



श्री चित्रा तिरुनाल आयुर्विज्ञान और प्रौद्योगिकी संस्थान, त्रिवेंद्रम , केरल- 695 011
(एक राष्ट्रीय महत्व का संस्थान, विज्ञान एवं प्रौद्योगिकी विभाग, भारत सरकार)
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Entrance Examination 2020- Neuroimaging & Interventional Neuroradiology

Sl No	Question	Answer	OptionA	OptionB	OptionC	OptionD
1	Common causes of communicating hydrocephalus :	B	Extradural hematoma	SAH	Aqueduct stenosis	Colloid cyst
2	Following are predisposing diseases for central pontine myelinolysis except	A	Multiple sclerosis	Cirrhosis	Chronic alcoholism	Malnutrition
3	The usual dose of Gadobutrol is	A	0.1 mmol / kg	0.01 mmol /kg	0.05 mmol. / kg	1 mmol. / kg
4	Which of the following is not a correct combination	D	Brachycephaly --- coronal suture fusion	Scapocephaly --- premature fusion of sagittal suture	Trigonocephaly --- fusion of metopic suture	Plagiocephaly – metopic suture fusion
5	Chordoma is a tumor of	A	Notochord	Spinal cord	Umbilical cord	Parasympathetic cord
6	Kümmell disease is	A	Osteonecrosis and collapse of a vertebral body	Osteonecrosis of patella	Bone infarction	Dislocation of patella
7	MRI findings in focal cortical dysplasia include all except	B	Cortical thickening	Presence of blooming in SWI	Poor grey matter-white matter distinction	FLAIR Hyperintensity extending to ventricle
8	In Impingement syndrome the following are true except	A	Imaging shows thickened nerve	Shoulder is a common site	Previous trauma could be the cause	Dynamic ultrasound can be useful in diagnosis
9	Imaging findings in ileocecal tuberculosis include all except :	C	Pulled-up cecum in barium study	CT may show Mesenteric lymphadenopathy with central low attenuation areas	Cobblestone appearance	Fleischner sign (inverted umbrella sign) may be seen
10	Caffey's disease shows following except	B	Early, Subacute and late phase described with radiologic features.	Carpal and tarsal bones are frequently involved	Mandible is a common site	Occurs below 6 months of age
11	Neuroblastoma can be associated with all except	A	Gorlin syndrome	Blueberry muffin syndrome	Hutchinson syndrome	Pepper syndrome
12	Chondromyxoid fibromas : all are true except	C	Located in the metaphyseal region of long bones	Well defined sclerotic margin in X ray	Periosteal reaction is common	Presence of septations (pseudotrabeclation)
13	The least common radiographic sign of malignancy in mammogram is	D	Microcalcification	Upper outer quadrant lesion	Halo sign	Clinical size less than radiographic size
14	Stage of hemoglobin that is hyperintense in both T1 and T2 weighted image	C	Deoxy Hemoglobin	Intracellular methemoglobin	Extracellular methemoglobin	Hemoisiderin
15	Which statement is correct?	A	Tip of the odontoid process projects normally not more than 3 mm above Chamberlain line	Tip of the odontoid process normally projects above McRae line	McGregor line connects the posterior edge of the hard palate and opisthion	Tip of odontoid process projects normally more than 3cm above bimaxoid line
16	Which of the following is least specific for non accidental injury	D	Bucket handle fracture	Posterior rib fractures	Non-parietal skull fracture	Middle clavicular fracture
17	Signs of diaphragmatic rupture include all except :	C	Dependent viscera sign	Collar sign	Figure of Eight sign	Segmental non-recognition of the diaphragm
18	Paraneoplastic syndromes : All statements are true except	D	Arise commonly with small cell lung cancer	Can present with syndrome of inappropriate antidiuretic hormone secretion	Can present as carcinoid syndrome	Can present with cerebellar degeneration when cerebellum is directly invaded by the malignancy
19	Patients with Peutz-Jeghers syndrome are at increased risk of all except	B	Intussusception	Papillary carcinoma of thyroid	GI tract adenocarcinoma	Adenoma malignum of the cervix
20	Location of the spinal dural fistula is	B	Anterior spinal dura	Dural root sleeve	Posterior spinal dura	Surface of spinal cord

21	About ureteritis cystica , which statement is wrong	B	Results from chronic urinary tract irritation due to infection	Can be caused by blood clots in the urinary tract	Mmultiple small smooth-walled rounded lucent filling defects in CT urogram	Can be bilateral
22	Causes of renal vein thrombosis in children include all except	D	Indwelling umbilical venous catheters	Polycythemia	Sickle cell disease	Thrombocytopenia
23	Mucosa-associated lymphoid tissue (MALT) lymphoma, associations include all the following EXCEPT :	B	Helicobacter pylori infection	Varicella infection	Sjogren syndrome	Hashimoto thyroiditis
24	Enlarged azygos vein is seen in all except	D	Heart failure	Inferior vena cava thrombosis	Portal hypertension	Sinus venosus defect
25	Who among the following was awarded Nobel prize in chemistry for NMR spectroscopy	A	Richard Ernst	Peter Mansfield	Felix Bloch	Isidor I Rabi
26	Who is considered father of interventional radiology	B	Sven-Ivar Seldinger	Charles T Dotter	Egas Moniz	Juan M Taveras
27	Radiographic findings in Ehlers-Danlos syndrome include all except :	C	Dolichoectasia	Arachnodactyly	Congenital cataract	Arterial Dissection
28	Following imaging findings can be seen in Renal tubular acidosis EXCEPT	D	Nephrocalcinosis	Osteomalacia	Urolithiasis	Osteosclerosis
29	Primary indication for MRI prostate is in the evaluation of prostate cancer	A	To determine if there is extracapsular extension	To direct the site for biopsy	For directing brachytherapy seeds into the prostate gland	Because the specificity of diagnosis is better than ultrasound
30	Myo-inositol peak is seen at	A	3.5 ppm at short TE	3.0 ppm at long TE	3.5ppm at long TE	3.0 ppm at short TE
31	Renal artery stenosis in the proximal renal artery is commonly due to	B	Fibromuscular dysplasia	Atherosclerosis	Polyarteritis nodosa	Aortic Dissection
32	What is false about inferior petrous sinus sampling:	D	Uses corticotropin releasing hormone for the test	Gold standard test for establishing the origin of adrenocorticotropin hormone secretion	Uses desmopressin for the test	None of the above
33	Heubner's artery arises from	C	Internal carotid artery	Middle cerebral artery	Anterior cerebral artery	Anterior choroidal artery
34	Artery of Adamkiewicz – all are true except	A	It arises most commonly at D9-D12 on right side	It is an anterior spinal artery	It supplies the lower thoracic segment of the spinal cord and conus	It is best demonstrated by spinal angiography
35	Wada's Test is carried out for the diagnostic support in which of the following conditions	C	Testing the patency of sagittal sinus in parasagittal midline meningiomas	Testing if the patient is malingering	Language lateralization in epilepsy	Language or speech testing in Parkinson's disease
36	The medial geniculate body sends efferent signals to the	B	Calcarine cortex	Temporal gyrus of Heschl	Cerebellum	Mammillary body
37	Noradrenergic innervations to the nervous system is provided by	C	Substantia nigra	Red nucleus	Locus ceruleus	Dorsal raphe nucleus
38	Atlanto- axial dislocation occurs in all except	B	Rheumatoid arthritis	Marfans syndrome	Osteogenesis imperfecta	Downs syndrome
39	Jefferson fracture is	A	Burst fracture of the ring of C1	Fracture of spinous process of C7	Neural arch of C2	Transverse fracture of odontoid
40	All are true about Neurocysticercosis except	B	The etiologic agent is Taenia Soleum	Definite host is pig	Main presentation is seizure	Pig is the intermediate host.
41	Which is the wrong statement in a normal child?	B	The lower end of the cerebellar vermis is at the level of obex	Primary fissure separates central lobule from culmen of vermis	The pons should be at least 1.5 times the height of medulla	Medulla and midbrain are approximately equal in height
42	The last to myelinate in a normal child among the following is?	A	Anterior temporal subcortical white matter	Anterior frontal subcortical white matter	Corticospinal tract in the pons	Corticospinal tract in the midbrain
43	Spontaneous intracranial hypotension (SIH) can produce	D	PRES	Cortical vein thrombosis	Headache	Any of the above
44	'Bright spotty' lesions in the spinal cord suggests	C	LETM	MOGAD	NMOSD	MS
45	Dentate nucleus hyperintensity is commonly seen in	A	Metronidazole toxicity	Multiple Sclerosis	NMOSD	Any of the above

46	Posterior Limb of the internal capsule appear swollen on T2, most frequently in	B	Glutaric aciduria type 1	MSUD	Ponto cerebellar hypoplasia	Zellweger syndrome
47	'ERICA' score is used for evaluating	C	Levi body disease	Lowe syndrome	Alzheimer's Disease	Acute Stroke in young
48	Which is true about the pituitary signal on MRI	A	In neonates both anterior and posterior pituitary appear bright on T1	In older children anterior pituitary can be bright on T1.	Neonates posterior pituitary is hypo on T1	None of the above
49	'Ring of fire' artifact on ASL perfusion imaging is due to	A	CSF labeling	Labeling of the internal and external carotids	Labeling of the jugular venous blood	Any of the above
50	Diffuse axonal injury is best evaluated by	B	FLAIR	DTI and SWI	Amide proton transfer imaging	ASL
51	Epidermoid tumor can occur in	D	Middle cranial fossa	Middle ear	Petrous bone	All of the above
52	Which is the best predictor of brain tumor neoangiogenesis on MRI	A	rCBV	rCBF	MTT	TTP
53	Dural arteriovenous fistula is best evaluated with	C	MRI	Doppler	DSA	CT
54	Which is true for medulloblastoma	D	SHH tumors tend to be hemispheric-cerebellar	WNT subgroup has the best prognosis	Group 3 tumors are central and enhance well	All of the above
55	Neurocysticercosis can show on MRS all the below except	D	Lactate	Succinate	Acetate	Leucine
56	Transient global amnesia is most commonly associate with DWI restriction in	D	Medial frontal lobe	Dorsolateral pre frontal cortex	Posterior cingulate gyrus	Hippocampus
57	Meningioma can show	D	Hypointensity on T2	Alanine on MRS	Hyperintensity on T2	All of the above
58	Oro- facio- digital syndrome is associated with	A	Joubert syndrome	Rhombencephalosynapsis	Duane retraction syndrome	Lysosomal disorders
59	Craniopharyngioma shows	D	Calcification	Cysts	Solid areas	All of the above
60	Neuroenteric cyst can show	D	T1 hyperintensity	NAA like peak on MRS	T2 hyperintensity	All of the above
61	Diffuse leptomeningeal glioneuronal tumor can mimic on imaging?	D	Neurocysticercosis	CNS tuberculosis	Meningitis	Any of the above
62	ZTE technique on MRI is used to evaluate	A	Bone	Meninges	CSF pulsations	Arterial velocity
63	Which is associated with 'Claval' hypertrophy	A	PLAN	BPAN	MPAN	PKAN
64	'FLAMES' is commonly associated with	C	NMOSD	CNS Vasculitis	MOGAD	Any of the above
65	Hypoxia affects most commonly	A	Posterolateral putamen	Globus pallidus interna	Globus pallidus externa	Pulvinar of the thalamus
66	Premature fusion of metopic suture results in	B	Plagiocephaly	Trigonocephaly	Scaphocephaly	Any of the above
67	Joubert syndrome is a	A	Ciliopathy	Tubulinopathy	Microtubule Associated Protein abnormality	All of the above
68	ASPECT scoring is used to evaluate	B	Carotid artery stenosis	Acute ischemic Stroke	Alzheimer's disease	Hemorrhagic stroke
69	'SPOT' sign is useful in estimating	A	Intracranial Hematoma expansion on CT	MRI estimation of vasculitis	MS plaques on MRI	NMOSD disease burden on MRI
70	'Ivy sign' is seen in	D	Cranial DAVF	Benign angiopathy of CNS	Proliferative cerebral angiopathy	Moyamoya disease
71	Sudeck's atrophy is characterized by all except.	D	Reflex sympathetic dystrophy	Patchy and spotty osteoporosis	Corical Tunnelling	Non- progressive
72	Achondroplasia is characterized by	D	Relative normal girth of the long bones	Central portion of the growth plate is more affected	Short femoral necks	All the above
73	Which of the following is a contraindication for hysterosalpingography?	A	Immediate post menstrual period	Abnormal uterine bleeding	Recurrent abortion	After laparoscopic sterilization
74	Most common cyst of the jaw is	B	Dentigerous cyst	Apical Dental cyst	Fissural cyst	Lateral dental cyst
75	Camutati- Engelmann's disease is characterized by	A	Diaphysial dysplasia	Epiphysial dysplasia	Metaphysial dysplasia	None of the above
76	In Jaccoud's arthropathy, which is true	C	A destructive polyarthropathy	Mainly involve the spine	Metacarpal hook erosions are seen	Not associated with rheumatic fever
77	Which of the following is not usually used to diagnose Covid Pneumonia	D	Ultrasonography	Chest Radiography	CT scan thorax	MRI thorax
78	In Le Fort I fracture	A	Tooth bearing part of maxilla get separated	Nasal bone is fractured	Inferior wall of orbits involved	All the above are true

79	Which is true of Sublingual glands	C	Situated below the mylohyoid muscle	Single duct opens into the mouth anteriorly	Situated above the mylohyoid muscle	None of the above.
80	Doppler study is the examination of choice in	D	Fetal distress evaluation	Vertebral steal syndrome	Lower limb deep vein thrombosis	All the above
81	Following is false about nuclear protein in testis (NUT) carcinoma of sinonasal cavity?	B	It is highly aggressive and infiltrative	Distant or Regional metastasis incidence is low	It has poor prognosis	It shows avid FDG uptake
82	The speed of sound (metres/second) in human brain tissue is:	A	1541	1585	1620	1561
83	Characteristic of hyperacute hemorrhage in MRI is:	C	Hyperintense on T1, hyperintense on T2 with hypointense rim	Iso or Hypointense on T1 and T2 with hyperintense rim in T2	Iso or hypointense T1, hyperintense T2 with hypointense rim	Iso or hyperintense on T1, hypointense on T2 with hyperintense T2 rim
84	Most common cause of spontaneous intracranial hemorrhage in children <18 years:	D	Drug abuse	Trauma	Tumor	Vascular malformation
85	What is true about remote cerebellar bleed:	A	Commonly occurs after supratentorial craniotomy	Commonly occurs after infratentorial craniotomy	Prognosis is generally poor	Punctate bleed of cerebellar parenchyma is classical observation
86	Blood blister like aneurysm is	D	A type of berry aneurysm of intracranial artery	Usually found in bifurcation of arteries	Endovascular coiling is the treatment of choice	Supraclinoid ICA is the most common location
87	Artery of foramen of rotundum is a branch of:	B	Internal carotid artery	Maxillary artery	Ascending pharyngeal artery	Ophthalmic artery
88	Moyamoya type of vessels are seen in all except:	D	Radiation	Trisomy 21	Sickle cell disease	Ehler Danlos syndrome
89	What is true about CNS immune reconstitution inflammatory syndrome (IRIS):	A	Most common inducing pathogen is JC virus	Herpes and HIV is a well known cause for CNS IRIS	Low CD4 count is a risk for CNS-IRIS	Imaging can distinguish the condition
90	What is true about colloid cysts of brain	A	They are endodermal cysts	Usually associated with multiple cysts	Usually symptomatic in children	Cysts have characteristic MRI appearance
91	What is true about anode heel effect?	C	Positioning of patient won't cause any change to anode heel effect	The heel effect is more pronounced if focal-film distance is large	The radiograph near cathode will be darker and lighter near anode	Heal effect is more pronounced in a small film compared to large film
92	What is the half-life of Technitium m99?	A	6 hours	10 hours	12 hours	24 hours
93	Area gastricae like pattern in the distal esophagus in Barium study is highly suggestive of	B	Reflux esophagitis	Barrett's esophagitis	Candida esophagitis	Radiation esophagitis
94	Grading scale use for assessing the clinical status of patient with subarachnoid hemorrhage is	C	Glasgow coma scale	Glasgow outcome scale	Hunt and Hess grade	Modified Rankin scale
95	For which type of leak after endovascular abdominal aortic aneurysm repair, only surgical option is possible	D	Type 2	Type 3	Type 4	Type 5
96	Hepatojejunostomy predisposes to which complication following chemoembolization of liver tumor?	C	Liver failure	Gut ischemia	Liver abscess	Hepatic encephalopathy
97	Iodine (I) scintigraphy is performed using	B	I-131	I-123	I-125	I-133
98	The most common site of mucosa associated lymphoid tissue (MALT) lymphoma is	A	Stomach	Small bowel	Colon	Lower esophagus
99	Which drug is an example of direct thrombin inhibitor?	B	Fondaparinaux	Argatroban	Dalteparin	Heparin
100	What is true about acute calcific peri-arthritis?	B	The symptom is related to amount of calcium deposition around the joint	X-ray evidence of calcification at the site of pain is pathognomonic	Most commonly affected joint is wrist joint	Calcium usually persists even after resolution of symptoms