1. When performing flexor tendon repair, which of the following pulleys must be preserved?
   a. A2 and A4.
   b. A2 only.
   c. A2 and C2.
   d. A2 and A3.

A

2. When reducing a Smith's or volar Barton's fracture, the reduction maneuver should include?
   a. Supination only.
   b. Extension only.
   c. Extension and supination.
   d. Extension and pronation.

C

3. A patient presents with pain and cold insensitivity at the fingertip. There is a bluish discoloration under the nail. The most likely diagnosis is?
   a. Neurofibroma.
   b. Glomus tumour.
   c. Turret tumour.
   d. Epithelioid sarcoma.

B

4. Which of the following is a rule of tendon transfer?
   a. The donor muscle must be at least MRC grade 3.
   b. Joints can have 50% maximum contracture.
   c. Tendon pull must be synergistic.
   d. Line of pull should be orthogonal.

C

5. The biomechanical advantage of a reverse total shoulder arthroplasty compared to a standard arthroplasty is what?
   a. Centre of rotation more superior.
   b. Centre of rotation more medial.
   c. Centre of rotation more lateral.
   d. Increased lateral humeral offset.

B

6. Which of the following muscles have only a single nerve supply?
   a. Brachialis.
   b. Flexor digitorum profundus.
   c. Lumbricals.
   d. Brachioradialis.

D

7. Following a traumatic anterior shoulder dislocation, what factor is associated with the highest risk for recurrent instability?
   a. Dislocation of the dominant shoulder.
   b. Bilateral shoulder dislocation.
   c. Young age (<25 years old) at time of dislocation.
   d. Family history of shoulder instability.

C

SIGNATURE OF THE CANDIDATE

8. When approaching the proximal diaphyseal radius via the Henry approach (volar), the forearm is supinated to minimize injury to what structure?
   a. Radial nerve.
   b. Lateral antebrachial cutaneous nerve.
   c. Posterior interosseous nerve.
   d. Ulnar nerve.

C

9. Which of the following is true regarding superior mesenteric artery (SMA) syndrome?
   a. The condition often occurs in overweight female patients.
   b. This syndrome is also known as cast syndrome.
   c. This condition occurs following curve correction as a result of an increase in the angle between the aorta and the superior mesenteric artery.
   d. The condition is due to an ischemic event of the SMA.

B

10. Which of the following is incorrect regarding spinal tuberculosis?
    a. It originates underneath the anterior longitudinal ligament and can cause destruction of several contiguous levels.
    b. It can cause skip lesions at non-contiguous segments in 15% of the cases.
    c. In the early disease process, the disc spaces are relatively preserved.
    d. Kyphosis and Pott paraplegia are late sequelae.

A

11. All of the following are true for hangman's fracture except?
    a. It is a traumatic spondylolisthesis of C2 on C3 as a result of bilateral fracture of C2 pars or pedicles.
    b. The mechanism of injury is a primary hyperflexion of the neck.
    c. Type IIA fracture has a significant angulation without displacement.
    d. Type I fracture has an intact C2/C3 disc.

B

12. The central cord syndrome is due to?
    a. A fall on flexed neck.
    b. Hyperextension injury on a background of a herniated disc.
    c. A hyperextension injury in a patient with a facet joint hypertrophy and thickened Ligamentum flavum.
    d. An anterior spinal artery lesion.

C

13. A 23-year-old motorcyclist was involved in a road traffic accident. He was brought to the A&E unconscious with multiple injuries. It is anticipated that he will remain unconscious and un-assessable for more than 48 hours. Which cervical radiological spinal clearance imaging should be undertaken?

    a. Anteroposterior (AP) and lateral radiographs of the C-spine.
    b. Helical CT scan with a 5-6 mm slice from the base of the skull to at least T1.
    c. MRI scans of the neck.
    d. Helical CT scan with a 2-3 mm slice from the base of the skull to at least T1.

D

SIGNATURE OF THE CANDIDATE

14. What constitutes a spinal motion segment?
    a. A disc and the facet joints at that level.
    b. A disc and the vertebrae above and below, including their interlocking facet joints.
    c. A section of the spine involved in a physiological curve with the similar function (i.e. thoracic kyphosis).
    d. A vertebral body and the disc above.

B

15. Injury to which artery is most likely to cause uncontrollable bleeding during the posterior approach to the hip?
    a. Inferior gluteal.
    b. Superior gluteal.
    c. Pudendal.
    d. Ascending branch of lateral circumflex femoral.

A

16. What is the predominant source of femoral head perfusion?
    a. Lateral circumflex artery.
    b. Obturator artery.
    c. Medial circumflex artery.
    d. Descending branch of lateral circumflex artery.

C

17. Core decompression following avascular necrosis (AVN) of the femoral head is more likely to be successful if the patient has not progressed beyond?
    a. FICAT I.
    b. FICAT II.
    c. FICAT III.
    d. FICAT IV.

B

18. Which of the following is not one of the trabecular patterns in the proximal femur?
    a. Greater trochanter group.
    b. Lesser trochanter group.
    c. Principle compressive group.
    d. Secondary compressive group.

B

19. What is meralgia paraesthetica due to?
    a. Compression of the obturator nerve at the obturator foramen.
    b. Hematoma around part of the sciatic nerve.
    c. Compression of the lateral cutaneous nerve of thigh.
    d. Compression of the femoral nerve (eg. by a weightlifter's belt).

C

20. Which nerve is at risk during the ilio-inguinal approach to the pelvis, and often needs to be divided?
    a. Anterior cutaneous branch of femoral nerve.
    b. Posterior branch of obturator nerve.
    c Lateral cutaneous nerve of thigh.
    d. Anterior branch of obturator nerve.

C

SIGNATURE OF THE CANDIDATE

21. In the posterior thigh, the sciatic nerve lies between which two muscles?
    a. Gluteus maximus and biceps femoris.
    b. Gluteus maximus and piriformis.
    c. Gluteus maximus and adductor magnus.
    d. Superior gemellus and obturator internus.

C

22. Which of the following statements regarding anterior cruciate ligament (ACL) grafts is false?
    a. The maximum load to failure of a patellar tendon graft is approximately 2600 newtons.
    b. The use of an autologous hamstring graft results in 50% loss of hamstring strength.
    c. The maximum load to failure of a quadruple hamstring graft is approximately 4500 newtons.
    d. Allograft processing does not always alter the mechanical properties of the graft.

B

23. Which of the following is incorrect regarding the native anterior cruciate ligament (ACL)?
    a. It has an anteromedial bundle which is tight in flexion.
    b. Its length typically ranges from 25 to 41 mm.
    c. Its primary role is proprioceptive.
    d. It has a posterolateral bundle which is tight in extension.

C

24. The following situations preclude the use of a high tibial osteotomy for the treatment of medial compartment osteoarthritis, except?
    a. Lateral Tibial subluxation.
    b. Lateral compartment osteoarthritis.
    c. Previous subtotal lateral menisectomy.
    d. Deficient anterior cruciate ligament.

D

25. Which of the following is not true of the menisci?
    a. The lateral meniscus is more mobile than the medial meniscus.
    b. A discoid meniscus is more common in the lateral meniscus.
    c. Their primary roll is to provide anteroposterior stability to the knee
    d. The collagen content is predominantly type 1.

C

26. Which of the following nerves supply the greatest area of sensibility of the foot?
    a. Sural.
    b. Saphenous.
    c. Tibial.
    d. Deep peroneal.

C

27. A vertical talus is most commonly associated with which of the following?
    a. Oligohydramnios.
    b. Arthrogryposis.
    c. Congenital talipes equinovarus.
    d. Tarsal coalition.

B

SIGNATURE OF THE CANDIDATE

28. Which of the following is the most common primary soft tissue malignancy of the foot?
    a. Malignant melanoma.
    b. Osteosarcoma.
    c. Squamous cell carcinoma.
    d. Synovial cell sarcoma.

D

29. Which of the following is not a typical deformity seen in congenital talipes equinovarus?
    a. Forefoot adduction.
    b. Forefoot pronation.
    c. Midfoot cavus.
    d. Hindfoot varus.

B

30. A 12-year-old boy presents with a 2 month history of right knee pain after a fall. He has lost 3 kg in weight but is otherwise well. He is pale, apyrexial and his right knee is slightly swollen and warm on examination. Plain radiographs reveal areas of dense sclerosis admixed with areas of radiolucency in the distal femoral metaphysis. Aggressive periosteal new bone formation is also noted. Which of the following is the most likely diagnosis?
    a. Parosteal osteosarcoma.
    b. Periosteal osteosarcoma.
    c. High-grade intramedullary osteosarcoma.
    d. Telangiectatic osteosarcoma.

C

31. The diagnostic criteria for ankylosing spondylitis include all of the following except ?
    a. HLA B27 positivity.
    b. Limitation of motion of the lumbar spine.
    c. History of pain in the lumbar spine.
    d. Limited chest expansion to 2.5 cm or less.

A

32. All of the following principles must be adhered to when performing a biopsy of a bone tumour except?
    a. The selection of the biopsy path should be made in consultation with the surgeon who will perform the definitive excision.
    b. The biopsy tract should be marked to allow excision at the time of definitive surgery.
    c. The biopsy should ideally be performed at the centre where the definitive excision is likely to be carried out.
    d. The tumour should be approached through normal tissue before entering the reactive zone.

D

33. Curettage and grafting is acceptable treatment for all of the following lesions except?
    a. Osteoblastoma.
    b. Aneurysmal bone cyst.
    c. Osteofibrous dysplasia.
    d. Chondromyxoid fibroma.

C

SIGNATURE OF THE CANDIDATE

34. All of the following are features of giant cell tumor of bone except?
    a. The most common site in the axial skeleton is the sacrum.
    b. Located in an eccentric position along the long axis of a bone.
    c. Cross the physis.
    d. Metastasize to lung.

C

35. Which of the following is the most sensitive clinical sign for detection of developmental dysplasia of the hip (DDH) in a baby aged 6 months?
    a. Galeazzi test.
    b. Asymmetric skin folds in the thighs.
    c. Limited hip abduction in flexion.
    d. Ortolani's test.

C

36. A supracondylar fracture of the distal humerus with posterolateral displacement should be reduced by performing reduction maneuvers in the following order?
    a. Valgus - Flexion - Pronation.
    b. Varus - Extension - Supination.
    c. Valgus - Extension - Pronation.
    d. Traction - Pronation - Flexion.

B

37. Following clubfoot surgery, which of the following is the commonest residual deformity?
    a. Forefoot adduction.
    b. Internal Tibial torsion.
    c. Forefoot supination.
    d. Equinus.

A

38. After the age of 4, the proximal femoral epiphysis receives its predominant blood supply via an increased contribution from which of the following?
    a. Ligamentum teres.
    b. Metaphyseal vessels.
    c. Lateral circumflex vessels.
    d. Medial circumflex vessels

D

39. Which is the least important risk factor associated with developmental dysplasia of the hip?
    a. Female sex.
    b. Breech position.
    c. Positive family history.
    d. Gestational diabetes

D

40. In Risser staging, an iliac apophysis showing 75% ossification represents which of the following?
    a. Risser 1.
    b. Risser 2.
    c. Risser 3.
    d. Risser 4.

C

SIGNATURE OF THE CANDIDATE

41. A previously healthy 41-year-old man suffers a minimally displaced distal radius fracture and is treated in a cast for 4 weeks. He presents 14 weeks later with dorsal wrist pain. What is the most likely diagnosis?
    a. Rupture of the extensor pollicis longus (EPL) tendon.
    b. Rupture of the extensor indicis proprius (EIP) tendon.
    c Missed scaphoid fracture.
    d. De Quervain's tenosynovitis.

A

42. Which of the following is true regarding scapholunate dissociation?
    a. A scapholunate distance of more than 1mm is diagnostic.
    b. The Madonna sign is diagnostic.
    c. The cortical ring sign is produced by cortex of distal pole of palmar flexed scaphoid.
    d. On the lateral view, a scapholunate angle of >40-45° suggests scapholunate dissociation.

C

43. An 86-year-old man falls and sustains a minimally displaced proximal humerus fracture. What is the best way to manage him?
    a. Physiotherapy and passive range of motion, 10 days following the injury.
    b. Immobilization for 4 weeks in a sling
    c. Physiotherapy the following day, with range of motion exercises.
    d. Intramedullary nail fixation.

A

44. Which of the following patients would you expect to fare better with operative management of a displaced calcaneal fracture?
    a. Young woman, heavy smoker.
    b. 60-year-old woman, otherwise healthy.
    c. Young woman, injured hill-running.
    d. Healthy man, injured at work.

C

45. A 31-year-old woman has fracture-dislocation at C5-C6. A clavicle fracture is noted on an otherwise normal chest X-ray. Her pulse is 45, blood pressure is 83/40 mmHg and respiratory rate is 28. An abdominal ultrasound is negative. What type of shock is most likely in this patient?
    a Hemorrhagic.
    b. Septic.
    c. Neurogenic.
    d. Spinal.

C

46. Which complication below is most likely following open reduction and fixation of a Lisfranc Injury.
    a. Non union
    b. Failure of metal work
    c. Infection
    d. Arthritis

D

47. Which of the following would not increase the stability of an external fixator?
    a. Increasing the diameter of the pins.
    b. Increasing the distance between the rods and the bone.
    c. increasing the number of pins.
    d. Increasing the space between the pins.

B

SIGNATURE OF THE CANDIDATE

48. Which of the following statements is incorrect with regards to dual-energy X-ray absorptiometry (DEXA) scanning?
    a. DEXA scans assess bone mineral density.
    b. Cortical and cancellous bone densities are indistinguishable on DEXA scans of the proximal femur.
    c. Vertebral fractures may give rise to false low density values.
    d. Osteoporosis is defined by a T-score lower than -2.5.

C

49. With reference to a cross section of the spinal cord, which of the following descriptions is incorrect?
    a. Pain and temperature sensation is transmitted via the lateral spinothalamic tracts.
    b. Light touch is transmitted in the anterior spinothalamic tract.
    c. Deep touch is transmitted in the dorsal columns..
    d. Vibration is transmitted in the anterior corticospinal tract.

D

50. Which of the following is not a prerequisite of gait?
    a. Foot prepositioning.
    b. Stability in stance.
    c. Adequate stride length.
    d. Conservation of energy.

C

51. According to Mirels' scoring system a patient with a very large, metastatic, pertrochanteric, painless lytic lesion would have a score of?
    a. .4.
    b. 6.
    c. 8.
    d. 10.

D

52. Which of the following tumours is the most likely diagnosis in a 13-year-old boy presenting with a mid-femoral lesion with a large associated soft tissue swelling?
    a. Chondrosarcoma.
    b. Osteosarcoma.
    c. Ewing's sarcoma.
    d. Giant cell tumour.

C

53. The posterior interosseus nerve can be compressed in all of the following sites except?
    a. The leash of Henry.
    b. The arcade of Frohse.
    c. The distal margin of the supinator muscle.
    d. The ligament of Struthers.

D

54. A muscle contraction during which tension is constant throughout the range of motion but muscle length changes is referred to as?
    a. Isometric.
    b. Plyometric.
    c Isokinetic.
    d. Isotonic.

D

SIGNATURE OF THE CANDIDATE

55. The pull-out strength of a cortical screw can be increased by?
    a. Changing to a larger core diameter.
    b. Changing to a smaller outer diameter.
    c. The addition of a self-tapping tip.
    d. Changing to a finer pitch.

D

56. A 58-year-old man is listed for a total knee replacement. He underwent a closing wedge high tibial osteotomy 10 years prior. The most likely problem one would encounter during the total knee replacement is?
    a. Difficult surgical exposure.
    b. Lateral ligament laxity.
    c. Difficult tibial stem placement.
    d. Patella baja.

D

57. Which of the following is not a sign of an unstable scaphoid fracture?
    a. Vertical oblique fracture.
    b. Comminuted fracture.
    c. > 1mm displacement.
    d. Scapholunate angle <60°.

D

58. The following are known causes of sciatic nerve dysfunction following total hip replacement except?
    a. Post-operative haematoma (e.g. subgluteal) around the sciatic nerve.
    b. Limb lengthening over 5 cm.
    c. Direct laceration during surgery.
    d. Pressure from straps of abduction wedge pillow.

D

59. Which of the following is true regarding a Mayfield Stage I injury?
    a. There is not always a scaphoid fracture.
    b. There is a lunotriquetral ligament injury.
    c .The lunate is extruded.
    e. There is a radio-scapho-capitate ligament detachment.

A

60. The blood supply to the anterior cruciate ligament is?
    a. The medial superior genicular artery.
    b. The lateral superior genicular artery.
    c. The middle genicular artery.
    d. The lateral inferior genicular artery.

C

SIGNATURE OF THE CANDIDATE