

[LB 082]

AUGUST 2012

Sub. Code: 1452

D.M- NEONATOLOGY

Paper – II CLINICAL NEONATOLOGY

Q.P. Code: 161452

Time: 3 hours
(180 Min)

Maximum: 100 marks

Answer ALL questions in the same order.

I. Elaborate on:

Pages Time Marks
(Max.)(Max.)(Max.)

- | | | | |
|--|----|----|----|
| 1. Elaborate on the evaluation of a Neonate with thrombocytopenia. | 16 | 35 | 15 |
| 2. Write in detail about factors affecting fetal weight at birth. | 16 | 35 | 15 |

II. Write notes on:

- | | | | |
|--|---|----|---|
| 1. Mechanism of placental transport. | 4 | 10 | 7 |
| 2. Prenatal diagnosis. | 4 | 10 | 7 |
| 3. Enteromammary circulation. | 4 | 10 | 7 |
| 4. Fetal stem cell therapy. | 4 | 10 | 7 |
| 5. Management of antenatally diagnosed renal anomalies. | 4 | 10 | 7 |
| 6. Approach to a dying infant with suspected IEM. | 4 | 10 | 7 |
| 7. Fetal fibronectin. | 4 | 10 | 7 |
| 8. Recent guidelines on the use of supplemental oxygen during resuscitation. | 4 | 10 | 7 |
| 9. Management of congenital varicella. | 4 | 10 | 7 |
| 10. Stabilisation and transport of a neonate with congenital heart disease. | 4 | 10 | 7 |

(LD 082)

AUGUST 2013

Sub. Code:1452

D.M. – NEONATOLOGY
Paper – II CLINICAL NEONATOLOGY
Q.P.Code: 161452

Time: Three Hours

Maximum: 100 marks

I. Elaborate on:

(2X15=30)

1. The goals of developmentally supportive care and how will you implement it in neonatal intensive care.
2. The risk factors for the development of respiratory distress syndrome in a neonate. Discuss the Ventilatory management and surfactant therapy.

II. Write notes on:

(10X7=70)

1. The mechanisms of heat gain in a neonate. Discuss the advantages and disadvantages of each of them.
2. Vitamin requirements for a very low birth weight infant.
3. Crigler Najjar syndrome.
4. Surgical management of necrotizing enterocolitis.
5. Radiological studies for obstructive uropathy in a neonate.
6. Management septic shock in a neonate.
7. Drugs used for the medical closure of patent ductus arteriosus.
8. The diagnostic workup of a bleeding neonate.
9. Risk factors and management of developmental dysplasia of hip.
10. Pathogenesis and management of post haemorrhagic ventricular dilatation.

D.M. – NEONATOLOGY
Paper – II CLINICAL NEONATOLOGY
Q.P.Code: 161452

Time: Three Hours

Maximum: 100 marks

I. Elaborate on: **(2X15=30)**

1. Enumerate the morbidity risks in a late preterm neonate and discuss their management.
2. Pathogenesis, diagnosis and treatment of neonatal shock

II. Write notes on: **(10X7=70)**

1. Cystic hygroma.
2. Therapeutic approach for management of apnoea of prematurity.
3. Pierre Robin sequence.
4. Approach to a baby with antenatally detected hydronephrosis.
5. Evaluation and management of neonatal fever.
6. Management of Perinatal Varicella –Zoster infection.
7. Evaluation and treatment of HIV exposed young infant.
8. Evaluation and management of a neonate with suspected meningitis.
9. Short Bowel syndrome
10. Approach to a baby with hyperinsulinemic hypoglycaemia.

(LH 082)

AUGUST 2015

Sub. Code:1452

D.M. – NEONATOLOGY
Paper II – CLINICAL NEONATOLOGY
Q.P.Code: 161452

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Approach to a bleeding neonate.
2. Evaluation of a neonate with suspected IEM.

II. Write notes on:

(10 x 7 = 70)

1. Clinical evaluation and management of PPHN.
2. Clinical manifestations and treatment of cardiogenic shock in neonates.
3. Non – pharmacological interventions for the management of neonatal pain.
4. Etiology and Workup of hydrops foetalis.
5. Factors determining the prognosis of congenital diaphragmatic hernia in a neonate.
6. Newborn screening in India – current perspectives.
7. Foetal alcohol syndrome.
8. Predisposing conditions for renal vein thrombosis and work up for the same.
9. Brachial plexus injury in newborn.
10. Resuscitation of preterm infants in delivery room.

D.M. – NEONATOLOGY
Paper II – CLINICAL NEONATOLOGY
Q.P.Code: 161452

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Discuss briefly gentle ventilation. What are the steps that can be taken for preventing and treating ventilation induced lung injury?
2. How will you investigate an outbreak of nosocomial infection in your neonatal unit? What are the steps that can be taken for reducing nosocomial infection?

II. Write notes on:

(10 x 7 = 70)

1. Persistent hypoglycemia.
2. Problems of infant of diabetic mother.
3. Diagnosis and prognosis of periventricular leukomalacia
4. Early discharge of newborn – advantages and problems.
5. Recent guidelines for neonatal resuscitation.
6. Management of retinopathy of prematurity.
7. Platelet transfusion in newborns.
8. Strategies to prevent kernicterus.
9. Metabolic bone disease of prematurity.
10. Role of immunoglobulin therapy in neonatal practice.

(LK 082)

FEBRUARY 2017

Sub. Code:1452

D.M. – NEONATOLOGY

Paper II – CLINICAL NEONATOLOGY

Q.P.Code: 161452

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Classify and enumerate the causes of intrauterine growth restriction (IUGR). Describe the management of a neonate with symmetrical IUGR.
2. Approach to ambiguous genitalia in neonates.

II. Write notes on:

(10 x 7 = 70)

1. Management of neonatal abstinence syndrome.
2. Approach to a neonate with metabolic alkalosis.
3. Complications of trachea-oesophageal fistula.
4. Urine Analysis in acute Kidney injury.
5. Hyperinsulinemic hypoglycemia in infancy.
6. Assessment of pain in newborn.
7. Aggressive parenteral nutrition in neonates.
8. Vitamin E supplementation for neonates.
9. Hand hygiene.
10. Role of paracetamol in neonates.

(LL 082)

AUGUST 2017

Sub. Code:1452

D.M. – NEONATOLOGY

Paper II – CLINICAL NEONATOLOGY

Q.P.Code: 161452

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Approach to a neonate presenting with congestive cardiac failure.
2. Pathophysiology and prevention of neonatal necrotizing enterocolitis.

II. Write notes on:

(10 x 7 = 70)

1. Congenital talipes equinovarus.
2. Infection control strategies targetting health care workers in a neonatal unit.
3. Neuroprotective pharmacotherapy in neonates.
4. MR Spectroscopy in newborn.
5. Universal hearing screening of newborn.
6. Diaper dermatitis.
7. Management of neonatal cholestasis.
8. Neonatal diabetes.
9. Prevention of intraventricular haemorrhage in newborn.
10. Treatment of hyponatremia in neonates.

(LM 082)

FEBRUARY 2018

Sub. Code: 1452

D.M. – NEONATOLOGY

Paper II – CLINICAL NEONATOLOGY

Q.P.Code: 161452

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Meconium aspiration syndrome- pathogenesis and management.
2. Evaluation and management of a term neonate with prolonged Jaundice.

II. Write notes on:

(10 x 7 = 70)

1. Management of hypernatremic dehydration.
2. PDA- hemodynamics, evaluation and management.
3. Delivery room CPAP- advantages and difficulties in Indian scenario.
4. Ways to optimize enteral nutrition in fluid restricted baby.
5. Periventricular leukomalacia- etiopathogenesis and follow up.
6. Acute renal failure- etiology and management.
7. Sodium balance in growing preterm.
8. Anticonvulsant therapy in neonates.
9. Planning of developmentally supportive NICU.
10. Breast milk expression and handling of expressed breast milk.

(LN 082)

AUGUST 2018

Sub. Code: 1452

D.M. – NEONATOLOGY

Paper II – CLINICAL NEONATOLOGY

Q.P.Code: 161452

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Discuss the pros and cons of various methods available to assess perfusion in neonates. What is the role and evidence for functional echocardiography in this domain?
2. Describe the pathophysiology, clinical features and management of Neonatal thrombosis.

II. Write notes on:

(10 x 7 = 70)

1. Approach to a neonate with Metabolic acidosis.
2. Neonate with Fever.
3. Neonatal CMV infection.
4. Micronutrient supplementation in TPN.
5. Postnatal management of Antenatally detected Hydronephrosis.
6. Preoperative stabilisation and Postoperative care of infants with Tracheo Oesophageal Fistula.
7. Prevention of Bronchopulmonary Dysplasia – Today and Tomorrow.
8. Cardiac emergencies in neonates.
9. Strategies for optimisation of Postnatal growth in VLBW infants.
10. Approach an infant with Indirect hyperbilirubinemia in the third week of life.

D.M. – NEONATOLOGY

Paper II – CLINICAL NEONATOLOGY

Q.P. Code: 161452

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. (a) Make a follow up plan for a term baby with perinatal asphyxia and severe encephalopathy. Baby is hypotonic at discharge and has occasional abnormal movements and has MRI evidence of global hypoxia.
- (b) Describe the various MRI findings in asphyxia and their possible long term clinical correlates.
2. A 26 weeks gestation preterm is born with a birth weight of 650g. to a primigravida mother who had abruption. Detail all the possible likely morbidities in the first week of life for this baby with management.

II. Write notes on:

(10 x 7 = 70)

1. Any three benign skin lesions in newborn.
2. Screening for congenital heart disease.
3. Standards for design of a neonatal intensive care unit.
4. Retinopathy of prematurity: Screening and management.
5. Management of a newborn with antenatal renal pelvis dilatation.
6. APGAR score and combined APGAR score.
7. Perinatal varicella exposure.
8. Steps to improve lactation in a breastfeeding mother.
9. Brain injury in hypoglycemia.
10. Newborn born to a HBsAg positive mother.

(LQ 082)

FEBRUARY 2020

Sub. Code: 1452

D.M. – NEONATOLOGY

Paper II – CLINICAL NEONATOLOGY

Q.P. Code: 161452

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Discuss the differential diagnosis and step wise approach to a neonate presenting with vesiculobullous skin lesions.
2. Prevention, Diagnosis and Management of Metabolic bone disease of prematurity.

II. Write notes on:

(10 x 7 = 70)

1. Recommendations on screening for Neonatal Hypoglycaemia.
2. Tools for assessing breastfeeding.
3. Endocrine derangements in IUGR.
4. Approach a neonate with cleft palate and lip.
5. Minimally Invasive surfactant therapy.
6. Screening for life threatening cardiac defects by pulse oximetry – Evidences and Recommendations.
7. Management of Intestinal failure.
8. Therapeutic Hypothermia – Challenges and Solutions.
9. Hypotension in preterm infants.
10. Gastroesophageal Reflux Disease (GERD) in preterm.

(LR 082)

NOVEMBER 2020
(AUGUST 2020 SESSION)

Sub. Code: 1452

D.M. – NEONATOLOGY

Paper II – CLINICAL NEONATOLOGY

Q.P. Code: 161452

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Discuss intranatal and postnatal management of a preterm 28 weeks baby born to Covid 19 positive mother.
2. Approach and management of a newborn with disorders of sexual development (DSD)

II. Write notes on:

(10 x 7 = 70)

1. Describe the etiology and management of direct hyperbilirubinemia.
2. Congenital hypothyroidism.
3. Describe the etiology and management of apneic episodes in a preterm baby.
4. Approach to a bleeding neonate.
5. Cerebral function monitoring.
6. Role of MRI in newborn brain injury.
7. Term and preterm skin.
8. What are the causes of thrombocytopenia. Discuss neonatal allo immune thrombocytopenia.
9. Aetiopathogenesis and management of non immune hydrops fetalis.
10. Diagnostic work up and management of resistant hypoglycemia.

(DM 0821)

AUGUST 2021

Sub. Code: 1452

D.M. – NEONATOLOGY

Paper II – CLINICAL NEONATOLOGY

Q.P. Code: 161452

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Elaborate on the pathophysiology, prevention and management of neonatal Necrotizing Enterocolitis (NEC). How will you manage a baby with short Bowel Syndrome?
2. Describe a Systematic Approach to the diagnosis and management of Congenital Cyanotic Heart Disease.

II. Write notes on:

(10 x 7 = 70)

1. Antenatally diagnosed hydronephrosis.
2. Aggressive parenteral nutrition.
3. Neonatal alloimmunethrombocytopenia.
4. Prostacyclins in management of PPHN.
5. Hepatolithiasis.
6. Foetal inflammatory response syndrome.
7. Posterior urethral valve.
8. Extrauterine growth retardation.
9. Cystic hygroma.
10. Infection control measures that should be adopted in a neonatal ICU.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[DM 0222]

FEBRUARY 2022

Sub.Code :1452

D.M. – NEONATOLOGY

Paper II – CLINICAL NEONATOLOGY

Q.P. Code: 161452

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Covid19 positive mother is in preterm labour (28 weeks). Discuss the intranatal and postnatal management of the baby.
2. Describe the pathophysiology and management of Septic shock in a Neonate.

II. Write notes on:

(10 x 7 = 70)

1. Skin care in preterm babies.
2. Discuss Gastro oesophageal reflux and its management in newborn care.
3. What are the causes of growth failure in preterm neonate and its management and prevention.
4. Entero mammary axis.
5. Approach to a case of ambiguous genitalia and its management.
6. Septic Arthritis of Hip joint.
7. Diagnostic approach and management of refractory neonatal seizures.
8. Risk factors for neonatal invasive Candida disease and its management.
9. Determinants of prognosis following Hypoxic Ischaemic Encephalopathy.
10. Describe the mechanisms of Ventilator induced lung injury and the lung protection strategies.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[DM 0822]

AUGUST 2022

Sub. Code :1452

D.M. – NEONATOLOGY

Paper II – CLINICAL NEONATOLOGY

Q.P. Code: 161452

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on: (2 x 15 = 30)

1. Discuss the definition of Ventilator associated Pneumonia (VAP) in Newborn, write briefly on pathogenesis treatment and prevention of VAP.
2. Term baby born normally to a primigravida mother develops lethargy and poor feeding on day 5 of life. On examination was in shock, hepatomegaly and ABG revealed severe metabolic acidosis. Discuss the differential diagnosis. Write briefly on management of cardiogenic Shock.

II. Write notes on: (10 x 7 = 70)

1. Late preterm, complications and management.
2. Hypercalcemia in Newborn.
3. Cerebral function Monitoring.
4. Causes of stridor in a neonate and management of laryngomalacia.
5. Nasal intermittent positive pressure ventilation in Newborn.
6. Management of post haemorrhagic ventricular dilatation.
7. Congenital Nephrotic syndrome.
8. Infantile Haemangiomas.
9. Leukocoria in neonates.
10. Septic Arthritis in neonate.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[DM 0823]

AUGUST 2023

Sub. Code :1452

D.M. – NEONATOLOGY

PAPER II – CLINICAL NEONATOLOGY

Q.P. Code: 161452

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. List the criteria and equipments needed for initiation of therapeutic cooling in babies with Hypoxic ischemic encephalopathy. Discuss the complications and the controversies in therapeutic cooling.
2. Discuss the approach in the management of a Floppy neonate. Discuss the clinical features, diagnosis and management of Spinal muscular atrophy in neonate.

II. Write notes on:

(10 x 7 = 70)

1. Intralipids in Total Parenteral Nutrition.
2. Molecular diagnosis of Neonatal sepsis.
3. Exchange transfusion in newborn.
4. Discuss briefly weaning of neonates from invasive ventilation.
5. Hemodynamically significant PDA in a preterm and its management.
6. Congenital heart block – Clinical features, diagnosis and management.
7. Portal vein thrombosis in Neonates.
8. Transfusion associated Gut injury.
9. Gastroesophageal reflux Disease in Preterm Neonate.
10. Persistent hypoglycemia.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[DM 0124]

JANUARY 2024

Sub. Code :1452

D.M. – NEONATOLOGY

PAPER II – CLINICAL NEONATOLOGY

Q.P. Code: 161452

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Describe a simplified approach to diagnosis of Inborn errors of metabolism in a sick neonate.
2. Discuss the changes in body water during growth and insensible water loss in neonates. Discuss the physiological aspects of arriving at a total fluid rate of 60 ml/kg on day one of life for a term neonate.

II. Write notes on:

(10 x 7 = 70)

1. Strategies to prevent Broncho Pulmonary Dysplasia and discuss the supporting evidence.
2. Discuss the risks associated with multiple gestation and fetal reduction.
3. Describe the approach to a case of neonatal diabetes.
4. Vitamin requirements for a very low birth weight infant.
5. Brachial plexus injuries in Newborn.
6. Liquid ventilation in neonates.
7. Management of retinopathy of prematurity.
8. Role of functional Echocardiography in neonatal intensive care.
9. Perinatal varicella exposure and management of the newborn.
10. Vesiculobullous skin lesions in Newborn .

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[DM 0824]

AUGUST 2024

Sub. Code :1452

D.M. – NEONATOLOGY

PAPER II – CLINICAL NEONATOLOGY

Q.P. Code: 161452

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Pathophysiology and prevention of intraventricular haemorrhage. Discuss management of post haemorrhagic ventricular dilatation.
2. Prevention and management of central line associated blood stream infection.

II. Write notes on:

(10 x 7 = 70)

1. Management of a baby born to VDRL positive mother.
2. Prevention and management of immune hydrops.
3. Transfusion associated lung injury.
4. Immediate post-natal management of a baby with transposition of great arteries.
5. Assessment of fluid responsiveness in neonate.
6. Non cystic Periventricular leukomalacia.
7. Pathophysiology of transient tachypnoea of newborn.
8. Newborn screening programme.
9. Approach to haemolytic hyperbilirubinemia.
10. Congenital diarrhoea.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[DM 0225]

FEBRUARY 2025

Sub. Code :1452

D.M. – NEONATOLOGY

PAPER II – CLINICAL NEONATOLOGY

Q.P. Code: 161452

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Elaborate on the evaluation of a neonate with thrombocytopenia.
2. Discuss the pathophysiology of neonatal hypoglycemic brain injury and clinical outcomes.

II. Write notes on:

(10 x 7 = 70)

1. Pierre Robin Sequence.
2. Factors determining the prognosis of congenital diaphragmatic hernia in a neonate.
3. Congenital hypothyroidism.
4. Management of neonatal cholestasis.
5. Approach to antenatally diagnosed renal pelvis dilatation.
6. Immunoglobulin therapy in neonatal practice.
7. Long term neurologic outcomes in infants with congenital heart disease.
8. Approach to neonate with lactic acidosis.
9. Transient leukemia of Down syndrome.
10. MR spectroscopy in newborn.

THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY

[DM 0825]

AUGUST 2025

Sub. Code: 1452

D.M. – NEONATOLOGY

PAPER II – CLINICAL NEONATOLOGY

Q.P. Code: 161452

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Discuss the management of neonates with respiratory distress syndrome (RDS) and its complications.
2. Explain the evaluation and management of neonates with persistent pulmonary hypertension.

II. Write notes on:

(10 x 7 = 70)

1. Outline the principles of total parenteral nutrition in neonates and its complications.
2. Management of Meconium Aspiration syndrome.
3. Management of neonates born to mothers with diabetes.
4. Approach to the diagnosis and treatment of neonatal seizures.
5. Clinical manifestations and treatment of neonatal herpes simplex virus infection.
6. Newborn resuscitation guidelines: Recent updates and management protocols.
7. Management of feeding intolerance in very low birth weight infants.
8. The importance of kangaroo mother care in preterm infants: Evidence and benefits.
9. Postnatal management of infants with suspected congenital syphilis.
10. Prevention and treatment of neonatal fungal infections.

THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY

[DM 0126]

JANUARY 2026

Sub. Code :1452

D.M. – NEONATOLOGY

PAPER II – CLINICAL NEONATOLOGY

Q.P. Code: 161452

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Pathogenesis, diagnosis and treatment of septic shock.
2. Discuss briefly types of Ventilation Induce Lung Injury (VILI). What are the steps that can be taken for preventing and treating ventilation induced lung injury?

II. Write notes on:

(10 x 7 = 70)

1. White matter injury in preterm babies.
2. Post natal growth failure.
3. Management of a Newborn with ileostomy.
4. Different phenotypes of chronic lung disease.
5. Screening of critical congenital heart disease in newborn.
6. Necrotising enterocolitis in term babies.
7. Role of nitric oxide in preterm babies.
8. Prevention of plagiocephaly in growing preterm babies.
9. Monitoring of a term neonate with encephalopathy.
10. Central Line Associated Blood Stream Infection (CLABSI) Prevention Bundle.
