



Cert Gastroenterology(SA) Paed

## THE COLLEGES OF MEDICINE OF SOUTH AFRICA

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

Examination for the Subspeciality Certificate in Gastroenterology  
of the College of Paediatricians of South Africa

27 February 2020

Paper 1

(3 hours)

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

Please note the meaning of the following terms

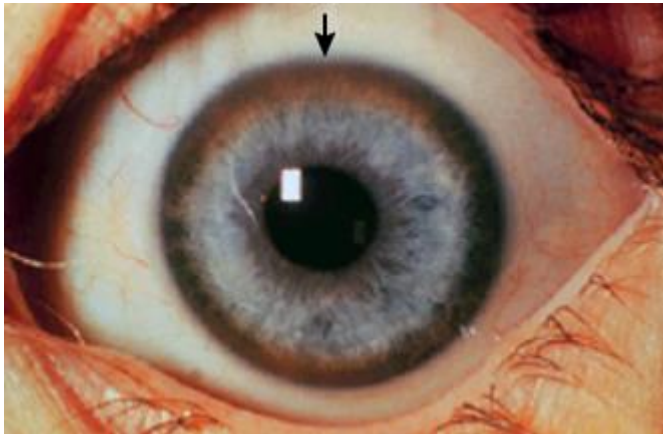
- i) "List" means to enumerate i.e. specify a list or an outline form of reply in concise form.
- ii) "Describe" means to answer in a brief narrative form.
- iii) "Discuss" means that you need to analyse carefully, and construct an answer that provides an overview of the various factors that may contribute to a particular problem or treatment- this type of question calls for a more complete response.

- 1 Steven is a 13-year-old boy who is referred to you from the Endocrinology Clinic. The endocrinologists are evaluating him for type 2 diabetes mellitus. He has central obesity and acanthosis nigricans. Abdominal examination revealed hepatomegaly with the liver palpable 4cm below the costal margin. Screening for autoimmune hepatitis and Wilson's disease are negative. Hepatitis A, B and C studies are negative
- a) What is the most likely diagnosis and how would you confirm this? (5)
  - b) Name 5 other conditions which may mimic this pathology. (5)
  - c) What are the risk factors that may predispose Steven to this disease, and what factors may increase his likelihood to develop cirrhosis? (5)
  - d) Briefly discuss treatment under the following headings
    - i) Lifestyle interventions. (5)
    - ii) Drugs and other modalities. (3)
  - e) Briefly discuss the prognosis in Steven. (2)
- [25]
- 2 a) Tshepang is a 12-year-old girl who was diagnosed with Crohn's disease three years ago. She has required four surgical interventions since then: twice for stricturing ileal disease, once for a revision of an ileostomy, and in the past week she underwent extensive ileocaecal resection. The surgeons plan to perform a jejunocolic anastomosis, and they estimate her total remaining small bowel length will be 80cm
- i) What is your advice with regards to the use of her chronic immunomodulatory and immunosuppressive treatment before and after surgery? (3)
  - ii) What are the pathophysiological consequences of losing her ileum and caecum? (10)

- b) 36 hours after her surgery, the surgeons ask you to start her nutritional care. She has a central line in situ  
Describe your strategy to introduce parenteral and enteral nutrition under the following headings (10)
- Fluid and electrolytes.
  - Parenteral nutrition.
  - Enteral nutrition.
- c) Describe the pharmaceutical treatment options for short bowel syndrome you would consider for Tshepang. (2)

[25]

- 3 A 10-year-old boy presents to your clinic with the complaint of jaundice for the preceding 3 weeks. He has had previous episodes of jaundice for which no definitive diagnosis was made. There is no other relevant previous medical history and no history of ingestion of potential hepatotoxic drugs. On examination he is alert but deeply jaundiced. He is not clubbed but has palmar erythema and cutaneous hepatic hemangiomas. His liver is palpable 2cm below the costal margin, firm and non-tender. His spleen is palpable 2cm below the costal margin. Examination of his eyes is illustrated in the attached image



- What is the single most likely diagnosis of the liver disease in this patient? (2)
- An ultrasound of the abdomen is requested, what findings would often occur in patients with this diagnosis? (5)
- List the extra-hepatic complications of this condition. (5)
- Describe how you would confirm the diagnosis. (8)
- Describe the treatment options available for this disease and the benefits and complications of each option. (5)

[25]

- 4 A 3-year-old child presents with watery stools which the mother describes as bloody and mucoid. Symptoms have been present for 2 months and the child has failure to thrive on examination as well as prominent peri-anal fissures. The paediatrician is concerned about possible inflammatory bowel disease

- List the differential diagnosis that you would consider in this child. (5)
- Describe the steps you would take to reach a diagnosis in a child of this age with suspected inflammatory bowel disease. (15)
- List the treatment options that are available for inflammatory bowel disease in this patient. (5)

(5)

[25]



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Paper 2

(3 hours)

*All questions to be answered.*

Please note the meaning of the following terms

- iv) "List" means to enumerate i.e. specify a list or an outline form of reply in concise form.
- v) "Describe" means to answer in a brief narrative form.
- vi) "Discuss" means that you need to analyse carefully, and construct an answer that provides an overview of the various factors that may contribute to a particular problem or treatment- this type of question calls for a more complete response.

**Please answer questions 1 – 2 in one book**

- 1 Tabulate the indications, examples of allowed/disallowed foods, and the proposed mechanism of action for the following diets
  - a) Low fermentable oligo-, di-, mono-saccharides and polyols (FODMAPs) diet. (5)
  - b) Crohn's Disease Exclusion Diet. (5)

[10]
  
- 2 List the following aspects of post-pyloric enteral feeding
  - a) Indications. (4)
  - b) Types of feeding tubes and insertion techniques. (6)

[10]

**Please answer questions 3 – 4 in one book**

- 3 A 3-month-old female infant presents with jaundice. A previous sibling also had severe jaundice and died due to complications of chronic liver disease 2 years before. The parents are second cousins. The liver biochemistry is as follows: Total bilirubin 260umol/l, Conjugated bilirubin 160umol/l, ALP 600 u/l, GGT 15u/l, AST 230u/l, ALT 200u/l
  - a) Describe the prominent findings in the biochemistry given. (3)
  - b) List the differential diagnosis. (5)
  - c) In addition to routine investigations, list the investigations that you would request to confirm the diagnosis in this infant. (2)

[10]

- 4 A 9-year-old boy presents to you with severe retrosternal discomfort after eating a hamburger. You perform an emergency oesophagoscopy and find food impacted in his mid-oesophagus. After removal of the food, you take biopsies from the length of the oesophagus. A prominent finding of the histology report is that more than 30 eosinophils are observed per high-field throughout the length of the oesophagus. Describe treatment options for this patient. [10]

**Please answer questions 5 – 7 in one book**

- 5 Discuss the following aspects of the diagnosis of coeliac disease  
 a) Blood-based investigations. (7)  
 b) Intestinal biopsies. (3)  
 [10]
- 6 A 2-year-old presents with acute recurrent abdominal pain  
 a) Describe the diagnostic criteria for acute pancreatitis. (5)  
 b) Describe the risk factors for the development of acute pancreatitis in children. (5)  
 [10]
- 7 A 10-year-old girl presents with recurrent episodes of severe epigastric abdominal pain and vomiting due to pancreatitis  
 a) List the complications of recurrent and chronic pancreatitis. (5)  
 b) Write short notes that describe how you would assess her for these complications. (5)  
 [10]

**Please answer question 8 in one book**

- 8 A 5-year-old boy presented to his local day hospital complaining of passing blood in the stool. He had a sigmoidoscopy at which a single rectal polyp was removed and sent for histology. He has now been referred to the paediatric gastroenterology clinic. There is no histology result available yet  
 a) List the possible types of polyps and polyposis syndromes you would consider. (5)  
 b) How would you manage this child further? (5)  
 [10]

**Please answer question 9 in one book**

- 9 Discuss the use of live vaccinations in patients considered for solid organ transplantation. [10]

**Please answer question 10 in one book**

- 10 A 10-year-old girl with known cystic fibrosis is seen in your clinic. On examination, her liver is palpable 5 cm below the costal margin. The results of her liver biochemistry are as follows: ALT 220u/l, GGT 80u/l, total bilirubin 18umol/l, alkaline phosphatase 350u/l  
 a) List the differential diagnosis for the findings described above. (5)  
 b) Describe the nutritional support of this child. (5)  
 [10]