

NNF FELLOWSHIP FOR DOCTORS APRIL 2024 EXAMINATION

THEORY PAPER I

Answer all the questions:

Total Marks: 100 Time: 3 hours

- Answers to "LIST" requires only the names as answers, no descriptions are required.
- Indicate the question number correctly in the margin.
- Answer all the parts of a single question together.
- Start the answer to a question on a fresh page or leave adequate space between two answers.
- Do not leave any blank pages between two answers.

1. An antenatal patient who has completed 26 weeks of gestation, has come with very high blood pressure and impending eclampsia. The obstetric team is planning to deliver the baby.
 - a. LIST two important antenatal interventions to improve the survival chances and long-term neurological outcomes. (2)
 - b. LIST two SPECIFIC delivery room interventions that are necessary for this delivery (2)
 - c. Describe the postnatal strategies for prevention of intraventricular hemorrhage (IVH); describe the screening protocol for IVH (4+2).
2. A term 8-day old neonate presented with encephalopathy and was found to have a Serum Sodium value of 185 meq/L.
 - a. What is the possible cause and most serious potential complication? (2)
 - b. Describe the emergency care of the baby with encephalopathy and specific management of the condition (3 +2)
 - c. What are the measures the unit can take to prevent this condition? (3)

3. In relation to follow up of NICU babies
 - a. LIST 2 validated tools that are highly predictive for early diagnosis of developmental delay in high-risk infants (2)
 - b. LIST 3 common neurodevelopment disabilities that are evident only beyond 2 years age and necessitate a longer follow up of high-risk neonates (3)
 - c. LIST the domains of development supportive care, and explain with one practical example on how to deliver this care in NICU (5)

4. In relation to nutrition of VLBW babies
 - a. Write a short note on composition of Human Milk Fortifiers, proven benefits of routine fortification in VLBW nutrition, and strategies of milk fortification (2 + 2 + 3)
 - b. Give a short description of problems associated with iron deficiency in VLBW babies and dosing schedule of iron. (3)

5. A term baby delivered for cord prolapse didn't cry after birth, and required extensive resuscitation including intubation and ventilation, chest compression and one dose of adrenaline. A stable heart rate was established, and the baby was shifted to NICU at 20 minutes of life.
 - a. What is expanded APGAR score? (2)
 - b. LIST the criteria for deciding therapeutic hypothermia (3)
 - c. Describe the morbidities and modifiable factors that determine outcome of a baby with perinatal asphyxia (other than therapeutic hypothermia) (5)

6. A 40 weeks/ 3.3 kg presented on day 6 of life with history of poor feeding and lethargy. On examination the baby had poor sensorium, shallow breathing, and very poor suck. The heart rate was 134, Capillary refill time was 2 seconds, blood sugar 75 mg / dL, and CRP negative. Capillary blood gas showed Ph of 7.45, PO₂ 100, PCO₂ 50, and HCO₃ of 28, while on nasal canula oxygen of FiO₂ 0.25. Serum ammonia was 835 µg/dL.
 - a. What is the most likely diagnosis? (1)

- b. Describe the initial emergency care (3)
- c. What confirmatory tests are required? (2)
- d. Describe the protocol of screening all newborn babies to detect similar conditions in pre-symptomatic stage. (4)

7. A 3-day old term baby born to a Rh-negative mother has been referred with a bilirubin value of 29 mg / dL.

- a. Describe the scoring system to assess for acute neuronal damage. (3)
- b. What is intense phototherapy? (3)
- c. Describe the blood components you will arrange for an exchange transfusion? (2)
- d. Describe role of Intravenous immunoglobulin (2)

8. Write short note on any two (2.5 marks each)

- a. MAA programme
- b. Management of Peripartum depression
- c. Number Needed to Treat

9. A mother was referred for counselling with antenatal scan showing Congenital Diaphragmatic Hernia (CDH) at 29 weeks gestation

- a. LIST two antenatal prognostic markers of CDH (2)
- b. LIST the problems expected postnatal, that determine survival of a baby with CDH (3)
- c. Describe how you will stabilize this neonate pre-operatively (labour room and NICU)? (5)

10. A 23-day old term neonate has persistent jaundice, and high coloured urine. The baby has an indirect bilirubin of 16mg/dl and direct bilirubin of 3mg/dl.

- a. LIST the treatable causes that must be urgently investigated. (4)
- b. What findings on liver biopsy confirm the need for surgery? (1)

c. LIST possible surgical managements of this neonate. (2)

d. What nutritional supplements are necessary in managing the baby? (3)

11. Write short notes on any 2 of the following (2.5 marks each)

a. Meta-analysis

b. Management after birth of antenatally diagnosed hydronephrosis

c. Immunization of a preterm baby