



IAP Neonatology Chapter

IAP Neonatology Fellowship Exam February 2020

Theory Paper 2

Time: 3hours

TotalMarks–100

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

Question 1: A full term neonate, 2720 gm, was born through meconium staining of amniotic fluid with cord around the neck. Intrapartum monitoring had revealed HR of 170 with poor beat to beat variability and late decelerations. The baby required bag and tube ventilation for 60 seconds followed by mechanical ventilation for poor respiratory efforts. Cord ABG revealed: pH 6.96, pCO₂ 75, pO₂ 9, HCO₃ 12, BE -16, and Lactate 8.9. On admission to NICU, therapeutic hypothermia was started at 4 hours of life. **(20 Marks)**

- A. What is normal cord ABG? How do you interpret this ABG with reference to the pathophysiology of perinatal asphyxia? (5)
- B. Describe inclusion and exclusion criteria, method of administration, monitoring, and complications of therapeutic hypothermia. (5)
- C. What is hypoxic ischemic brain injury? Describe HIE staging. (5)
- D. What are the poor prognostic clinical factors in perinatal asphyxia? Describe the role of MRI in perinatal asphyxia. (5)

Question 2: A 26 weeks / 900 gram preterm baby was admitted with RDS and was on CPAP. Infant is weaned off from CPAP support by day 21 of life. Infant is now 28 days old and planning for ROP screening is discussed during rounds. **(20 Marks)**

- A. What would be the schedule of ROP screening for this baby? (3)
- B. Enumerate the major risk factors for ROP (3)



- C. Explain the various zones and stages of ROP with diagrams (6)
- D. What is APROP? (2)
- E. What are the various treatment options available? (6)

Question 3: You are called as an expert by your pediatric colleague to opine as blood cultures of 3 neonates in his NICU have grown *BurkholderiaCepacia*. (20 Marks)

- A. Should this be considered as an outbreak? Define outbreak in NICU.(5)
- B. Are outbreaks in NICU different as compared to other ICUs? If yes, how? (5)
- C. Discuss the management of an outbreak in NICU. (5)
- D. How will you help your colleague to plan out infection control policy and biomedical waste management policy for his NICU? (5)

Question 4: Antenatal USG showed that a fetus has significant intra-cranial hemorrhage. On evaluation after birth the PT and APTT were normal but the platelet count was found to be low; 15,000 per microliter. (20 Marks)

- A. Explain with an algorithm, the approach to early onset thrombocytopenia in a newborn. (6)
- B. What is NAIT? (3)
- C. How will you confirm and manage a baby with NAIT? (5)
- D. Discuss the current platelet transfusion guidelines in a newborn (6)

Question 5: A 27 weeks gestation preemie born weighing 870gms developed feed intolerance, abdominal wall discoloration with distension on day 14 of life. Abdominal X-ray showed features of NEC totalis. Surgeons opined that there is no role for any definitive surgical procedure in such an advanced case. (20 Marks)

- A. What type of care does this baby need? Define it. Describe eligibility for this care. (4)



- B. How do you assess pain in preterm infants? (4)
- C. What are the pharmacological & non pharmacological interventions to reduce pain? (4)
- D. What are the components of counseling in this baby? (4)
- E. What is end-of-life care? (4)

