SGL case scenarios for HSF module

Case 1
A 60 years old woman was walking in the street, she bogged & fallen on her right buttock, she couldn’t stand again because of the pain & her limb was not fixed.
In the hospital, the doctor noticed that her affected limb was coarsely rotated externally, X-ray confirmed the diagnosis of fracture in the neck of the right femur, operation decided & the patient advised to walk on crutches as early as possible.
Questions:
1- What is the morphological classification of the hip joint?
2- What is the structural classification of the hip joint?
3- Follow the capsular attachment on the hip bone.
4- Follow the capsular attachment on the femur.
5- Name the flexors of the hip.
6- Name the extensors of the hip.
7- Name the adductors of the hip.
8- Name the abductors of the hip.
9- Why there are powerful abductors for this joint?
10- What is Trendelenberg sign?
11- Whe femoral head commonly die after femoral neck features?
12- What is the blood supply of femoral head?
13- What forms the trochanteric anastomosis?
14- What forms the cruciate anastomosis?
15- What are the articular surfaces of the hip joint.
16- What are the ligaments of the hip joint?
17- Concerning stability & mobility, compare the hip to the shoulder joint.
18- What is Hilton law?
19- According to this law what are the nerves which supply the hip joint?
20- What is the labrum acetabulare?
21- What is the ligament of head of femur?
22- What are the angles of inclination & tortion?
Case 2
A 30 years old lady delivered a boy with his feet were club like, being internally rotated & inverted. Parents were so afraid that their baby will not be able to walk, but when they consulted the orthopedic surgeon he reassured them & started a program of treatment involving successive surgeries & casts.
When the baby became 5 years old, he was playing, running & driving a bike.

Questions:
1- What are the foot invertors?
2- What are the foot evertors?
3- What are the foot plantar flexors?
4- What are the foot dorsiflexors?
5- What are the muscles supplied by the medial plantar nerve?
6- Where do inversion-eversion take place?
7- Where do plantar & dorsi-flexion take place?
8- What are the segments of inversion-eversion?
9- What are the segments of plantar & dorsi-flexion?
10- What are the muscles of the first layer of the sole?
11- What is the function of quadratus plantae?
12- What is the take off muscle in walking & running?
13- What is the function of dorsal interossei?
14- What is the function of plantar interossei?
15- What are the long & short plantar ligaments?
16- Where is the insertion of tibialis posterior & peroneus longus in the foot?
17- If you want to do incision in the foot, where is the best site for it & why?
18- How would you do superficial peroneal nerve block?
19- What is the course of lateral plantar artery in the foot?
20- Enumerate the arches of the foot.
21- What forms the medial longitudinal arch?
22- What forms the lateral longitudinal arch?
23- What is the function of the arches?
Case 3
While stepping down the ladder, a 50 years old woman dropped down the stairs where her major weight was thrown on the right knee joint.
Severe pain & immediate swelling followed this injury, all movements of the joint were limited, extension was impossible.
In the hospital, X-ray showed fracture in the right patella, fixation was done & the patient was asked to do quadriceps exercise one weeks after the operation.
Questions:
1- What is the function of the patella?
2- Is the patella a part of the knee joint?
3- What are the articular surfaces of the knee joint?
4- What are the patellar retinacula?
5- How would you differentiate between right & left patella?
6- What is the type of knee joint?
7- Describe the movements of the knee joint.
8- What is the role of menisci in this movement?
9- Which meniscus is more prone to injury & why?
10- What is the role of cruciate ligaments in the knee?
11- What will happen if the anterior cruciate ligament is ruptured?
12- Describe the attachments of the cruciate ligaments.
13- Enumerate other knee joint ligaments.
14- What are the knee extensors?
15- What is the segment of knee jerk?
16- What prevent lateral patellar dislocation during extension?
17- What are the knee flexors?
18- What is the nerve supply of knee flexors?
19- What is the blood supply of knee joint?
20- What are the 10 arteries which supply knee with blood?
21- What is the nerve supply of the knee joint?
Case 4
In a football match, the forward player received a strong hit on his left upper leg. The hit was followed by severe pain, swelling & bruise in the region.

X-ray film showed comminuted fracture in the neck of his left fibula, he was treated conservatively & advised to be away from playing for provisional three months.

After this period the player was experiencing progressive numbness on the dorsum of the foot & side of the affected leg followed by foot drop which made him leave the stadiums permanently.

Questions:
1- What is the function of the fibula?
2- Is the fibula a part of the knee joint?
3- What is the structure mostly related to the fibular neck?
4- What is the root value of this structure?
5- What are its terminal branches.
6- What does superficial peroneal nerve supply?
7- What does deep peroneal nerve supply?
8- Is drop foot is due to involvement of the superficial or the deep peroneal nerves?
9- What is the function of tibialis anterior muscle.
10- What are the muscles seen in the anterior compartment of the leg at upper 1/3 section?
11- Describe muscle arrangement in the extensor compartment of the leg in middle 1/3 section.
12- What is the main blood supply for the extensor compartment.
13- What is the blood supply of the peroneal compartment.
14- What are the retinacula surrounding the ankle joint?
15- Describe the structures deep to the flexor retinaculum.
16- Describe the inferior extensor retinaculum.
17- How could you feel the dorsalis pedis pulse?
18- What is extensor digitorum brevis?
19- What is the type of ankle joint?
20- What are the movements that take place on this joint?
21- What are the muscles attached to the talus?
22- What are the ankle joint ligaments?
Case 5
A 40 years old man was wearing his clothes when he noticed a small swelling in his right groin. This swelling was increased as the patient builds pressure in his abdomen & almost disappears when lying down. When the surgeon was consulted, he examined the swelling carefully & he diagnosed the condition as right sided femoral hernia & decided to correct it with surgery.

Questions:
1- What is the femoral sheath?
2- What are the structures within the femoral sheath?
3- What is the femoral canal?
4- What is the femoral ring?
5- What are the boundaries of the femoral ring?
6- What is femoral hernia?
7- How could you feel for femoral artery pulsation?
8- What is the difference between the midpoint of inguinal ligament & midinguinal point?
9- How would you aspirate blood from the femoral vein?
10- Is the femoral nerve a content of femoral sheath?
11- What is the nerve supply of skin over the femoral triangle?
12- What are the boundaries of the femoral triangle?
13- What forms the floor of femoral triangle?
14- What is the function of iliopsoas?
15- What is the nerve supply of these muscles?
16- What is fascia lata?
17- What are the branches of femoral artery in the triangle?
18- What are the tributaries of femoral vein in the triangle?
19- What are the branches of profunda femoris?
20- What forms the anastomosis around ASIS?
21- What is abnormal obturator artery?
22- Why it is dangerous the presence of this artery in femoral canal surgery?