



IAP Neonatology Chapter

IAP Neonatology Fellowship Exam March 2021

Theory Paper 2

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: A baby boy is born at 30 weeks of gestation with a birth weight of 750grams.

Antenatal scans suggest oligohydramnios and abnormal umbilical artery dopplers. Mother has high blood pressures, headache and vomiting prior to admission for delivery. **(20 Marks)**

- a) How do you define and classify severity of preterm IUGR? (2)
- b) What is the sequence of antenatal presentations/findings of placental insufficiency? (5)
- c) What are the immediate and long-term morbidities of preterm IUGR infants? (5)
- d) What perinatal interventions are likely to improve the outcome of this newborn? (5)
- e) Discuss the nutritional management specific to this newborn? (3)

Question 2: A term infant born to Gravida 2 mother presents at 36 hours after birth with severe jaundice. TSB at admission is 33 mg/dl with a direct fraction of 2.5g/dl. **(20 marks)**

- a) What are the causes of severe jaundice in this newborn? (2)
- b) What clinical and lab features differentiate hemolytic from non-hemolytic jaundice? (3)
- c) What is intensive phototherapy? How to improve the efficacy of Phototherapy? (5)



- d) What are the indications for Exchange transfusions? How to choose the right blood group? Precautions while doing ET? Expected complications of ET? (5)
- e) How to avoid and assess for long term complications of severe jaundice in this newborn? (5)

Question 3: A preterm male neonate delivered to a primigravida mother at 27 weeks of gestation, due to sudden Antepartum Hemorrhage in mother. Baby developed respiratory distress soon after birth and needed surfactant and ventilation. Baby was extubated on day 3 of life to nasal CPAP. He still needed oxygen by nasal prongs on 30th days of life. (20 marks)

- a) Define and classify Bronchopulmonary Dysplasia (BPD) (4)
- b) What are the evidence-based measures to prevent BPD? (4)
- c) Discuss the role of postnatal corticosteroids in prevention of BPD? (4)
- d) How to manage BPD, once it has developed? (4)
- e) List the long-term consequences of BPD. (4)

Question 4: A 26 weeks, preterm baby is being discharged from NICU on day 55 of life.

(20 Marks)

- a) Advise dietary and nutritional supplementation on discharge? (5)
- b) What is the expected weight, height and head circumference growth of this baby? (5)
- c) Enumerate different preterm growth charts. Compare their merits and demerits. (5)
- d) Enumerate the neuro development follow up schedule for this baby.(5)



Question 5: You noted a lot of VLBW infants are getting blood transfusion in your unit. Plan a Quality improvement project to reduce blood transfusions among VLBW infants in your unit? (20 marks)

- a) How to write a SMART Aim? (2)
- b) How to evaluate the baseline incidence and the reasons for high transfusion rates in your unit? (4)
- c) How to choose the interventions appropriate for your set up? (2)
- d) How to test the changes that would results in reduced blood transfusions? (4)
- e) How to evaluate the success of interventions in a typical QI study? (5)
- f) How to improve sustenance of the positive outcomes/interventions evaluated in your QI project? (3)

