



IAP Neonatology Chapter

IAP Neonatology Fellowship Exam February 2024

Theory Paper 2

Time: 3hours

TotalMarks–100

- Attempt all questions.
 - Write in legible handwriting.
 - Draw appropriate figures and flow diagrams
 - Quote evidence / studies wherever required.
1. **Question 1: A 8 day old neonate was brought to the emergency with excessive bleeding from the fallen umbilical stump. The neonate was born by normal vaginal delivery at 36 weeks of gestation with a birth weight of 2100 gm. She looked active and a rash was observed on the body.**
 - i. Write various causes of bleeding in the neonate. (5)
 - ii. Discuss about the physiological handicaps in coagulation in neonates compared to adults. (5)
 - iii. What are the laboratory parameters that will guide the clinician to come to the diagnosis and discuss the same. (5)
 - iv. Discuss the indications for platelet transfusion and the pros and cons of different thresholds. (5)
 2. **Question 2: A 4-day old neonate brought to the emergency with the complaints of bilious vomiting. On examination, the neonate was having mild abdominal distention.**
 - i. Discuss the causes of bilious vomiting in a neonate. (5)
 - ii. Write an approach to neonate with suspected surgical abdomen (5)
 - iii. Discuss imaging modalities to aid diagnosis in detail.(5)
 - iv. Write a short note on managing a baby with ileostomy. (5)
 3. **Question 3: In your hospital you find that among Caesarean deliveries, initiation of breastfeeding is happening at a mean duration of 3 hours of birth. Design a quality improvement project to establish early initiation of breastfeeding within 1 hour of life.**
 - i. Write your smart aim. (2)
 - ii. Constitute a team with rationale for each member and assign roles. (4)
 - iii. Draw a process flow chart and identify areas of potential change. (4)
 - iv. Write a key driver diagram and identify what could drive the change. (2)
 - v. Identify key outcomes and measures. (4)



vi. Hypothesize two change ideas with PDSA cycles. (4)

4. Question 4: A newborn baby admitted in the postnatal wards born 39 week of gestation age, birth weight of 3100 gram, is found to have collapsed on day 4 of life with cold and cyanosed peripheries, with baby in shock. ABG had pH 7.1, paO_2 34 mm Hg, paCO_2 67 mm Hg, BE-21. The child was stabilized on inotropes and ventilation.

- i. List the common causes of sudden unexpected postnatal collapse in a neonate. (5)
- ii. How do you arrive at a differential diagnosis? Use flow diagrams if required. (5)
- iii. Discuss how you would counsel the family. (5)
- iv. What measures would you take to prevent such occurrences in the future? (5)

5. Question 5: A 21 day old neonate brought to the emergency with the c/o respiratory distress. On examination: HR- 228/min; Peripheries were cool; RR- 62/min.

- i. Discuss neonatal tachyarrhythmias (5)
- ii. Write the ECG features of the same. (5)
- iii. Write the management of supraventricular tachycardias. (5)
- iv. Discuss genetic arrhythmias that occur in neonates. (5)