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प्रश्न-पुस्तिका संख्या व बारकोड /
Question Booklet No. & Barcode

MPA-25

इस प्रश्न-पुस्तिका को तब तक न खोलें जब तक
कहा न जाए। Do not open this Question
Booklet until you are asked to do so.

पुस्तिका में पृष्ठों की संख्या : 24
Number of Pages in Booklet : 24
पुस्तिका में प्रश्नों की संख्या : 150
No. of Questions in Booklet : 150

Paper Code : 72

Sub : Neuro Surgery

समय : 02:30 घण्टे + 10 मिनट अतिरिक्त*

Exam Date: 3/7/2025

अधिकतम अंक : 150

Time : 02:30 Hours + 10 Minutes Extra*

Maximum Marks : 150



प्रश्न-पुस्तिका के पेपर की सील/पोलिथीन बैग को खोलने पर प्रश्न-पत्र हल करने से पूर्व परीक्षार्थी यह सुनिश्चित कर लें कि :

- प्रश्न-पुस्तिका संख्या तथा ओ.एम.आर. उत्तर-पत्रक पर अंकित बारकोड संख्या समान हैं।
- प्रश्न-पुस्तिका एवं ओ.एम.आर. उत्तर-पत्रक के सभी पृष्ठ व सभी प्रश्न सही मुद्रित हैं। समस्त प्रश्न, जैसा कि ऊपर वर्णित है, उपलब्ध हैं तथा कोई भी पृष्ठ कम नहीं है / मुद्रण त्रुटि नहीं है। किसी भी प्रकार की विसंगति या दोषपूर्ण होने पर परीक्षार्थी वीक्षक से दूसरा प्रश्न-पत्र प्राप्त कर लें। यह सुनिश्चित करने की जिम्मेदारी अभ्यर्थी की होगी। परीक्षा प्रारम्भ होने के 5 मिनट पश्चात् ऐसे किसी दावे/आपत्ति पर कोई विचार नहीं किया जायेगा।

On opening the paper seal/polythene bag of the Question Booklet before attempting the question paper, the candidate should ensure that :

- Question Booklet Number and Barcode Number of OMR Answer Sheet are same.
- All pages & Questions of Question Booklet and OMR Answer Sheet are properly printed. All questions as mentioned above are available and no page is missing/misprinted.

If there is any discrepancy/defect, candidate must obtain another Question Booklet from Invigilator. Candidate himself shall be responsible for ensuring this. No claim/objection in this regard will be entertained after five minutes of start of examination.

परीक्षार्थियों के लिए निर्देश

1. प्रत्येक प्रश्न के लिये एक विकल्प भरना अनिवार्य है।
2. सभी प्रश्नों के अंक समान हैं।
3. प्रत्येक प्रश्न का मात्र एक ही उत्तर दीजिए। एक से अधिक उत्तर देने की दशा में प्रश्न के उत्तर को गलत माना जाएगा।
4. OMR उत्तर-पत्रक इस प्रश्न-पुस्तिका के अन्दर रखा है। जब आपको प्रश्न-पुस्तिका खोलने को कहा जाए, तो उत्तर-पत्रक निकाल कर ध्यान से केवल नीले बॉल पॉइंट पेन से विवरण भरें।
5. कृपया अपना रोल नम्बर ओ.एम.आर. उत्तर-पत्रक पर सावधानीपूर्वक सही भरें। गलत रोल नम्बर भरने पर परीक्षार्थी स्वयं उत्तरदायी होगा।
6. ओ.एम.आर. उत्तर-पत्रक में करेक्शन पेन/व्हाइटनर/सफेदा का उपयोग निषिद्ध है।
7. प्रत्येक गलत उत्तर के लिए प्रश्न अंक का 1/3 भाग काटा जायेगा। गलत उत्तर से तात्पर्य अशुद्ध उत्तर अथवा किसी भी प्रश्न के एक से अधिक उत्तर से है।
8. प्रत्येक प्रश्न के पाँच विकल्प दिये गये हैं, जिन्हें क्रमशः 1, 2, 3, 4, 5 अंकित किया गया है। अभ्यर्थी को सही उत्तर निर्दिष्ट करते हुए उनमें से केवल एक गोले (बबल) को उत्तर-पत्रक पर नीले बॉल पॉइंट पेन से गहरा करना है।
9. यदि आप प्रश्न का उत्तर नहीं देना चाहते हैं तो उत्तर-पत्रक में पाँचवें (5) विकल्प को गहरा करें। यदि पाँच में से कोई भी गोला गहरा नहीं किया जाता है, तो ऐसे प्रश्न के लिये प्रश्न अंक का 1/3 भाग काटा जायेगा।
- 10.* प्रश्न-पत्र हल करने के उपरांत अभ्यर्थी अनिवार्य रूप से ओ.एम.आर. उत्तर-पत्रक जाँच लें कि समस्त प्रश्नों के लिये एक विकल्प (गोला) भर दिया गया है। इसके लिये ही निर्धारित समय से 10 मिनट का अतिरिक्त समय दिया गया है।
11. यदि अभ्यर्थी 10% से अधिक प्रश्नों में पाँच विकल्पों में से कोई भी विकल्प अंकित नहीं करता है तो उसको अयोग्य माना जायेगा।
12. मोबाइल फोन अथवा अन्य किसी इलेक्ट्रॉनिक यंत्र का परीक्षा हॉल में प्रयोग पूर्णतया वर्जित है। यदि किसी अभ्यर्थी के पास ऐसी कोई वर्जित सामग्री मिलती है तो उसके विरुद्ध आयोग द्वारा नियमानुसार कार्यवाही की जायेगी।

चेतावनी : अगर कोई अभ्यर्थी नकल करते पकड़ा जाता है या उसके पास से कोई अनधिकृत सामग्री पाई जाती है, तो उस अभ्यर्थी के विरुद्ध पुलिस में प्राथमिकी दर्ज कराते हुए राजस्थान सार्वजनिक परीक्षा (भर्ती में अनुचित साधनों की रोकथाम अध्यापय) अधिनियम, 2022 तथा अन्य प्रभावी कानून एवं आयोग के नियमों-प्रावधानों के तहत कार्यवाही की जाएगी। साथ ही आयोग ऐसे अभ्यर्थी को भविष्य में होने वाली आयोग की समस्त परीक्षाओं से विवर्जित कर सकता है।

उत्तर-पत्रक में दो प्रतियाँ हैं - मूल प्रति और कार्बन प्रति। परीक्षा समाप्ति पर परीक्षा कक्ष छोड़ने से पूर्व परीक्षार्थी उत्तर-पत्रक की दोनों प्रतियाँ वीक्षक को सौंपेंगे, परीक्षार्थी स्वयं कार्बन प्रति अलग नहीं करें। वीक्षक उत्तर-पत्रक की मूल प्रति को अपने पास जमा कर, कार्बन प्रति को मूल प्रति से कट लाइन से मोड़ कर सावधानीपूर्वक अलग कर परीक्षार्थी को सौंपेंगे, जिसे परीक्षार्थी अपने साथ ले जावेंगे। परीक्षार्थी को उत्तर-पत्रक की कार्बन प्रति चयन प्रक्रिया पूर्ण होने तक सुरक्षित रखनी होगी एवं आयोग द्वारा माँगी जाने पर प्रस्तुत करनी होगी।

INSTRUCTIONS FOR CANDIDATES

1. It is mandatory to fill one option for each question.
2. All questions carry equal marks.
3. Only one answer is to be given for each question. If more than one answers are marked, it would be treated as wrong answer.
4. The OMR Answer Sheet is inside this Question Booklet. When you are directed to open the Question Booklet, take out the Answer Sheet and fill in the particulars carefully with Blue Ball Point Pen only.
5. Please correctly fill your Roll Number in OMR Answer Sheet. Candidates will themselves be responsible for filling wrong Roll No.
6. Use of Correction Pen/Whitener in the OMR Answer Sheet is strictly forbidden.
7. 1/3 part of the mark(s) of each question will be deducted for each wrong answer. A wrong answer means an incorrect answer or more than one answers for any question.
8. Each question has five options marked as 1, 2, 3, 4, 5. You have to darken only one circle (bubble) indicating the correct answer on the Answer Sheet using BLUE BALL POINT PEN.
9. If you are not attempting a question then you have to darken the circle '5'. If none of the five circles is darkened, one third (1/3) part of the marks of question shall be deducted.
- 10.* After solving question paper, candidate must ascertain that he/she has darkened one of the circles (bubbles) for each of the questions. Extra time of 10 minutes beyond scheduled time, is provided for this.
11. A candidate who has not darkened any of the five circles in more than 10% questions shall be disqualified.
12. Mobile Phone or any other electronic gadget in the examination hall is strictly prohibited. A candidate found with any of such objectionable material with him/her will be strictly dealt with as per rules.

Warning : If a candidate is found copying or if any unauthorized material is found in his/her possession, F.I.R. would be lodged against him/her in the Police Station and he/she would be liable to be prosecuted under Rajasthan Public Examination (Measures for Prevention of Unfair means in Recruitment) Act, 2022 & any other laws applicable and Commission's Rules-Regulations. Commission may also debar him/her permanently from all future examinations.

1. Traumatic Extra Dural Haematoma, following statements are true, except
- (1) Lucid interval is associated with 50% of cases in EDH.
 - (2) EDH volumes > 30 mL have a higher incidence of failing conservative treatment.
 - (3) Global mortality after surgically treated EDH is 10%.
 - (4) EDH expansion has not been reported later than 36 hours.
 - (5) Question not attempted
2. A 60-year-old man in the intensive care unit (ICU) develops altered mental status and has a brief seizure. He is afebrile. His complete blood count and CSF studies are unremarkable. His complete metabolic profile shows a sodium level of 115 mEq/L. Which of the following is the best treatment?
- (1) Intravenous fosphenytoin
 - (2) Intravenous Levetiracetam
 - (3) Scheduled intravenous lorazepam
 - (4) Sodium correction
 - (5) Question not attempted
3. After head trauma with injury in posterior fossa, which lesion is most common?
- (1) Depressed fracture
 - (2) Acute Extra-dural haematoma
 - (3) Acute Sub-dural haematoma
 - (4) Cerebellar contusion / haematoma
 - (5) Question not attempted
4. Which is not associated with raised Intra-cranial pressure after traumatic brain injury?
- (1) Cerebral oedema
 - (2) Mass lesion due to haematoma formation
 - (3) Systemic hypertension
 - (4) Cerebral vasoconstriction
 - (5) Question not attempted
5. In which lesion after head injury surgery may be avoided?
- (1) Acute extra-dural haematoma in which volume is more than 30 cm³ as measured on C.T. Scan
 - (2) Acute sub-dural haematoma in which thickness is less than 10 mm, midline shift is 3 mm, ICP is 15 mmHg.
 - (3) Frontal contusion with volume is 50 cm³, GCS score 8 and midline shift is more than 5 mm.
 - (4) Posterior fossa haematoma with altered consciousness
 - (5) Question not attempted
6. Which is the most frequent site for Traumatic SAH?
- (1) Sylvian fissure
 - (2) Convexity
 - (3) Inter-hemispheric fissure
 - (4) Basal Cistern
 - (5) Question not attempted

7. A 50-year-old lady was involved in a car accident. She was driving the car with seat belt and collided with another car. She has sustained a L2 compression fracture with <30% height loss with no canal compromise and no neurological deficits.
The most appropriate management should be
- (1) Bed rest for 12 weeks
 - (2) TLSO brace and early mobilization
 - (3) Surgical fixation by Posterior spinal fixation
 - (4) Vertebroplasty
 - (5) Question not attempted
8. A patient who was admitted to the ICU with a Frontal contusion becomes intermittently unresponsive. Laboratory studies are normal and head CT findings are unchanged. Which of the following is most likely to yield the diagnosis ?
- (1) Continuous EEG monitoring
 - (2) Repeat MRI
 - (3) Magnetic resonance venography (MRV)
 - (4) Computed tomography angiography (CTA)
 - (5) Question not attempted
9. Denis three column theory
- (1) Middle column is most critical for determining spinal stability.
 - (2) Stable injury is when only one column is disrupted.
 - (3) Flexion-distraction injury often involves all 3 columns and hence is unstable.
 - (4) All of these
 - (5) Question not attempted
10. Which type of spine injury in neck is most common ?
- (1) Flexion and deflexion injury
 - (2) Hyper extension injury
 - (3) Rotation injury
 - (4) Compression injury
 - (5) Question not attempted
11. In the process of a brain abscess formation enlarging necrotic center, reaching maximum size occurs in
- (1) Early cerebritis
 - (2) Late cerebritis
 - (3) Early capsule formation
 - (4) Late capsule formation
 - (5) Question not attempted
12. The following statement holds true for a brain abscesses :
- (1) Most of the cases a 6-8 weeks course, appropriate anti-microbial therapy is recommended.
 - (2) Complete resolution of the abscess and abnormal contrast enhancement may take 3-4 months.
 - (3) Seizures can occur in almost 25% of cases.
 - (4) All of these
 - (5) Question not attempted

13. A 24-year-old nurse is exposed to meningococcal meningitis in the emergency department. What is the recommended treatment ?
- (1) Ethambutol
 - (2) Rifampin
 - (3) Streptomycin
 - (4) Isoniazid (INH)
 - (5) Question not attempted
14. A 30-year-old man with Human Immunodeficiency Virus (HIV) infection presents with chronic headache, confusion and fever. On examination, there is mild nuchal rigidity. Lumbar puncture shows an elevated opening pressure, 8 red blood cells (RBCs), 175 white blood cells (WBCs) with a lymphocytic predominance, a glucose level of 35 mg/dL and a protein level of 100 mg/dL. Gram staining is negative. – India ink staining reveals encapsulated fungi. What is the most likely diagnosis ?
- (1) Aspergillosis
 - (2) Cryptococcosis
 - (3) Coccidioidomycosis
 - (4) Histoplasmosis
 - (5) Question not attempted
15. In a c/o NF-2 patient with deaf in one ear and progressive hearing loss in other ear, what is your treatment ?
- (1) total removal in preserved ear
 - (2) total removal in preserved ear with IAC decompression
 - (3) subtotal removal in preserved ear with IAC decompression
 - (4) medical management
 - (5) Question not attempted
16. Gene associated with primary glioblastoma are all, except -
- (1) EGFR amplification
 - (2) PTEN mutation
 - (3) TP53 mutation
 - (4) All of these
 - (5) Question not attempted
17. 7th nerve identification is done in intraop period during retromastoidsuboccipital craniotomy by all, except -
- (1) tuft of choroid plexus
 - (2) flocculus of cerebellum
 - (3) electrophysiological monitoring
 - (4) anterior to 5th nerve
 - (5) Question not attempted
18. The single most important factor in the recurrence of meningiomas is
- (1) Bone invasion
 - (2) Histologic type of benign meningioma
 - (3) Post-operative tumour residual
 - (4) Sex of the patient
 - (5) Question not attempted
19. In the suboccipital transmeatal approach to an acoustic neuroma. The location of the facial nerve in relation to the tumour in decreasing frequency of occurrence, is
- (1) Anterior, posterior, inferior
 - (2) Anterior, superior, inferior
 - (3) Superior, anterior, posterior
 - (4) Posterior, superior, anterior
 - (5) Question not attempted

20. Which of the following features does not characterise pituitary tumor ?

- (1) Headache is a feature.
- (2) Superior temporal quadrantanopia is the initial defect on perimetry.
- (3) Diabetic insipidus is a common finding.
- (4) SRS is a modality of the treatment.
- (5) Question not attempted

21. A 50-year-old lady presented with progressive gait unsteadiness, headache and spasticity over last 1 year. Examination revealed right cerebellar signs, right 6 nerve paresis, right sided sensory neural hearing loss, bilateral limbs brisk reflexes with upgoing plantars. MRI was suggestive of a large right CP angle epidermoid cyst with distortion of brainstem and no hydrocephalus. Management is

- (1) Surgery and gross total excision
- (2) Clinical follow up
- (3) Surgery and near total excision
- (4) Surgery and post op radiotherapy
- (5) Question not attempted

22. In Parasellar meningiomas, most common site of origin is

- (1) Diaphragm sellar
- (2) Clinoid process
- (3) Dorsum sellar
- (4) Tuberculum sellar
- (5) Question not attempted

23. The positive GFAP Immunohistochemistry staining is strong possibility in diagnosis of

- (1) Metastatic brain tumours
- (2) Glioblastoma multiforme
- (3) Anaplastic meningioma
- (4) Lymphoma of brain
- (5) Question not attempted

24. Ectopic pituitary adenomas arise in all the regions, except

- (1) Orbit
- (2) Petrous Temporal bone
- (3) Para pharyngeal area
- (4) Middle nasal meatus
- (5) Question not attempted

25. Which is not a common site for an Ependymoma ?

- (1) Cervical intramedullary
- (2) Conus medullaris
- (3) Around fourth ventricle
- (4) Intraventricular (lateral ventricle)
- (5) Question not attempted

26. Most common intracranial pediatric tumours of non-glial origin are

- (1) Craniopharyngiomas
- (2) Choroid plexus papilloma
- (3) Pituitary adenomas
- (4) Germinomas
- (5) Question not attempted

27. When treating a case of Anaplastic Astrocytoma, following are important prognosticators, except

- (1) MGMT promotor methylation
- (2) IDH1 mutation
- (3) Gross total resection
- (4) Contrast enhancement on MRI
- (5) Question not attempted

28. Hearing preservation is not a goal in which treatment approach for vestibular schwannoma ?
- (1) Retromastoid surgery
 - (2) Stereotactic radio surgery
 - (3) Middle fossa approach
 - (4) Trans labyrinthine approach
 - (5) Question not attempted
29. Which oncogenic viruses are not associated with development of human CNS tumours ?
- (1) Simian virus – 40
 - (2) JC virus
 - (3) Human papilloma virus
 - (4) Adeno virus-12
 - (5) Question not attempted
30. All are the indications for Brachy Therapy in brain tumour, except :
- (1) Recurrent metastatic brain tumour
 - (2) Recurrent malignant meningioma
 - (3) Primary anaplastic astrocytoma
 - (4) Giant sized brain metastasis
 - (5) Question not attempted
31. LINAC based systems are following, except
- (1) Gamma Knife
 - (2) X-Knife
 - (3) Cyber Knife
 - (4) ZAP-X gyroscopic stereotactic radio surgery system
 - (5) Question not attempted
32. The organs at risk of Radiotherapy associated toxicity include all these, except
- (1) Optic nerve
 - (2) Brain stem
 - (3) Hippocampus
 - (4) Motor cortex
 - (5) Question not attempted
33. The most common toxicity seen after Radiosurgery for Benign spine tumors
- (1) Radiculopathy in the nerve root near the lesion
 - (2) Myelopathy
 - (3) Enlargement of the size of tumour due to necrosis
 - (4) Spinal instability due to early degenerative changes
 - (5) Question not attempted
34. Which nitrosourea agent is commonly utilized as an adjuvant chemotherapy for high-grade gliomas ?
- (1) Lomustine
 - (2) Dacarbazine
 - (3) Methotrexate
 - (4) Etoposide
 - (5) Question not attempted
35. Which Radiotherapy technique is best suited for treating small, well-circumscribed brain lesions such as metastases and certain benign tumors ?
- (1) Fractionated external beam radiotherapy
 - (2) Stereotactic radiosurgery
 - (3) Whole-brain radiotherapy
 - (4) Brachytherapy
 - (5) Question not attempted

36. What is a major advantage of proton beam therapy compared to conventional photon-based radiotherapy in pediatric brain tumor management ?
- (1) Increased penetration depth
 - (2) Superior dose distribution with reduced exit dose
 - (3) Lower cost of treatment
 - (4) Ability to treat larger tumors in one session
 - (5) Question not attempted
37. Which immunotherapeutic strategy involves harvesting and priming patient-derived dendritic cells with tumour antigens to induce an immune response against brain tumours ?
- (1) Checkpoint inhibitors
 - (2) CAR T-cell therapy
 - (3) Dendritic cell vaccines
 - (4) Cytokine therapy
 - (5) Question not attempted
38. A Tricorticate iliac crest bone graft is used for the anterior spinal fusion in which technique ?
- (1) The Cloward Technique
 - (2) The Smith-Robinson Technique
 - (3) The Bailey-Badgley Technique
 - (4) Bloom and Raney Technique
 - (5) Question not attempted
39. Maximum amount of cement that can be injected safely in one session kyphoplasty -
- (1) 15 ml (2) 25 ml
 - (3) 35 ml (4) 50 ml
 - (5) Question not attempted
40. In double door laminoplasty all are true, except
- (1) bone is dissected in two location.
 - (2) bone is dissected in three location.
 - (3) two hinge are constructed.
 - (4) b/l foraminotomy can be performed at each level.
 - (5) Question not attempted
41. About Nucleus Pulposus all are correct, except
- (1) Disc is made up of Annulus Fibrosus and Nucleus Pulposus.
 - (2) It has a volume of 0.2 ml and is about 0.7 cm in diameter.
 - (3) Nucleus Pulposus lie in the center.
 - (4) It is the remnant of notochord.
 - (5) Question not attempted
42. Spinal intra medullary hemnagioblastoma, all are true, except
- (1) Highly vascular lesions, well encapsulated abutting the Pia
 - (2) Association with syrinx in 80-90% of cases
 - (3) Treatment of choice is en bloc excision
 - (4) Embolisation of feeder vessel is curative
 - (5) Question not attempted

43. Sphenopalatine Ganglion block is now thought to be effective in treating and preventing

- (1) Pain of cervical region and the arm
- (2) Jaw pain
- (3) Cluster headache
- (4) Trigeminal neuralgia
- (5) Question not attempted

44. Regarding Cordotomy for the pain relief, which statement is not correct ?

- (1) It is the interruption of the lateral spinothalamic tract fibers.
- (2) More easily performed percutaneously at the C₁-C₂ interspace.
- (3) If there is any bladder dysfunction, it usually gets worse after the procedure.
- (4) Procedure of choice for bilateral pain and should be performed simultaneously on both side.
- (5) Question not attempted

45. Dorsal root entry zone (DREZ) lesions appear to be effective in treating pain relief in all indications mentioned, except

- (1) Differentiation pain resulting from nerve root avulsion
- (2) For cancer pain
- (3) Post herpetic neuralgia
- (4) Post amputation phantom limb pain
- (5) Question not attempted

46. Where is serotonin produced ?

- (1) Locus ceruleus
- (2) Medial forebrain bundle
- (3) Nucleus accumbens
- (4) Raphe nuclei
- (5) Question not attempted

47. Which of the following neuropeptides/neurotransmitters are most specific to pain pathways involving fibers ?

- (1) Adenosine
- (2) Substance P
- (3) Neuropeptide Y
- (4) Neurotensin
- (5) Question not attempted

48. A 30-year-old patient presents with stroke. Symptoms began 30 minutes ago. No contraindications to recombinant tissue plasminogen activator are found in the history or laboratory studies. Computed tomography (CT) shows blurring of the gray-white junction involving more than one-third of the middle cerebral artery territory. Which of the following is the most appropriate treatment ?

- (1) Asprin
- (2) Clopidogrel
- (3) Heparin drip
- (4) Recombinant tissue plasminogen activator
- (5) Question not attempted

49. Positron emission tomography (PET) studies in ischemic stroke show that the blood flow in necrotic tissue is less than
- (1) 30 mL/ 100 gr per minute
 - (2) 24 mL/ 100 gr per minute
 - (3) 15 mL/ 100 gr per minute
 - (4) 12 mL/ 100 gr per minute
 - (5) Question not attempted
50. Each of the following surgical approaches may be considered for an aneurysm of the vertebrobasilar junction, except the
- (1) lateral sub-occipital approach
 - (2) pesigmoid trans tentorial approach
 - (3) retrolabyrinthine trans sigmoid approach
 - (4) sub-temporal approach
 - (5) Question not attempted
51. All are the trial for aneurysm, except -
- (1) ISAT
 - (2) ISUIA
 - (3) ARUBA
 - (4) BRAT
 - (5) Question not attempted
52. Which of the following is true of subarachnoid haemorrhage ?
- (1) The mean age at presentation of patients with subarachnoid haemorrhage is 35 years.
 - (2) The risk for a male is 1.5 times that for a female.
 - (3) Most deaths from subarachnoid haemorrhage occur within the first 24 hours
 - (4) Altered level of consciousness on admission points to a poor prognosis.
 - (5) Question not attempted
53. The following aneurysms can be clipped by the Supra orbital Keyhole Craniotomy approach, except
- (1) Ruptured Anterior communicating aneurysm
 - (2) Unruptured Posterior communicating artery aneurysm
 - (3) Unruptured Distal Anterior Cerebral artery aneurysm
 - (4) Unruptured Basilar aneurysm
 - (5) Question not attempted
54. The main cause of neural death in the core of an Ischemic stroke is
- (1) Free radical production
 - (2) Metabolic acidosis
 - (3) Necrosis
 - (4) Mitochondrial dysfunction
 - (5) Question not attempted
55. Which of the following is true about the management of spontaneous intracerebral haemorrhage ?
- (1) Early use of intubation and hyperventilation or osmotic agents should start in all patients.
 - (2) Early surgical evacuation of haematoma from basal ganglia or thalamic area has a better outcome than medical management.
 - (3) Early craniotomy is recommended in cerebellar haematoma.
 - (4) Long-term use of anti-epileptic drugs is always needed.
 - (5) Question not attempted

56. Xenon-Enhanced computer tomography is not useful in

- (1) Acute stroke
- (2) Chronic ischemia
- (3) Meningitis
- (4) Balloon occlusion testing
- (5) Question not attempted

57. Woven Endo Bridge device is mainly used for

- (1) Carotid artery stenting
- (2) Wide neck aneurysm treatment
- (3) Acute thromboembolic occlusion
- (4) For the coil migration management
- (5) Question not attempted

58. Most common presentation of Moya Moya disease in adult is

- (1) Transient ischemic attack (TIA)
- (2) Cerebral infarction
- (3) Sudden decrease in cognitive performance
- (4) Intracranial bleeding
- (5) Question not attempted

59. Which statement is not correct for Pediatric aneurysm as compared to adult aneurysm ?

- (1) Posterior circulation aneurysm common.
- (2) Giant aneurysm is uncommon.
- (3) Multiple aneurysms are less frequent.
- (4) Traumatic aneurysms are more frequent.
- (5) Question not attempted

60. In dorsal type of lipomeningomyelocele sensory root arises from -

- (1) passes through mass itself
- (2) just posterior to line of fusion of dura and pia
- (3) just anterior to line of fusion of dura and pia
- (4) just superior to line of fusion of dura and pia
- (5) Question not attempted

61. The essential difference between a syringomyelic and a hydromyelic cavity is that the cavity in

- (1) Hydromyelia is lined with ependymal cells and in syringomyelia is not.
- (2) Hydromyelia is lined with choroid plexus and in syringomyelia is not.
- (3) Syringomyelia contains CSF and in Hydromyelia contains serum.
- (4) Syringomyelia is focal and in Hydromyelia is more extensive.
- (5) Question not attempted

62. A child with Dandy-Walker syndrome presents with new-onset seizure. He has agenesis of the cerebellar vermis and cystic dilatation of the fourth ventricle. Which of the following is also expected to be present ?

- (1) Midbrain atrophy
- (2) Pontocerebellar hypoplasia
- (3) Optic nerve hypoplasia
- (4) An enlarged posterior fossa with an elevated tentorium
- (5) Question not attempted

63. Which of the following statements is false ?

- (1) The most common cause of plagiocephaly is craniosynostosis.
- (2) Craniosynostosis is most often caused by premature closure of the sagittal suture.
- (3) Mutations in fibroblast growth factor receptors can cause craniosynostosis.
- (4) Hyperthyroidism can cause craniosynostosis.
- (5) Question not attempted

64. The most common mechanism of translational C1-C2 subluxation is

- (1) Axial loading
- (2) Distraction
- (3) Extension
- (4) Flexion
- (5) Question not attempted

65. Which of the following is derivative of proatlas ?

- (1) anterior tubercle of atlas
- (2) apex of dens
- (3) jugular tubercle
- (4) occipital condyle
- (5) Question not attempted

66. What type of shunt valve is known as in which resistance to outflow of CSF can be altered non-invasively ?

- (1) Fixed pressure valves
- (2) Flow regulated valves
- (3) Programmable pressure valves
- (4) Differential flow valves
- (5) Question not attempted

67. Cranial base flattening, invagination of dens as a result of some bone softening due to acquired conditions like osteogenesis imperfecta, Paget's disease or hyperparathyroidism is called

- (1) Basilar invagination
- (2) Platy basia
- (3) Basilar impression
- (4) Dens dysplasia
- (5) Question not attempted

68. Which one is not true about minimally invasive lumbar discectomy ?

- (1) Nerve roots and thecal sac not retracted.
- (2) Scar formation (Epidural or Paridural) is minimal.
- (3) Even one can address migrated disc fragments easily.
- (4) Post-op stay/cost/morbidity minimized.
- (5) Question not attempted

69. Regions of the brain devoid of a blood-brain barrier (circumventricular organs) include each of the following, except

- (1) Indusium griseum
- (2) Median eminence
- (3) Organum vasculosum of the lamina terminalis
- (4) Pineal gland
- (5) Question not attempted

70. Which one is not an endoscopic procedure for treatment of Aqueductal stenosis with hydrocephalus ?

- (1) Third ventriculostomy
- (2) Aqueductal stenting
- (3) Aqueductal re-construction (Aqueductoplasty)
- (4) Lateral ventricle septostomy
- (5) Question not attempted

71. Diagnostic criteria of chiari 1 malformation has all these features, except

- (1) Tonsillar herniation extending more than 5 mm below the foramen magnum
- (2) Basilar invagination may be associated
- (3) Presence of myelomeningocele in virtually all cases
- (4) Syringomyelia occurs commonly in 50% to 70% of patients
- (5) Question not attempted

72. Dolichocephaly, an anomaly of the skull is associated with

- (1) Sagittal synostosis
- (2) Coronal synostosis
- (3) Metopic synostosis
- (4) Lambdoid synostosis
- (5) Question not attempted

73. Neural tube for the development of brain and spinal cord in embryonal stage developed by

- (1) Ectoderm
- (2) Paraxial mesoderm
- (3) Endoderm
- (4) Splanchoic mesoderm
- (5) Question not attempted

74. Which post-operative complication is not seen after pallidotomy ?

- (1) Visual field defect
- (2) Loss of hearing
- (3) Hemiparesis
- (4) Dysarthria
- (5) Question not attempted

75. In stereotaxic procedures, a brain atlas is used to :

- (1) Guide the placement of electrodes
- (2) Locate the target area in the brain
- (3) Identify the landmarks on the skull
- (4) Monitor the patient's brain functioning
- (5) Question not attempted

76. Therapeutic ablations sites for Psychiatric indications include all, except

- (1) Capsulotomy
- (2) Callosotomy
- (3) Subcaudate Tractotomy
- (4) Cingulotomy
- (5) Question not attempted

77. Which of the following is the most common target for DBS in Parkinson's disease ?
- (1) Globus pallidus internus (GPi)
 - (2) Subthalamic nucleus (STN)
 - (3) Ventral intermediate nucleus (VIM) of the thalamus
 - (4) Caudate nucleus
 - (5) Question not attempted
78. What is the primary mechanism by which DBS alleviates symptoms in movement disorders ?
- (1) Destruction of overactive neurons
 - (2) Inhibition of abnormal neuronal activity
 - (3) Stimulation of neurogenesis
 - (4) Enhancement of neurotransmitter release
 - (5) Question not attempted
79. Which imaging modality is commonly used intraoperatively to confirm accurate placement of DBS electrodes ?
- (1) Computed Tomography (CT)
 - (2) Magnetic Resonance Imaging (MRI)
 - (3) Fluoroscopy
 - (4) Microelectrode recording
 - (5) Question not attempted
80. Which of the following is a contraindication for DBS surgery ?
- (1) Advanced age
 - (2) Mild cognitive impairment
 - (3) Severe psychiatric disorder
 - (4) Long disease duration
 - (5) Question not attempted
81. Radiosurgery is most commonly indicated for which of the following conditions ?
- (1) Large, diffuse high grade gliomas
 - (2) Brain metastases, arteriovenous malformations (AVMs) and acoustic neuromas
 - (3) Extensive meningiomas requiring wide resection
 - (4) Hydrocephalus due to ventricular enlargement
 - (5) Question not attempted
82. What role does AI play in the management of epilepsy in neurosurgery ?
- (1) Predicting seizure onset
 - (2) Performing surgical resections
 - (3) Monitoring anesthesia levels
 - (4) Repairing neural tissue
 - (5) Question not attempted
83. A 26-year-old man has right temporal lobe epilepsy. His seizures have not responded to levetiracetam or lacosamide. What is the next step ?
- (1) Referral to an epilepsy monitoring unit for an epilepsy surgery evaluation.
 - (2) Treatment with oxcarbazepine, levetiracetam and lacosamide.
 - (3) Treatment with valproic acid, levetiracetam and lacosamide.
 - (4) Referral to neurosurgery for implantation of vagus nerve stimulator.
 - (5) Question not attempted

84. A 35-year-old man with a history of complex partial seizure was being treated with carbamazepine. He consulted the neurologist because of chronic headache and blurred vision. Which of the following side-effects might this patient develop ?

- (1) Hyponatremia
- (2) Impotence
- (3) Acute pancreatitis
- (4) Dupuytren's contracture
- (5) Question not attempted

85. Which of the following medications has high protein binding ?

- (1) Gabapentin
- (2) Levetiracetam
- (3) Phenytoin
- (4) Vigabatrin
- (5) Question not attempted

86. A seizure attack with impaired consciousness with mild or no motor involvement, bilaterally symmetrical and synchronous involving both cerebral hemispheres is classified as

- (1) Generalized tonic-clonic seizure
- (2) Generalized tonic seizure
- (3) Absence seizure
- (4) Atonic seizure
- (5) Question not attempted

87. The incidence of seizures are higher in which condition after traumatic brain injury ?

- (1) Acute subdural haematoma
- (2) Intra-parenchymal haematoma or cerebral contusion
- (3) Diffuse axonal injury
- (4) Penetrating injury of skull
- (5) Question not attempted

88. Which of the following is not true about epilepsy surgery ?

- (1) It is a treatment option for drug resistant epilepsy.
- (2) Epileptogenic pathway can be identified by multimodal imaging.
- (3) An epileptogenic lesion identification by MRI is always necessary.
- (4) Has a good seizure free outcome in mesial temporal sclerosis.
- (5) Question not attempted

89. Which of the following is the most correct indication for the corpus callosotomy ?

- (1) Infantile spasm
- (2) Myoclonic jerks
- (3) Hippocampal sclerosis surgery
- (4) Generalized epilepsy with drop attacks
- (5) Question not attempted

90. Nurick classification for grading severity of myelopathy, incorrect statement is
- (1) It is from Grade 0 to 5
 - (2) Grade 5 means wheelchair bound
 - (3) Grade 3 means can walk unassisted
 - (4) Grade 0 means no symptoms
 - (5) Question not attempted
91. Inability to squeeze the little finger (Wartenberg's sign) indicates
- (1) Ulnar nerve involvement
 - (2) Median nerve pathology
 - (3) Anterior interosseous nerve pathology
 - (4) Radial neuropathy
 - (5) Question not attempted
92. All of the following are true about Lhermitte's sign of multiple sclerosis; except
- (1) An electric shock like sensation
 - (2) It is generally self-limited
 - (3) Induced by flexion or other movements of neck
 - (4) Commonly radiates into the arm
 - (5) Question not attempted
93. In comparison to Parkinson's disease, which is not a characteristic feature of Atypical Parkinsonism?
- (1) Less aggressive clinical course
 - (2) Presence of motor asymmetry
 - (3) Absence of resting tremor
 - (4) Late involvement of speech and gait
 - (5) Question not attempted
94. A patient is on anti-AChE (Anti-cholinergic) medication and needs to be evaluated by repetitive nerve stimulation. What is true about the test?
- (1) Medication should be stopped 6-12 hours before testing.
 - (2) Medication should be stopped 6-12 days before testing.
 - (3) Medication should be taken in regular dose before testing.
 - (4) Medication should be taken double dose before testing.
 - (5) Question not attempted
95. Which of the following can be present in brain death?
- (1) Wave I on brainstem auditory evoked potential testing
 - (2) A focal epileptiform discharge over the right occipital lobe
 - (3) A delayed, but present, P100 on visual evoked potential testing
 - (4) N20 on somatosensory evoked potential testing
 - (5) Question not attempted
96. All are advantages of lumbar disc arthroplasty, except -
- (1) reduces adjacent level degeneration
 - (2) maintain motion
 - (3) fast pain relief
 - (4) same level facet degeneration
 - (5) Question not attempted

97. Which one is false about benefits of minimally invasive spine surgery ?

- (1) Shorter procedure and recovery time.
- (2) Less pain after surgery
- (3) Scar size is small but have slight more infection rate
- (4) Decreased blood loss
- (5) Question not attempted

98. Which one of following is not a advances in minimally invasive spine surgery ?

- (1) Endoscopic spine surgery
- (2) Robotic assisted spine surgery
- (3) Microscopic assisted spine surgery
- (4) Artificial intelligence
- (5) Question not attempted

99. Which one is a contra-indication about percutaneous lumbar discectomy as per the Hijikata ?

- (1) Positive tension signs
- (2) Failure to respond to non-operative measures
- (3) Correlative pain distribution
- (4) Cauda Equina syndrome
- (5) Question not attempted

100. Which type of brachial plexus injury is most common at birth ?

- (1) Erb's palsy
- (2) Middle trunk plexopathy
- (3) Klumpke palsy
- (4) Complete brachial plexus palsy
- (5) Question not attempted

101. Nerve regeneration, all are true statements, except

- (1) Typically occurs at 1 mm per day.
- (2) Better when a neuroma forms at the cut edges.
- (3) Faster when injury in the proximal part of the nerve.
- (4) Older age recovery is faster.
- (5) Question not attempted

102. Secondary repair of peripheral nerve injury is described when operation performed in between _____ after the injury.

- (1) 3 days to 3 weeks
- (2) 3 weeks to 3 months
- (3) 3 months to 6 months
- (4) After 6 months
- (5) Question not attempted

103. Which advancement utilizes robotic platforms to enhance precision and stability during the resection of deep-seated brain lesions ?

- (1) Laser ablation
- (2) Robotic – assisted neurosurgery
- (3) Manual microsurgery
- (4) Endoscopic resection
- (5) Question not attempted

104. What MRI finding is most consistent with nerve root avulsion in a patient who was involved in a motorcycle accident presented with a flail arm ?
- (1) Perineural edema
 - (2) Neuroma-in-continuity
 - (3) Pseudomeningoceles
 - (4) Coexistent vascular injury
 - (5) Question not attempted
105. The Vein of Galen is formed by
- (1) Internal cerebral veins and Basal vein of Rosenthal
 - (2) Straight Sinus
 - (3) Inferior sagittal sinus
 - (4) All of these
 - (5) Question not attempted
106. All are supplied by third cranial nerve; except
- (1) Lateral rectus
 - (2) Superior rectus
 - (3) Medial rectus
 - (4) Inferior rectus
 - (5) Question not attempted
107. All are the components of gag reflex, except –
- (1) elevation of soft palate to seal off the nasopharynx
 - (2) closure of glottis to prevent airway
 - (3) constriction of the pharynx to prevent entry of substance
 - (4) deviation of uvula to c/l side
 - (5) Question not attempted
108. Formation of the neural plate in Neurulation process during Fetal life occurs in the
- (1) First week
 - (2) Second week
 - (3) Third week
 - (4) Fourth week
 - (5) Question not attempted
109. Which fiber band is not a part of posterior limb of internal capsule ?
- (1) Cortico pontine fibers
 - (2) Fronto pontine fibers
 - (3) Cortico spinal fibers
 - (4) Cortico fugal fibers
 - (5) Question not attempted
110. Hadad flap provide surface area for coverage of defect upto –
- (1) 15 cm²
 - (2) 25 cm²
 - (3) 50 cm²
 - (4) 35 cm²
 - (5) Question not attempted
111. Which AI technique is commonly used for segmenting brain tumors in MRI images ?
- (1) Decision Trees
 - (2) Support Vector Machines
 - (3) Convolutional Neural Networks
 - (4) K-Nearest Neighbours
 - (5) Question not attempted

112. What is the primary advantage of using AI in neurosurgical outcome prediction ?

- (1) Eliminates the need for clinical expertise
- (2) Provides real-time surgical assistance
- (3) Enhances accuracy and consistency in predictions
- (4) Reduces the cost of surgical procedures
- (5) Question not attempted

113. Which AI method is utilized for predicting patient-specific responses to neurosurgical treatment ?

- (1) Reinforcement learning
- (2) Supervised learning
- (3) Unsupervised learning
- (4) Deep reinforcement learning
- (5) Question not attempted

114. What recent innovation in neurosurgery offers high-definition 3D visualization on a monitor, allowing improved ergonomics and a broader view of the surgical field ?

- (1) Exoscopic Visualization
- (2) Digital zoom magnification
- (3) Endoscopic fluorescence imaging
- (4) Stereotactic Navigation
- (5) Question not attempted

115. Which one is a wrong statement regarding limitations of Diffusion Tensor Imaging and Tractography ?

- (1) Poor distinction of crossing fiber tracts in a voxel
- (2) When there is local field distortion like in regions adjacent to post-operative air, blood products and surgical clips
- (3) Tractography depends on user input to define tracts of interest, so incorrect or sub-optimal region-of-interest placement will result in misrepresented tracts.
- (4) It is not very useful for demonstrating the integrity or compromise of tracts running between brain areas.
- (5) Question not attempted

116. The ROSA robotic system is useful in which type of neurosurgical procedure ?

- (1) Spinal surgery
- (2) Brain tumour surgery
- (3) Epilepsy surgery
- (4) Neurovascular procedures
- (5) Question not attempted

117. In an Apnoea test for brain death confirmation, the test is aborted if :

- (1) During apnoea for 2 minutes with $\text{PaCO}_2 > 60$ mmHg or $\text{PaCO}_2 > 20$ mmHg over base line
- (2) If patient does not breathe, his $\text{PaCO}_2 > 60$ mmHg
- (3) If the patient breathes or O_2 saturation below 80% for 30 seconds
- (4) If PaCO_2 stabilizes below 60 mmHg and the $\text{pO}_2 > 20$ mmHg
- (5) Question not attempted

118. First President of Neurological Society of India

- (1) Balasubramanian Ramamurthi
- (2) Baldev Singh
- (3) Jacob Chanday
- (4) S.T. Narasimhan
- (5) Question not attempted

119. What was the theme of Alzheimer's day 2024 ?

- (1) Time to Act on Dementia, Time to Act on Alzheimer's
- (2) Never too Early, Never too Late
- (3) Know Dementia, Know Alzheimer's
- (4) Let's talk about Dementia
- (5) Question not attempted

120. Which one is not a Technical contribution to Neurosurgery by Victor Horsley ?

- (1) Ablating and removing Choroid Plexus to treat hydrocephalus
- (2) Use of Bees wax to stop bone bleeding
- (3) Earliest operations for craniostenosis
- (4) Sectioning the posterior root of trigeminal nerve to treat trigeminal neuralgia
- (5) Question not attempted

121. Use of snare ligatures or mel clip to treat cerebral aneurysms first done by

- (1) William Macewen
- (2) Harvey William Cushing
- (3) William Keen
- (4) Walter Dandy
- (5) Question not attempted

122. Which of the following is true of papilloedema ?

- (1) Pupillary light reflexes remain normal.
- (2) The congested capillaries derive from the central retinal vein.
- (3) Unilateral edema of the optic disk is never seen.
- (4) Visual acuity usually decreases.
- (5) Question not attempted

123. Sharp, well-defined optic disc margins is the feature of

- (1) Papilloedema
- (2) Primary optic atrophy
- (3) Secondary optic atrophy
- (4) Papillitis
- (5) Question not attempted

124. Alexia without agraphia is most likely to occur with a lesion involving the

- (1) Left geniculocalcarine tract and corpus callosum
- (2) Left geniculocalcarine tract and Wernicke's area
- (3) Right geniculocalcarine tract and corpus callosum
- (4) Right geniculocalcarine tract and Wernicke's area
- (5) Question not attempted

125. Soft, Fast, Mumbled Speech is the feature of

- (1) Lesions of the basal ganglia
- (2) Friedrich's ataxia
- (3) Multiple sclerosis
- (4) Parkinsonism
- (5) Question not attempted

126. A 50-year-old man presents with decreased vision in the left eye. On examination, he also has decreased colour vision in the left eye. He has optic nerve edema of the right. He also has decreased olfaction. What is the most likely diagnosis ?

- (1) Anterior ischemic optic neuropathy
- (2) Leber hereditary optic neuropathy
- (3) Olfactory groove meningioma
- (4) Optic neuritis
- (5) Question not attempted

127. The electroencephalogram (EEG) finding of 14- and 6-Hz positive spikes is classically associated with which condition ?

- (1) Benzodiazepine Intoxication
- (2) Cardiac Arrest
- (3) Renal Failure
- (4) Reye Syndrome
- (5) Question not attempted

128. Wave III in Brainstem Auditory – Evoked Potential Monitoring generates at

- (1) Distal acoustic nerve
- (2) Cochlear nucleus
- (3) Lateral lemniscus
- (4) Superior olivary complex
- (5) Question not attempted

129. Methods of activation during Electroencephalography can be done by

- (a) Hyper ventilation
- (b) Sudden loud sound
- (c) Photic stimulation
- (d) Sleep deprivation

In the above mentioned options :

- (1) All are correct.
- (2) Only (a) and (b) are correct.
- (3) Only (a), (c) and (d) are correct.
- (4) Only (a) and (c) are correct.
- (5) Question not attempted

130. In anterior corpus callosal disconnection syndrome all are found, except

- (1) crossed optic ataxia
- (2) agraphia of left hand
- (3) right unilateral constructional apraxia
- (4) left hemialexia
- (5) Question not attempted

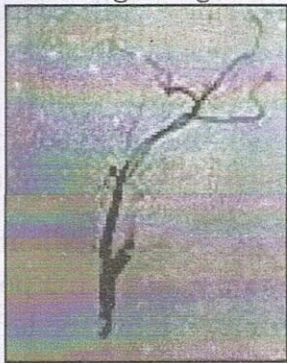
131. Transcranial Doppler in vasospasm, all statements are true, except

- (1) Lindegaard ratio MCA velocity/ACA velocity
- (2) Lindegaard ratio >6 is severe vasospasm
- (3) Normal MCA velocity is <80 cm/s
- (4) TCD is a non-invasive, bedside test and repeatable
- (5) Question not attempted

132. All are the possible uses of Magnetic Resonance Spectroscopy (MRS), except

- (1) Differentiating epidermoid from arachnoid cyst
- (2) Differentiating abscess from neoplasm
- (3) Distinguishing tumour from multiple sclerosis (MS) plaques
- (4) Post-operative enhancement vs. recurrent tumour
- (5) Question not attempted

133. The following image shows :



- (1) Carotid endarterectomy
- (2) Encephalomyosynangiosis
- (3) Heparinization
- (4) Superficial temporal artery to middle cerebral artery bypass
- (5) Question not attempted

134. In the context of increased ICP and the Monro-Kellie hypothesis, which of the following is usually the most important blood volume regulator ?

- (1) Arteriolar Oxygen
- (2) Arterioal Carbon Dioxide
- (3) Arteriolar Lactic acid
- (4) Venous Oxygen
- (5) Question not attempted

135. Each of the following occurs in venous air embolism, except a(n)

- (1) Increase in end-tidal $p\text{CO}_2$
- (2) Increase in pulmonary artery pressure
- (3) Increase in pulmonary vascular resistance
- (4) Ventilation-Perfusion Mismatch
- (5) Question not attempted

136. Factor not commonly associated with increased incidence of infection with ICP monitoring

- (1) Intracranial pressure is more than 20 mm Hg
- (2) Intracerebral, intraventricular hemorrhage
- (3) Use of steroid
- (4) Irrigation of system
- (5) Question not attempted

137. All signs are in diagnostic favour of cerebral herniation, except

- (1) Progressive neurological deterioration
- (2) Asymmetrical Pupil
- (3) Extensor Posturing
- (4) Bilateral Constriction of Pupil
- (5) Question not attempted

138. Which of the following represents the correct sequence of removal of clamps from the arteries following carotid endarterectomy ?

- (1) Common Carotid, External Carotid, Internal Carotid
- (2) Common Carotid, Internal Carotid, External Carotid
- (3) External Carotid, Common Carotid, Internal Carotid
- (4) External Carotid, Internal Carotid, Common Carotid
- (5) Question not attempted

139. MRI of the brain shows two lesions, but hyperintense T2W1. One involves the cerebellum extending into cerebral peduncles. The other involves the optic nerve. Which neurocutaneous syndrome is most likely present ?

- (1) Neurofibromatosis Type 2
- (2) Tuberous sclerosis
- (3) Von Hippel Landau
- (4) Neurofibromatosis Type 1
- (5) Question not attempted

140. Which one is not a disadvantage of autologous bone cranioplasty ?

- (1) Bone resorption
- (2) Potential for growth
- (3) Possible poor cosmesis
- (4) Infection
- (5) Question not attempted

141. Which one is not a common cause for nontraumatic intracerebral hemorrhage (ICH) ?

- (1) Ruptured aneurysm
- (2) Hypertension
- (3) Amyloid angiopathy
- (4) Use of anti-coagulant drugs
- (5) Question not attempted

142. In which condition mentioned below is the success rate least of Endoscopic third ventriculostomy ?

- (1) Idiopathic Intracranial Hypertension
- (2) Communicating hydrocephalus
- (3) Aqueductal stenosis
- (4) VP shunt malfunction
- (5) Question not attempted

143. During third ventriculostomy stoma is made in

- (1) Roof of the third ventricle
- (2) Anterior wall of the third ventricle
- (3) Lateral wall
- (4) Pre-mamillary membrane
- (5) Question not attempted

144. Absolute contra-indication for operating in the sitting position is

- (1) Patent right to left cardiac shunt
- (2) Pediatric age group
- (3) Geriatric population
- (4) Presence of ventriculoperitoneal shunt
- (5) Question not attempted

145. In the Foramen magnum tumour surgery, which cranial nerve is seen at Foramen magnum ?

- (1) IX cranial nerve (Glossopharyngeal nerve)
- (2) Vagus nerve (X cranial nerve)
- (3) Accessory nerve (XI cranial nerve)
- (4) Hypoglossal nerve (XII cranial nerve)
- (5) Question not attempted

146. After head-trauma, if computed tomography shows compressed basal cisterns, midline shift is 3 mm and no mass lesion then according to Marshall classification injury is

- (1) Diffuse injury I
- (2) Diffuse injury II
- (3) Diffuse injury III
- (4) Diffuse injury IV
- (5) Question not attempted

147. The wrong statement about Traumatic head injury in children

- (1) Fracture of the skull is not uncommon.
- (2) Haemorrhagic tears in the cerebral white matter unlike adults who develop surface cortical lesions.
- (3) Unlike in adults, diffuse axonal injury is not seen in the brainstem of infants.
- (4) Intradiploic course of the middle meningeal artery causes frequent Epidural Haematoma.
- (5) Question not attempted

148. Which is the most common focal intracranial lesion occurs after Traumatic brain injury ?

- (1) Epidural haematoma
- (2) Sub-dural haematoma
- (3) Cerebral contusion
- (4) Depressed fracture skull
- (5) Question not attempted

149. A 10-year-old boy had a fall in the football field while playing and sustained a scalp laceration over the vertex across the midline. Examination revealed GCS-15/15, no focal neurological deficits. 10 cms scalp laceration over vertex with debris. NCCT head revealed depressed fracture across the midline with bone fragment impinging on the superior sagittal sinus and no evidence of dural breach or parenchymal haematoma. Management :

- (a) Debridement and suturing of the scalp laceration
- (b) Elevation of depressed fragment
- (c) Compression bandage over scalp after cleaning the laceration
- (d) CT or MR venogram

The most appropriate management steps would include

- (1) (a) alone
- (2) (c) followed by (d) and then (b)
- (3) (b) alone
- (4) (d) and then wait for scalp healing by secondary intention
- (5) Question not attempted

150. The most common acid-base disturbance in mild to moderately injured patients without severe renal, circulatory or pulmonary decompensation is

- (1) Respiratory acidosis and metabolic alkalosis
- (2) Respiratory alkalosis and metabolic acidosis
- (3) Respiratory or metabolic acidosis
- (4) Respiratory or metabolic alkalosis
- (5) Question not attempted

