Asstt. Professor Comp Exam -2024
(Med. Edu. Deptt.)

07/07/2025

MPA-25

पुस्तिका में पृष्ठों की संख्या : 32
Number of Pages in Booklet : 32
पुस्तिका में प्रश्नों की संख्या : 150
No. of Questions in Booklet : 150

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

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.

Paper Code : 63

Sub : Paediatric Neurology

Exam Date- 03/07/2025

समय : 02:30 घण्टे + 10 मिनट अतिरिक्त*
Time : 02:30 Hours + 10 Minutes Extra*

अधिकतम अंक : 150
Maximum Marks : 150

प्रश्न-पुस्तिका के पेपर की सील/पॉलिथीन 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/व्हाईटनर/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 इलेक्ट्रोनिक 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 अध्युपाय) 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।

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.

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 जायेंगे। परीक्षार्थी को उत्तर-पत्रक की कार्बन प्रति चयन प्रक्रिया पूर्ण होने तक सुरक्षित रखनी होगी एवं आयोग द्वारा माँगे जाने पर प्रस्तुत करनी होगी।

1. Which of the following statements about OMAS is incorrect ?
   (1) Condition typically affects toddlers between age 1 and 3 years.
   (2) Presents as acute onset of ataxia, behavioural disturbance, rapid chaotic movements of the eyes and myoclonic jerking of the limbs.
   (3) Neuroblastoma underlies more than half of all cases of OMAS.
   (4) More than 90% of patients with neuroblastoma develop OMAS.
   (5) Question not attempted

2. Which of the following is true regarding leptomeningeal involvement in Sturge Weber Syndrome ?
   (1) It always occurs bilaterally.
   (2) It is limited to the frontal lobe.
   (3) It most commonly involves the parietal and occipital lobes.
   (4) It spares the cortical vessels entirely.
   (5) Question not attempted

3. In CLN3-associated epilepsy, which antiepileptic drug may be more effective while being contraindicated in CLN2 disease due to worsening myoclonus ?
   (1) Phenytoin
   (2) Lamotrigine
   (3) Valproate
   (4) Carbamazepine
   (5) Question not attempted

4. In the context of pediatric neurodisability, community-based rehabilitation primarily aims to :
   (1) provide surgical interventions in rural setups.
   (2) promote institutionalization of children with severe disability.
   (3) enable participation, inclusion and skill development using local resources.
   (4) train caregivers in EEG interpretation.
   (5) Question not attempted

5. Which feature most favours seizure over syncope ?
   (1) Brief tonic posturing
   (2) Urinary incontinence
   (3) Eyewitness report of pallor
   (4) Post-event confusion
   (5) Question not attempted

6. A 7-year-old boy presents with frequent night-time episodes of sitting up, mumbling and appearing confused, lasting 5–10 minutes, with no recollection in the morning. EEG during sleep is normal. What is the most appropriate next step ?
   (1) Start levetiracetam
   (2) Obtain brain MRI
   (3) Reassure the parents
   (4) Schedule polysomnography with extended EEG
   (5) Question not attempted

7. A child with pituitary stalk interruption syndrome is most likely to present with which sequence of hormone deficiencies ?
   (1) ACTH → TSH → GH
   (2) GH → TSH → ACTH
   (3) TSH → GH → ACTH
   (4) LH/FSH → GH → TSH
   (5) Question not attempted

8. A child with hypotension, poor feeding and lethargy is found to have a mutated PHOX2B gene. This condition results in dysfunction of which part of the autonomic nervous system ?
   (1) Sympathetic nervous system
   (2) Parasympathetic nervous system
   (3) Central autonomic regulation
   (4) Peripheral autonomic nerves
   (5) Question not attempted

9. A 7-year-old child with muscle weakness and progressive atrophy has A-waves noted in their motor nerve conduction studies. What does the presence of A-waves most likely indicate in this context ?
   (1) Focal demyelination at the nerve root
   (2) Chronic axonal neuropathy
   (3) Distal segmental demyelination
   (4) Normal response for the patient's age
   (5) Question not attempted

10. A 10-year-old child with sickle cell disease presents for routine monitoring using transcranial doppler (TCD). The TCD reveals a mean flow velocity greater than 200 cm/s in the middle cerebral artery. What is the most appropriate next step in management ?
   (1) Start hydroxyurea therapy
   (2) Initiate blood transfusion therapy
   (3) Monitor without any changes
   (4) Perform a brain MRI for ischemic changes
   (5) Question not attempted

11. What is the primary advantage of SISCOM (Subtraction Ictal SPECT Co-registered to MRI) in epilepsy surgery planning ?
   (1) Identification of MRI-negative malformations
   (2) Real-time seizure monitoring
   (3) Differentiation between generalized and focal seizures
   (4) Classification of seizure semiology
   (5) Question not attempted

12. In the context of neuroinformatics, FAIR principles refer to data that is :
   (1) Free and Anonymous, International, Replicable
   (2) Findable, Accessible, Interoperable, Reusable
   (3) Fast, Accurate, Independent, Reliable
   (4) Federated, Audited, Indexed, Regulated
   (5) Question not attempted

13. Mirror therapy is most beneficial in pediatric patients with :
(1) Seizures
(2) Spastic diplegia
(3) Hemiplegia following stroke or CP
(4) Progressive ataxia
(5) Question not attempted

14. The Pediatric Evaluation of Disability Inventory is designed to evaluate :
(1) IQ and cognition
(2) Sensory thresholds
(3) Functional capabilities and performance in self-care, mobility and social function
(4) Seizure frequency
(5) Question not attempted

15. Which of the following is a non-directional (two tailed) hypothesis ?
(1) There is a difference in driving ability with men being better drivers than women.
(2) Women are better at concentrating on more than one thing at a time than men.
(3) Women spend more time doing the cooking and cleaning than men.
(4) There is a difference in the number of men and women who participate in sports.
(5) Question not attempted

16. In a clinical trial comparing two treatments, the number needed to treat is calculated. Which of the following is the formula for calculating NNT ?
(1) 1 / absolute risk reduction
(2) Absolute risk difference / control event rate
(3) 1 / relative risk
(4) Control event rate – experimental event rate
(5) Question not attempted

17. Based on AAP guidelines, which screening protocol is recommended for children with NF1 to detect optic pathway gliomas ?
(1) Annual routine MRI of the brain and orbits
(2) Routine PET-CT every 2 years
(3) Annual ophthalmological evaluation with visual acuity and field testing
(4) MRI only after onset of visual symptoms
(5) Question not attempted

18. A 10-year-old child with status epilepticus is treated with benzodiazepines, but there is no resolution of seizures. The next step in management should be :
(1) Phenytoin
(2) Levetiracetam
(3) Propofol
(4) Phenobarbital
(5) Question not attempted

19. A 7-year-old child presents with rapid-onset vomiting, lethargy and papilledema. CT scan shows a large cerebellar mass. What is the first-line management ?

(1) External ventricular drainage
(2) Cerebellar tumor resection
(3) Chemotherapy
(4) Radiotherapy
(5) Question not attempted

20. Which gene mutation causes a congenital muscular dystrophy associated with cobblestone lissencephaly and eye anomalies ?

(1) POMT1 (2) COL6A1
(3) DYSF (4) NEB
(5) Question not attempted

21. Mutation in GARS is implicated in :

(1) Spinal muscular atrophy
(2) Charcot-Marie-Tooth type 2D
(3) Congenital muscular dystrophy
(4) Friedreich ataxia
(5) Question not attempted

22. Which gene is targeted in gene therapy (onasemnogene abeparvovec) for spinal muscular atrophy ?

(1) SMN2 (2) SMN1
(3) DYNC1H1 (4) GAA
(5) Question not attempted

23. A 10-year-old boy presents with elbow contractures, rigid cervical spine and cardiac arrhythmia. His uncle died suddenly at age 20. Genetic testing confirms an EMD gene mutation. What is the most likely pathophysiological mechanism leading to cardiac involvement in this form of Emery-Dreifuss muscular dystrophy ?

(1) Impaired sarcolemmal membrane repair due to defective dysferlin.
(2) Nuclear envelope instability leading to myocyte apoptosis under mechanical stress.
(3) Abnormal mitochondrial trafficking due to defective microtubules.
(4) Reduced dystrophin-glycoprotein complex assembly at the costameres.
(5) Question not attempted

24. A child is diagnosed with nemaline myopathy. Genetic analysis reveals a mutation in NEB (nebulin). What is the primary functional consequence of nebulin deficiency in skeletal muscle fibers ?

(1) Loss of dystroglycan complex anchoring leading to sarcolemmal tears.
(2) Disruption of thin filament length regulation and sarcomeric structure.
(3) Mitochondrial clustering due to impaired calcium buffering.
(4) Aggregation of misfolded titin proteins in the sarcomere.
(5) Question not attempted

25. A newborn has a midline lumbosacral skin dimple and abnormal lower limb tone. MRI reveals a fatty filum terminale. What is the most likely embryological error ?
(1) Defective neural crest migration
(2) Failure of secondary neurulation
(3) Incomplete somite segmentation
(4) Disrupted notochord development
(5) Question not attempted

26. A neonate with sacral agenesis and neurogenic bladder is found to have a normal spinal cord and brain MRI. Which maternal factor is most likely implicated ?
(1) Advanced maternal age
(2) Maternal epilepsy
(3) Pre-gestational diabetes mellitus
(4) Inadequate folate supplementation
(5) Question not attempted

27. Which tumor is most associated with BRAF V600E mutations in children ?
(1) Medulloblastoma – SHH subtype
(2) Ganglioglioma
(3) Ependymoma
(4) Craniopharyngioma
(5) Question not attempted

28. In pediatric medulloblastoma, what is the primary rationale for craniospinal irradiation as part of standard therapy ?
(1) To prevent local recurrence at the posterior fossa site.
(2) To induce apoptosis in tumor stem cells.
(3) To eradicate microscopic leptomeningeal dissemination.
(4) To reduce radiation-induced necrosis in eloquent areas.
(5) Question not attempted

29. Which clinical finding in a child with NF1 is most predictive of future development of an optic pathway glioma ?
(1) Lisch nodules
(2) Macrocephaly
(3) Age <2 years with >6 café-au-lait spots
(4) Presence of unidentified bright objects on MRI
(5) Question not attempted

30. In Lesch-Nyhan syndrome, self-injurious behaviour is believed to be due to
(1) Dopaminergic depletion in the basal ganglia
(2) Increased adenosine deaminase activity
(3) Serotonergic hyperactivity
(4) Cortical atrophy with frontal disinhibition
(5) Question not attempted

31. A child presents with chorea, hypotonia and emotional lability. MRI shows caudate atrophy. Genetic testing reveals a trinucleotide repeat expansion. Which of the following is true ?

(1) The child likely has a de novo mutation.

(2) The repeat expansion is in an intronic region.

(3) Anticipation is more severe with maternal transmission.

(4) Juvenile onset is usually associated with parkinsonism.

(5) Question not attempted

32. Which of the following is most likely to cause paroxysmal kinesigenic dyskinesia in children ?

(1) SLC2A1 mutation

(2) PRRT2 mutation

(3) SCN8A mutation

(4) ATP1A3 mutation

(5) Question not attempted

33. A 7-year-old boy presented with history of febrile illness followed by walking difficulty. He has become clumsy and falls repeatedly. He cannot sit still and keeps on moving, sometime twisting posture of ankle was observed. Symptoms are worse in evening. MRI brain is normal. What is the most likely diagnosis in index case ?

(1) Segawa disease

(2) Wilson disease

(3) ADEM

(4) Myoclonus-Dystonia Syndrome

(5) Question not attempted

34. Excess manganese exposure in children may resemble which movement disorder ?

(1) Huntington disease

(2) Dystonia musculorum deformans

(3) Juvenile Parkinsonism

(4) Myoclonic epilepsy

(5) Question not attempted

35. Pyridoxine-dependent epilepsy is due to mutation in

(1) ALDH7A1 (2) GCH1

(3) ATP7B (4) CBS

(5) Question not attempted

36. A 7-months old infant presented with failure to thrive, developmental delay and drug-refractory seizures. Examination showed prominent forehead, bitemporal hollowing, anteverted nostrils, prominent upper lip and micrognathia. A magnetic resonance imaging of the brain showed a smooth brain with an absence of sulci. What is the true statement about the condition ?

(1) Caused by submicroscopic chromosomal deletions of 17p13.3
(2) Caused by visible chromosomal deletions of 17q13.3
(3) Caused by submicroscopic chromosomal deletions of 17q13.3
(4) Caused by mutations in the doublecortin gene
(5) Question not attempted

37. A 3-years old boy presented with global developmental delay and refractory seizures. Examination revealed microcephaly and sensorineural hearing loss. Magnetic resonance imaging of the brain showed frontal polymicrogyria, mild ventriculo-megaly and agenesis of the corpus callosum. Identify the underlying condition.

(1) Kabuki make-up syndrome
(2) Chudley-McCullough syndrome
(3) Warburg-Micro syndrome
(4) Delleman syndrome
(5) Question not attempted

38. A 3-year-old girl who has developmental delay presented to the emergency room with a history of cyanotic episodes 2 hours back. She was noted to have a look of fear and then confusion associated with slow breathing, a choking sound and diminished awareness. Physical examination revealed microcephaly. She sits but does not stand, and she has no language and poor eye contact. She has truncal unsteadiness and brings her hands to her mouth frequently. The genetic defect may be possible in all of the following genes except :

(1) FOXG1 (2) ZEB2
(3) MECP2 (4) MEF2C
(5) Question not attempted

39. A 5-year-old boy presents with global developmental delay, hypotonia and macroorchidism. He exhibits hand-flapping and poor eye contact. FMR1 gene analysis shows CGG trinucleotide repeat expansion in the 5' UTR. Which mechanism explains the gene silencing ?

(1) Histone acetylation
(2) DNA hypomethylation
(3) Aberrant splicing
(4) Hypermethylation of CpG island
(5) Question not attempted

40. Which enzyme deficiency is most commonly implicated in infantile-onset Mitochondrial Encephalopathy with Lactic Acidosis and Stroke-like episodes (MELAS) ?

(1) Pyruvate carboxylase
(2) Complex IV (cytochrome c oxidase)
(3) tRNA-Leu(UUR) mutation
(4) Succinyl-CoA synthetase
(5) Question not attempted

41. Elevated CSF lactate with low plasma lactate is most suggestive of –

(1) Pyruvate carboxylase deficiency
(2) Cerebral folate deficiency
(3) Mitochondrial DNA depletion
(4) Dihydrolipoamide dehydrogenase deficiency
(5) Question not attempted

42. Which neuroimaging pattern is most characteristic of Mitochondrial Neurogastrointestinal Encephalomyopathy (MNGIE) ?

(1) Cerebellar atrophy
(2) Symmetric involvement of basal ganglia
(3) Leukoencephalopathy with peripheral nerve involvement
(4) Diencephalic and midbrain atrophy
(5) Question not attempted

43. Which condition shows low CSF 5-MTHF with normal plasma folate ?

(1) Homocystinuria
(2) Cerebral folate deficiency
(3) MTHFR deficiency
(4) Biotinidase deficiency
(5) Question not attempted

44. Which of the following Mitochondrial disorders is X-linked ?

(1) Pearson syndrome
(2) Barth syndrome
(3) NARP syndrome
(4) Kearns-Sayre syndrome
(5) Question not attempted

45. A 5-year-old presents with unclear speech and academic delay. The parents report that the child often responds inappropriately to verbal instructions and seems to hear better in quiet settings. Tympanic membranes are normal. What is the most appropriate next diagnostic step ?

(1) Auditory processing evaluation
(2) Pure tone audiometry
(3) Tympanometry
(4) Otoacoustic emissions
(5) Question not attempted

46. General movements assessment is a sensitive tool used to detect early markers of cerebral palsy. Which of the following movement patterns, if absent during the "fidgety" phase (9–20 weeks post-term), is most predictive of cerebral palsy ?

(1) Startle responses
(2) Complex writhing
(3) Fidgety movements
(4) Tonic neck reflexes
(5) Question not attempted

47. Which of the following early neurological signs observed in infants is most predictive of cerebral palsy when present at 3 months of age ?

(1) Head lag on pull-to-sit
(2) Asymmetrical tonic neck reflex
(3) Absence of visual tracking
(4) Persistent fisting with scissoring of the lower limbs
(5) Question not attempted

48. Which of the following statements best reflects an acceptable variation in normal child development ?

(1) A 9-month-old who is not yet sitting without support.
(2) A 12-month-old who has not started babbling.
(3) A 15-month-old who is not walking but cruises around furniture.
(4) A 3-year-old who uses only 10 single words.
(5) Question not attempted

49. Which of the following is NOT a typical eating behaviour observed in a 9–12-month-old infant ?

(1) Drinking from a cup
(2) Eating lumpy, mashed food
(3) Finger feeding dissolvable solids
(4) Circular (rotary) jaw movements
(5) Question not attempted

50. Which gene mutation is associated with X-linked lissencephaly and agenesis of the corpus callosum in males, often presenting with epilepsy and intellectual disability ?

(1) TUBA1A
(2) Doublecortin
(3) LIS1
(4) SHH
(5) Question not attempted

51. Holoprosencephaly is most commonly associated with which genetic syndrome ?

(1) Trisomy 18
(2) Trisomy 13
(3) Trisomy 21
(4) Trisomy 5
(5) Question not attempted

52. Which of the following is most characteristic of the neurological presentation of systemic lupus erythematosus in children ?

(1) Cerebrovascular accidents

(2) Diffuse cortical atrophy

(3) Seizures and chorea

(4) Cerebellar degeneration

(5) Question not attempted

53. Which neuropathological hallmark is most typical in pediatric HIV encephalopathy ?

(1) Multinucleated giant cell encephalitis

(2) Neuronal apoptosis

(3) Basal ganglia calcification

(4) Perivascular demyelination

(5) Question not attempted

54. Which of the following MRI findings is least likely in SSPE ?

(1) Hyperintensities in occipito-parietal cortex

(2) Corpus callosum thinning

(3) Ventriculomegaly

(4) Basal ganglia hemorrhage

(5) Question not attempted

55. Which of the following neurological manifestations has the strongest association with MIS-C in children post-COVID-19 ?

(1) Guillain-Barré Syndrome

(2) Acute necrotizing encephalopathy

(3) Reversible splenial lesion syndrome

(4) Aseptic meningitis

(5) Question not attempted

56. Which cytokine has the strongest association with severity and complications in pediatric pneumococcal meningitis ?

(1) TNF-alpha (2) IL-1β

(3) IL-6 (4) IL-1

(5) Question not attempted

57. A 6-year-old with acute bacterial meningitis deteriorates neurologically on day 3 despite antibiotics. MRI shows no abscess. Which next step is most appropriate ?

(1) Repeat lumbar puncture

(2) Initiate IV corticosteroids

(3) Add vancomycin

(4) Perform MR venography

(5) Question not attempted

58. Which of the following pathogens is most likely to cause neonatal meningitis with basal ganglia and thalamic involvement on MRI ?

(1) Escherichia coli
(2) Listeria monocytogenes
(3) Enterovirus
(4) Citrobacter koseri
(5) Question not attempted

59. In the setting of neonatal meningitis, which CSF value best correlates with adverse neurodevelopmental outcome ?

(1) CSF glucose
(2) CSF protein
(3) CSF cell count
(4) CSF lactate
(5) Question not attempted

60. Which of the following is most common cause of neonatal encephalitis ?

(1) HSV-1 (2) HSV-2
(3) Enterovirus (4) CMV
(5) Question not attempted

61. Drug of choice for Aspergillus meningitis is :

(1) High dose liposomal amphotericin B
(2) Voriconazole
(3) Posaconazole
(4) Caspofungin
(5) Question not attempted

62. Which of the following arteries is most commonly involved in transient cerebral arteriopathy ?

(1) ACA
(2) PCA
(3) PICA
(4) M1 segment of MCA
(5) Question not attempted

63. Which of the following is a hallmark of CADASIL ?

(1) Early cortical strokes with calcifications
(2) White matter changes in anterior temporal lobes
(3) Infantile hemorrhagic strokes
(4) MRA shows focal aneurysms
(5) Question not attempted

64. Which MRI finding is most characteristic of nonketotic hyperglycinemia in neonates ?

(1) Basal ganglia infarcts
(2) Hyperintensity of the corpus callosum and posterior limb of internal capsule
(3) Periventricular calcifications
(4) Leukodystrophic pattern
(5) Question not attempted

65. Which of the following biochemical markers is most useful in monitoring treatment efficacy and predicting neurotoxicity in neonates with MSUD ?

(1) Valine levels in plasma

(2) Alpha-ketoglutarate in CSF

(3) Plasma leucine concentration

(4) CSF lactate levels

(5) Question not attempted

66. A term neonate with sepsis develops seizures and signs of raised intracranial pressure. Cranial ultrasound reveals loss of sulcal effacement and periventricular echogenicity. MRI shows diffuse restricted diffusion in cortical and subcortical regions. Which of the following best explains the pathophysiology of cerebral edema in this neonate ?

(1) Cytotoxic edema due to glutamate-induced neuronal apoptosis

(2) Vasogenic edema secondary to immature blood-brain barrier breakdown

(3) Interstitial edema from hydrocephalus ex vacuo

(4) Osmotic edema from renal tubular acidosis

(5) Question not attempted

67. Which of the following cognitive deficits is most specific to children with dyscalculia rather than other forms of learning disability ?

(1) Slow processing speed and poor working memory

(2) Deficits in number sense and magnitude representation

(3) Impaired verbal comprehension and expressive language

(4) Poor phonemic awareness and letter-sound mapping

(5) Question not attempted

68. In standardized IQ testing using the Wechsler Intelligence Scale for Children (WISC-V), which subscale score is most sensitive in detecting specific learning disabilities in a child with an otherwise average Full-Scale IQ ?

(1) Processing Speed Index

(2) Verbal Comprehension Index

(3) Perceptual Reasoning Index

(4) Working Memory Index

(5) Question not attempted

69. Inherited causes of intellectual disability are most often :

(1) X-linked recessive

(2) Autosomal dominant

(3) Mitochondrial

(4) Multifactorial

(5) Question not attempted

70. A child with HIV presents with progressive cognitive decline, poor coordination and memory loss. What is the most likely diagnosis ?

(1) HIV-associated neurocognitive disorder
(2) Cerebral malaria
(3) HIV encephalopathy
(4) Meningitis
(5) Question not attempted

71. Which type of GSD causes hepatomegaly, cirrhosis and muscle weakness due to a deficiency in the debranching enzyme ?

(1) Type I (2) Type III
(3) Type IV (4) Type V
(5) Question not attempted

72. A 10-year-old with congenital adrenal hyperplasia presents with behavioural changes, hyperactivity and cognitive difficulties. Which of the following is the most likely cause of these neurological symptoms ?

(1) Excessive cortisol levels
(2) Elevated androgen levels
(3) Hypoglycemia due to cortisol deficiency
(4) Hyperkalemia and hyponatremia
(5) Question not attempted

73. The most specific clinical feature differentiating vegetative state from minimally conscious state is :

(1) Spontaneous eye opening
(2) Visual pursuit or fixation to stimuli
(3) Abnormal posturing
(4) Sleep-wake cycles
(5) Question not attempted

74. Which of the following findings best distinguishes hypoxic-ischemic encephalopathy from inborn errors of metabolism in a comatose neonate ?

(1) Seizures and poor tone
(2) Elevated lactate in serum
(3) Pattern of injury on MRI
(4) Absence of suck and Moro reflexes
(5) Question not attempted

75. High dose corticosteroids are not useful in reducing intracranial pressure in all of the following, except :

(1) Traumatic brain injury
(2) Brain Tumor
(3) Hemorrhage
(4) Infarction
(5) Question not attempted

76. Which of the following are true about the preterm baby at the equivalent of 40 weeks gestation as compared to the full term one ?

a. The preterm baby at the equivalent of 40 weeks gestation tends to bear his weight on toes, while the full term one has the flat feet on the ground.

b. In prone position, the preterm baby resembles a full-term baby who is 6 weeks.

c. Preterm baby has incomplete flexion of the wrist and incomplete dorsiflexion of the ankles.

d. Preterm baby has incomplete flexion of the wrist but complete dorsiflexion of the ankles.

(1) a, b, c (2) a, b, d
(3) a, b (4) a, c
(5) Question not attempted

77. In the provision of developmentally supportive care to newborns, which of the following are not characteristic behaviours of stressed neonate ?

(1) Gag, hiccough, sneeze, yawn
(2) Change in heart rate, respiratory rate, oxygen saturation, colour
(3) Back arching, finger splay, hyperalert, salute
(4) Flexion posture, finger grasping, hands to face or mouth, foot bracing
(5) Question not attempted

78. Which is the correct match for Erikson's psychosocial stage and the corresponding age in western cultures ?

Psychosocial stage	Age group
a. Basic trust vs. mistrust	i. Infancy (0-1 year)
b. Identity vs. role diffusion	ii. Preschool (3-6 years)
c. Industry vs. inferiority	iii. Adolescence (12-20 years)
d. Initiative vs. guilt	iv. Toddlerhood (2-3 years)
e. Autonomy vs. shame and doubt	v. School age (6-12 years)

(1) a-i, b-iii, c-v, d-ii, e-iv
(2) a-v, b-iv, c-iii, d-ii, e-i
(3) a-ii, b-iii, c-iv, d-v, e-i
(4) a-iv, b-v, c-i, d-ii, e-iii
(5) Question not attempted

79. A 34-month-old boy presents to the OPD with inability to walk without support as yet. He can speak 1-2 meaningful words and has only assisted pincer grasp. He can build a tower of 3 cubes and has casting of objects. His antenatal, perinatal and past history are uneventful. There are no focal deficits on examination or neurocutaneous markers or dysmorphism. His brain MRI is normal. Which genetic test has the highest diagnostic yield in this situation ?

(1) Karyotype
(2) MECP2
(3) Chromosome microarray
(4) FISH
(5) Question not attempted

80. Match the following as per Palmini classification system :

Focal cortical dysplasia type	Pathological findings
a. Type IA	i. No dysmorphic neurons or balloon cells, only isolated dyslamination present
b. Type IB	ii. Architectural abnormalities with dysmorphic neurons but no balloon cells
c. Type IIA	iii. Architectural abnormalities with giant or immature but not dysmorphic neurons
d. Type IIB	iv. Architectural abnormalities with dysmorphic neurons and balloon cells

(1) a-i, b-iii, c-ii, d-iv
(2) a-i, b-ii, c-iii, d-iv
(3) a-ii, b-iii, c-iv, d-i
(4) a-ii, b-iv, c-i, d-iii
(5) Question not attempted

81. Which of the following is not true regarding Germinal Matrix Hemorrhage-Intraventricular Hemorrhage (GMH_IVH) in preterms in low resource setups ?
(1) Full course of antenatal steroids is protective against it when birth interval is 24 hours to 7 days.
(2) The suggested protocol for cranial ultrasound is 1-3 days, 10-14 days and 48 days in survivors.
(3) First ultrasound can detect 95% of cases of IVH and periventricular echogenicity (PVE) in clinically symptomatic preterms <1000g.
(4) Later ultrasounds can detect periventricular cysts and early hydrocephalus.
(5) Question not attempted

82. A 3-day old neonate is brought to medical attention for dryness of right eye. On crying, his face is deviated to left side. He was born, full term with face presentation and birth weight of 3.5 Kg. There was no use of forceps or vacuum. What is the possible reason for this finding ?
(1) Mobius syndrome
(2) Myotonic dystrophy
(3) Pressure over stylomastoid foramen by sacral promontory
(4) Transient Neonatal myasthenia
(5) Question not attempted

83. A 9-day old term newborn in NICU is having recurrent hypoglycemia whenever glucose infusion rate is reduced from 8 mg/kg/minute. His arterial blood gas is normal, urine ketones are positive at time of hypoglycemia. His liver is 4 cm below subcostal margin and SGOT is 23 mg% and SGPT is 34 mg%. His INR is 1.0. What is the possible diagnosis ?
(1) Glycogen storage disease
(2) Galactosemia
(3) Tyrosinemia
(4) Gaucher's disease
(5) Question not attempted

84. Which of the following tumors is less common in pediatric age group ?
(1) Medulloblastoma
(2) Brainstem glioma
(3) Optic pathway glioma
(4) Tentorial meningioma
(5) Question not attempted

85. All of the following are true about neurocytoma, except
(1) It is composed of uniform round cells with neuronal differentiation.
(2) It presents as an intraventricular mass with raised intracranial pressure.
(3) It is more likely to occur in toddler age group.
(4) Treatment is gross total resection with little role of radiotherapy or chemotherapy.
(5) Question not attempted

86. In thoracic spine, the most common site of fracture in pediatric trauma patients is :
(1) T6 (2) T8
(3) T10 (4) T12
(5) Question not attempted

87. Which of the following is false about Brown Sequard syndrome ?
(1) Hemisection of the spinal cord
(2) Absent pain and temperature sensation contralaterally
(3) Loss of proprioceptive sensation ipsilaterally
(4) Loss of power contralaterally
(5) Question not attempted

88. In myasthenia gravis, when patient attempts to smile, snarling expression appears due to weakness of
(1) Levator oris
(2) Buccinator
(3) Orbicularis oris
(4) Depressor anguli oris
(5) Question not attempted

89. The structure of muscle type nicotinic acetylcholine receptor consists of

(1) 1-alpha, 2-beta, 1-delta and 1-gamma or epsilon

(2) 1-alpha, 1-beta, 2-delta and 1-gamma or epsilon

(3) 1-alpha, 1-beta, 1-delta and 2-gamma or epsilon

(4) 2-alpha, 1-beta, 1-delta and 1-gamma or epsilon

(5) Question not attempted

90. At postsynaptic membrane of neuromuscular junction, acetylcholinesterase (AChE) rapidly terminates the action of acetylcholine by

(1) Oxidation

(2) Reduction

(3) Hydrolysis

(4) Phosphorylation

(5) Question not attempted

91. What is the other name for acquired neuromyotonia ?

(1) Rett syndrome

(2) Munchausen's syndrome

(3) Isaacs syndrome

(4) Andersen-Tawil syndrome

(5) Question not attempted

92. Which genotype in a child with congenital myopathy is associated with susceptibility to malignant hyperthermia ?

(1) RYR1 mutation

(2) SEPN1 mutation

(3) NEB mutation

(4) TPM3 mutation

(5) Question not attempted

93. Which of the following is not true about atomoxetine ?

(1) Blackbox warning of suicidal ideation

(2) Stimulant medication

(3) Selective norepinephrine reuptake inhibitor

(4) Appetite suppression

(5) Question not attempted

94. A ten-year-old girl is brought with poor school performance. She has no dysmorphism or neurocutaneous markers. Her vision and hearing are normal. She is not forgetful, is cheerful and cooperative. Her neurological examination is normal. Her performance IQ is 100. However, she performs poorly on the tests of reading comprehension and word problems. How will you clinch the diagnosis ?

(1) MRI brain

(2) EEG

(3) PET

(4) Checking school work and Neuropsychological assessment

(5) Question not attempted

95. An eight-year-old boy with ADHD on methylphenidate for 1½ years is brought to the OPD with new onset repetitive movements in form of eye blinking, shrugging, throat clearing and barking. He has also become abusive to classmates. This is causing disturbance in the classroom. He was found to have a pathogenic variant in SLITRK1 gene. What is the likely reason ?

(1) Transient tic disorder
(2) Tourette syndrome
(3) Depressive episode
(4) Oppositional defiant disorder
(5) Question not attempted

96. Which one of the following personality disorders is called psychopathic personality ?

(1) Borderline personality disorder
(2) Obsessive compulsive disorder
(3) Antisocial personality disorder
(4) Schizoid personality disorder
(5) Question not attempted

97. Which of the following is not an essential feature of coning ?

(1) Increased posterior fossa pressure
(2) Downward herniation of cerebellum and medulla at the foramen magnum
(3) Increased supratentorial pressure
(4) Respiratory deterioration
(5) Question not attempted

98. Which of the following is incorrect regarding pediatric sports related concussion ?

(1) A structured concussion recognition tool 6 comprising of visible clues, physical symptoms, changes in emotions, changes in thinking and questions to gauge awareness can be administered even by layperson.
(2) Any athlete with a suspected concussion should be immediately removed from practice or play till symptoms resolve.
(3) An athlete with suspected concussion should not be left alone for at least 3 hours.
(4) An athlete with suspected concussion can be sent home with a responsible adult.
(5) Question not attempted

99. Most common dyskinesia after cardiac surgery is :

(1) Ballismus
(2) Choreoathetosis
(3) Dystonia
(4) Apraxia
(5) Question not attempted

100. Hypomagnesemia can exacerbate uremic encephalopathy by acting as :

(1) NMDA receptor antagonist

(2) GABA A receptor agonist

(3) GABA B receptor agonist

(4) Acetylcholine receptor antagonist

(5) Question not attempted

101. Which of the following is not true about rare diseases ?

(1) WHO defines rare disease as a disease or disorder with a prevalence of ≤ 5 per 10,000 population.

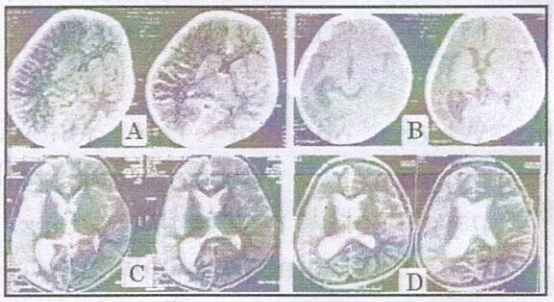
(2) 70-80% of rare diseases are genetic.

(3) Approximately 450 rare diseases have been identified in India.

(4) Rare disease registry in India was started by ICMR in collaboration with AIIMS, New Delhi in 2019.

(5) Question not attempted

102. A 10-year-old male child presented with right epilepsia partialis continua with left hemiparesis for last 3 years. He had initially had focal, brief seizures with a febrile illness 3 years back but thereafter had progressive hemiparesis and now presented with epilepsia partialis continua for 3 months. His serial neuroimaging is shown in the panel as A followed by B followed by C and followed by D over 3 years. His MRA was normal. What is the most likely diagnosis ?



(1) Right Hemispheric stroke

(2) Dyke-Davidoff Mason Syndrome

(3) Hemiconvulsion-Hemiplegia-Epilepsy Syndrome

(4) Rasmussen's encephalitis

(5) Question not attempted

103. What is the symbol of Gadolinium used for contrast enhancement in MRI ?

(1) Ga (2) Gd

(3) GI (4) Gm

(5) Question not attempted

104. Which is the most frequently used radionuclide moiety in Positron Emission Tomography (PET) ?
(1) 2-[^{16}F]fluoro-2-deoxy-d-glucose
(2) 2-[^{17}F]fluoro-2-deoxy-d-glucose
(3) 2-[^{18}F]fluoro-2-deoxy-d-glucose
(4) 2-[^{19}F]fluoro-2-deoxy-d-glucose
(5) Question not attempted

105. Which of the following is true about post lumbar puncture headache ?
(1) Headache after lumbar puncture is an uncommon complication.
(2) Headache after lumbar puncture is defined as "Bilateral headaches that develop within 7 days after the procedure and disappear within 14 days, and has a definite relationship to the patient's position".
(3) Needle size has no relation to the incidence of headaches after lumbar puncture.
(4) Epidural blood patch is not successful if carried out after 24 hours of headache after lumbar puncture.
(5) Question not attempted

106. Botulinum toxin blocks release of which of the following ?
(1) Acetylcholine
(2) Serotonin
(3) GABA
(4) Norepinephrine
(5) Question not attempted

107. In secondary headache post migrainosus infarction, which of the following statement is false ?
(1) Regular use of non-steroidal anti-inflammatory drug can decrease the efficacy of acetylsalicylic acid.
(2) Flunarizine can provide both headache and stroke prevention.
(3) Triptans should be avoided.
(4) Attention to lifestyle, triggers and psychological factors is unnecessary.
(5) Question not attempted

108. **Assertion (A)** : High-frequency rTMS targeted at the primary motor cortex (M1) of the lesioned hemisphere or low-frequency rTMS aimed at the M1 of the non-lesioned hemisphere, rTMS may promote the reorganization of neural pathways post stroke.
Reason (R) : Traditional High-frequency rTMS typically has inhibitory effects, while low-frequency rTMS has excitatory effects.
(1) Both assertion and reason are true, and the reason is the correct explanation of the assertion.
(2) Both assertion and reason are true, but the reason is not the correct explanation of the assertion.
(3) Assertion is true, but the reason is false.
(4) Assertion is false, but the reason is true.
(5) Question not attempted

109. Which one of the following statements is correct ?

(1) In clinical trials, traditional recruitment methods are more cost effective and efficient than web-based recruitment in terms of accessibility and geographic diversity of target populations.

(2) The majority of members in online support groups for pediatric rare diseases are non-supportive of being contacted through the group for study recruitment inquiries.

(3) The Extinguish Trial, a prospective randomized clinical trial for Anti-NMDA Receptor Encephalitis, is a prime example of Social media (SoMe)-based recruitment to study a rare disease.

(4) Use of SoMe is helpful in protecting study participant's identities, maintaining blinding and retention of participants.

(5) Question not attempted

110. A two-year-old boy was referred to the hospital with one month history of constipation and lethargy. The baby passed stools only after glycerine suppository. The family had recently relocated and the house was undergoing renovation. The mother gave history of pica in the child. Examination revealed mild distension of the abdomen. Plain X-ray of abdomen revealed scattered radio opaque speckles and abdomen loaded with stools. Peripheral blood smear revealed a normocytic normochromic blood picture with basophilic stippling of red blood cells. What is the next investigation that you will do ?

(1) MRI Brain

(2) Barium enema

(3) Blood lead levels

(4) Upper GI endoscopy

(5) Question not attempted

111. Which of the following anti-seizure medication is associated with acute angle-closure glaucoma ?

(1) Lacosamide

(2) Gabapentin

(3) Zonisamide

(4) Oxcarbazepine

(5) Question not attempted

112. Which of the following is not true regarding etiopathogenesis of holoprosencephaly (HPE) ?

(1) HPE may be seen in association with syndromes with normal karyotype like Rubinstein Tayebi syndrome, Smith-Lemli-Opitz syndrome.

(2) Non-syndromic and non-chromosomal HPE is seen with autosomal dominant and autosomal recessive inheritance patterns.

(3) HPE may result from germline mutations in PTEN and mTOR pathway.

(4) HPE may be seen in association with Trisomy 13, Trisomy 18 or triploidy.

(5) Question not attempted

113. Which of the following is true for the capsule of a brain abscess ?

(1) Fibrous

(2) Inflammatory granulation tissue

(3) Compressed brain parenchyma

(4) No capsule

(5) Question not attempted

114. All of the following drugs have been associated with recurrent meningitis, except :

(1) Intravenous Immunoglobulin

(2) Allopurinol

(3) Nonsteroidal anti-inflammatory drugs

(4) Acyclovir

(5) Question not attempted

115. Low CSF glucose level is seen in viral meningitis due to which of the following agent ?

(1) Parechovirus

(2) Mumps virus

(3) Measles virus

(4) Ebstein Barr virus

(5) Question not attempted

116. All are true about brain abscess except :

(1) Brain abscess in children occur most commonly in association with cyanotic heart disease and infections of sinuses or middle ear.

(2) Bacterial meningitis is rarely complicated by brain abscess except Citrobacter in neonates.

(3) Surgical treatment is necessary in all cases in addition to antibiotics for 4 to 8 weeks.

(4) Corticosteroids are given to manage raised intracranial pressure.

(5) Question not attempted

117. Drug of choice for listeria monocytogenes meningitis is :

(1) Ampicillin and gentamicin

(2) Vancomycin and ceftazidime

(3) Rifampicin and ceftriaxone

(4) Ceftriaxone alone

(5) Question not attempted

118. Mollaret meningitis is associated with :

(1) Bartonella henselae

(2) Mycoplasma pneumoniae

(3) Borrelia burgdorferei

(4) Herpes simplex

(5) Question not attempted

119. Which of the following is incorrect about importance of automated seizure detection using wearable devices ?

(1) Automated seizure detection helps detect seizures that are unrecognized and unreported.

(2) Automated seizure detection can potentially reduce risk of SUDEP due to undetected seizures.

(3) Wearable devices are recommended for accurate automated detection of generalized tonic-clonic seizures and focal-to-bilateral tonic-clonic seizures in outpatients with epilepsy in ambulatory setting.

(4) Wearable devices are effective and recommended for accurate automated detection of all seizure types in outpatients with epilepsy in ambulatory setting.

(5) Question not attempted

120. An 18-month-old baby is brought to the emergency in active generalised tonic clonic seizure for last 30 minutes that got aborted by intravenous midazolam. He is a product of nonconsanguineous marriage with uneventful perinatal period. Past history of five similar episodes occurring every month for last five months. Mother reports that child has just started walking 1 month back with support and has a dragging gait and a right-hand preference. He is immunised for age. He is febrile on examination, but has no meningeal signs. MRI brain shows left frontal porencephalic cyst. The family stays in a village and is very anxious that it is difficult to get him to medical facility. Which statement below is incorrect ?

(1) He should undergo lumbar puncture to rule out meningitis.

(2) Parents should be taught how to use intranasal midazolam, if seizure is more than 3 to 5 minutes.

(3) The parents should be counselled about risk of febrile seizure recurrence.

(4) At the time of discharge, he may be offered intermittent versus continuous prophylaxis and potential adverse effects of anti-seizure medications should be explained.

(5) Question not attempted

121. Which one of the following reduces Serum folate levels in rat models ?

(1) Valproate

(2) Carbamazepine

(3) Lamotrigine

(4) Topiramate

(5) Question not attempted

122. Which of the following is not a known adverse effect of Fingolimod ?

(1) Macular edema

(2) QTc prolongation

(3) Anaemia

(4) Basal cell carcinoma

(5) Question not attempted

123. In the setting of super-refractory status epilepticus, in which of the following condition/s the diagnosis of FIRES spectrum is excluded ?

a. Prior febrile infection starting between 2 weeks and 24 hours prior to onset of refractory status epilepticus.

b. Remote brain injuries and patients with resolved epilepsy.

c. Those with active epilepsy.

d. Epilepsia partialis continua.

(1) a,b,c,d (2) c,d

(3) a,b (4) b,c

(5) Question not attempted

124. Which of the following is not true about the differences between NMOSD and MOGAD ?

(1) AQP4-IgG is highly specific for NMOSD diagnosis at any titer. In contrast, caution is needed with low-titer myelin-oligodendrocyte glycoprotein-IgG (MOG-IgG), which can be found with other diseases.

(2) In contrast to MOGAD optic neuritis, NMOSD optic neuritis may present with pain prior to onset of vision impairment with presence of papillitis and peripapillary hemorrhages.

(3) Maintenance treatment should be started after the first attack in AQP4+NMOSD but is generally not started until the second attack in MOGAD as the latter can have a monophasic course in more than half of cases.

(4) In AQP4+NMOSD, the area postrema syndrome, characterized by intractable vomiting or hiccups for days to several weeks, is the most frequent manifestation of brainstem involvement (16%–60% of patients) whereas in MOGAD, brainstem or cerebellar symptoms are mainly represented by ataxia (45%) or diplopia (26%).

(5) Question not attempted

125. Which of the following is not a feature of Hashimoto's encephalopathy ?

(1) It is exquisitely steroid sensitive.

(2) Antithyroglobulin antibodies are present in 70% cases and antithyroid peroxidase in nearly 100% case.

(3) A postulated mechanism is toxic effect of increased thyrotropin releasing hormone level as many patients appear to improve wit thyroxine supplementation despite euthyroid status.

(4) MRI Brain shows irreversible T2/FLAIR hyperintensities in bilateral hippocampi.

(5) Question not attempted

126. Which of the following is inaccurate about NMOSD ?

(1) Neuromyelitis Optica Spectrum Disorder (NMOSD) is an autoimmune disorder directed against oligodendrocytes.

(2) The cardinal features are Longitudinally Extensive Transverse Myelitis (LETM), recurrent Optic Neuritis (ON), and typical brain lesions.

(3) About 3%–5% of cases of NMOSD have a pediatric onset, with the usual age at onset between 10-12 years and a female predominance.

(4) Approximately 31% of pediatric patients with NMOSD have detectable serum anti-AQP4-IgG.

(5) Question not attempted

127. How many of the following are correct about Wolf-Hirschhorn Syndrome ?

1. It is a congenital malformation disorder first described in 1961.
2. The female : male is 1 : 2.
3. This syndrome is caused by deletion of the distal region of the short arm of chromosome 4 (4p16.3) and is therefore also known as 4p-syndrome.
4. It has a distinctive craniofacial features of Greek warrior helmet-shaped face.
5. WHS is a contiguous gene deletion syndrome whose clinical severity is linked to deletion size.

Options :

(1) Two (2) Three

(3) Four (4) Five

(5) Question not attempted

128. The drug recently approved for plexiform neurofibromas that are not amenable to surgical resection is

(1) Selumetinib

(2) Eliglustat

(3) Nitisinone

(4) Eculizumab

(5) Question not attempted

129. Pure hemi sensory stroke can occur due to lacunar stroke in

(1) Parietal lobe

(2) Supplementary sensory cortex

(3) Internal capsule

(4) Lateral thalamus

(5) Question not attempted

130. Which of the following arteries is occluded most commonly in case of Weber syndrome ?

(1) Vertebral artery

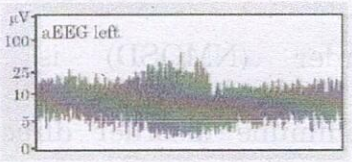
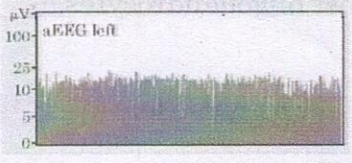
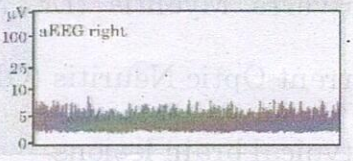
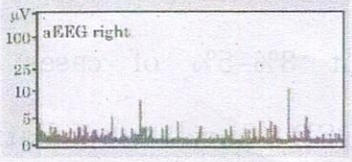
(2) Posterior inferior cerebellar artery

(3) Superior cerebellar artery

(4) Posterior cerebral artery

(5) Question not attempted

131. Match the aEEG trace with their findings :

aEEG trace	Finding
a. 	i. Burst Suppression pattern
b. 	ii. Continuous Low-Voltage Pattern
c. 	iii. Flat Trace Pattern
d. 	iv. Continuous Normal Voltage Pattern with Sleep-Wake Cycling

(1) a-i, b-ii, c-iii, d-iv

(2) a-iv, b-i, c-ii, d-iii

(3) a-iii, b-iv, c-i, d-ii

(4) a-ii, b-iii, c-i, d-iv

(5) Question not attempted

132. Approximately what percentage of TSC patients develop seizures ?

(1) 30–40% (2) 50–60%

(3) 70–80% (4) 80–90%

(5) Question not attempted

133. An 8-year-old girl developed refractory status epilepticus and was started on i.v. infusion of a certain drug, after which child developed pancreatitis. Which of the following drugs is likely the cause of this adverse event ?

(1) Midazolam

(2) Propofol

(3) Pentobarbital

(4) Ketamine

(5) Question not attempted

134. Which of the following EEG findings is not seen in atypical absences ?

(1) Ictal EEG suggestive of 1.5 to 2.5-Hz slow spike-and-wave complexes.

(2) Ictal EEG suggestive of 3 Hz spike-and-wave complexes.

(3) Ictal EEG suggestive of multiple spike-and-wave discharges.

(4) Interictal EEG shows slowing and multifocal epileptiform.

(5) Question not attempted

135. Which feature would most clearly argue against ADHD and suggest a diagnosis of Autism Spectrum Disorder (ASD) ?

(1) Difficulty waiting turn

(2) Poor social reciprocity and restricted interests

(3) Impulsivity and inattention

(4) Academic underperformance

(5) Question not attempted

136. According to DSM-5, which of the following is not required for diagnosing ADHD ?

(1) Symptoms present in two or more settings

(2) Neuropsychological testing

(3) Clear evidence of interference with functioning

(4) Onset of symptoms before age 12

(5) Question not attempted

137. A 2-month-old girl presented to OPD with history of multiple episodes of tonic seizures, which started in the neonatal period. Interictal EEG was suggestive of burst suppression pattern. Genetic testing was suggestive of KCNQ2 mutation. Which of the following drugs is used as first line agent ?

(1) Phenobarbitone

(2) Sodium Valproate

(3) Carbamazepine

(4) Clobazam

(5) Question not attempted

138. Ketogenic diet is most likely to increase the serum levels of which lipids during the initial 6 months ?

(1) HDL only

(2) LDL and triglycerides

(3) VLDL only

(4) Free fatty acids only

(5) Question not attempted

139. A 5-month-old baby boy was vaccinated, after which he developed fever followed by hemiclonic seizures. After the first episode, he developed recurrent episodes of seizures triggered by fever along with delayed development in all domains. Which of the following genes is not associated with this infantile onset epilepsy syndrome ?

(1) SCN1B (2) SCN1A

(3) CDKL5 (4) GABRA1

(5) Question not attempted

140. Which imaging technique best detects muscle edema in inflammatory myopathies ?

(1) SWI

(2) T2 weighted MRI

(3) T1-weighted MRI

(4) STIR sequence

(5) Question not attempted

141. Which of the following is not a red flag for social communication development ?

(1) No vocalisation by 6 months

(2) No gestures by 8 months

(3) No polysyllabic consonant babbling by 12 months

(4) No spontaneous phrases by 24 months

(5) Question not attempted

142. An 8-month-old male infant presented with history of not attaining any major milestones along with epileptic spasms. On examination infant was found to have hypopigmented patches over the back. Which of the following drugs is 1st line for the management of spasms in this condition ?

(1) ACTH

(2) Vigabatrin

(3) Oral Prednisolone

(4) Sodium Valproate

(5) Question not attempted

143. An 8-month-old developmentally normal boy presented with history of brief episodes of focal seizures with shifting laterality. Father had history of sudden brief episodes of fall on getting up without loss of consciousness during adolescence which spontaneously resolved in adulthood. Mutation associated with this condition :

(1) STXBP1 (2) PCDH19

(3) GRIN2A (4) PRRT2

(5) Question not attempted

144. A 1-year-old boy presented with history of fever for 1 day followed by poor feeding, lethargy and encephalopathy. On examination, child had macrocephaly and later developed multifocal dystonia. Deficiency of which enzyme could be responsible for this condition ?

(1) Glutamate decarboxylase
(2) Glutaryl-CoA dehydrogenase
(3) Methylmalonyl-CoA mutase
(4) Electron transfer flavoprotein dehydrogenase
(5) Question not attempted

145. Horizontal supranuclear gaze palsy, gelastic cataplexy are characteristic of :

(1) Tay-Sachs disease
(2) Niemann-Pick type C
(3) Krabbe disease
(4) Farber disease
(5) Question not attempted

146. Which disease results from a deficiency of galactosylceramidase, leading to demyelination in both central and peripheral nervous systems ?

(1) Fabry disease
(2) Krabbe disease
(3) Gaucher disease type III
(4) Metachromatic leukodystrophy
(5) Question not attempted

147. A 2-year-old girl presents with following clinical features : subcutaneous nodules, hoarseness and painful arthritis. Which condition is associated with the clinical features ?

(1) Farber disease
(2) Metachromatic leukodystrophy
(3) Tay-Sachs disease
(4) Niemann-Pick type C
(5) Question not attempted

148. In polymyositis, the inflammatory infiltrate predominantly consists of :

(1) CD4+ T-cells
(2) CD8+ T-cells
(3) B-cells
(4) Neutrophils
(5) Question not attempted

149. Which autoantibody is strongly linked to antisynthetase syndrome ?

(1) Anti-Mi-2 (2) Anti-TIF1-γ
(3) Anti-Jo-1 (4) Anti-HMGCR
(5) Question not attempted

150. Which of the following neuroimaging findings is characteristically seen in untreated classic MSUD during metabolic crisis ?

(1) Symmetric widening of the Sylvian fissures with poor operculization ("bat wing" appearance)
(2) Restricted diffusion in basal ganglia and thalami
(3) Subdural hemorrhages
(4) Diffuse hemorrhage in periventricular regions
(5) Question not attempted

रफ कार्य के लिए स्थान / SPACE FOR ROUGH WORK