

Theory Paper: 2 Neonatology Fellowship
Advanced Neonatology and Neonatal Surgery

Time: Three hours

Total Marks: 100

Instructions: Attempt all questions. All questions carry equal marks.

1. Describe the principle, procedure, and interpretation of nonstress test of fetal well-being. 2+5+3
2. Describe the principle, advantages, and limitations of pulse oximetry. 4+3+3
3. What are the physiological effects, indications, and contraindications of continuous positive airway pressure? 3+4 +3
4. What are the advantages and disadvantages of volume targeted versus pressure limited ventilation? 5+5
5. Discuss in brief the etiopathogenesis and strategies for preventing ventilator induced lung injury. 4+6
6. Enumerate the surgical causes of respiratory distress in newborn. Briefly outline the intrapartum and postnatal management of congenital diaphragmatic hernia. 4+6
7. Define oxygenation index. What are the indications and contraindications of extracorporeal membrane oxygenation. 2+5+3
8. Compare the differences in the ventilatory approach to the management of respiratory distress syndrome and meconium aspiration syndrome. 5+5
9. During conventional mechanical ventilation, how changes in ventilator settings influence the oxygenation and ventilation? 6+4
10. Describe the diagnostic approach and management of neonatal hyperammonemia. 5+5