

MAY



2024

EDEN UNIVERSITY

SCHOOL OF MEDICINE

BACHELOR OF SCIENCE CLINICAL MEDICINE

FIFTH YEAR SECOND SEMESTER (5,2)

**PAEDIATRICS AND CHILD HEALTH
PAPER II – MPE 5810**

DURATION: THREE HOURS DATE: 8TH 2024

STUDENT ID No.	19060095
NRC No. /PASSPORT No.	
EXAMINATION VENUE	

INSTRUCTIONS TO CANDIDATE

1. Indicate your student ID and NRC numbers on this question paper and the booklets use
2. Do NOT start writing before you are told
3. Read the questions very CAREFULLY before attempting to answer
4. Maximum marks = 100 Marks

**CELLPHONES, SMART WRIST WATCHES AND PRAGRAMMED CALCULATORS
ARE NOT ALLOWED IN THE EXAMINATION ROOM**

**DO NOT TURN THIS PAGE UNTILL YOU ARE TOLD TO DO SO BY THE
INVIGILATOR**

ANSWER ALL THE QUESTIONS USING THE BOOKLET PROVIDED

Answer all the questions

1. Discuss the biochemical and endocrine changes together with the investigations you would do in chronic kidney disease (15 marks).
2. You are moonlighting in a rural emergency room when a father rushes his 3-year-old daughter into the waiting area. You quickly determine that he and the child have been at a relative's farm where they were spraying for bugs in an old barn. The child had been fine, but while at the farm developed abdominal cramping, cough, drooling, and tearing. While in route the child seems to be having increased respiratory difficulty, and the dad notes she soiled and urinated upon herself. A major examination finding is the presence of pinpoint pupils.
 - I. List at least three possible causes of pinpoint pupils [3 marks]
 - II. What is the most likely diagnosis in this scenario? [3 marks]
 - III. How is the diagnosis made? [4 marks]
 - IV. What is the best therapy? [8 marks]
3. A 12-month-old boy whom you have followed since birth arrives for a well-child visit. The mother is concerned that the baby's manner of crawling, where he drags his legs rather than using a four-limbed movement, is abnormal. She says that the child only recently began crawling and he does not pull to a stand. You noted at his 6-month visit that he was not yet rolling over nor sitting; previous visits were unremarkable as was the mother's pregnancy and vaginal delivery. On examination today, you note that he positions his legs in a "scissoring" posture when held by the axillae.
 - I. What is the initial step in the evaluation of this child? [4 marks]
 - II. What is the most likely diagnosis? [2 marks]
 - III. What is the next step in the evaluation? [4 marks].
4. A 5-year-old girl comes to your clinic for the first time with complaints of fever, malaise, and a cough for 2 days. She has a history of asthma for which she uses a steroid inhaler daily and an albuterol inhaler as needed. She has been tried on various over-the-counter cold and allergy remedies, but her respiratory symptoms have been worsening over the past several months. Her past medical history is notable for an episode of rectal prolapse and "sinusitis" during each of the past two winter seasons. Her mother also reports that her daughter has "always been small for her age." Your examination reveals a moderately ill-appearing child whose height and weight are at the fifth percentile for age. Her temperature is 101°F (38.3°C) and her respiratory rate is 32 breaths/min. She has scant purulent rhinorrhea bilaterally, wheezy breath sounds in all lung fields, and diminished breath sounds on the right side. Heart sounds and capillary refill are normal, yet she has digital clubbing.
 - I. What is the diagnostic approach in the evaluation of this child? [4 marks]
 - II. What is the most likely diagnosis? [2 marks]
 - III. What is the next step in evaluation? [4marks]
 - IV. What complications do you anticipate in this patient? [5 marks].
5. A mother brings her previously healthy 6-year-old son to your clinic because he has been limping and complaining of left leg and knee pain for 1 week. He has experienced no recent trauma, and his past medical history is unremarkable. His physical examination reveals a temperature of 100°F (37.8°C) orally with no lower extremity swelling, misalignment, or

weakness. He has tenderness over the right knee, hepatosplenomegaly, and petechiae on his cheeks and chest.

- I. What is the most likely diagnosis? [3 marks]
 - II. What is the next step in the evaluation? [5 marks]
6. A 10-year-old boy in respiratory distress arrives late in the evening at the emergency department (ED); he has a 2-hour history of rapid breathing and a complaint that his chest hurts. His mother gave him two nebulizer treatments without improvement. She tells you that this is the fourth time in 3 months that he has required ED visits for similar symptoms. Your initial examination reveals an afebrile male with a respiratory rate of 60 breaths per minute and a heart rate of 120 beats/min (bpm). You note that his pulse varies in amplitude with respiration. His blood pressure is normal, but his capillary refill is somewhat sluggish at 1 to 2 seconds. He is pale, appears drowsy, has mild perioral cyanosis, and is using accessory chest muscles to breathe. You hear only faint wheezing on chest auscultation.
- I. What are the initial steps in evaluating this patient? [4 marks]
 - II. What is the most likely diagnosis? [3 marks]
 - III. What is the next step in investigations? [5 marks]
 - IV. What is the long-term management of such a patient? [4 marks]
7. A 2800-g male is born at 36 weeks gestation to a 19-year-old mother via vaginal delivery. Delivery occurred 19 hours after membrane rupture. The mother's pregnancy was uncomplicated, but her prenatal records are not available at delivery. At 6 hours of age, he is "breathing hard" and refusing to breastfeed. His respiratory rate is 60 breaths/min with "grunting." His temperature is 96.5°F (35.8°C), and his blood pressure is lower than normal. You ask the nurses to obtain a Full blood count (FBC) while you drive in from home. Upon arrival, you confirm that he is in respiratory distress and that his perfusion is poor. The FBC demonstrates a white blood cell (WBC) count of 2500 cells/mm³ with 80% bands.
- I. What is the most likely diagnosis? [3 marks]
 - II. What is the most likely aetiology? [2 marks]
 - III. What additional investigations are you going to do for this patient? [5 marks]
 - IV. What is the best therapy? [4 marks]
8. Discuss the biochemical and endocrine changes together with the investigations you would do in chronic kidney disease [15 marks].
9. A 15-year-old adolescent male uses his albuterol inhaler shortly after he mows the lawn because of a mild feeling of chest "tightness." He later returns home early from dinner at a friend's house when he has the sudden onset of wheezing, cough, and chest pain. Which of the following is the most likely explanation for these circumstances?
- I. What additional history would you get in this patient? [3 marks]
 - II. What is the most likely diagnosis? [2 marks]
 - III. What investigations would you do for such a patient? [7 marks]
 - IV. How would you treat such a patient? [5 marks]
10. Write notes on causes, investigations and treatment of central precocious puberty [15 marks]

THE END OF THE EXAM