



## **IAP Neonatology Chapter**

### **IAP Neonatology Fellowship Exam 2023**

#### **Theory Paper II**

**Time: 3hours**

**Total Marks–100**

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

#### **Question 1:**

**(20 marks)**

A 6 hour old baby born at 36 weeks of gestation, weighing 1.9 kg is referred to your NICU with suspected esophageal atresia.

- a. How do you confirm the diagnosis (3)
- b. Outline the initial stabilization of this neonate.(3)
- c. What factors are taken into consideration for risk stratification and how do you counsel the parents. (5)
- d. Discuss do's and don't's in the immediate post-operative period to optimise survival (4)
- e. Name post-op complications and management. (5)

#### **Question 2:**

**(20 marks)**

An extremely low birth weight baby, born at 28 weeks gestation, is nursed under a radiant warmer. On the fourth day of life, the baby appears sick, dull, and develops metabolic acidosis.

- a. Describe the fluid and electrolyte management strategies that should be implemented in the initial few days of life for extremely low birth weight infants. (5)
- b. Explain the potential causes of metabolic acidosis in this baby and how it could be related to fluid and electrolyte imbalances. (5)
- c. Discuss the importance of temperature control for premature infants and the challenges of maintaining thermal stability in the NICU. Discuss the principles and practices for optimum environment in ELBW babies. (5)
- d. Outline the appropriate interventions and steps you would take to manage the baby's metabolic acidosis and improve their clinical condition. (5)

#### **Question 3: (20 marks)**



A 28-week-old preterm baby in the NICU has been receiving broad-spectrum antibiotics due to suspected sepsis. On day 10 of life, the baby develops fever, lethargy, and a skin rash with satellite lesions.

- Discuss the risk factors that make preterm infants susceptible to neonatal fungal infections, particularly *Candida*. (5)
- Describe the clinical presentation of *Candida* infection in a preterm neonate and how it differs from bacterial infections. (5)
- Explain the diagnostic approaches and laboratory tests that would help confirm the presence of *Candida* infection in this baby. (3)
- Outline the management strategies for treating invasive neonatal *Candida* infections and potential complications to monitor for during treatment. Also discuss the preventive strategies. (7)

**Question 4:**

(20 marks)

A two week old newborn, 3.3 kg, previously doing well, is rushed to the emergency with poor feeding, resp distress, poor pulses and prolonged CFT in a moribund state.

- What are the causes of ALTE ? ( acute life threatening emergency) (5)
- What are the steps in resuscitation of this sick baby. (5)
- Discuss relevant investigations to reach the diagnosis. (5)
- Add a note on stabilization of critical CHD before referral to cardiac unit. (5)

**Question 5:**

(20 marks)

A 30-year-old pregnant woman undergoes a routine ultrasound at 28 weeks gestation, revealing significant bilateral pelvic dilatation in her fetus.

- Define and describe the potential underlying causes of fetal hydronephrosis. (7)
- How would you counsel the parents about this finding, considering potential implications and prognosis? (3)
- Outline the key components of antenatal and postnatal management for a newborn with pelvic dilatation. (7)
- Discuss the long-term prognosis for a child born with antenatally detected pelvic dilatation. (3)