पुस्तिका में पृष्ठों की संख्या–**32**
No. of Pages in Booklet **-32**
पुस्तिका में प्रश्नों की संख्या–**180**
No. of Questions in Booklet **-180**

BSAP-22

Paper Code : **07**
SUBJECT : **Orthopaedics**
(Broad Speciality)

1700257

प्रश्न पुस्तिका संख्या / Question Booklet No.

समय : **3.00** घण्टे
Time: **3.00** Hours

अधिकतम अंक : **180**
Maximum Marks: **180**

प्रश्न–पत्र पुस्तिका के पेपर सील/ पॉलिथिन बैग को खोलने पर परीक्षार्थी यह सुनिश्चित कर लें कि प्रश्न पुस्तिका संख्या तथा ओ.एम.आर उत्तर–पत्रक पर अंकित बारकोड समान हैं। इसमें कोई भिन्नता हो तो परीक्षार्थी वीक्षक से दूसरा प्रश्न–पत्र प्राप्त कर लें। ऐसा सुनिश्चित करने की जिम्मेदारी अभ्यर्थी की होगी।

On opening the paper seal /polythene bag of the Question Booklet the candidate should ensure that Question Booklet Number and Barcode of OMR Answer Sheet must be same. If there is any difference, candidate must obtain another Question Booklet from Invigilator. Candidate himself shall be responsible for ensuring this.

परीक्षार्थियों के लिए निर्देश

1. सभी प्रश्नों के उत्तर दीजिए।
2. सभी प्रश्नों के अंक समान हैं।
3. प्रत्येक प्रश्न का केवल एक ही उत्तर दीजिए।
4. एक से अधिक उत्तर देने की दशा में प्रश्न के उत्तर को गलत माना जाएगा।
5. प्रत्येक प्रश्न के चार वैकल्पिक उत्तर दिये गये हैं, जिन्हें क्रमशः **1, 2, 3, 4** अंकित किया गया है। अभ्यर्थी को सही उत्तर निर्दिष्ट करते हुए उनमें से केवल एक गोले अथवा बबल को उत्तर–पत्रक पर **नीले बॉल प्वॉइंट पेन** से गहरा करना है।
6. **OMR** उत्तर–पत्रक इस परीक्षा पुस्तिका के अन्दर रखा है। जब आपको परीक्षा पुस्तिका खोलने को कहा जाए, तो उत्तर–पत्रक निकाल कर ध्यान से केवल **नीले बॉल प्वॉइंट पेन** से विवरण भरें।
7. **प्रत्येक गलत उत्तर के लिए प्रश्न अंक का 1/3 भाग काटा जायेगा।** गलत उत्तर से तात्पर्य अशुद्ध उत्तर अथवा किसी भी प्रश्न के एक से अधिक उत्तर से है। किसी भी प्रश्न से संबंधित गोले या बबल को खाली छोड़ना गलत उत्तर नहीं माना जायेगा।
8. मोबाइल फोन अथवा इलेक्ट्रॉनिक यंत्र का परीक्षा हॉल में प्रयोग पूर्णतया वर्जित हैं। यदि किसी अभ्यर्थी के पास ऐसी कोई वर्जित सामग्री मिलती है, तो उसके विरुद्ध आयोग द्वारा नियमानुसार कार्यवाही की जायेगी।
9. कृपया अपना रोल नम्बर ओ.एम.आर. पत्रक पर सावधानीपूर्वक सही भरें। गलत अथवा अपूर्ण रोल नम्बर भरने पर **5 अंक** कुल प्राप्तांकों में से काटे जा सकते हैं।
10. यदि किसी प्रश्न में किसी प्रकार की कोई मुद्रण या तथ्यात्मक प्रकार की त्रुटि हो, तो प्रश्न के हिन्दी तथा अंग्रेज़ी रूपान्तरों में से अंग्रेज़ी रूपान्तर मान्य होगा।

चेतावनी : अगर कोई अभ्यर्थी नकल करते पकड़ा जाता है या उसके पास से कोई अनधिकृत सामग्री पाई जाती है, तो उस अभ्यर्थी के विरुद्ध पुलिस में प्राथमिकी दर्ज कराते हुए विविध नियमों–प्रावधानों के तहत कार्यवाही की जाएगी। साथ ही विभाग ऐसे अभ्यर्थी को भविष्य में होने वाली विभाग की समस्त परीक्षाओं से विवर्जित कर सकता है।

INSTRUCTIONS FOR CANDIDATES

1. Answer all questions.
2. All questions carry equal marks.
3. Only one answer is to be given for each question.
4. If more than one answers are marked, it would be treated as wrong answer.
5. Each question has four alternative responses marked serially as **1, 2, 3, 4**. You have to darken only one circle or bubble indicating the correct answer on the Answer Sheet using **BLUE BALL POINT PEN.**
6. The **OMR** Answer Sheet is inside this Test Booklet. When you are directed to open the Test Booklet, take out the Answer Sheet and fill in the particulars carefully with **blue ball point pen** only.
7. **1/3 part of the mark(s) of each question will be deducted for each wrong answer.** A wrong answer means an incorrect answer or more than one answers for any question. Leaving all the relevant circles or bubbles of any question blank will not be considered as wrong answer.
8. Mobile Phone or any other electronic gadget in the examination hall is strictly prohibited. A candidate found with any of such objectionable material with him/her will be strictly dealt as per rules.
9. Please correctly fill your Roll Number in O.M.R. Sheet. **5 Marks** can be deducted for filling wrong or incomplete Roll Number.
10. If there is any sort of ambiguity/mistake either of printing or factual nature, then out of Hindi and English Version of the question, the English Version will be treated as standard.

Warning : If a candidate is found copying or if any unauthorized material is found in his/her possession, F.I.R. would be lodged against him/her in the Police Station and he/she would liable to be prosecuted. Department may also debar him/her permanently from all future examinations.

इस परीक्षा पुस्तिका को तब तक न खोलें जब तक कहा न जाए।
Do not open this Test Booklet until you are asked to do so.

ORTHOPAEDICS

1. An MRI of the shoulder in a patient with chronic quadrilateral space syndrome is most likely to show which of the following?

   (1) Increased intra – capsular volume

   (2) Loss of intra – capsular volume

   (3) Fatty atrophy of the infraspinatus

   (4) Fatty atrophy of the teres minor

2. A 34 year old man presents with a 3 month history of knee pain, with an inability to squat. The most likely diagnosis is -

   (1) Primary osteoarthritis (2) Osteochondral defect

   (3) Loose body (4) Posterior horn meniscal tear

3. A 21 year old army recruit developed hip and groin pain that initially started while running, but is now painful when walking across campus. Radiographs show no evidence of a stress fracture, an alpha angle of 45 degrees, and a lateral center edge angle of 30 degrees. An MRI shows focal, intense marrow edema in the superior-lateral femoral neck. What is the most appropriate treatment?

   (1) Non-operative treatment with NSAIDs and reduction in mileage

   (2) Operative treatment with percutaneous screw placement

   (3) Cam resection

   (4) Non-operative treatment with partial weight-bearing

4. Which of the following statements is correct regarding Vitamin D?

   (1) 1, 25–dihydrocholecalciferol is the best laboratory study to determine a Vitamin D deficiency.

   (2) Active form of Vitamin D is 25-hydroxycholecalciferol.

   (3) Inactive form of Vitamin D is 24, 25- dihydroxycholecalciferol.

   (4) The half-life of 1, 25-dihydrocholecalciferol is longer than 25-hydroxycholecalciferol.

5. In evaluating the radiographs of a patient with Paget's disease, which of the following would be suggestive of the malignant change?

   (1) Enlargement of bone (2) Marked bowing

   (3) Coarsened trabeculae (4) Cortical bone destruction

6. A 5 year old boy has a history of delayed walking and difficulty climbing stairs. Physical examination shows a positive Gower sign and scoliosis. Laboratory tests show elevated serum creatine phosphokinase. A mutation of what protein results in this disorder?

(1) Dystrophin

(2) Collagen type I

(3) Neurofibromin

(4) Runt-related transcription factor 2 (Runx2)

7. Which of the following is the most common sarcoma found in the foot?

(1) Epithelioid Sarcoma

(2) Liposarcoma

(3) Fibrosarcoma

(4) Synovial sarcoma

8. Glycogen positive cells are seen in -

(1) Chordoma (2) Osteosarcoma

(3) Fibrosarcoma (4) Ewing's sarcoma

9. All of the following histologic features are typical of enchondromas, EXCEPT -

(1) low cellularity

(2) lobular architecture

(3) prominent myxoid changes

(4) Small round nuclei

10. Which of the following carcinomas typically produces purely lytic bone metastasis?

(1) Lung and breast (2) Bladder and thyroid

(3) Lung and prostate (4) Kidney and lung

11. What is the appropriate treatment for a 10 year old boy with Ewing's sarcoma isolated to the proximal femur?

(1) Neoadjuvant chemotherapy and surgical excision

(2) Neoadjuvant chemotherapy, surgical excision and radiation therapy

(3) Neoadjuvant chemotherapy, surgical excision and adjuvant chemotherapy

(4) Neoadjuvant radiation therapy and surgical excision

12. You are caring for a 63 year old female with metastatic breast cancer to the lumbar spine. Her neurological examination shows significant weakness in leg function and she is having difficulty ambulating. Imaging shows significant neural element compression by the tumor and complete erosion of L1 vertebrae. She has no other sites of metastatic disease and is otherwise healthy. What treatment option do you recommend to best maintain her function?

(1) Palliative therapy

(2) Complete neural element decompression with instrumentation to stabilize the spine

(3) Complete neural element decompression, instrumentation and postoperative chemotherapy

(4) Complete neural element decompression, instrumentation and postoperative radiotherapy

13. Which is not a treatment modality in osteoclastoma?

(1) Joint Replacement (2) Curettage

(3) Chemotherapy (4) Excision

14. A 12 year old boy was diagnosed with Li-Fraumeni syndrome. The origin of his syndrome is related to a germ-line mutation of the tumor suppressor p53 gene. What is most common primary bone tumor associated with this gene mutation?

(1) Osteosarcoma (2) Ewing Sarcoma

(3) Chondrosarcoma (4) Multiple Myeloma

15. A 64 year old male has a 6 month history of back pain. Serum Laboratory studies shows a hemoglobin level of 11 mg/dl and an E.S.R of 110 mm/hr. Based on these studies the most likely diagnosis is -

(1) Metastatic breast cancer (2) Multiple myeloma

(3) Metastatic lung disease (4) Fibrous dysplasia

16. Which of the following is radio-resistant tumor?

(1) Ewing's sarcoma (2) Multiple myeloma

(3) Osteosarcoma (4) Lymphoma

17. Which of the following soft tissue sarcomas is the most responsive to chemotherapy?

(1) Synovial sarcomas (2) Fibrosarcoma

(3) Epithelioid sarcoma (4) Rhabdomyosarcoma

18. Boutonnière deformity involves -

(1) Flexion at PIP and DIP joints

(2) Extension at PIP and DIP joints

(3) Flexion at PIP and Extension at DIP joint

(4) Extension at PIP and Flexion at DIP joint

19. A 3 year old boy presented with progressive anaemia, hepatosplenomegaly & osteomyelitis of jaw with pathological fracture. X-ray shows chalky white deposits on bone. Probable diagnosis is -

(1) Osteopetrosis (2) Alkaptonuria

(3) Osteopoikilocytosis (4) Myelofibrosis

20. Subluxation caused by rheumatoid arthritis is most commonly seen at what level of the cervical spine?

(1) Occiput C_1 (2) C_1-C_2

(3) C_2-C_3 (4) C_3-C_4

21. Which of the following is a primary defect in Paget's disease?

(1) Osteoblast (2) Osteoclast

(3) Osteocyte (4) Fibroblast

22. Which of the following most accurately describes the cause of Osteopetrosis?

(1) Decreased expression of type I collagen

(2) Decreased mineralization of osteoid matrix

(3) Loss-of-function of GS alpha protein gene

(4) Loss-of-function of carbonic anhydrase II gene

23. Denosumab – a monoclonal antibody against RANKL receptor is used in treatment of -

(1) Rheumatoid arthritis (2) SLE

(3) Osteoarthritis (4) Osteoporosis

24. The commonest cause for a Charcot's arthropathy in the upper limb is -

(1) Hansen's disease (2) Myelomeningocele

(3) Diabetes (4) Syringomyelia

25. Hypercalcemia commonly occurs in which of the following bone lesion?

(1) Osteosarcoma
(2) Malignant fibrous histiocytoma
(3) Multiple myeloma
(4) Chondrosarcoma

26. What is the World Health Organization (WHO) definition of Osteoporosis?

(1) Bone mineral density less than 1 standard deviation below the mean of a young, healthy adult.
(2) Bone mineral density at least 2.5 standard deviation below the mean of a young, healthy adult.
(3) T score less than – 2.5.
(4) Both (2) and (3)

27. Which of the following best describes the mechanism by which Osteoprotegerin (OPG) plays a role in RANKL – mediated osteoclast bone resorption?

(1) inhibits RANKL – mediated osteoclast bone resorption by directly binding to RANKL.
(2) inhibits RANKL – mediated osteoclast bone resorption by directly binding to the RANK receptor on osteoclasts.
(3) stimulates RANKL – mediated osteoclast bone resorption by directly binding to RANKL.
(4) stimulates RANKL – mediated osteoclast bone resorption by directly binding to the RANK receptor on osteoclasts.

28. Rugger Jersey spine is seen in -

(1) Fluorosis
(2) Achondroplasia
(3) Renal Osteodystrophy
(4) Marfan's Syndrome

29. Looser zone is a feature of -

(1) Metastasis
(2) Osteoporosis
(3) Scurvy
(4) Osteomalacia

30. Which is not seen in Paediatric Vitamin D deficiency?

(1) Harrison's sulcus
(2) Wimberger sign
(3) Rachitic rosary
(4) Craniotabes

31. In a patient with arm pain and paraesthesia, which of the following symptoms or physical exam findings support a cervical radiculopathy as opposed to a peripheral neuropathy?

(1) Relief of pain when holding the arm above the head.

(2) Reproduction of pain with tilting head to affected side and rotating head to contralateral side.

(3) Compensatory inter – phalangeal joint flexion of the thumb when attempting to pinch.

(4) Patient is unable to make "OK" sign with index finger and thumb.

32. The most common sequelae of TB spondylitis in adolescent is -

(1) Fibrous ankylosis (2) Bony ankylosis

(3) Pathological dislocation (4) Chronic osteomyelitis

33. Extraforaminal L4 – L5 disc prolapse involves which nerve root?

(1) L3 (2) L4

(3) L5 (4) S1

34. Earliest reflex to appear after spinal shock is -

(1) Ankle jerk (2) Knee jerk

(3) Abdominal reflex (4) Bulbocavernosus reflex

35. Striated vertebra are seen in -

(1) Metastasis (2) Tuberculosis

(3) Osteoblastoma (4) Hemangioma

36. A number of potential complications are associated with the direct lateral approach to the lumbar spine; which complication is most common?

(1) Infection (2) Iliopsoas weakness

(3) Injury to the aorta (4) Foot drop

37. Among patients with adolescent idiopathic scoliosis, a thoracolumbosacral orthosis is most effective for which type of curve?

(1) Apex of the curve is at T3 (2) Apex of the curve is at T8

(3) Apex of the curve is at L1 (4) Apex of the curve is at L2

38. An 18-year-old presents with back pain with rounded – thoracic kyphosis of about 40°. On Examination → No spinal tenderness and deformity does not correct with prone positioning. Most likely diagnosis is -

(1) Post tubercular kyphosis

(2) Postural kyphosis

(3) Scheuermann's disease

(4) Adolescent idiopathic scoliosis

39. Symmetrical areflexic bladders, bowel and lower limb occur in -

(1) Conus Medullaris Syndrome

(2) Central Cord Syndrome

(3) Cauda Equina Syndrome

(4) Brown-Sequard Syndrome

40. A type 2A Hangman's fracture, which has the potential to overdistract with traction has which of the following hallmark findings?

(1) Anterior translation of greater than 3 mm

(2) Severe angulation with minimal translation

(3) Associated C1 ring fracture

(4) Extension at fracture site

41. A 45-year-old woman with a history of rheumatoid arthritis has C1-C2 instability with neurologic deterioration. Her posterior atlantodens interval is 10 mm. Which fixation technique will be the most biomechanically sound to facilitate fusion across the atlanto – axial junction?

(1) Gallie fusion

(2) Use of C1-C2 transarticular screws

(3) Brooks fusion

(4) Onlay grafting with a halo vest

42. What is the prognosis for ambulation from best to worst for patient with an incomplete spinal cord injury?

(1) Central cord syndrome, Interior cord syndrome, Brown-Sequard syndrome

(2) Central cord syndrome, Brown-Sequard syndrome, Anterior cord syndrome

(3) Brown-Sequard syndrome, Anterior cord syndrome, Central cord syndrome

(4) Brown Sequard syndrome, Central cord syndrome, Anterior cord syndrome

43. A 25-year-old athletic woman has a 16 week history of left lower – extremity radiating pain in an S1 distribution. MRI images obtained by her family physician reveal a large L5 – S1 paracentral disk herniation impinging on the left S1 nerve root. You suggest a left – sided L5 – S1 microdiscectomy. You would like to counsel patient about tubular discectomy and open procedures, that –

(1) There are no differences in functional outcome.

(2) Open discectomy is associated with superior functional outcomes.

(3) Tubular discectomy is associated with superior short and long term results.

(4) Tubular discectomy is associated with inferior short – term results but superior long – term outcomes.

44. In a patient with a C5 – C6 herniation, the most likely sensory deficit will be in the -

(1) Lateral shoulder
(2) Radial forearms, thumb and index finger
(3) Dorsal forearm and little finger
(4) Roller forearm and palm

45. Which factor is most important when attempting to prevent interbody graft subsidence?

(1) End-plate burring
(2) Surface contact area
(3) Bone quality
(4) Use of rigid fixation

46. Which of the following methods accurately describes the measurement of tip – apex distance as it relates to placement of a lag screw in the femoral head?

(1) Summation of the distance between the end of the screw and the apex of the femoral head on AP and lateral radiographs

(2) Distance from the acetabular teardrop to the tip of the screw on an AP radiograph of the hip

(3) Multiplication of the distance between the end of the screw and the apex of the femoral head on AP and lateral radiographs

(4) None of the above

47. Submuscular bridge plating is appropriate treatment for which of the following?

(1) A 2 month old female with displaced, spiral, mid-diaphyseal femur fracture

(2) A 26 month old boy with a displaced spiral mid-diaphyseal femur fracture with <2cm shortening

(3) A 7 year old boy with a transverse, non-comminuted mid-diaphyseal femur fracture

(4) A 7 year old boy with a highly comminuted mid-diaphyseal femur fracture

48. A 32-year-old male sustains a 100% tear of his flexor tendon in the Zone 2 region after cutting his finger with a knife. Which of the following variables has the greatest effect on increasing the strength of the tendon repair?

(1) The size of the core suture
(2) Number of core strands crossing the repair site
(3) Use of epitendinous suture
(4) Repair of the flexor tendon sheath

49. An elderly patient falls and sustains an extensive injury to the neck that result in upper extremity weakness, spared perianal sensation and lower extremity spasticity. These findings best describe what syndrome?

(1) Brown-Sequard
(2) Cauda equina
(3) Anterior cord
(4) Central cord

50. Treatment of choice for fracture shaft femur in 3 month old child is -

(1) Gallow's Traction
(2) Hip Spica
(3) Paediatric Thomas splint
(4) Russell Traction

51. A 42-year-old construction worker sustains a crush injury to the hand at a job site. He has immediate pain and significant swelling, and is taken to the local emergency department for evaluation. Radiographs do not demonstrate any fracture of dislocation. On examination, he experiences severe pain with passive motion at the metacarpal phalangeal joints and when the wrist is flexed and extended while sensation and capillary refill were normal. What is the next best step in diagnosis or treatment?

(1) Advanced imaging
(2) Arterial Doppler
(3) Surgical intervention
(4) Pain control

52. A 74-year-old female who has no significant medical comorbidities presents to the emergency department after sustaining a compression fracture of L2. The patient has moderate back pain but is neurologically intact. Radiographs of the entire spine reveal a L2 compression fracture with 30% loss of vertebral body height loss and 15 degrees of local kyphosis. What would be the appropriate management for this patient?

(1) Posterior percutaneous pedicular fixation from L1 to L5
(2) Anterior column reconstruction with strut grafting and plate fixation
(3) Bed rest for ten days
(4) Oral pain medications, thoracolumbosacral orthosis and progressive increase in activity level

53. What spinal nerves in the cauda equina are primarily responsible for innervations of the bladder?

(1) L1, L2 & L3
(2) L4 & L5
(3) L5 & S1
(4) S2, S3 & S4

54. What is an advantage of utilizing a 36 mm instead of a 28 mm femoral head in the setting of a revision total hip arthroplasty?

(1) Compensating for abductor deficiency
(2) Decreasing volumetric wear
(3) Decreasing trunnion stress
(4) Delaying neck-socket impingement

55. What is the most anatomic location for placement of the femoral tunnel in anterior cruciate ligament reconstruction?

(1) As far superior in the notch as possible
(2) As far posterior as possible on the lateral femoral condyle
(3) As far posterior as possible on the medial femoral condyle
(4) At resident's ridge

56. A 10 year old girl has recurrent left ankle sprains for the past 9 months. She has tried immobilization in a cast for 5 weeks which has failed to provide relief. She is tender to palpation at the tarsal sinus. Radiographs and CT scan of the left foot show an isolated calcaneonavicular coalition and physical exam revealed a neutral hindfoot. What is the next best step in management?

(1) Resection of coalition at the middle facet if <20 degree hindfoot valgus is present
(2) Coalition resection and interposition of extensor digitorum brevis
(3) Complete excision of sustentaculum tali
(4) Triple arthrodesis

57. Which activity will be difficult to perform for a patient with anterior cruciate ligament deficient knee?

(1) Walk Uphill
(2) Walk Downhill
(3) Getting up from sitting
(4) Squatting

58. Which of the following statements regarding Polymethylmethacrylate (PMMA) cement is incorrect?

(1) It is strongest in compression
(2) It has poor tensile strength
(3) It exhibits a high Young's modulus
(4) It exhibits viscoelastic properties

59. The function of which of the following structures is to resist internal tibial rotation with the knee in full extension?

(1) Anterior cruciate ligament
(2) Iliotibial band
(3) Popliteus tendon
(4) Posterior oblique ligament

60. The lift off test is an examination in particular of which muscle?

(1) Subscapularis
(2) Pectoralis major
(3) Pectoralis minor
(4) Supraspinatus

61. The biomechanical advantage f a reverse total shoulder arthroplasty compared to a standard arthroplasty is what?

(1) Centre of rotation more superior
(2) Centre of rotation more medial
(3) Centre of rotation more lateral
(4) Increased lateral humeral offset

62. The increased radiographic bone density is osteonecrosis in most likely secondary to -

(1) Calcification of the necrotic bone marrow
(2) Creeping substitution on the dead trabeculae
(3) Resorption of the Haversian canal bone
(4) Necrotic cortical bone

63. Which of the following enzyme deficiencies occurs in patients with Gaucher disease?

(1) Alpha – L – iduronidase
(2) Glucocerebrosidase
(3) Beta – glucuronidase
(4) Acid phosphatase

64. Which of the following is the best diagnostic test to establish the diagnosis of cubital tunnel syndrome?

(1) Sensory nerve conduction velocity, finger to wrist
(2) Mixed nerve conduction velocity, finger to wrist
(3) Motor nerve conduction velocity across the elbow
(4) Motor conduction, elbow to axilla

65. Which of the following occurs with myopathies?

(1) Focal demyelination

(2) High amplitude – long duration motor unit potentials

(3) Small amplitude – short duration motor unit potentials

(4) Nerve conduction velocity slowing

66. Loosening of the acetabular component in a cemented total hip arthroplasty most often occurs at -

(1) Bone cement interface (2) Within the cement

(3) Prosthesis – cement interface (4) Within the bone

67. The best index to measure acetabular deficiency in the coronal plane is -

(1) Tear drop ratio (2) Hilgenreiner angle

(3) Center edge angle of Wiberg (4) Leg length measurement

68. The anterolateral (Watson - Jones) approach to the hip dissects in an interval between -

(1) Gluteus medius & gluteus minimus

(2) Tensor fasciae latae and rectus femoris

(3) Gluteus medius and tensor fascia latae muscles

(4) Gluteus maximus

69. The position putting a total hip arthroplasty most at risk for an anterior dislocation is -

(1) flexion, adduction, internal rotation (2) extension, adduction, external rotation

(3) flexion, abduction, internal rotation (4) flexion, adduction, external rotation

70. The most common complication following high tibial osteotomy for treatment of medial compartment knee arthrosis is -

(1) Neurovascular injury (2) Undercorrection

(3) Overcorrection (4) Patella Baja

71. During the implantation of a cementless acetabular component in total hip arthroplasty, placement of a screw in the anterior superior quadrant puts which of the following structure at risk for damage?

(1) Sciatic nerve (2) Internal iliac vessels

(3) External iliac vessels (4) Femoral vessels

72. Varus intertrochanteric osteotomy for coxa valga commonly produces which of the following results?

(1) Decreased abductor lever arm
(2) Increased hip joint reaction force
(3) Increased center edge angle
(4) Abductor lag and lurch

73. After cementing in a total knee replacement for a valgus knee, you find that it remains tight laterally in extension. The next most appropriate step is to?

(1) Carry out a medial release.
(2) Carry out a medial release and increase the size of the polyethylene insert.
(3) Release the iliotibial band.
(4) Release popliteus.

74. The term internal impingement is used in throwers to describe a condition where the posterosuperior glenoid labrum impinges on which structure?

(1) The anterior glenohumeral ligaments.
(2) The posterior glenohumeral ligaments.
(3) The biceps tendon.
(4) The posterior rotator cuff.

75. Which of the following benign bone tumor may occasionally (about 22) metastasize to the lungs?

(1) Chondromyxoid fibroma
(2) Giant cell tumor grade II
(3) Osteochondroma
(4) Fibrous dysplasia

76. A 30-year-old male presents with a bony growth arising from the proximal phalanx of his left middle finger which appeared 3 months ago and is steadily increasing in size, and now causing discomfort. He denies a history of trauma. Radiographs demonstrate an irregular bony mass arising from the dorsolateral surface of the proximal phalanx. The matrix of the lesion contains mature bone. What is the diagnosis?

(1) Osteochondroma
(2) Nora's disease
(3) Periosteal chondroma
(4) Parosteal osteosarcoma

77. Curettage and grafting is acceptable treatment for all of the following lesions, EXCEPT -

(1) Osteoblastoma
(2) Aneurysmal bone cyst
(3) Osteofibrous dysplasia
(4) Chondromyxoid fibroma

78. Compared to historical causes of revision after total knee replacement, which of the following statement is most accurate?

(1) Infection is now the most frequent cause for late revision.

(2) Polyethylene wear is no longer the major cause for revision.

(3) Aseptic loosening is now the most frequent cause for early revision.

(4) The percentage of revisions for instability and malalignment has increased.

79. A 78-year-old female undergoes total hip arthroplasty through a minimally invasive surgical approach. During insertion of a metaphyseal fixation stem with a cementless press – fit technique, a crack in the calcar is identified. The stem is removed, two cable wires are passed around the calcar, and the same stem is reinserted. Which of the following statement is true?

(1) The patient should be advised she is at greater risk of stem subsidence and early revision.

(2) Female sex is a risk factor for intra-operative calcar fracture.

(3) A better outcome would be expected if a long – stem diaphyseal fixation stem had been inserted after recognition of the calcar fracture.

(4) Minimally invasive surgical approach is not a risk factor for intraoperative fracture.

80. Which of the following best describes normal tibiofemoral joint kinematics?

(1) The femur undergoes internal rotation with knee flexion.

(2) The lateral femoral condyle remains stationary on the lateral tibia plateau during knee flexion from 0 to 120 degrees.

(3) The tibia undergoes internal rotation with knee flexion.

(4) Beyond 120 degrees of flexion only the lateral femoral condyle participates in femoral rollback.

81. Resection of the posterior cruciate ligament during total knee arthroplasty simulates which of the following techniques below?

(1) Excessive distal femur resection (2) Excessive distal femur augmentation

(3) Excessive posterior femur resection (4) Oversized femoral component

82. What medication has been shown to decrease osteolysis after total joint replacement surgery?

(1) Bisphosphonates (2) NSAIDs

(3) TNF – alpha inhibitors (4) Calcium and vitamin D supplementation

83. In a patient undergoing total knee arthroplasty, the femoral and tibial bone resections can be done using intra-or extra-medullary alignment systems. Extra-medullary guidance systems have what benefit over intra-medullary guidance systems?

(1) Decreased fracture risk

(2) Decreased embolization risk

(3) Decreased surface area available for cement interdigitation

(4) Increased risk of blood loss and/or transfusion requirement

84. Which of the following is true of the scapula during an overhead throwing motion?

(1) It maximally retracts on ball release.

(2) It protracts during late cocking to prevent impingement on the rotator cuff.

(3) It must rotate in the cocking and acceleration phases to prevent impingement on the rotator cuff.

(4) It must remain fixed during the throwing motion to impart maximal energy.

85. When performing an arthroscopic distal clavicle excision for acromioclavicular joint arthrosis, which of the following structures must be preserved to prevent post-operative anteroposterior instability of the clavicle?

(1) Trapezoid ligament

(2) Anterior and inferior acromioclavicular joint capsule

(3) Superior and posterior acromioclavicular joint capsule

(4) Coracohumeral ligament

86. The saphenous nerve is most likely to be injured with which of the following steps during an Anterior Cruciate Ligament (ACL) reconstruction with hamstring autograft?

(1) Incision for an anteromedial portal with the knee flexed

(2) Incision for an anteromedial portal with the knee extended

(3) Incision for an accessory medial portal with the knee flexed

(4) Hamstring harvest with the knee extended

87. A 20-year-old Division 1 football player is injured in practice. His treatment regimen includes immobilization of the knee in 120 degrees of flexion. What injury has this patient most likely sustained?

(1) Iliac crest contusion

(2) Avulsion fracture of the lesser trochanter

(3) Quadriceps contusion

(4) Hamstring rupture

88. Which of the following rehabilitation exercises provides for restoration of range of motion while limiting stress on the repair of a ruptured patellar tendon?

(1) Active open chain flexion, active closed chain extension

(2) Passive flexion, active closed chain extension

(3) Active closed chain flexion, active open chain extension

(4) Active flexion, passive extension

89. Which of the following is true regarding closure of the rotator interval in patients undergoing arthroscopic shoulder stabilization?

(1) It can lead to recurrent instability.

(2) It restricts external rotation predominately in the "arm cocking" phase of throwing.

(3) It restricts combined flexion and cross-body adduction.

(4) It restricts external rotation predominately with the arm at 0 degrees of shoulder abduction.

90. Following ACL reconstruction, which of the following tests most closely correlate with patient satisfaction with their reconstructed knee?

(1) KT-1000 manual maximum value (2) Lachman's test

(3) Anterior drawer test (4) Pivot shift test

91. Each of the following are indications for microvascular replantation, EXCEPT -

(1) Thumb amputation

(2) Index finger amputation in a child

(3) Through wrist amputation

(4) Long finger amputation through the proximal phalanx

92. All of the following variables have a negative impact on the outcomes of isolated meniscal allograft transplantation, EXCEPT-

(1) Axial malalignment
(2) Anterior cruciate ligament insufficiency
(3) The use of a fresh frozen graft
(4) Femoral condyle flattening

93. As a cemented femoral component of a total hip arthroplasty fails by cantilever bending a plain anteroposterior (AP) pelvic radiograph will reveal-

(1) Radiolucent lines in Gruen zones 1 to 7 inclusive.
(2) Cement mantle fracture in Gruen zones 2 and 6.
(3) Radiolucent lines in Gruen zones 4 and 5.
(4) Radiolucent lines in Gruen zones 1, 2, 6 and 7.

94. Which of the following factors minimize patellar maltracking in TKA?

(1) Medialization of femoral component
(2) Medialization of patellar component
(3) Internal rotation of femoral component
(4) Internal rotation of tibial component

95. What is the most common external cause of snapping hip syndrome?

(1) Iliotibial band tightness
(2) Iliopsoas tendinitis
(3) Labral tear
(4) Femoro – acetabular impingement

96. Which nerve is responsible for referred hip pain to knee?

(1) Lateral femoral cutaneous nerve
(2) Sciatic Nerve
(3) Femoral nerve
(4) Obturator nerve

97. Indicator of ACL tear is -

(1) Pellegrini – stieda sign
(2) Squared off lateral femoral condyle sign
(3) Segond sign
(4) Double PCL sign

98. In Judet view of the pelvis, the right obturator oblique view shows best -

(1) Anterior wall and posterior column of (R) Acetabulum
(2) Anterior column and posterior wall of (R) Acetabulum
(3) (R) obturator foramen
(4) (R) Sacroiliac Joint

99. 'Validity' describes whether a clinical instrument or test -

(1) produces consistent scores in similar situations

(2) produces a result that is statistically significant

(3) produces measurements that represent reality or the true measurements

(4) produces similar results with repeated measurements

100. Which of the following is absolute contraindication of standard total shoulder arthroplasty?

(1) Asymmetric posterior glenoid wear

(2) Anterio-superior glenohumeral instability

(3) Irreparable supraspinatus tear

(4) Failed prior hemiarthroplasty

101. In hand surgery, which area is called no man's land?

(1) Within the carpal tunnel

(2) Distal to insertion of Flexor Digitorum Superficialis

(3) Between distal palmar crease and flexor crease of PIP

(4) Proximal to carpal tunnel

102. Gamekeeper's thumb is -

(1) Thumb IP joint ulnar collateral ligament rupture

(2) Thumb IP joint radial collateral ligament rupture

(3) Thumb MCP joint radial collateral ligament rupture

(4) Thumb MCP joint ulnar collateral ligament rupture

103. Structural integrity of collateral ligaments are best tested by -

(1) Varus / Valgus stress test in full extension

(2) Varus / Valgus stress test in full Flexion

(3) Varus / Valgus stress test in 30° of Flexion

(4) Varus / Valgus stress test in 90° of Flexion

104. Which of the following should be avoided during total knee arthroplasty to avoid lateral patellar subluxation?

(1) Internal rotation of the tibial component

(2) External rotation of the femoral component

(3) Lateral placement of the tibial component

(4) Lateral placement of the femoral component

105. A muscle contraction during which tension is constant throughout the range of motion but muscle length changes is referred to as-

(1) Isometric
(2) Plyometric
(3) Isokinetic
(4) Isotonic

106. In uncemented arthroplasty of hip, the stem remains attached to the bone by -

(1) Bone ingrowth / overgrowth over the surface of the stem
(2) Mechanical bonding between the stem and bone
(3) Press fitting of the stem in tight canal
(4) Adhesive properties of the stem

107. The medial and lateral joint surfaces have different tibiofemoral geometry. How does this affect the kinematics of normal knee movement from full extension into flexion?

(1) Tibia will externally rotate
(2) Distal femur will pivot about a medial axis of the knee
(3) Distal femur will translate anteriorly on the tibia
(4) Distal femur will pivot about a lateral axis of the knee

108. Osteochondritis dissecans of the elbow most commonly occurs at this location -

(1) Trochlea
(2) Capitellum
(3) Olecranon
(4) Coronoid

109. Calcification of menisci is seen in -

(1) Hyperparathyroidism
(2) Pseudogout
(3) Renal Osteodystrophy
(4) Acromegaly

110. Which of the following patient scenarios is most appropriate for reverse total shoulder arthroplasty?

(1) A 40-year-old laborer with severe glenohumeral arthritis and irrepairable rotator cuff tear.
(2) A 40-year-old with a painful proximal humerus malunion.
(3) A 75-year-old woman with severe arthritis and active overhead motion.
(4) A 75-year-old man with painful arthritis and a massive irrepairable rotator cuff tear.

111. What tendon has an intra-articular location in the knee joints?

(1) Patellar (2) Popliteal

(3) Semitendinosus (4) Biceps femoris

112. Synovial fluid of low viscosity is seen in all, EXCEPT -

(1) Gout (2) Septic arthritis

(3) Osteoarthritis (4) Rheumatoid arthritis

113. Joint erosion is not a feature in -

(1) SLE (2) Rheumatoid arthritis

(3) Gout (4) Psoriasis

114. A 65-year-old diabetic male with forefoot gangrene is evaluated for possible amputation. When discussing the amputation levels with the patient, which of the following should be noted to require the greatest increase in energy expenditure for ambulation?

(1) Syme amputation (2) Unilateral transtibial amputation

(3) Transfemoral amputation (4) Bilateral transtibial amputation

115. Tarsometatarsal amputation is also known as -

(1) Syme's amputation (2) Chopart's amputation

(3) Lisfranc amputation (4) Pirogoff amputation

116. Which of the following variables is not predictive of poor healing of diabetic foot ulcers?

(1) Transcutaneous oxygen pressure < 20 mmHg

(2) Systolic blood pressure > 140 mmHg

(3) Ankle – brachial index < 0.45

(4) Albumin < 3.0 g/dL

117. Patient presents with crush injury to lower limb. Surgeon is concerned with sepsis and gangrene. Which can help to decide between amputation and limb salvage?

(1) GCS score (2) MESS

(3) ASIA guidelines (4) Gustilo – Anderson classification

118. In limb reconstruction, what is done first?

(1) Artery anastomosis (2) Vein repair

(3) Nerve repair (4) Bone Fixation

119. Ring sequestrum is seen in -

(1) Typhoid osteomyelitis
(2) Chronic osteomyelitis
(3) Amputation stump
(4) Tuberculous osteomyelitis

120. In patients with an extremity-based osteosarcoma without metastasis, all of the following are risk factors for disease progression and poor outcomes, EXCEPT-

(1) High histologic grade
(2) Low serum level of alkaline phosphatase at diagnosis
(3) Large tumor volume
(4) Inadequate surgical margins following resection

121. A 56-year-old female is referred for a second opinion after placement of an intramedullary nail through a presumed metastatic lesion in her proximal femur. Final biopsy results from the lesion show a high-grade chondrosarcoma and staging studies show this to be an isolated site of disease, what treatment should be recommended?

(1) Intramedullary nail removal and radiotherapy to the limb
(2) Systemic chemotherapy and keep nail in place to prevent fracture
(3) Wide proximal femoral resection and hemiarthroplasty followed by radiotherapy
(4) Wide resection including hip disarticulation

122. All of the following are necessary steps in bony metastasis of a malignant cell, EXCEPT-

(1) Intravasation
(2) Target tissue localization
(3) Induction of angiogenesis
(4) Direct stimulation of osteoclasts

123. A 13 year old girl presents with an isolated distal femur osteosarcoma that extends into the soft tissue. Work-up is negative for metastasis, but biopsy reveals a high grade lesion. What is the stage of this tumor by the Musculoskeletal Tumor Society system?

(1) I A
(2) II A
(3) I B
(4) II B

124. A 58-year-old male is referred to your clinic for a sacral mass found on a lumbar spine MRI. He brought a pathology report from a biopsy that was performed at an outside hospital that states "primary malignant bone tumor of notochordal remnant cells." Staging work – up showed no distant disease. Which of the following describes the best treatment strategy for this patient?

(1) Neo-adjuvant chemotherapy, surgical excision, maintenance chemotherapy

(2) Wide surgical excision

(3) Tumor debulking, chemotherapy

(4) Radiation therapy

125. A 25-year-old tourist slips on a sand dune, falling onto an outstretched right elbow. He is taken to the local teaching hospital and radiographs demonstrate a significantly comminuted radial head fracture and coronoid base fracture. His elbow is reduced and splinted. To restore stability and allow early range of motion, which of the following will most likely need to be performed in most cases?

(1) Radial head fixation or replacement

(2) Radial head fixation or replacement and coronoid fixation

(3) Radial head fixation or replacement, coronoid fixation and Lateral Ulnar Collateral Ligament (LUCL) repair

(4) Radial head fixation or replacement, coronoid fixation, LUCL and Medial Ulnar Collateral Ligament (MUCL) repair

126. Trendelenburg test is positive due to injury to -

(1) Superior Gluteal Nerve (2) Inferior Gluteal Nerve

(3) Femoral Nerve (4) Obturator Nerve

127. A Bennett's fracture is difficult to maintain in a reduced position because of the pull of the -

(1) Flexor pollicis longus (2) Flexor pollicis brevis

(3) Abductor pollicis longus (4) Extensor pollicis brevis

128. What is the most common clinically significant preventable complication secondary to the treatment of a displaced talar neck fracture?

(1) Osteonecrosis (2) Non union

(3) Mal union (4) Infection

129. Which of the following statement is wrong concerning the blunt trauma?

(1) Small child and a large adult have a markedly different level of energy transfer in a high speed RTA

(2) Shear strain injuries result from rapid acceleration or deacceleration

(3) Tensile strain results from direct compression of tissues

(4) The tolerance of biological tissue to trauma is directly proportional to elasticity of tissue

130. A Mangled Extremity Severity Score (MESS) of 8 indicates -

(1) Amputation should be performed.

(2) Amputation should not be performed.

(3) The likelihood of successful reconstruction is zero.

(4) The limb is severely injured, but both reconstruction or amputation maybe reasonable.

131. Putti-Platt operation involves tightening of which muscle?

(1) Supraspinatus (2) Subscapularis

(3) Pectoralis major (4) Pectoralis minor

132. During anterior approach of the shoulder, excessive traction on the congenital tendon is most likely to result in loss of -

(1) Elbow flexion (2) Shoulder flexion

(3) Shoulder internal rotation (4) Shoulder Abduction

133. A 32-year-old man sustains a Lisfranc fracture dislocation. Which of the following is the most important factor in predicting a satisfactory outcome?

(1) Severity of initial injury.

(2) The state of the articular cartilage.

(3) The age of the patient.

(4) Whether or not a compensation claim is involved.

134. A 30-year-old woman is involved in a road traffic accident and is found to have a pelvic symphysis separation of 4 cm and a sacral fracture. She undergoes a normal secondary survey and is haemodynamically stable. Definitive fixation should involve which of the following?

(1) Skeletal traction for 3 months.

(2) Internal fixation of the symphysis pubis with anterior external fixation.

(3) Internal fixation of the symphysis pubis and internal fixation of the sacrum.

(4) Posterior only external fixation.

135. A football player sustains a suspected Acromioclavicular joint (ACJ) separation. Which of the following is the most appropriate radiographic view to evaluate the ACJ?

(1) Stryker notch view
(2) Serendipity view
(3) Zanca view
(4) Supraspinatus outlet view

136. A patient has a swollen, tendon hindfoot with focal tenderness beneath the heel after falling 12 feet. Radiographs and CT scans are negative. An MRI scan would most likely reveal which of the following conditions?

(1) Occult subcortical fracture of the calcaneus
(2) Acute osteonecrosis
(3) Rupture of the posterior tibial tendon
(4) Rupture of the plantar fascia

137. A 22-month-old girl has cerebral palsy. Which of the following findings is a good prognostic indicator of the child's ability to walk in the future?

(1) Asymmetric tonic neck reflex
(2) Moro reflex
(3) Extensor thrust
(4) Positive parachute reaction

138. Hypothyroidism is most commonly associated with which of the following paediatric conditions?

(1) Legg Calve Perthes
(2) Slipped capital femoral epiphysis
(3) Toxic synovitis
(4) Achondroplasia

139. Sprengel deformity is associated with all, EXCEPT -

(1) Dextrocardia
(2) Klippel – Feil syndrome
(3) Congenital scoliosis
(4) Diastematomyelia

140. A genetic abnormality in the cyclic AMP signalling pathway is involved in which of the following conditions?

(1) Achondroplasia
(2) Hypochondroplasia
(3) Multiple hereditary exostosis
(4) Fibrous dysplasia

141. Dwarfism caused by a defect of Fibroblast Growth Factor Receptor – 3 (FGFR3) is associated with all of the following traits, EXCEPT -

(1) Rhizomelic limb shortening
(2) Normal intelligence
(3) Frontal bossing
(4) Cervical spine instability

142. Which of the following conditions is inherited in an X – linked dominant fusion?

(1) Hemophilia A
(2) Marfan syndrome
(3) Familial hypophosphatemic rickets
(4) Sickle cell anemia

143. All of the following are described procedures for CTEV, EXCEPT -

(1) Dwyer Osteotomy
(2) Akron Dome Osteotomy
(3) Lichtblau Procedure
(4) Dillwyn – Evans Procedure

144. In Nail-patella syndrome, the patella is -

(1) High lying patella
(2) low lying patella
(3) Small or absent
(4) Large

145. Which is false about radiological features in DDH?

(1) Acetabular index increases
(2) Centre edge angle decreases
(3) Alpha angle decreases (measured on USG)
(4) Beta angle decreases (measured on USG)

146. Ponseti method of clubfoot cast treatment starts with which of the following steps?

(1) Pronation of forefoot
(2) Dorsiflexion of the ankle
(3) Dorsiflexion of first ray
(4) Internal rotation of foot

147. A 13-year-old boy has a left slipped capital femoral epiphysis which has displaced 75%. He is unable to bear weight on the limb, other hip is normal. Your preferred treatment is as follows -

(1) Hip spica cast
(2) Gentle reduction of the slip and fixation with cannulated screw
(3) Free vascularized fibular grafting
(4) Subtrochanteric osteotomy

148. Which of the following is associated with a mutation in the GNAS gene?

(1) Fibrosarcoma
(2) Chondroblastoma
(3) Fibrous dysplasia
(4) Osteoblastoma

149. Which of the following is not a typical deformity/gait disturbance seen in cerebral palsy?

(1) Toe walking
(2) Wide-based gait
(3) Hip adduction
(4) Forearm supination

150. Trethowan's sign is seen in -

(1) Transient synovitis hip (2) Perthes disease

(3) SCFE (4) Coxa vara

151. Features of Klippel – Feil Syndrome include all, EXCEPT -

(1) Fusion of 2 or more cervical vertebrae

(2) Low hairline at the back of head

(3) Short Neck

(4) Webbed Fingers

152. Most common site of Actinomycosis amongst the following is -

(1) Cervicofacial (2) Foot

(3) Rib (4) Tibial metaphysis

153. First Neurological sign in TB of thoracic spines is -

(1) Motor involvement (2) Sensory loss

(3) Bowel/ Bladder involvement (4) Increased deep tendon reflexes

154. All are associated with chronic osteomyelitis, EXCEPT -

(1) Sequestrum (2) Amyloidosis

(3) Myositis ossificans (4) Metastatic abscesses

155. Tuberculous arthritis of knee in advanced cases leads to -

(1) Charcot joints

(2) Bony ankylosis

(3) Fibrous ankylosis

(4) Subluxation with internal rotation of tibia

156. Felon is -

(1) Infection of nail fold

(2) Infection of pulp space

(3) Infection of thenar space

(4) Infection of Midpalmar space

157. A 72-year-old who underwent a total knee replacement 6 weeks ago presents with increasing knee pain and swelling, with raised inflammatory markers. An aspiration of the joint cultures coagulase-negative staphylococcus. The next most appropriate step in management is -

(1) Single-stage revision plus intravenous antibiotics.

(2) Two-stage revision, with cement spacer plus intravenous antibiotics.

(3) Intravenous antibiotics.

(4) Open washout/debridement, polyethylene exchange and intravenous antibiotics.

158. Which of the following is not a component of Kocher's criteria when diagnosing septic arthritis of the hip?

(1) Non-weight-bearing on the affected side

(2) Erythrocyte Sedimentation Rate (ESR) greater than 40 mm/hr

(3) Fever

(4) White Blood Cell (WBC) count of > 12000 mm^3

159. Which of the following inflammatory mediators has been most closely associated with the magnitude of the inflammatory response to blunt trauma and with the development of Multiple Organ Dysfunction Syndrome (MODS)?

(1) Interleukin – 1 (IL-1).

(2) Beta-Human Chorionic Gonadotropin (β-HCG).

(3) Tumour Necrosis Factor-beta (TGF-β).

(4) Interleukin - 6 (IL-6).

160. A 3-year-old African – American child presents with irritability, fever and a warm, swollen leg. Imaging shows an area concerning for osteomyelitis and transcortical biopsy reveals multiple Salmonella species. This child most likely also has which of the following conditions?

(1) Osteogenesis imperfecta **(2)** Child abuse

(3) Thalassemia **(4)** Sickle cell anemia

161. Most common type of Tuberculosis in spine is -

(1) Appendiceal **(2)** Anterior

(3) Central **(4)** Paradiscal

162. 'Caries sicca' is seen in -

(1) Shoulder **(2)** Spine

(3) Wrist **(4)** Hip

163. Kanavel's sign is positive in -

(1) Tenosynovitis
(2) Trigger Finger
(3) Dupuytren's contracture
(4) Carpal Tunnel Syndrome

164. Tom Smith's arthritis manifests as -

(1) Lengthening of limb
(2) Hip Stiffness
(3) Ankylosis
(4) Hip instability

165. The most common organism causing osteomyelitis in drug abusers is -

(1) Staphylococcus
(2) Klebsiella
(3) E-coli
(4) Pseudomonas

166. Coronary Ligament of knee connects -

(1) Two anterior horns of menisci
(2) Two posterior horns of menisci
(3) Menisci and Tibial condyle
(4) Menisci and collateral ligaments

167. Which of the following ligament prevents hyperextension of the hip?

(1) Iliofemoral ligament
(2) Ischiofemoral ligament
(3) Pubofemoral ligament
(4) Ligamentum teres

168. Which of the following is not a prerequisite of gait?

(1) Foot prepositioning
(2) Stability instance
(3) Adequate stride length
(4) Conservation of energy

169. Finkelstein test is used for diagnosis of -

(1) Carpal Tunnel Syndrome
(2) Thoracic Outlet Syndrome
(3) De Quervain's Tenosynovitis
(4) Cervical Myelopathy

170. Bouchard's nodes are seen in -

(1) Knee Joints
(2) Wrist Joints
(3) Proximal Interphalyngeal Joints
(4) Distal Interphalyngeal Joints

171. Which of the following incorrectly describes changes in articular cartilage?

(1) Water content increases in osteoarthritis.

(2) Water content decreases as part of ageing.

(3) Young's modulus of elasticity increases in ageing.

(4) Chondrocyte number increases in ageing.

172. 32-year-old man presents with a 2 month history of back and right-sided leg pain. He walked with right sided Trendelenburg gait. The most likely diagnosis is-

(1) An ipsilateral paracentral disc herniation at L3 - L4.

(2) An ipsilateral paracentral disc herniation at L5 - S1.

(3) An ipsilateral far lateral disc herniation at L4 - L5.

(4) An ipsilateral far lateral disc herniation at L5 - S1.

173. Which of the following is true regarding Superior Mesenteric Artery (SMA) syndrome?

(1) The condition often occurs in overweight female patients.

(2) This syndrome is also known as cast syndrome.

(3) The condition occurs following curve correction as a result of an increase in the angle between the aorta and the superior mesenteric artery.

(4) The condition is due to an ischemic event of the SMA.

174. All of the following contribute to the wrist and hand deformity in rheumatoid arthritis, EXCEPT-

(1) Volar subluxation of the Extensor Carpi Ulnaris (ECU).

(2) Radioscaphocapitate ligament failure.

(3) Scaphoid extension.

(4) Supination of the carpus on the forearm.

175. Motor supply of axillary nerve is -

(1) Supraspinatus (2) Subscapularis

(3) Infraspinatus (4) Teres minor

176. Nerve entrapped in arcade of Frohse -

(1) Medial Nerve (2) Ulnar Nerve

(3) Radial Nerve (4) PIN

177. Bisphosphonates are used for all, EXCEPT -

(1) Osteosclerosis

(2) Osteoporosis

(3) Osteolytic bone metastasis

(4) Paget's disease

178. A 35-year-old female presents with darkening of urine on standing, joint pain and stiffness and pigment deposition in joints. What is most probable diagnosis?

(1) Phenylketonuria

(2) Alkaptonuria

(3) Gout

(4) Tyrosinemia

179. Which of the following antibiotics is bacteriostatic at therapeutic serum concentrations?

(1) Penicillin

(2) Cefoxitin

(3) Clindamycin

(4) Vancomycin

180. Titanium, an extremely reactive metal is one of the most biocompatible implant material because -

(1) Nothing in the biologic environment reacts with titanium.

(2) Physiologic condition inhibit titanium reactions.

(3) Protein coat the titanium and insulate it from the body.

(4) Titanium spontaneously forms a stable oxide coating.

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