

POST DOCTORAL FELLOWSHIP - NEONATOLOGY
EXAMINATION, FEBRUARY - 2022

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 apnea of prematurity.
- Q. 2.** Write short note on embryology of the Heart.
- Q. 3.** Describe bilirubin metabolism in newborns.
- Q. 4.** Write short note on sodium homeostasis in newborns.
- Q. 5.** Discuss definition of Late preterm and early term. Discuss prevention and morbidities of Late preterm babies.
- Q. 6.** What are levels of Neonatal care? Discuss how to set up a level III Neonatal unit?
- Q. 7.** Discuss various growth charts used in neonatology.
- Q. 8.** Write short note on anti-infective factors present in human milk.
- Q. 9.** Discuss surfactant and its role in Neonatology.
- Q. 10.** Write short note on principles behind Aseptic non-touch technique.

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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.** Define acute kidney injury in neonates and discuss its causes and management.
- Q. 2.** Discuss approach and management of :
 - a.** Rh isoimmunized mother with an ICT titre of 1:256 in second trimester
 - b.** Neonate born to this Rh isoimmunized mother
- Q. 3.** Discuss about management and prevention of extrauterine growth restriction.
- Q. 4.** Discuss various aspects of Retinopathy of Prematurity screening in Neonatology.
- Q. 5.** Discuss pathophysiology of Shock & outline principles of its management & prevention
- Q. 6.** Discuss common modes of ventilation in Neonatology.
- Q. 7.** What are causes of neonatal encephalopathy? Discuss comprehensive management of Neonatal Encephalopathy.
- Q. 8.** Discuss principles of diagnosis and management of Persistent pulmonary hypertension of newborn.
- Q. 9.** Discuss in brief pathophysiology, clinical features, management, and prevention of intraventricular hemorrhage in preterm neonates.
- Q. 10.** Discuss optimal cord management at the time of birth of neonate.

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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 diagnosis, approach, and management of MISC-N related to COVID 19.
- Q. 2.** Write short note on:
 - a.** Capnography
 - b.** Role of NIRS in neonatology.
- Q. 3.** Discuss in brief Amplitude integrated EEG in neonates.
- Q. 4.** Write short note on salient features of India Newborn Action Plan (INAP).
- Q. 5.** What is a ROC curve in statistics? Describe its utility and drawbacks in clinical studies.
- Q. 6.** Write a short note on human milk banking.
- Q. 7.** Discuss in brief on immediate Kangaroo mother care (iKMC).
- Q. 8.** Describe evidence based important strategies to reduce neonatal mortality and morbidity in community.
- Q. 9.** Define nosocomial infection. Describe measures to control an outbreak of neonatal sepsis in your NICU.
- Q. 10.** Discuss role of point of care ultrasonography in NICU.

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