1  A 30-year-old young woman is admitted to your ward. She has just been diagnosed with HIV, is not yet on ART and has a CD4 count of 56. She is suffering from 3 weeks of watery diarrhoea and is dehydrated, with oral candida and dysphagia. Her Na is 128, K+ is 2.0, creatinine is 180umol/l. Her Hb is 6g/dl MCV 84, plt are 245 and WCC 2.4. Briefly describe the following
a) Common causes of chronic diarrhoea in this clinical setting. (4)
b) Management of her presenting complaint over the first 24 – 48 hours of her admission. (7)
c) A step-wise approach to the investigation of chronic diarrhoea in the patient with AIDS. (5)
d) Possible first line ART for this patient considering the information provided. (4)
e) She is noted to be 14 weeks pregnant, and decides that she would like to keep the pregnancy. Comment briefly about reducing the risk of mother to child transmission for this patient, according to the South African guidelines. (5) [25]

2  a) Discuss shortly the management of a patient with a confirmed ST-elevation myocardial infarction. (15)
b) Write short notes on a patient with bronchus carcinoma with Horner syndrome. (5)
c) Write short notes on a patient with bronchus carcinoma with Pancoast’s (superior sulcus) tumor. (2)
d) Write short notes on the endocrine paraneoplastic manifestations of bronchus carcinoma. (3) [25]

3  Write short notes on the following
a) Light’s criteria to diagnose an exudative pleural effusion. (3)
b) Pathophysiology and clinical features of ophthalmopathy of grave’s disease. (7)
c) Clinical features of aortic dissection. (7)
d) The defects of haemostasis in patients with liver disease. (4)
e) Differential diagnoses of a mid-diastolic murmur at apex of the heart. (4) [25]
A 60-year-old caucasian female presents to MOPD with progressive lower limb weakness. She is known with hypertension and type 2 diabetes mellitus and is on oral hypoglycaemic medication. She also complains about visual disturbances. Examination reveals that she has absent ankle jerks but up-going plantar responses and the knee jerks were brisk. Sensory examination of the lower limbs reveals absent vibration and proprioception but intact temperature and pain sensation. The eye examination shows a relative afferent pupillary defect

i) What is the most likely clinical diagnosis? (3)

ii) How can routine laboratory testing assist with making a diagnosis? (Discuss likely laboratory findings). (6)

iii) List the causes for your diagnosis. (5)

iv) What is the most common cause and how will you test for this condition? (3)

v) How will you manage this patient? (3)

b) Write short notes on the complications of measles in adults. (5)
1 A 65-year-old diabetic, hypertensive woman is admitted with signs and symptoms of fluid overload to your district hospital. She has evidence of biventricular failure, is oxygen dependant, with a BP of 220/115mmHg. Her glucose is 14 mmol/l on admission and her finger prick Hb is 9.5g/dl. She has defaulted all her medication recently. Briefly outline the following
a) Initial management of her fluid overload. (5)
b) Clinical features supportive of target organ involvement. (5)
c) Appropriate, cost-effective investigations to delineate the extent of her organ involvement. (5)
d) Pharmacological management options for this patient (in state sector) to manage the following
i) Hypertension. (2)
ii) Diabetes mellitus. (2)
iii) Heart failure. (2)
Comment specifically about potential side effects of medication you may commence. (10) [25]

2 a) A 40-year-old male known with hypertension and diabetes mellitus presents with complaints of new onset progressively worsening dyspnoea and swollen ankles. He complains that he has symmetrical acute pain in his 2nd and 3rd metacarpophalangeal joints, and has noticed a change in his skin colour. On examination he has an elevated JVP and pitting oedema in the legs. The precordial examination reveals an inferolaterally displaced apex beat which is volume-loaded. He has symmetrical basal crackles with auscultation of the lungs. He mentions that his father and brother have a similar problem
i) What is the most likely diagnosis? (2)
ii) Discuss the pathophysiology. (2)
iii) Discuss your work-up for this condition. (3)
iv) How will you manage this patient? (3)

b) A 20-year-old female, who works at an animal shelter, presents to the emergency centre (EC) with agitated delirium. Her mother recalls that she only complained of pins-and-needles in the left leg about 3 weeks ago. She also mentions that the patient becomes violent when offered water. On examination she has a temperature of 39°C, BP 150/100mmHg and PR 120bpm. She has dilated pupils with excessive lacrimation and salivation
i) What is the most likely diagnosis? Explain. (4)
ii) Discuss the various presentations of this disease. (5)
iii) What is the management of asymptomatic exposed individuals? (3)
iv) How can you make a definitive diagnosis? (3)

3 Discuss the following
a) Causes of metabolic acidosis with a normal anion gap. (4)
b) Mechanisms of action of any three drugs used in the management of Parkinson’s disease. (4)
c) Complications of prosthetic heart valves. (5)
d) Causes of macrocytosis without megaloblastic changes on peripheral blood film. (6)
e) Clinical features of Ebola virus infection. (6)

4 a) Describe shortly the management of a patient with a thyrotoxic crisis/storm. (10)
b) Write short notes on the pathophysiology of bone disease in multiple myeloma. (5)
c) Name five possible causes for renal failure in multiple myeloma. (5)
d) Name five clinical features of a patient with a cavernous sinus thrombosis. (5)