1. A 48 years old man is shifted to the emergency ward from Police custody after developing anorexia, nausea, vomiting, intellectual clouding leading to drowsiness over three days. Accompanying guards inform that he has not urinated since the previous day. Physical examination reveals a drowsy unwell looking person with facial puffiness and swollen hands and feet. Skin of the extremities is studded with large ecchymosis, limbs are tender as well and neck veins are distended. His serum Potassium is 6.8 MEq/L and CPK is 1432 IU/L.

   a) What is the most likely diagnosis?  
   b) What is the most likely cause of your diagnosis?  
   c) Name two investigations to confirm the primary diagnosis and one investigation to confirm the cause of primary diagnosis?  
   d) Name two therapeutic measures for his serum potassium level.

2. A 14 year old girl is brought to the emergency ward in an unconscious state. For the last few days she was having fever with sore throat followed by “breathlessness”, abdominal pain and clouding of consciousness. On physical examination she is thin and lean, hyperventilating, flushed and dehydrated with a peculiar odour in her breath. Following are her laboratory reports:

   pH 7.1  
   Na⁺ 144 mmol/L  
   K⁺ 5.7 mmol/L  
   Cl⁻ 102 mmol/L  
   HCO₃⁻ 10 mmol/L  

   a) What type of acid-base disequilibrium is seen?  
   b) What is the likely cause of this acid-base abnormality?

3. A middle aged guard was brought by his colleagues in an excited state with a history of exhibiting violent behaviour in the past couple of days. He had earlier been admitted for a manic episode and had recently stopped taking his medication.

   a) What are the other important causes of violent and excited behaviour?  
   b) Briefly delineate the salient aspects of managing such a patient.

4. A 38 years widow presents in the OPD with complaints of fatigue, malaise, weight loss and anorexia. There is also history of postural dizziness, intermittent mild to moderate abdominal pain and darkening of her complexion. Six years ago she was treated for abdominal Tuberculosis. Physical examination reveals thin, lean and weak looking female of dark complexion, her palmer creases and back of elbows are dark. There is no jaundice or hepatosplenomegaly. Standing BP is 80/50, LFT, HB, TLC and DLC are normal. Na⁺ 131mmol/L, K⁺ 4.9 mmol/L, Blood Glucose Random 85 mg/dl.

   a) What is the most likely diagnosis?  
   b) What one Laboratory test would confirm the diagnosis?  
   c) What is the likely cause of this primary diagnosis?
5. A 16 years old girl presents with irritability, psychiatric symptoms and fits. CT brain scan shows basal ganglia calcification. She has low serum calcium, high serum phosphate and low urinary calcium.
   a) What is the diagnosis?
   b) List THREE clinical signs of hypocalcaemia.
   c) Give TWO ways of treating hypocalcaemia.

6. A fifty years old veterinary doctor is admitted with high fever, anorexia and severe myalgias. Examination revealed conjunctival haemorrhages and suffusion and mild hepatomegally. Few days later he developed jaundice which worsened rapidly. A week later his urine output dropped to around 200 ml per day. There was no history of alcohol/drug intake or accidental intake of toxic substances. Investigations are as under:
   Hb: 11.8 gm/dl
   TLC 28000 cells/mm³, with Polys 95%
   Bilirubin: 24 mg/dl
   ALT: 445 IU/L
   Alkaline Phosphatase: 543 IU/dl
   Blood urea: 285mg/dl
   Serum creatinine:6.9 mg/dl
   Hepatitis Viral Serology for HAV, HBV, HCV, HDV, HEV all negative.
   a) What is the most likely diagnosis?
   b) Name TWO laboratory tests which would confirm the diagnosis.
   c) Name TWO medicines which are used to treat this condition.

7. A 46 years old British tourist after returning from Lahore develops abdominal discomfort, bloating, diarrhoea, initially watery and later becoming typical of steatorrhoea. He develops some weight loss as well. There is no history of fever, tenesmus or blood in stools. Stool is negative for amoeba or cysts of amoeba. A three day course of appropriate medicine cures him completely.
   a) What is the most likely diagnosis?
   b) What investigation will confirm the diagnosis?
   c) What was the medication which cured him?

8. Mrs. A is a 30 years old primary school teacher with a history of repeatedly checking her student’s notebooks, repeatedly checking the door locks and having persistent thoughts about harm coming to her parents.
   a) What is your provisional diagnosis?
   b) Briefly describe some of the clinical features.

9. An eighteen year old girl presents to you with photosensitivity, positive anti-nuclear factor, proteinuria of 1.0 gm / 24 hours and a leucocyte count of 1000 / Litre.
   a) What is your diagnosis?
   b) What Cutaneous features can be seen in this disease? Enlist at least THREE.
   c) What measures will you take for her photosensitivity? Enlist at least TWO.