

POST DOCTORAL FELLOWSHIP – NEONATOLOGY, EXAMINATION, JULY-2023
(One year Programme)

PAPER ONE
BASIC MEDICAL SCIENCES

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions and each question carries **10** marks
Illustrate with suitable diagrams and flowcharts wherever possible.

- Q. 1.** Describe the pathophysiology and management of hypoxic ischemic encephalopathy.
- Q. 2.** Write short note on embryology of the central nervous system.
- Q. 3.** Describe sodium homeostasis and management of dysnatremia in Neonates.
- Q. 4.** Write short note on physiology of cardio-respiratory transition at birth.
- Q. 5.** Discuss principles of thermoregulation in newborn. Discuss classification and prevention of hypothermia in neonates. (5+5)
- Q. 6.** Describe Calcium, Phosphorus and Vitamin D metabolism in newborns.
- Q. 7.** Discuss various types of surfactant and its role in Neonatology.
- Q. 8.** Discuss in brief pathophysiology and management of Meconium Aspiration syndrome in neonates. (4+6)
- Q. 9.** Discuss principles of newborn skin care.
- Q. 10.** Write short note on various infection prevention strategies in neonatal intensive care unit.

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PAPER TWO
CLINICAL SPECIALITY

[Time allotted: Four hours]

[Max Marks: 200]

Note: Attempt all questions and each question carries **20** marks
Illustrate with suitable diagrams and flowcharts wherever possible.

- Q. 1.** RBSK guidelines for screening for ROP in India. What are the indications for treatment of ROP?
- Q. 2.** Discuss management principles in the Golden hour in a preterm neonate.
- Q. 3.** Define BPD. Recent classification of BPD. Describe the methods to prevent BPD.
- Q. 4.** Discuss the causes of term neonate presenting with respiratory distress. Describe in brief the management outline.
- Q. 5.** Discuss prevention of intraventricular haemorrhage. List the guidelines for neurosonogram in preterm.
- Q. 6.** Describe hemodynamically significant PDA and compare the therapeutic options in the management of hsPDA.
- Q. 7.** Describe methods of optimizing mother's own milk in NICU. How would you implement a quality improvement program to achieve the same?
- Q. 8.** Management of a neonate with bilious vomiting in 1st week of life.
- Q. 9.** Cause of encephalopathy in a term neonate on day 3 (did not have HIE). How will you manage the emergency?
- Q. 10.** Describe indications and procedure details of exchange transfusion for hyperbilirubinemia.

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PAPER THREE
SOCIAL, PUBLIC HEALTH, RECENT ADVANCES

[Time allotted: Three hours]

[Max Marks: 100]

Note: Attempt all questions and each question carries **10** marks
Illustrate with suitable diagrams and flowcharts wherever possible.

- Q. 1.** Discuss the advantages and monitoring schedule of total parenteral nutrition (TPN) in neonate.
- Q. 2.** Write in detail about Rashtriya Bal Swasthya Karyakram (RBSK).
- Q. 3.** Discuss the use of steroids in postnatal care of a neonate.
- Q. 4.** Write a note on forest plot.
- Q. 5.** How will you set up a Level IIIa NICU? Discuss the processes involved for same.
- Q. 6.** Discuss the role of early intervention and developmentally supportive care in a NICU.
- Q. 7.** Discuss the various strategies and monitoring during human milk fortification.
- Q. 8.** What is plagiarism? Discuss the ethics of research publication.
- Q. 9.** Discuss advantages and disadvantages of aEEG in NICU.
- Q. 10.** What is LISA? Discuss the steps and advantages in usage of a thin catheter for surfactant administration.

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