

**POST DOCTORAL FELLOWSHIP – NEONATOLOGY EXAMINATION,  
SEPTEMBER - 2022**  
(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 role of umbilical artery doppler in the assessment of fetal growth restriction.
- Q. 2.** Describe ammonia metabolism and its role in neonatology.
- Q. 3.** Write short note uses of Erythropoietin (r- Hu - EPO) in neonates.
- Q. 4.** Describe development of retina and pathophysiology of retinopathy of prematurity.
- Q. 5.** What are levels of Neonatal care? Discuss how to set up a Special Newborn Care Unit?
- Q. 6.** Discuss enhancement of fetal maturation.
- Q. 7.** Discuss mechanisms of antibiotic resistance in the neonatal unit and strategies to minimize it.
- Q. 8.** Discuss importance of Peripheral blood smear in Neonatology.
- Q. 9.** Write short note on Sildenafil.
- Q. 10.** Write peculiarities & principles of Skin care in Neonates.

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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.** Prescribe TPN for a neonate of 28 weeks gestational age with birth weight of 800 gms on day one of life.
- Q. 2.** Discuss risk factors, pathophysiology, presentation and management of NEC.
- Q. 3.** Discuss the pathophysiology and management of PPHN.
- Q. 4.** Discuss types of surfactant and explain INSURE & MIST.
- Q. 5.** Discuss management of perinatal Asphyxia.
- Q. 6.** Discuss pathophysiology of preterm PDA and describe echocardiographic findings of hemodynamic significant PDA.
- Q. 7.** Discuss ethical legal and clinical issues around birth and management of babies born at <24 weeks gestation.
- Q. 8.** Describe the pathogenesis, clinical features & management of acute bilirubin encephalopathy neonates.
- Q. 9.** Discuss management principles of stroke in neonates.
- Q. 10.** Discuss pathophysiology, presentation and management of MIS-N.

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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 hemodynamics of placental transfusion.
- Q. 2.** Write short note on NIRS in neonatology
- Q. 3.** Discuss in brief closed loop oxygenation during advance mechanical ventilation in neonates.
- Q. 4.** Write a short note on Regression analysis
- Q. 5.** Write a short note on human milk banking
- Q. 6.** Discuss Enablers and barriers to practice of KMC in hospital and community setting
- Q. 7.** How to do medical literature search?
- Q. 8.** Write short note on LaQshya programme.
- Q. 9.** Magnesium sulphate for women at risk for preterm birth –rationale and current evidence
- Q. 10.** Discuss role of point of care neonatal lung ultrasonography in NICU

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