



**SREE CHITRA TIRUNAL INSTITUTE FOR MEDICAL SCIENCES & TECHNOLOGY
THIRUVANANTHAPURAM—695 011**

ENTRANCE EXAMINATION - ACADEMIC SESSION JANUARY 2018

DM – NEUROIMAGING & INTERVENTIONAL NEURORADIOLOGY

Time:90 Minutes

Max.Marks: 100

(Select the most appropriate answer)
(There are **no negative** marks for wrong answers)

1. Which of the following is NOT a true radiological feature of an infantile haemangioendothelioma
 - a. centripetal filling in CT scans
 - b. Embolisation is curative
 - c. feeding vessel is seen in T2 WI
 - d. Biopsy is done with a 21 G core needle.

2. Flow quantification in MRI would be done by
 - a. SSFP sequence
 - b. True FISP sequence
 - c. HASTE sequence
 - d. Phase contrast-VENC sequence

3. All is true for a choroid plexus papilloma except
 - a. Increased CSF production is the common cause of hydrocephalus
 - b. Common in neonatal period
 - c. 40% of papillomas undergo malignant conversion
 - d. Trigone is common site in children

4. What is true for Vein of Galen malformation
 - a. They do not bleed in children
 - b. Present as congestive cardiac failure
 - c. Angiography detects it in 100% of cases
 - d. Occult malformations are not detected by MRI

5. Floating teeth are not seen with
- Osteoid osteoma
 - Histiocytosis
 - Giant cell granuloma
 - All of the above
6. Which of the following is not a correct combination
- Brachycephaly --- coronal suture fusion
 - Scaphocephaly --- premature fusion of sagittal suture
 - Trigonocephaly --- fusion of metopic suture
 - Trigonocephaly – coronal suture fusion
7. Colpocephaly is a feature of all except
- Agenesis of corpus callosum
 - Joubert syndrome
 - Arnold Chiari malformation
 - Holoprosencephaly
8. Which of the following is true for the Trigeminal nerve
- Gasserian ganglion has cell bodies of all sensory fibres
 - Has four nuclei
 - All of the above
 - None of the above
9. What is not correct of septo-optic dysplasia
- De Morsier syndrome
 - Associated with schizencephaly
 - Hypertonia
 - Small optic canals
10. Achondroplasia does not have
- Flaring of iliac wings
 - Hydrocephalus
 - Frontal bossing
 - Normal cardiothoracic ration

11. MRI features of carpal tunnel syndrome are all except

- a. Neurinoma of median nerve
- b. Increased signal intensity of nerve on T2WI
- c. Mass within the carpal tunnel
- d. Volar bowing of flexor retinaculum

12. The chromosomal defect in NF I is

- a. Short arm of chromosome 17
- b. Long arm of Chromosome 17
- c. Short arm of chromosome 22
- d. Short arm of chromosome 11

13. Which is true for a neuroblastoma

- a. Location is unknown in 10 %
- b. Bilateral in 10 %
- c. Drooping lily sign is characteristic
- d. All of the above

14. K-space manipulation in MRI denotes

- a. Manipulation of image contrast
- b. Gradient manipulation
- c. Manipulation of the RF pulse
- d. Manipulation of Fourier image transforms

15. Oxyhemoglobin in MRI is represented by

- a. Hypointense in T1 and T2
- b. Hyperintense in T1 and T2
- c. Isointense in T1 and hyperintense in T2
- d. Hyperintense in T1 and hypointense in T2

16. Bulls angle is measures between

- a. Nasion –basion line and Mc-Rae's line
- b. Clival line and Stockholm line.
- c. Clinoparietal line and bimaoid line
- d. None of the above

17. The most sensitive examination for disc prolapse is

- a. CT myelography
- b. Myelography with flexion and extension views
- c. MRI
- d. Lumbar venography

18. STIR sequence in MRI is used to get

- a. Good T1 contrast
- b. Good T2 Contrast
- c. Good fat suppression
- d. Good T2 contrast and fat suppression

19. The commonest location of an intracranial berry aneurysm is

- a. Anterior communicating artery
- b. PCA
- c. ICA
- d. Basilar bifurcation

20. The magnification factor of a radiographic image is determined by

- a. Focus object distance/ object film distance
- b. Focus film distance/ object film distance
- c. Focus object distance/ focus film distance
- d. Object film distance/ focus film distance

21. Congenital cytomegalovirus infection can produce all the following EXCEPT

- a. Cerebellar hypoplasia
- b. Macrocephaly
- c. Cortical gyral abnormalities
- d. Myelination delay

22. Which of the following is NOT a characteristic features of neurofibromatosis type I involving the orbit

- a. Plexiform Neurofibromatosis
- b. Sphenoid wing dysplasia
- c. Optic nerve glioma
- d. Optic nerve sheath Meningioma

23. Retro pharyngeal edema is characterized by
- Non-abscess fluid
 - Needs surgical drainage immediately
 - Shows wall enhancement
 - All of the above
24. 'Honda' sign is seen in
- Glutaric aciduria type I
 - osteogenesis imperfecta
 - Sacral meningocele
 - Sacral insufficiency fracture
25. Kummell disease is
- Delayed, post traumatic collapse vertebral body
 - Non-traumatic bone infarction
 - Traumatic dislocation of the patella
 - Osteonecrosis of the patella
26. Leigh's disease is characterized by ;
- Early childhood presentation
 - Basal ganglia diffusion restriction
 - Hypotonia
 - All of the above
27. Which flow follows in true regarding traumatic diaphragmatic rupture(TDI)
- Most commonly occur after penetrating trauma
 - About 50% of TDI is diagnosed acutely
 - Left hemidiaphragm is more commonly ruptured than right
 - The most commonly herniated organ is spleen
28. The current treatment of osteoid osteoma of the femur is
- Radio frequency ablation
 - Bone cement injection
 - Local alcohol injection
 - Surgical excision
29. Which of the following produces globus pallidus hyperintensity on T2 weighted MRI
- Kernicterus
 - Neurofibromatosis type I
 - Leigh's disease
 - All of the above

30. All are TRUE about intestinal tuberculosis EXCEPT
- Less than 50% have pulmonary tuberculosis
 - Straightening of ileocolic angle
 - Longitudinal ulcers are common
 - Ascending colon can be involved
31. All are true about carcinoid EXCEPT
- Common in appendix
 - Ileal carcinoids are usually malignant
 - Annular fibrotic structure
 - Can coexist with Crohn's
32. The following are false EXCEPT
- Size less than <5mm colonic polyps can be malignant
 - Villous adenomas can present with enteropathy
 - Familial colonic polyps lead to carcinoma by 15 years
 - Familial polyposis is associated with Hamartomas of stomach
33. Regarding pharyngocele the following are true EXCEPT
- Zenker's diverticulum is seen between inferior constrictor and cricopharyngeus
 - Air fluid level can occur
 - Can be a remnant of 3rd brachial pouch
 - Usually seen on left side
34. Thickened duodenal mucosal folds are seen in all EXCEPT
- Pancreatitis
 - Crohn's disease
 - Superior mesenteric artery syndrome
 - Mastocytosis
35. Regarding Peutz-Jegher's syndrome all are false EXCEPT
- Autosomal recessive
 - Stomach involved in
 - Premalignant
 - Associated with carcinoma duodenum

36. Widening of retro rectal space occurs in all EXCEPT

- a. Abscess
- b. Enteric duplication cysts
- c. Radiotherapy
- d. Diverticulosis

37. Anisakiasis is related to the following EXCEPT

- a. Can involve stomach
- b. Produce ascites
- c. Colon involvement common
- d. Eosinophilic infiltration of intestinal mucosa

38. Regarding angiodysplasia of colon all are true EXCEPT

- a. Descending and sigmoid colon common
- b. Age groups >55 years
- c. Contrast extravasations can occur in angiogram
- d. Associated with aortic stenosis

39. Regarding Behcet's disease following are true EXCEPT

- a. Intestinal ulcers occur
- b. Ulcers resemble peptic ulcer
- c. Migratory thrombophelitis
- d. Intestinal perforation unusual

40. Regarding tracheal neoplasms which of the following least accurate

- a. Neoplasms are submucosal mostly
- b. Papillomas likely to become malignant
- c. Carcinoma is the most common tracheal neoplasm
- d. Amyloid tumours resemble tracheal carcinoma

41. Regarding Pompe's disease following are true EXCEPT

- a. Glycogen storage disorder
- b. Cause acute myocarditis
- c. Conduction abnormalities seen
- d. Cause of sudden death in 1st year of life

42. Tricuspid atresia is associated with
- Pulmonary stenosis
 - Hypo plastic right ventricle
 - Normal pulmonary vasculature
 - Normal sized heart
43. Calcification of ascending aorta is most commonly caused by
- Atherosclerosis
 - Syphilis
 - Hypertension
 - Hypercholestrolemia
44. Left atrial enlargement can be best made out in
- Left posterior oblique
 - Right anterior oblique
 - Left posterior oblique with barium
 - Left anterior oblique with barium
45. In lymphangiography secondary nodes show
- Filling defects single or multiple / central or peripheral
 - Soap bubble appearance
 - Irregular pattern
 - Opacified small glands
46. The number of carpal bones seen in new born is
- None
 - Three
 - Six
 - One
47. Unilateral elevation of diaphragm is due to
- Scoliosis
 - Obesity
 - Large liver
 - Ascites

48. Earliest radiological signs of rickets are
- Narrowing of absence of normal zone of provisional calcification
 - Fracture of bone
 - Thin penciled out small epiphyses
 - Bowing of bone
49. The pathognomonic x-ray sign of chronic pancreatitis is
- Air under diaphragm
 - Setinel loop
 - Widening of duodenal loop
 - Pancreatic calcifications
50. Half life of radioactive cobalt Co^{60} is
- 16 years
 - 30.5 years
 - 5.6 years
 - 3 years
51. Radioactive Co^{60} emits
- Alpha rays
 - Beta rays
 - Gamma rays
 - All of the above
52. Radioactive isotope used in liver scan is
- Rose Bengal I 131
 - I 131
 - Tc 99m
 - Mercury neohydrine
53. The most reliable method of diagnosis of pulmonary embolism is by
- Plain x-ray
 - CT scan
 - Angiogram
 - Perfusion scan

54. Regarding achondroplasia all are true except

- a. Large skull
- b. Anterior beaking of vertebra
- c. Square iliac wings
- d. Wide sacrosciatic notch

55. Hypertrophic Osteo arthropathy shows the following features

- a. Painless swelling of joints
- b. No periosteal reaction
- c. Not seen in psoriasis
- d. Periarticular osteoporosis

56. Osteoporosis can be seen in all except

- a. Hypogonadism
- b. Heparin
- c. Young people
- d. Following fracture

57. Subarticular lucent bone is seen in all except

- a. Rheumatoid arthritis
- b. Gout
- c. Haemophilia
- d. Non-ossifying fibroma

58. Caffey's disease shows following except

- a. Multiple bones involved
- b. Hands & feet affected
- c. Mandible is a common site
- d. Occurs below 6 months of age

59. Pagets disease shows following features

- a. Common above 40 years
- b. Extramedullary hemopoiesis
- c. Picture frame vertebra
- d. Facial bone affected

60. Battered child syndrome following are true EXCEPT

- a. Less than 2 years
- b. Separation of epiphysis
- c. Subperiosteal hemorrhage
- d. Epidural hemorrhage common

61. Bone infarct occurs in following EXCEPT

- a. Pancreatitis
- b. Corticosteroid therapy
- c. Hypopituitarism
- d. Osteochondritis

62. Brucellosis causes all EXCEPT

- a. Synovitis
- b. Myositis
- c. Bone destruction with no sclerosis
- d. Disc gas

63. Campomelic dysplasia is associated with all EXCEPT

- a. Hydrocephalus
- b. Congenital heart disease
- c. Hydronephrosis
- d. Normal mandible

64. Ellis van creveld syndrome shows following features

- a. Associated with congenital heart disease
- b. Autosomal dominant
- c. Ectodermal dysplasia
- d. Hepato splenomegaly

65. Chondromyxoid fibroma shows all EXCEPT

- a. Arises in cortex
- b. Benign cartilaginous tumor
- c. Usually metadiaphyseal
- d. Common in 4th decade

66. In persistent hyperplastic primary vitreous the following are seen EXCEPT

- a. Small hypoplastic globe
- b. Hyperdense I
- c. Calcification
- d. Subhyaloid hemorrhage

67. In retrolental fibroplasias, the following are seen EXCEPT

- a. Retinal detachment
- b. Microphthalmia
- c. Shallow anterior chamber
- d. No calcification

68. Warberg disease is characterized by

- a. Hydrocephalus
- b. Lissencephaly
- c. Autosomal dominant
- d. Bilateral leukokoria

69. Regarding Rhabdomyosarcoma of orbit the following are true except

- a. Associated commonly with neurofibromatosis
- b. Retrobulbar location common
- c. Embryonal type is common
- d. Males commonly affected than females

70. In asbestos related pleural disease following are true except

- a. Focal pleural plaques seen
- b. Round atelectasis
- c. Air bronchogram is a common feature
- d. Bronchoalveolar carcinoma can occur

71. Regarding amyloidosis of chest following are true except

- a. Tracheobronchial type common
- b. Secondary amyloidosis is common
- c. Haemoptysis is the most common complaint
- d. Age more than 60 years

72. The least common radiographic sign of malignancy in mammogram is

- a. Microcalcification
- b. Upper outer quadrant lesion
- c. Halo sign
- d. Clinical size less than radiographic size

73. Pagets disease of nipple shows following features EXCEPT

- a. Can be multicentric
- b. Nipple calcification
- c. Negative mammogram rare
- d. Retroalveolar fibrous mass

74. Down syndrome is associated with all except

- a. Ostium primum ASD
- b. PDA
- c. 11 pairs of ribs
- d. Mitral stenosis

75. In Noonan syndrome following are true except

- a. Pulmonary stenosis
- b. ASD-ostium secundum type
- c. Hypertrophic cardiomyopathy
- d. Mental retardation

76. In Williams syndrome all are true except

- a. Elfin facies
- b. Aortic stenosis
- c. Hypocalcemia
- d. ASD

77. Aortic size in shunt lesions show following except

- a. Decreased size in PDA
- b. Decreased size in ASD
- c. Decreased size in VSD
- d. Decreased size in common AV canal

78. Enlarged azygos vein is seen in all except
- Heart failure
 - Pregnancy
 - Portal hypertension
 - Sinus venous defect
79. In Ehlers-Danlos syndrome the following are true except
- Mitral valve prolapsed
 - Aortic root dilatation
 - Dissection of aorta
 - Pulmonary artery dilatation
80. In osteogenesis imperfecta the following are true except
- Aortic valve regurgitation
 - Ruptured chordae tendinae
 - Enlarged lumbar pedicles
 - Type II is autosomal dominant
81. All are TRUE about retroperitoneal leiomyosarcoma EXCEPT
- Can arise from wall of IVC
 - More common in males
 - Dissemination more common by lymphatics
 - Can cause metastasis to skin
82. All are true regarding renal vein thrombosis EXCEPT
- 80-90% asymptomatic
 - Can cause proteinuria
 - Intra renal chunky calcification
 - Retro peritoneal dilated collaterals
83. Regarding renal tubular acidosis all are true EXCEPT
- Can cause nephrocalcinosis in proximal type 2 RTA
 - Muscle weakness
 - Bone pain
 - Hyperchloremia

84. Regarding renovascular hypertension all are true EXCEPT
- Renal vein renin assay is gold standard
 - Renin assay is essential for renal angioplasty decision
 - AV fistula is a cause
 - Stenting is indicated in Takayasu arteritis
85. Pyelourethritis cystica is the result of
- Infection
 - Benign variant
 - A term of transitional cell carcinoma
 - Caused by blood clots
86. Which of the following is NOT true about Cephal hematoma
- Limited by cranial sutures
 - Subperosteal location
 - Between galea and periosteum of calvarium
 - Usually occurs in infants
87. 'Lentiform Fork sign' is seen in
- Uremia
 - Osmotic demyelination of Pons
 - PRESS
 - Zellweger syndrome
88. Which of the following can produce sudden severe headache
- Subarachnoid hemorrhage
 - Intracranial hypotension
 - Cortical Venous thrombosis
 - All of the above
89. Which of the following is NOT a common site for capillary telangiectasia of the brain
- Pons
 - Frontal Lobe
 - Cerebellum
 - Spinal Cord

90. In Behcet disease
- Genital ulcers are common
 - Dural sinus thrombosis can occur
 - Perivascular necrosis is seen on pathology
 - All of the above
91. Which is TRUE in Japanese Encephalitis
- It is an entero viral encephalitis
 - Body of the hippocampus can be involved
 - Head of the hippocampus is more commonly involved
 - None of the above
92. Racemose cysticercosis
- Usually shows thick contrast enhancement
 - Occurs in basal cisterns
 - Scolex is always identifiable
 - Hydrocephalus is less common
93. Immune Reconstitution Inflammatory Syndrome (IRIS) is
- T- cell mediated
 - Seen only in HIV patients
 - Seen along with TB only
 - All of the above
94. SUSAC syndrome is
- RED- M
 - SICRET
 - Microangiopathy with microinfarcts
 - All of the above
95. Neurosarcoidosis is
- Of unknown etiology
 - CD4 positive T Cells are implicated
 - Can affect multiple body regions
 - All of the above
96. Which of the following terminology is/ are omitted in 2016 CNS WHO?
- Diffuse fibrillary astocytoma
 - Gliomatosis Cerebri
 - Glioblastoma Multiformae
 - All of the above

97. Which is TRUE about Dysplastic Cerebellar Gangliocytoma

- a. rCBV is high
- b. Choline is elevated
- c. Shows diffusion Restriction
- d. All of the above

98. Which of the following terminology is/ are added in 2016 CNS WHO?

- a. Diffuse leptomeningeal glioneuronal tumor
- b. Pleomorphic xanthoastrocytoma
- c. Desmoplastic Medulloblastoma
- d. All of the above

99. Which of the following cranial nerve is a pure motor nerve?

- a. IX
- b. X
- c. XI
- d. V

100. Tuber Cinerium is part of

- a. Hippocampus
- b. Hypothalamus
- c. Geniculate ganglion
- d. None of the above

