1. A 30 year old man, previously asymptomatic, develops sudden right sided chest pain followed by dyspnoea. On examination there is mild cyanosis and breath sounds are diminished. On percussion there is resonant tone on the affected side.
   a) What is the most likely diagnosis? 2
   b) What investigation will be the most helpful to establish the diagnosis? 1
   c) What treatment may be indicated? 1
   d) How can this be prevented in future? 1

2. A 53 years old bank executive comes for a routine check-up. He has a sedentary lifestyle and smokes one cigar daily. Although asymptomatic, he is worried about his heart because of positive family history. He is 5 feet 5 inches tall and weighs 85 kgs. His waist measures 42 inches and sitting BP was recorded as 150/95 after five minutes rest in the clinic.
   a) What points in the history and physical examination are relevant to the cardiovascular risk? 2
   b) What investigations should be done to determine his total risk of developing cardiovascular disease? 1
   c) What medications may be indicated to reduce the risk of cardiovascular disease? 2

3. A 12 years boy is brought to you with swollen and painful right knee joint. Few days earlier he had similar swelling of the left wrist joint which is improving. Rest of the physical examination including CNS, CVS and skin is unremarkable.
   a) What is the most likely diagnosis? 1
   b) What criteria are applied to establish the diagnosis? 2
   c) What may be chronic complications of this disease? 1
   d) How can you prevent it in future? 1

4. A 15 years boy is brought to you with progressive weakness of both lower limbs over a period of 7 days. He was previously normal except mild flu prior to present condition. O/E boy is fully alert and afebrile. GPE does not reveal any abnormality except undescended testes on one side. Power in upper limbs is 5/5 where as in lower limbs is 2/5. Deep tendon reflexes were absent in lower limbs.
   a) What is the most likely diagnosis? 2
   b) What investigations are helpful to confirm the diagnosis? 1
   c) What complication can prove fatal and how can you manage them? 2
5. A medical student gets a needle prick injury while drawing blood from a patient suffering from cirrhosis of liver. Earlier, patient had received a full course of interferon for hepatitis-C and was vaccinated for hepatitis-B.
   a) What is the risk to the student?
   b) How would you manage the student?

6. A young girl presents with chronic epigastric pain, palpitation and exertional dyspnoea. O/E there is marked pallor and koilonychia. There is no history of menorrhagia or bleeding from any site. She carries a blood report showing Hb. of 7.6 g/dl
   a) What is the most likely cause of anaemia in this patient?
   b) Name five relevant investigations to determine the cause of anaemia.

7. A 35 years old woman comes with history of chronic diarrhea and lower abdominal discomfort which is relieved by defecation. Occasionally she had noticed some mucus but never blood in the stool.
   a) What is the most likely diagnosis?
   b) Name three most relevant investigations
   c) How will you treat this lady?

8. A 15 years old boy is brought to you with fever, pallor and dyspnoea. O/E there is marked pallor but no hepatosplenomegaly or lymphadenopathy. Blood C/E reveals following picture:
   Hb: 6.5g/dl
   TLC: 1800/cumm
   DLC: Polys 20%, Lymphos 78%, Monocytes 2% Eosinophils 0%, and Basophils 0%
   Platelets: 25,000/mm³
   No blast cells or other premature cells on peripheral smear
   a) What is the most likely diagnosis?
   b) What investigation will be most helpful in establishing the diagnosis?
   c) How will you treat this case?

9. A 35 years old male comes to you with frequent occipital headache. Both his parents were hypertensives and have died. O/E his BP is 170/105 mmHg. Rest of the examination is normal.
   a) Name five investigations to rule out a secondary cause.
   b) Enlist five lifestyle changes this patient should follow.
   c) Enlist five classes of antihypertensive drugs.