



Cert Neonatology(SA)

THE COLLEGES OF MEDICINE OF SOUTH AFRICA

Incorporated Association not for gain
Reg No 1955/000003/08

Subspecialty Examination for the Certificate of Neonatology of the College of Paediatricians of South Africa

21 February 2019

Paper 1

(3 hours)

All questions are to be answered. Each question to be answered in a separate book (or books if more than one is required for the one answer)

- 1 Write notes on congenital cytomegalovirus (CMV) infection under the following headings
 - a) Risk and modes of transmission from the mother to the fetus or neonate. (5)
 - b) Clinical presentation. (7)
 - c) Possible head ultrasound findings. (3)
 - d) Diagnosis of congenital CMV. (5)
 - e) Specific treatment for CMV infection. (5)[25]

- 2 A neonate collapses on day 4 of life and presents with neonatal encephalopathy to the tertiary hospital. The antenatal course was uneventful, birth history was normal with a good Apgar score. He was breastfeeding well and was discharged home within 6 hours of life. On admission, the glucose levels are normal. With the above information answer the following questions.
 - a) What is the differential diagnosis? (8)
 - b) How would you investigate this neonate? (10)From some of the investigations, the serum ammonia is $>800 \mu\text{mol/L}$ with a broad based aEEG trace but no seizures noted.
 - c) What group of diseases does this describe? (2)
 - d) Describe the emergency management you would now provide. (5)[25]

- 3 You've been appointed as the neonatal consultant at a regional hospital in the Province. The nearest referring hospitals (Clinics and district hospitals) are at least 200km from the Regional Hospital. You are tasked to reduce neonatal mortality in the district but have noticed that babies arrive in a compromised state at the hospital. You are now tasked to set up an ambulance retrieval team for the drainage area.

Discuss how you would go about developing a neonatal transport service. [25]

- 4 Discuss Hirschsprung disease under the following headings
 - a) Pathophysiology. (3)
 - b) Differential diagnosis. (4)
 - c) Different tests/investigations that assist in diagnosing this condition and their expected abnormalities. (8)
 - d) Complications of post-surgical management. (10)[25]



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Paper 2

(3 hours)

All questions are to be answered. Each question to be answered in a separate book (or books if more than one is required for the one answer)

- 1 Write short notes on
 - a) Radiological signs of necrotising enterocolitis. (8)
 - b) Causes and investigation of anaemia that presents at birth. (10)
 - c) In biostatistics, explain the following (use examples if necessary) (7)
 - i) 95% Confidence interval.
 - ii) Sensitivity.
 - iii) NNT (number needed to treat).

[25]

- 2 Discuss the following
 - a) Different preparations of surfactant. (5)
 - b) Clinical presentation, diagnosis and treatment of *Listeria Monocytogenes* in a neonate. (10)
 - c) Medical treatment of retinopathy of prematurity. (5)
 - d) Tabulate the composition differences in preterm versus term breastmilk in the 1st week of life. (5)

[25]

- 3 Write short notes on
 - a) Discuss strategies to prevent chronic lung disease. (10)
 - b) The use of sunlight in treatment of neonatal jaundice. (5)
 - c) Give examples of impact, coverage and quality of care indicators in neonatology. (5)
 - d) Criteria for use of therapeutic hypothermia in neonates with intrapartum hypoxia. (5)

[25]

- 4
 - a) Discuss limitations and benefits of pulse oximetry screening for critical congenital heart disease. (5)
 - b) The mechanisms by which the use of adrenalin in neonatal resuscitation improves return of spontaneous circulation. (5)
 - c) Risk factors and diagnosis of developmental dysplasia of the hip (previously called congenital hip dislocation). (10)
 - d) Conservative management strategies of a haemodynamically significant Patent Ductus Arteriosus. (5)

[25]