



IAP Neonatology Chapter

IAP Neonatology Fellowship Exam 2023

Theory Paper 1

Time: 3 hours

Total Marks–100

- **Attempt all questions.**
- **Write in legible handwriting.**
- **Write answers to the point.**
- **Quote evidence / studies wherever required.**

Question 1: Neuroprotection deserve careful attention while managing neonates. Write short notes on (20 marks)

- Briefly discuss BIND and its prevention (5)
- Neuroprotection bundle in care of extreme preterm (5)
- Newer therapeutic agents for perinatal asphyxia (5)
- Discuss the salient aspects of risk assessment and neurodevelopmental outcome of neonates (5)

Question 2: Write short notes on the following: (20 marks)

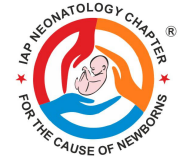
- Key changes in ICROP (International Classification of Retinopathy of Prematurity) 3rd edition (5)
- Ethical care in the NICU. Add a note on palliative care (5)
- Newborn screening using dried blood spot. Add a note on screening of congenital hypothyroidism (5)
- Estimation of fetal well-being (5)

Question 3: Illustrate the following using flow chart (20 marks)

- Management of antenatal hydronephrosis. (5)
- Approach to refractory hypoglycaemia (5)
- Approach to a baby with ambiguous genitalia (5)
- Approach to late onset hypocalcaemia in a neonate (5)

Question 4: Write short notes on the following (20 marks)

- Receiver operative curve for diagnostic test (5)
- Management of HIV- exposed infant of <6 months (5)



- C. Recent WHO recommendations on KMC and the evidence basis (5)
- D. MAA program (5)

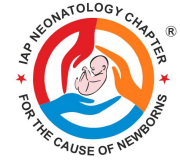
Question 5: Choose the most appropriate answer (20 marks - 1 mark for each MCQ)

- 1. Which of the following is NOT a criterion to offer therapeutic hypothermia according to NNF position statement?**
 - a. pH <7 or BE >-16 on cord or arterial blood gas done within 1 h of life
 - b. Apgar score <5 at 10 minutes or at least 10 min of positive pressure ventilation AND
 - c. History of acute perinatal event (such as but not limited to placental abruption, uterine rupture, cord prolapse)
 - d. TH should be offered to neonates with HIE with gestational age \geq 35 weeks.

- 2. All of the following are the hyperbilirubinemia neurotoxicity risk factors, EXCEPT.**
 - a. Albumin <3.0 g/dL
 - b. Isoimmune hemolytic disease
 - c. Jaundice in the first 24 h after birth
 - d. Significant clinical instability in the previous 24 h

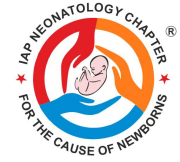
- 3. Which of the following is NOT a known risk factor for invasive candidiasis in a newborn?**
 - a. Extremely low birth weight
 - b. Exposure to third-generation cephalosporins
 - c. Presence of a central venous catheter
 - d. Caffeine therapy

- 4. A 10-day-old female infant born at 39 weeks of gestation presents with respiratory distress.** Perinatal history was insignificant. Parents recollect that their infant became progressively “fussy.” She breathed faster and required a longer time for each breast feeds. Vital signs: heart rate 190 beats/minute, blood pressure from the right arm 78/50 mm Hg, respiratory rate 78 breaths/minute, SpO₂ is 98%. Weight is 3.3 kg (birth weight and discharge weight are 3.5 and 3.4 kg). The precordium is hyperdynamic, and no murmurs are appreciated. The liver is palpable 4 cm. Lower extremity pulses are difficult to palpate. Her feet are cool to touch. the capillary refill is 5 seconds.
CBC: WBC $15 \times 10^9/L$, Hct 40%, platelet count $23 \times 10^9/L$. Differential count 50% neutrophils, 35% lymphocytes, and no bands. Serum electrolytes were normal and



bicarbonate 14 mEq/L. Chest radiograph shows pulmonary edema and cardiomegaly. This infant's clinical presentation is most consistent with a:

- a. Left heart obstructive lesion
 - b. Right heart obstructive lesion
 - c. Adrenal insufficiency
 - d. Sepsis
5. **A newborn with antenatally diagnosed CDH is ventilated due to respiratory distress after birth.** He is on conventional ventilation with the following parameters: PIP of 23 cm H₂O, PEEP of 5 cm H₂O, Paw of 13 cm H₂O, rate of 40 breaths/minute, and inspired oxygen concentration of 80%. The preductal oxygen saturation is 70%. The arterial blood gas is as follows: pH 7.27, PCO₂ 57 mm Hg, and PO₂ 27 mm Hg. Calculate the oxygenation index.
- a. 4
 - b. 15
 - c. 36
 - d. 166
6. **All of the following are useful in assessing the gestational age of an infant, EXCEPT:**
- a. Posture
 - b. Square window test
 - c. Nipple formation
 - d. Palmar creases
7. **FALSE statement regarding Cell-free DNA (cfDNA) screening for aneuploidy.**
- a. It is also known as non-invasive prenatal testing
 - b. Fetal DNA detected in maternal blood is placental in origin
 - c. Fetal DNA can be detected as early as 9 weeks in the maternal blood
 - d. The test can be used as a substitute for chorionic villous sampling
8. **National Newborn Week is celebrated every year from**
- a. 1st to 7th August
 - b. 15th to 21st August



- c. 1st to 7th November
- d. 15th to 21st November

9. Which of the following is NOT true regarding neonatal seizure ?

- a. Hypoxic ischemic encephalopathy is the most common cause of neonatal seizure
- b. Levetiracetam is the most efficacious drug for neonatal seizure
- c. High proportion of neonatal seizure are subclinical
- d. EEG is the gold standard for detection and quantification of neonatal seizure

10. What is the most reliable way of checking heart rate immediately after birth of a 24 weeker?

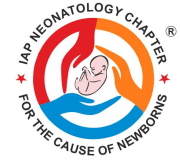
- a. Feeling of the umbilical cord
- b. Apply ECG lead two on both shoulder one at thigh
- c. Pulse oximeter
- d. Auscultation of heart rate for 6 seconds and multiply by 10

11. Which of the following is the most important risk factor for IVH ?

- a. Coagulation disorder
- b. Invasive ventilation
- c. Extreme prematurity
- d. Hypoxic ischemic encephalopathy

12. Combined APGAR Score ranges from

- a. 0-7
- b. 0-10
- c. 0-17
- d. 0-27



13. Which condition has a short time constant?

- a. RDS
- b. MAS
- c. BPD
- d. B & C

14. Fortification of human milk based on macronutrient component of breast milk is termed as

- a. Standard fortification
- b. Adjustable fortification
- c. Targeted fortification
- d. None of the above

15. Which is the standard reporting guidelines for the meta-analysis ?

- a. PRISMA
- b. STROBE
- c. CONSORT
- d. STARD

16. Which pattern does not predict poor prognosis in aEEG in HIE neonate?

- a. Burst suppression.
- b. Upper and lower margin remain $<5 \mu\text{V}$
- c. Lower margin above $5 \mu\text{V}$ and upper margin above $10 \mu\text{V}$
- d. IBI more than 30s

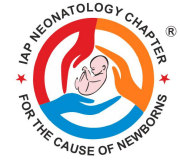
17. The causality between an outcome and an exposure can be more certain in which study design?

- a. Case series
- b. Cross sectional
- c. Cohort
- d. Case report

18. V wave in BERA originates in

- a. Cochlear nucleus
- b. Superior olivary nucleus
- c. Lateral lemniscus
- d. Inferior colliculus

19. Which of the following is false regarding ASHA visits under HBNC programme?



- a) 6 visits in hospital delivery
- b) 7 visits in home delivery
- c) Babies are followed till 30days of life
- d) ASHA ensures vaccination BCG, OPV and DPT done

20. A term newborn has a cluster of blisters on the abdominal skin. The lesions are nontender, filled with cloudy yellowish fluid and surrounded by a thin rim of erythema. The blisters rupture easily, leaving behind superficial glossy erosions with scaly crusts. There is no systemic illness. What is the likely diagnosis?

- a. Bullous impetigo
- b. Cutaneous candidiasis
- c. Staphylococcal scalded skin syndrome
- d. Varicella – Zoster virus infections

