Q.1 Six years boy presents 4th time in last six months with fracture of right femoral shaft. He had previously fractured both tibia and humerus which united uneventfully.

a) What is most probable diagnosis?
b) What is primary defect in this disease and what other organs can be involved?
c) How will you classify this disease?
d) Name different treatment options for this condition?

Q.2 A young man aged 25 years is brought to A&E department with history of road traffic accident. He has sustained injury to pelvic region 2 hours back. He has not passed urine since injury. His pulse is 100/min, BP is 90/60 mm of Hg, there is ecchymosis in pelvic region. There is blood at external urethral meatus.

a) What possible injuries has he sustained?
b) What investigations you will do to reach the diagnosis and decide management?
c) Give treatment outline according to priorities and justification.

Q.3 A 30 years old motorcyclist is brought with pain and gross swelling of Right calf after suffering accidental fall. On examination his leg skin has normal colour and temperature. His distal pulses are palpable. Passive stretching of his toes is excruciatingly painful. X-rays show an oblique fracture of tibia which is minimally displaced.

a) What complication is suspected in this case?
b) How would you manage this case?
Q.4  A 55 years old female presented in OPD with low backache. There is no h/o trauma. On examination there is step off at level of lower lumbar spine. There is weakness of right hip abductors and big toe dorsiflexor with impaired medial hamstring reflex with loss of sensation on dorsum of foot?

   a) What is most probable diagnosis?
   b) What level of spine is involved?
   c) How will you investigate?
   d) What are the indications of surgical intervention and how to treat the patient?

Q.5  A 23 years old banker had a glass cut injury at the level of distal palmar crease. He is unable to flex his middle and index finger.

   a) How will you assess his injury?
   b) How will you treat him?
   c) What will be post operative care?

Q.6  A 25 years old footballer received a kick on the lateral side of his right knee two years ago. He has not been able to play since then. He complains of recurrent swelling and inability to straighten his knee easily on certain occasions. He experiences giving way of knee specifically while climbing down the stairs. On examination, there is quadriceps wasting and tenderness in posterior part of medial joint line.

   a) What are possible components of this injury?
   b) What investigations are required to confirm the diagnosis?
   c) Outline procedures likely to be performed in this case.
Q.7 A 65-year-old man has a swollen painful knee after undergoing a knee replacement 10 years ago. Aspiration of the knee reveals cloudy, viscous synovial fluid. He has controlled diabetes with good cardiovascular status. Laboratory studies show an erythrocyte sedimentation rate of 40 mm/h and a C-reactive protein level of 0.8.

a) What is the most likely diagnosis with justification?
b) Name other investigations that may help in diagnosis?
c) Name the surgical procedure you will carry out for treatment?
d) What are steps of this surgical procedure?

Q.8 A 70 years old lady who underwent mastectomy 8 years back, she experienced severe pain around left hip and thigh as she tried to get up off the sofa. She was unable to bear weight thereafter. Her X-rays reveal fracture through subtrochanteric lytic area of left femur.

a) What other clinical information needs to be gathered in this case?
b) What investigations would you like to have?
c) How would you treat this case?

Q.9 a) What are mechanisms of injuries in Bomb blast incidents?
b) Enlist possible musculoskeletal injuries due to Bomb blast.
c) Outline management strategies for these musculoskeletal injuries.

Q.10 a) What do you understand by bone banking system?
b) What are pre-requisites for safe harvesting and storage of Allografts?