateral geniculate body	Substantia nigra	Dorsal columns	Superior colliculus
16	The areas devoid of a blood brain barrier include all except	B	Area postrema	Induseum griseum	Neurohypophysis	Pineal gland
17	Which of the following is not a part of the limbic system	B	Fimbria of fornix	Thalamic fasciculus	Diagonal band of Broca	Mamilothalamic tract
18	The resting membrane potential of a neuron is	C	-90 mV	65 mV	-70 mV	50 mV
19	Which of the following histological meningioma variants is associated with the most aggressive clinical behaviour?	D	Angiomatous	Chordoid	Clear cell	Papillary
20	The projection of the superior semicircular canal usually seen on the floor of the middle cranial fossa during a subtemporal approach for resection of vestibular schwannoma, is called	B	Tegmen tympani	Arcuate eminence	Vestibular prominence	Glasscock's triangle
21	The following cranial nerves carry parasympathetic fibres except	D	III	VII	IX	XI
22	The following is not a boundary of the Trautman's triangle	A	Tympanic membrane	Superior petrosal sinus	Sigmoid sinus	Semi circular canals
23	Fisch approach for skull base lesions refers to	B	Pre auricular trans temporal approach	Retro auricular infra temporal approach	Retro auricular post sigmoid transcondylar approach	Combined pre and post sigmoid approach

24	A 60 year old female has loss of touch sensations in the face. The patient can feel pain and temperature sensations, and there is no jaw weakness. The neural structure most likely affected is the	C	Spinal nucleus of V	Trigeminal ganglion	Principal nucleus of V	Mesencephalic nucleus of V
25	Which of the following requires the highest dose of radiation in gamma knife stereotactic radiosurgery for control/cure?	A	Trigeminal Neuralgia	Metastases	Meningioma	Vestibular Schwannoma
26	The intracranial tumor most likely to be encountered in a middle-aged man with the acquired immunodeficiency syndrome (AIDS) is	C	Glioblastoma multiforme	Ependymoma	Lymphoma	Oligodendroglioma
27	A 45 year old male suddenly cannot read or write. His speech is normal, although he misuses words, and he understands and executes simple motor commands. Further testing reveals that he cannot add and subtract, and he cannot identify which fingers are which. The localization of the lesion is	B	Splenium of the corpus callosum	Angular gyrus of dominant hemisphere	Cuneus gyrus of dominant hemisphere	Arcuate fasciculus of dominant hemisphere
28	Which of the following statement is true?	D	Cranial osteomyelitis most frequently arises from the spread of bacteria through the bloodstream from an infection elsewhere in the body.	Subdural empyema is ordinarily treated by administration of antibiotics without the need for surgical drainage.	Bacterial meningitis rarely leads to the development of hydrocephalus	A bacterial brain abscess commonly presents as a mass lesion of the brain, without systemic signs of infection such as fever or leukocytosis.
29	Cancer of the Prostate Risk Assessment (CAPRA) score for predicting prognosis is calculated on the basis of the following except,	D	PSA Level	Gleason score	Percentage of biopsy cores positive for cancer	Tumour histology
30	A 34-year-old woman developed neck and right arm pain. She noted paresthesias in the right index and middle fingers. She was found to have weakness of the right triceps muscle and a diminished right triceps jerk. The disc herniation is most likely to be at	D	C3-C4	C4-C5	C5-C6	C6-C7
31	Which of the following statement is true regarding nerve injuries?	B	The Hoffmann-Tinel sign localizes the level of a nerve injury.	Secondary repair of a lacerated nerve 3 to 8 weeks after injury has several advantages.	At delayed exploration a clinically nonfunctioning nerve if is in continuity with distal end, one should resect the injured portion of the nerve and suture together the ends.	Electromyography studies are warranted within one week of injury
32	Which of the following lesions is not one of the cutaneous stigmata of occult spinal dysraphism?	D	Midline lumbar capillary hemangioma	Focal hairy patch over the thoracolumbar spine	Dermal sinus located above the midsacrum.	Café-au-lait spot over the thoracolumbar spine
33	Cordotomy results in which of the following?	A	Contralateral loss of pain sensation	Vagal instability	Ipsilateral loss of temperature appreciation.	Contralateral loss of two-point discrimination
34	All of the following are true about neurogenic shock except:	C	There is a decrease in systemic vascular resistance and an increase in venous capacitance	Tachycardia or bradycardia may be observed, along with hypotension	The use of an alpha agonist such as phenylephrine is the mainstay of treatment	Severe head injury, spinal cord injury, and high spinal anesthesia may all cause neurogenic shock.
35	Which of the following statements about head injury and concomitant hyponatremia are true?	A	There are no primary alterations in cardiovascular signs.	Signs of increased intracranial pressure may be masked by the hyponatremia	Oliguric renal failure is an unlikely complication	Rapid correction of the hyponatremia may prevent central pontine injury.
36	Which of the following statement is true concerning the neuroendocrine responses to shock?	D	Sympathetic nerve endings release epinephrine which is responsible for systemic vascular resistance	Endogenous glutamate is the primary contributor to systemic vascular resistance	Reduced pancreatic secretion of glucagon contributes to glucose intolerance associated with injury and sepsis	The renin-angiotensin axis further augments the sympathetic-mediated vasoconstriction

37	An aneurysm that has been detected at the junction of the anterior cerebral artery and the anterior communicating artery on the right side has caused a visual field defect. What might visual field testing reveal?	D	Macular sparing	Right nasal hemianopsia	Left homonymous hemianopsia with macular sparing	Bitemporal quadrantanopsia
38	The probable embryonic origin of craniopharyngioma is from a remnant of	B	Endoderm cells	Ectoderm cells	Neural crest cells	Neural tube cells
39	Post-traumatic evaluation of a patient showed that did not open his eyes to call, neither did he obey verbal commands and was mumbling incomprehensibly. On applying sternal pressure, the patient was noted to open his eyes and lifted his limbs to command and stated his name and address. The GCS recorded was	B	E1 M1 V2	E2 M6 V5	E2 M1 V2	E2 M1 V1
40	The Kadish system is used for the classification of	A	Esthesioneuroblastoma	Sinonasal adenoid cystic carcinoma	Inverted papilloma	Squamous cell carcinoma
41	After repair of an aortic aneurysm, a patient develops neurological signs, which was attributed to temporary occlusion of the feeder arteries to the anterior spinal artery. Which of the following neurologic signs would be least likely to be present in the patient?	C	Bilateral loss of pain and temperature below the site of the occlusion	Bilateral motor weakness below the site of the occlusion	Bilateral loss of vibratory sense below the site of the occlusion	Bilateral Babinski signs
42	In a section through the T10 segment of the spinal cord, which of the following will not be present?	C	Preganglionic sympathetic neurons	Fasciculus gracilis	Fasciculus cuneatus	Dorsal spinocerebellar tract
43	A 47 year old diabetic patient develops infection in a dural sinus lateral to the body of the sphenoid bone in the floor of the middle cranial fossa. Which neurological deficit is expected in such a situation initially on the affected side?	C	Ptosis	Dilated pupil	Medial strabismus with restricted abduction	Altered sensation in skin of the forehead
44	In a primigravida, ultrasound imaging reveals that fetus has spina bifida cystica with meningocele. What is the associated finding?	A	Raised alpha-fetoprotein in amniotic fluid	Oligohydramnios	Club foot	Pulmonary hypoplasia
45	All the following statements about Shagreen patch are true except:	B	Shagreen patches are seen in tuberous sclerosis	These patches are mostly seen on thoracic region	It is a plaque of subepidermal fibrosis	It has an orange-peel appearance
46	The dorsal scapular nerve arises from	B	C4	C5	C6	C7
47	Pupil sparing oculomotor palsy is seen in	C	Anterior clinoidal meningioma	Posterior communicating artery aneurysm	Diabetic Neuropathy	Uncal herniation
48	Taste sensations from the anterior two-thirds of the tongue are carried to the geniculate ganglion by the	B	Greater superficial petrosal nerve	Chorda tympani	Vagus nerve	Gingivo-buccal nerve
49	Bill's bar separates the	A	Facial nerve and superior vestibular nerve	Superior vestibular nerve and inferior vestibular nerve	Inferior vestibular nerve and the cochlear nerve	a) Cochlear nerve and the superior vestibular nerve
50	The TNM staging for a bladder carcinoma with invasion of the prostatic stroma, external iliac node involvement and no metastases is	D	T3 N1 M0	T4 N2 M0	T3 N1 M1	T4 N1 M0
51	Cricothyroid muscle acts a of the vocal cord	B	Abductor	Tensor	Adductor	Lengthener
52	Posterior pituitary is supplied by	B	Superior hypophyseal artery	Inferior hypophyseal artery	Both superior and inferior hypophyseal artery	Perforators from middle cerebral artery
53	The most common cause of XI th cranial nerve injury in the neck is	C	Tubercular adenopathy	Metastatic cervical adenopathy	Iatrogenic	Vertebral artery aneurysm
54	The hypothalamus inhibits the secretion of prolactin by secreting..	A	Dopamine	Serotonin	Noradrenaline	GABA
55	Astereognosis occurs due to the involvement of	B	Ipsilateral parietal lobe	Contralateral parietal lobe	Ipsilateral temporal lobe	Contralateral frontal lobe
56	In all the following conditions, patients usually present with cough headaches except:	C	Chiari malformation	Arachnoid cysts	Craniosynostosis	Pseudotumor cerebri
57	54-year-old male patient is brought to the emergency with multiple long bone injuries and suspected blunt trauma abdomen. His ABG shows pH of 7.24, PCO2 of 39.4, PO2 of 95, HCO3 of 18, and anion gap of 10. He is in:	C	Respiratory Acidosis	Respiratory Alkalosis	Metabolic acidosis	Metabolic alkalosis
58	The usual appearance of an acute extradural hematoma on a CT scan is	B	Hyperdense, concavo-convex lesion	Hyperdense, biconvex lesion	Hypodense, biconvex lesion	Isodense, concavo-convex lesion

59	Not true about surgical repair of inguinal hernias is	C	Lichtenstein's repair is an open mesh tension free repair	TEP is a laparoscopic repair preferred for bilateral and recurrent hernias	Shouldice's repair uses an absorbable mesh	Hemiotomy as a stand alone procedure is rarely done for adult direct inguinal hernias
60	The superior oblique is supplied by...	B	Oculomotor nerve	Trochlear Nerve	Trigeminal nerve	Abduces nerve
61	Myelin in the central nervous system is formed by.	B	Schwann cells	Oligodendroglia	Microglia	Ependymal cells
62	Broadman's area 4 corresponds to the	C	Speech area	Sensory area	Motor area	Auditory area
63	Gerstman's syndrome consists of all the following except:	C	Acalculia	Left-Right Confusion	Dressing apraxia	Finger anomia
64	Posterior fontanelle closes at:	A	3 months	9 months	12 months	18 months
65	The components of the Glasgow Coma Score include all of the following EXCEPT.	C	Motor activity	Speech	Pupillary Size	Eye opening
66	Atypical teratoid/rhabdoid tumor is characterised by all of the following except	B	INI-1 deletion	Chromosome 21 mutations	WHO grade IV	Predilection for posterior fossa
67	CSF is normally produced at the rate of...	A	0.3ml/hour	0.8ml/hour	1.2ml/hour	2.4ml/hour
68	Acetazolamide is a diuretic, which acts upon...	C	Na-K ATPase	Na-K-Cl channels	Carbonic anhydrase	Aquaporin channels
69	A subtle sign of corticospinal weakness is	D	Hemiparesis	Waddling gait	Foot drop	Pronator drift
70	A middle aged man presents with a history of abnormal increase in the size of his hands and feet. He has also noticed a hoarseness of voice and coarseness of facial features. He is likely to be suffering from..	B	Cushing's disease	Acromegaly	Gigantism	Hypothyroidism
71	Involvement of the cerebellar vermis by an isolated lesion causes	A	Truncal ataxia	Limb ataxia	Dysmetria	Hypotonia
72	The median nerve supplies all the muscles except	B	Flexor digitorum longus	Triceps	Lumbricals	Palmaris longus
73	A 25 year old male with blunt abdominal trauma and hemodynamic instability due to a motor cycle accident is subjected to a diagnostic peritoneal lavage(DPL). A positive DPL is indicated by	A	RBCs over 1,00,000 per microliter	RBCs over 10,000 per microliter	WBC over 100 per microliter	Amylase above 5 IU/L
74	Subependymal giant cell Astrocytoma is associated with	A	Tuberous sclerosis	Neurofibromatosis	Sturge Weber syndrome	Von Hippel Lindau syndrome
75	A mural nodule is seen with which neoplasm?	A	Pilocytic astrocytoma	Myxopapillary ependymoma	Medulloblastoma	Pleomorphic xanthoastrocytoma
76	All the following are manifestations of pituitary apoplexy except:	C	Ophthalmoplegia	Vision loss	Cushing's Syndrome	Panhypopituitarism
77	In a "hernia en glissade"the most common contents are	D	Urinary bladder	Caecum	Ileum	Sigmoid colon
78	Upward gaze palsy and nystagmus retractorius are seen with tumours of the	B	Cerebellum	Pineal region	Suprasellar region	Brainstem
79	Papilloedema is associated with all the following findings EXCEPT.	C	Loss of venous pulsations	Chalky white optic disk	Deep optic cup	Loss of nerve fiber layer
80	All the following are true about Neurofibromatosis-2 except	C	Bilateral vestibular schwannoma	Mutation in chromosome 17q12	Associated with posterior subcapsular cataract	Associated with multiple intracranial meningiomas
81	The most common cause of subarachnoid hemorrhage is	A	Trauma	Aneurysm bleed	AVM Bleed	Tumour bleed
82	The most common site for an intracranial aneurysm is	A	Anterior communicating artery	Posterior communicating artery	Middle cerebral artery	Basilar artery
83	All the following are differential diagnosis for a ring enhancing lesion in the brain except	D	Glioblastoma	Metastasis	Tuberculoma	Choroid plexus papilloma
84	The radiation source of a Gamma Knife is	A	Cobalt	Radium	Thorium	Iodine 131
85	An amenorrhoeic 35-year-old woman with galactorrhea is found to have a large prolactin-secreting pituitary tumor compressing her optic chiasm. Which visual disturbance does she have?	B	Left central scotoma	Bitemporal hemianopia	Left nasal hemianopia	Left homonymous hemianopia
86	Abulia is due to obstruction of	D	M1 segment of MCA	M2 segment of MCA	A1 segment of ACA	A2 segment of ACA
87	All of the following are Non-motor features of Parkinson's disease, except	C	Sleep disturbances	Cognitive impairment	Loss of taste	Loss of smell
88	Which of the following procedures is not suitable for NOTES (Natural Orifice Transluminal Endoscopic Surgery)?	C	Gastrostomy	Cholecystectomy	Thyroidectomy	Hysterectomy
89	Lung volume reduction surgery(LVRS) offers hope to improve the quality of life in patients with,	A	Emphysema	Empyaema	Malignant effusion	Large diaphragmatic hernia
90	During the placement of a ventriculoperitoneal shunt, a surgeon accidentally injures the transverse colon causing a 2 cm perforation. The best management option would be,	B	Laparotomy and colostomy with delayed colostomy closure	Primary closure of colonic tear.	Continue the shunt placement and broad spectrum antibiotics post operatively	Exploratory laparotomy and peritoneal lavage

91	52 year old patient complains of severe bursting headache ; on examination he was found to be conscious but restless, neck stiffness & drooping of right eyelid were observed. Clinical diagnosis is	B	Cerebral embolism	Posterior communicating artery aneurysm with subarachnoid hemorrhage	Anterior communicating Artery aneurysm with subarachnoid hemorrhage	Sagittal sinus thrombosis
92	A 55-year-old right-handed woman has sudden onset of difficulty in reading. Investigation revealed a left parietal lobe infarct. What additional feature is most likely to be present?	A	Acalculia	Confabulation	Cortical deafness	Expressive dysphasia
93	In limb compartment syndrome, the critical pressure limit above which fasciotomy is urgently indicated is,	C	12mm Hg difference between intra compartmental pressure and diastolic pressure	20 mm Hg difference between intra compartmental pressure and diastolic pressure	30 mm Hg difference between intra compartmental pressure and diastolic pressure	15 mm Hg difference between intra compartmental pressure and diastolic pressure
94	The most common initial manifestation in MEN 2 syndromes is	A	Medullary Thyroid Carcinoma(MTC)	Pheochromocytoma	Pancreatic neoplasms	Primary hyperparathyroidism
95	Which of the following statements are true?	A	Lumbar disc herniation occurs most often in a posterolateral direction	5% of lumbar disc herniations occur at the L5-S1 level.	Sciatica is a term used to denote pain felt along the distribution of L1 and L2 dermatomes	Weakness of dorsiflexion of the foot is a mechanical sign of involvement of L4 root due to lumbar disc herniation
96	The following statement is not true about cryptorchidism	C	The incidence is around 30% in premature male babies	The incidence of malignancy is higher in undescended testis	It does not influence fertility	A retractile testis may be misdiagnosed as cryptorchidism
97	Pneumoperitoneum during laparoscopic surgery does not involve	B	Carbon dioxide insufflation at the rate of 4- 6 lit/min	Maintenance by insufflation at the rate of 1500 ml/min	Ventilation-perfusion(VQ) mismatch	Increase in venous return and cardiac output
98	All of the following are true about Gradenigo's syndrome except	A	It is due to cavernous sinus thrombosis	Associated with otitis media	6th nerve palsy	Facial pain present
99	Subependymal giant cell Astrocytoma is associated with	A	Tuberous sclerosis	Neurofibromatosis	Sturge Weber syndrome	Von Hippel Lindau syndrome
100	Modified radical neck dissection usually involves preservation of all structures except	A	Submental and submandibular node	Internal jugular vein	Sternocleidomastoid	Spinal accessory nerve