



श्री चित्रा तिरुनाल आयुर्विज्ञान और प्रौद्योगिकी संस्थान, तिरुवनंतपुरम् -11  
SREE CHITRA TIRUNAL INSTITUTE FOR MEDICAL  
SCIENCES & TECHNOLOGY,  
THIRUVANANTHAPURAM—695 011

ENTRANCE EXAMINATION : ACADEMIC SESSION JANUARY 2018

M.Ch Neurosurgery Post M.S (3year course)

Time: 90 min

Max.Marks: 100

(Select the most appropriate answer) *No negative marks*

1. All are true regarding syringomyelia except:
  - A. Bilateral loss of pain and temperature in the affected dermatomes.
  - B. Bilateral loss of touch sensation in the affected dermatomes.
  - C. Destruction of the crossing fibers of the lateral spinothalamic tracts.
  - D. Destruction of the crossing fibers of the ventral spinothalamic tracts.
  
2. Which cranial nerve nuclei is not present in floor of IV ventricle?
  - A. Abducent nucleus.
  - B. Facial nucleus.
  - C. Dorsal motor nucleus of Vagus.
  - D. Hypoglossal nucleus.
  
3. The following nuclei project their axons to the cerebellum except
  - A. Red nucleus.
  - B. Accessory cuneate nucleus.
  - C. Arcuate nucleus.
  - D. Inferior olivary nucleus.
  
4. An excess of which of the following amino acids is most likely to be important in the pathogenesis of hepatic encephalopathy?
  - A. Aspartate
  - B. Glutamine
  - C. Methionine
  - D. Phenylalanine

5. The Dorellos canal is traversed or crossed by the:
- A. Third nerve.
  - B. The 6th nerve.
  - C. The inferior petrosal sinus.
  - D. Both the 6th nerve and the inferior perusal sinus.
6. First order neurons subserving vision are
- A. The ganglion cells.
  - B. Rods and cons.
  - C. Bipolar cells.
  - D. Present in the lateral geniculate body.
7. Which of the following statements about deep tendon reflexes is true?
- A. It is a monosynaptic reflex, which is not subject to any control from higher centres.
  - B. It is suppressed immediately following cord transection and the pyramidal tract is the efferent arm of the reflex.
  - C. The golgi tendon organ acts as the sensory receptor and the alpha motor neuron is the effector neuron.
  - D. Gamma motor neuron supplies the intrasfusal fibers but does not participate in the reflex arc.
8. An ideal patient for trans-hiatal esophagectomy and gastric pull up would be
- A. A 25 year old lady with upper third esophageal squamous cell carcinoma
  - B. A 40 year old man with lower third esophageal adenocarcinoma
  - C. A 30 year old man with a middle third esophageal perforation and mediastinitis
  - D. A 45 year old lady with gastroesophageal junction ulceroproliferative adenocarcinoma and ascites
9. The mechanism of action common to both immunosupressants, cyclosporine and tacrolimus
- A. Purine biosynthesis inhibition
  - B. Blockade of Interleukin-2 receptors

- C. Inhibition of Interleukin-2 production
  - D. Inhibition of signal transduction from Interleukin-2 receptor
10. Fondaparinux a newer anticoagulant used for treatment of acute venous thromboembolism has the following mechanism of action,
- A. Antithrombin III -mediated selective inhibition of Factor X a
  - B. Direct thrombin inhibition
  - C. Inactivating thrombin and activated factor XII through an antithrombin dependent mechanism
  - D. Inhibiting the synthesis of vitamin K-dependent clotting factors, which include Factors II, VII, IX, and X
11. Which is the most common malignancy predisposed to due to chronic immune suppression in liver transplant patients?
- A. Kaposi sarcoma
  - B. Non-Hodgkin's lymphoma
  - C. Renal cell carcinoma
  - D. Askin's tumor
12. The most common type of congenital tracheoesophageal fistula(TEF) encountered in pediatric surgical practice is
- A. Esophageal atresia with distal TEF
  - B. Esophageal atresia with proximal TEF
  - C. Isolated TEF
  - D. "H" type TEF
13. Best way to reduce the chance of auto PEEP occurring is to increase:
- A. Expiratory time
  - B. Inspiratory time
  - C. Respiratory rate
  - D. Amount of positive pressure ventilation

14. Neurosurgery in sitting position has increased risk of venous air embolism. Which is the most sensitive monitor to detect venous air embolism?
- A. Precordial Doppler
  - B. Pulmonary artery catheter
  - C. Trans oesophageal ECHO
  - D. EtCO<sub>2</sub>
15. Which statement about FFP (fresh frozen plasma) is most likely true.
- A. Each unit is typically pooled from multiple donor units of whole blood.
  - B. Collection techniques eliminate the risk of infection
  - C. Units should be administered within 2 hrs of thawing
  - D. ABO compatibility should be confirmed prior to transfusion
16. Which of the following is most likely to be increased as a result of administration of Metoclopramide :
- A. Gastric volume
  - B. The pH of gastric contents
  - C. Lower esophageal sphincter tone
  - D. Motility of the colon
17. The following is false regarding follicular carcinoma thyroid:
- A. Follicular carcinoma is the second most common carcinoma of the thyroid gland, and is commonest cause of micro carcinomas of the thyroid.
  - B. The incidence of follicular carcinoma is high in endemic areas and is due to increased TSH stimulation.
  - C. They are grossly well encapsulated lesions with very little tendency to involve lymph nodes.
  - D. Those lesions with hurtle cells predominate have a poorer prognosis with a risk of haematogenous, spread.
18. Regarding oesophageal diverticulae which of the following statements is false:
- A. Mid oesophageal diverticulae are pulsion diverticulae and are usually small.
  - B. Traction diverticulae are less common and follows granulomatous disease.

C. A diverticulum, in isolation, should not be assumed to account for a patient's illness just because it looks dramatic on a radiograph.

D. Epiphrenic diverticulae is traction diverticulae, which can reach great sizes.

19. Which of the following statements regarding GIT motility is false?

A. GIT motility is mainly mediated by the intrinsic nervous system, and critical in this process is the migrating motor complex.

B. Following a meal the stomach expresses a phase of receptive relaxation which lasts several minutes, and the antrum demonstrates tonic contractility.

C. The duodenum can generate 10 contractions per minute but responds mainly to contractions of the antrum.

D. In the fasting state the 3 phases of small intestinal contractions together lasts approximately 90 minutes.

20. Which of the following statements is true regarding gastritis.

A. Type A gastritis is associated with achlorhydria however pernicious anemia is uncommon.

B. Patients with Type A gastritis are prone for malignancy and the main cause of the same is hypertrophy of the gastrin producing endocrine cells.

C. Helicobacter associated pan gastritis may or may not be antral sparing.

D. Granulomatous gastritis can occur in crohns disease but may also be seen in tuberculosis.

21. The following statements are not true regarding gastric carcinoma:

A. In the UICC classification T1 b refers to invasion of the submucosa.

B. In the Japanese classification of early gastric cancers the types I, II and III, refers to protruding, superficial and excavated respectively.

C. In Japan more than half of gastric cancers are identified as early gastric cancers however only 1/3<sup>rd</sup> of British patients have early gastric cancer.

D. In the UICC classification N3A refers to 7- 15 regional nodes involved in the malignancy however no node outside the region will be involved.

22. A 60 year old man presents following two bouts of upper gastrointestinal heamorrhage, recovered with conservative management. Oesophogastroduodenoscopy shows puckered ulcer in the first part of the duodenum penetrating posteriorly with a large blood clot In the middle of the floor of the ulcer. Which one of the following arteries is the most probable cause of the bleeding?
- A. Aberrant right hepatic artery
  - B. Right gastric artery
  - C. Gastroduodenal artery
  - D. Right gastroepiploic artery
23. Off pump beating heart coronary artery surgery(OPCAB) is associated with all of the following except,
- A. Increased risk of post perfusion syndrome
  - B. Use of a stabilizer during surgery
  - C. Reduced risk of perioperative stroke
  - D. Avoidance of crystalloid cardioplegic solutions
24. Which of the following statements regarding unusual hernias is incorrect?
- A. An obturator hernia may produce nerve compression
  - B. Petit's hernia occurs through the inferior lumbar triangle.
  - C. Sciatic hernias usually present with a painful groin mass below the inguinal ligament.
  - D. Littre's hernia is defined by a Meckel's diverticulum presenting as the sole component of the hernia sac.
25. The likelihood of developing neurologic manifestations of nitrous oxide toxicity is greatest in patients with subclinical deficiency of which of the following?
- A. Cobalamin (vitamin B12)
  - B. Copper
  - C. Thiamine (vitamin B1)
  - D.  $\alpha$ -Tocopherol (vitamin E)
26. The following is not true about hypothalamic hamartoma:
- A. They are associated with gelastic seizures.

- B. They are associated with precocious puberty.
- C. They are associated with behavioral abnormalities and mental retardation.
- D. They commonly present with hydrocephalus.

27. A far lateral disc prolapse at L4-5 is most likely to cause the following deficit,

- A. Toe dorsiflexion weakness
- B. Plantar flexion weakness
- C. Foot inversion weakness
- D. Foot eversion weakness

28. An artery of Percheron territory infarct would result in,

- A. Bilateral pontine infarcts
- B. Bilateral thalamic and mesencephalic infarcts
- C. Unilateral thalamic and diffuse brain stem infarcts
- D. Hypothalamic and medullary infarcts

29. The resting membrane potential of a neuron is,

- A. -90 mV
- B. 65 mV
- C. -70 mV
- D. 50 mV

30. Damage to what neural structure(s) is most associated with prosopagnosia?

- A. Mid-fusiform gyrus and inferior occipital gyrus
- B. Mesial temporal lobe
- C. Calcarine sulcus and dominant angular gyrus
- D. Superior parietal lobule and supramarginal gyrus

31. What is classically described as the cause of an immediate coma in a patient after a head injury without evidence of an intracranial mass or ischemia?

- A. Severe concussion
- B. Diffuse axonal injury

- C. Dural sinus thrombosis
- D. Atlantoaxial dislocation

32. Contents of the cavernous sinus include all the following except:

- A. Optic nerve
- B. Oculomotor nerve
- C. Maxillary nerve
- D. Abducens nerve

33. The normal rate of CSF formation is:

- A. 0.4ml/min
- B. 1ml/min
- C. 3ml/min
- D. 10ml/min

34. In Wilson's disease (hepatolenticular degeneration), the Kayser-Fleischer ring is formed due to copper deposition in the:

- A. Cornea
- B. Sclera
- C. Conjunctiva
- D. Retina

35. The medial striate artery is also known as

- A. Tentorial artery (of Bernasconi and Cassinari)
- B. McConnell capsular artery
- C. Frontopolar artery
- D. Recurrent artery of Heubner

36. Contralateral homonymous hemianopia indicates a lesion in all of the following except

- A. Optic chiasm
- B. Optic tract.
- C. Lateral geniculate body.
- D. Optic radiation



37. The third ventricle is the cavity of the
- A. Metencephalon
  - B. Mesencephalon
  - C. Diencephalon
  - D. Telencephalon
38. Which of the following lesions is not one of the cutaneous stigmata of occult spinal dysraphism?
- A. Café-au-lait spot over the interscapular region
  - B. Focal hairy patch over the thoracolumbar spine
  - C. Dermal sinus located above the midsacrum
  - D. Midline subcutaneous lipoma
39. Constriction of the right pupil when light is directed at the left eye requires integrity of all of the following structures except
- A. Left optic nerve
  - B. Left pretectal nucleus
  - C. Left optic radiation
  - D. Right Edinger-Westphal nucleus
40. An athlete presented with neck and left arm pain and paresthesias up to left index finger. He was found to have weakness of the left triceps muscle and a diminished left triceps jerk. The disc herniation is most likely to be at:
- A. C3–C4
  - B. C4–C5
  - C. C5–C6
  - D. C6–C7
41. The intracranial tumor most likely to be encountered in a middle-aged man with the acquired immunodeficiency syndrome (AIDS) is:
- A. Glioblastoma multiforme
  - B. Ependymoma

- C. Oligodendroglioma
  - D. Lymphoma
42. All are true about Brown Sequard syndrome except
- A. Ipsilateral extensor plantar response
  - B. Contralateral dorsal column impairment
  - C. Ipsilateral corticospinal tract involvement
  - D. Contralateral spinothalamic tract involvement
43. Which of the following is not associated with neuronal migration disorder
- A. Schizencephaly
  - B. Lissencephaly
  - C. Polymicrogyria
  - D. Focal cortical dysphasia
44. The commonest location of the artery of Adamkiewicz is
- A. Left, D 6-8
  - B. Right, D9-11
  - C. Left, D9-11
  - D. Right, D6-8
45. Spastic paraplegia is caused by all except
- A. Vit B12 deficiency
  - B. Lead poisoning
  - C. Motor neuron disease
  - D. Cervical myelopathy
46. The lowest line of the Snellens chart when read at a distance of 6 meters indicates 6/6 vision.  
What is angle subtended by one letter in this line at the focal point of the eye.
- A. 1 degree.
  - B. 5 degrees.
  - C. One minute.
  - D. 5 minutes.

47. The following is true about the paranasal sinuses.
- The maxillary sinuses as well as ethmoidal sinuses are present at birth.
  - The sphenoid sinuses are well formed by the age of 18 to 24 months.
  - The frontal sinus is the last sinus to pneumatise.
  - The antrum is the first air cell in the mastoid and is seen at birth.
48. A 4-year old child has a focal cystic brain stem glioma and on neurological examination is noted to have a left "one-and-half syndrome". The lesion is presumed to have involved,
- Right Medial longitudinal fasciculus and left paraspontine reticular formation
  - Right Medial longitudinal fasciculus and posterior commissure
  - Left Medial longitudinal fasciculus and left paraspontine reticular formation
  - Left Medial longitudinal fasciculus and right paraspontine reticular formation
49. Onion peel distribution of sensory impairment is seen or associated in the following situation.
- Trigeminal root involvement due to progressive compression of an extrinsic tumor.
  - Involvement of the mesencephalic nucleus of the trigeminal nerve.
  - Trigeminal neuralgia can be distributed in such a pattern and is due to vascular compression.
  - Due to selective involvement within a rostrocaudally distributed spinal ganglion.
50. A 70-year-old woman is undergoing an open operation on her pharyngeal pouch. A pharyngeal pouch occurs through the Killian's dehiscence. Between which one the following sites is the weakness most likely?
- Middle and inferior constrictor muscles of the pharynx
  - Right and left palatopharyngeus
  - Superior and middle constrictor muscles of the pharynx
  - Thyropharyngeus and cricopharyngeus (two parts of the inferior constrictor muscle)
51. A 35-year-old man has been investigated for hypercalcaemia from primary hyperparathyroidism. A technetium-labeled sestamibi scan shows a parathyroid adenoma in the superior mediastinum. The adenoma has developed from which of the following sites of origin of the parathyroid?
- 1<sup>st</sup> pharyngeal pouch

- B. 4<sup>th</sup> pharyngeal pouch
- C. 2<sup>nd</sup> pharyngeal pouch
- D. 3<sup>rd</sup> pharyngeal pouch

52. A 70-year-old man is undergoing an elective open repair of an infra-renal abdominal aortic aneurysm. Which one of the following structures is most adherent to the aneurysm neck?

- A. Left renal vein
- B. Neck of pancreas
- C. Third part of duodenum
- D. Portal vein

53. A 36 year old woman with feature of Grave's disease is on the waiting list for subtotal thyroidectomy. She had been on antithyroid treatment for 2 months. At her preoperative assessment in the outpatient clinic she complains of feeling too hot and found to be sweating with sinus tachycardia of 90 beats per min and arterial BP of 170/90mmHg. Which of the following is the most effective management?

- A. Postpone the operation for further stabilization
- B. Referral to cardiologist for management of hypertension
- C. Reiterate that antithyroid drugs and surgery are the way forward
- D. Turn down the thermostats in the outpatient department

54. Which of these arise from the upper trunk of brachial plexus?

- A. Dorsal scapular
- B. Lateral pectoral nerve
- C. Long thoracic nerve
- D. None of the above

55. What toxin inhibits RNA translation?

- A. Botulinum toxin
- B. Tetanus toxin

C. Diphtheria toxin

D. Tetrodotoxin

56. Treatment of choice for Type 1 Mirizzi's syndrome is,

A. Cholecystectomy

B. Hepaticojejunostomy

C. Common bile duct exploration and bilioenteric anastomosis

D. Roux-en-Y anastomosis

57. Uptake of a skin graft involves alignment of capillaries of the graft with capillaries in the recipient bed. This process is called -

A. Inosculation

B. Imbibition

C. Reanastomosis

D. Vascular realignment

58. Which of the following is most likely to result in increased affinity of haemoglobin for oxygen?

A. Acidosis

B. Increased 2,3 DPG

C. Fetal Hb

D. Isoflurane

59. Which among the following is a depolarising muscle relaxant?

A. Rocuronium

B. Vecuronium

C. Atracurium

D. Succinyl choline

60. End tidal CO<sub>2</sub> monitoring helps in all except,

A. Confirming tracheal position of endotracheal tube

B. Detecting accidental extubation

C. Presence of hypoxemia

D. Spontaneous ventilator attempts during mechanical ventilation

61. Clagett's window is a surgical procedure done for
- A. Large invasive thymomas
  - B. Empyemathoracis
  - C. Mediastinal biopsy
  - D. Thoracic sympathectomy
62. Video assisted thoracoscopic surgery (VATS) is used for the following surgical procedures except,
- A. Thoracic sympathectomy
  - B. Thymectomy
  - C. Dorsal spine cold abscess
  - D. Mitral valve repair
63. True about Gastro intestinal stromal tumors (GIST) is?
- A. Surgical excision has the best prognostic outcome
  - B. Tyrosine kinase inhibitors offer no benefit for adjuvant therapy
  - C. Most tumors are large and cause intestinal obstruction
  - D. Size less than 4 cm and homogeneity on endoscopic ultrasound is a predictor for malignant GIST.
64. Which of the following is false regarding pin index safety system?
- A. It is a safety mechanism so that one cylinder cannot be fitted on other's position.
  - B. The pins are on the yoke of the anaesthesia machine.
  - C. Pin index for oxygen is 2, 5.
  - D. The pin index safety system can never be bypassed.
65. Which among the following muscle relaxants can be used as an alternative to Succinyl choline for rapid sequence intubation?
- A. Rocuronium
  - B. Vecuronium
  - C. Atracurium
  - D. Cisatracurium

66. Which of the following zones of the adrenal gland is the site of aldosterone synthesis?
- A. Zonaglomerulosa
  - B. Zonafasciculata
  - C. Zonareicularis
  - D. Adrenal medulla
67. At the age of 46, an accountant has developed hoarseness due to an inoperable cancer of the left upper lung lobe. He has smoked heavily since the age of 14. Which of the following features of cancer of the lung indicates distant spread?
- A. Hypercalcemia
  - B. Gynecomastia
  - C. Syndrome of inappropriate secretion of antidiuretic hormone (SIADH)
  - D. Brachial plexus lesion (Pancoast's syndrome)
68. The most common site of adenocarcinoma of the small intestine is the
- A. Duodenum.
  - B. Jejunum.
  - C. Ileum.
  - D. Terminal ileum.
69. Which of the following histological meningioma variants is associated with a more aggressive clinical behavior?
- A. Angiomatous
  - B. Chordoid
  - C. Clear cell
  - D. Papillary
70. True about Dexmedetomidine, commonly used for awake craniotomy is,
- A. Alpha 2 adrenergic receptor agonist
  - B. Sedative without the risk of respiratory depression
  - C. Both of the above
  - D. None of the above

71. Vonhappel Lindau disease is associated with

- A. Heamangioblastoma
- B. Vestibular schwannoma
- C. Subependymal giant cell astocytoma
- D. None of the above

72. Giant aneurysms are more than

- A. 1 cm
- B. 1.5 cm
- C. 2 cm
- D. 2.5 cm

73. Which among the following statements is true?

- A. Extradural neoplasms are usually benign.
- B. A typical type of intramedullary tumor is a meningioma.
- C. An intradural extramedullary neoplasm is ordinarily treated by a combination of surgical resection and radiotherapy.
- D. Hemangioblastoma is a benign intramedullary tumor that has the potential for surgical cure.

74. Regarding Train of Four (TOF), which of the following is false

- A. It can be used to distinguish between a depolarising and non depolarising block
- B. TOF should not be repeated more frequently than every 10-12 sec
- C. TOF ratio ( ratio of the amplitude of the fourth response to that of the first ) provides an estimation of the degree of non depolarising neuromuscular block
- D. A pre relaxant control twitch is needed to interpret TOF

75. According to the Gardner and Robertson modified hearing classification which of these statements is right with regard to speech discrimination

- A. Class 1 - 70 -100 %
- B. Class 3 -30 -50 %



- C. Class 2 -50 - 75%
- D. Class 1 - 75 -100 %

76. How does caffeine exert its effects?

- A. GABA receptor antagonism
- B. Phosphodiesterase inhibition
- C. Adenosine receptor agonism
- D. Acetylcholinesterase activation

77. The band of Giacomini is located in

- A. Temporal lobe
- B. Occipital lobe
- C. Insula
- D. Orbitofrontal cortex

78. A palliative surgical option for primary generalised epilepsy would be,

- A. Selective amygdalohippocampectomy
- B. Multilobar resection
- C. Posterior quadrant disconnection
- D. Vagus nerve stimulation

79. The artery of Bernasconi and Cassanari is a branch of,

- A. Internal carotid artery
- B. Thalamoperforators
- C. Basilar artery
- D. Medial posterior choroidal artery

80. Which of the following is not a part of the limbic system,

- A. Fimbria of fornix
- B. Thalamic fasciculus
- C. Diagonal band of Broca
- D. Mammillothalamic tract.

81. Which of these statements is false regarding lacosomide?

- A. Used in painful diabetic neuropathy
- B. Used in partial onset seizures
- C. Affects voltage gated sodium channels
- D. It is a GABA uptake inhibitors

82. Adequate recommended pressure to be maintained in the endotracheal tube cuff is,

- A. 20-30cms of water
- B. 35-45cms of water
- C. 40-50cms of water
- D. 5-10cms of water

83. Which of the following conditions is associated with increased risk of breast cancer?

- A. Fibrocystic mastopathy.
- B. Severe hyperplasia.
- C. Atypical hyperplasia.
- D. Papillomatosis.

84. Which of the following statements about the anatomic course of the esophagus is correct?

- A. The cervical esophagus passes behind and to the right of the trachea.
- B. The thoracic esophagus enters the posterior mediastinum anterior to the aortic arch.
- C. The esophagus enters the diaphragmatic hiatus at the level of T8.
- D. The esophagus deviates anteriorly and to the left as it enters the abdomen.

85. Hodgkin's disease is a malignant lymphoma with four histological subtypes. Which of the following is not one of the subtypes?

- A. Mixed cellularity
- B. Nodularsclerosis.
- C. Lymphocyte depletion.
- D. Leukocyte-lymphocyte dominance.

86. Which of the following muscle relaxants causes an increase in intracranial pressure?

- A. Atracurium

- B. Pancuronium
- C. Vecuronium
- D. Succinyl Choline

87. In a patient who had a motor-cycle crash, a CT of the abdomen revealed a peripancreatic hematoma and indistinct pancreatic border. The most definitive test for a pancreatic injury requiring operative intervention is:

- A. ERCP
- B. CT scanning
- C. Operative exploration
- D. Amylase test of lavage fluid

88. A 1-week-old infant is brought to the hospital because of vomiting. An upper gastrointestinal (GI) series reveals duodenal obstruction. On laparotomy, annular pancreas is found. Which of the following statements about annular pancreas is TRUE?

- A. Resection is the treatment of choice.
- B. It is associated with Down's syndrome.
- C. Symptoms usually begin with back pain.
- D. It is most likely due to abnormal rotation encircling the third part of the duodenum.

89. Which of the following is true about Wilms tumor?

- A. Usually affects adolescent males sporadically
- B. Has a survival of 30-40% for Stage I even with surgery and multimodal therapy
- C. Most commonly presents as an abdominal mass
- D. Bilateral Wilms tumor may be present in 30-40% of patients

90. Bending of the neural placode to form the neural tube is known as:

- A. Gastrulation
- B. Neurulation
- C. tubulation
- D. stomatisation

91. Which of the following breast lesions are noninvasive malignancies?
- A. Intraductal carcinoma of the comedo type.
  - B. Tubular carcinoma and mucinous carcinoma.
  - C. Infiltrating ductal carcinoma and lobular carcinoma.
  - D. Medullary carcinoma, including atypical medullary lesions.
92. Which of the following clinical situations are considered good indications for PVS?
- A. A 50-year-old cirrhotic man had an emergency portacaval shunt for bleeding varices and postoperatively had an ascites leak and mild superficial wound infection.
  - B. A 57-year-old woman with primary biliary cirrhosis (PBC) has difficult to control ascites and diuretic-induced encephalopathy.
  - C. A 46-year-old resistant alcoholic has chronic ascites uncontrolled by diuretics combined with repeat paracentesis.
  - D. A 34-year-old woman taking BCPs had rapid onset of ascites and is found to have hepatic vein thrombosis causing the Budd-Chiari syndrome.
93. Which of these trials is associated with unruptured avm
- A. ISAT
  - B. DECIMAL
  - C. DESTINY
  - D. ARUBA
94. In what ventricular structure is cerebrospinal fluid not produced by the choroid plexus?
- A. Floor of the third ventricle
  - B. Lateral recess of the foramen of Luschka
  - C. Temporal horn of the lateral ventricle
  - D. Roof of the third ventricle
95. What midbrain anatomic structure is responsible for pain modulation?
- A. Superior colliculus
  - B. Substantia nigra
  - C. Red nucleus
  - D. Periaqueductal gray matter

96. What is a miniature end-plate potential?
- A. Excitatory postsynaptic potential
  - B. Response of the postsynaptic terminal caused by the release of a single vesicle into the synaptic cleft
  - C. Response of the postsynaptic terminal caused by the release of a single molecule of neurotransmitter into the synaptic cleft
  - D. Response of the postsynaptic terminal caused by the release of the neurotransmitters from a single neuron only
97. What is the name of the white matter tract that projects from Wernicke's area to the inferior frontal lobe in Broca's region?
- A. The arcuate fasciculus
  - B. IFOS
  - C. Inferior Longitudinal fasciculus
  - D. Anterior commissure
98. The parahippocampal gyrus continues by a small isthmus into the following
- A. Cingulate gyrus
  - B. Lateral occipito temporal gyrus
  - C. Dentate gyrus
  - D. Parieto occipital gyrus
99. A 30 year old man has insidious onset upgaze paresis, convergence retraction nystagmus, light near dissociation and retracted eyelids. The most likely pathological lesion is,
- A. Pineocytoma
  - B. Pontine glioma.
  - C. Pulvinar tuberculoma
  - D. 4<sup>th</sup> ventricular ependymoma
100. First order neurons subserving vision are
- A. The ganglion cells.
  - B. Rods and Cones.
  - C. Bipolar cells.
  - D. Present in the lateral geniculate body.

