

पुस्तिका में पृष्ठों की संख्या : 32  
Number of Pages in Booklet : 32

पुस्तिका में प्रश्नों की संख्या : 180  
No. of Questions in Booklet : 180

प्रश्न-पत्र पुस्तिका संख्या /  
Question Paper Booklet No.

5202665

**BSAPOr-02**

Paper Code : 16

SUBJECT : Orthopaedics

समय : 3.00 घण्टे  
Time : 3.00 Hours

परीक्षा दिनांक :- 11/08/2020

परीक्षा समय :- 2:00 To 5:00

अधिकतम अंक : 180  
Maximum Marks : 180

प्रश्न-पत्र पुस्तिका एवं उत्तर पत्रक के पेपर सील/पॉलिथीन बैग को खोलने के बाद परीक्षार्थी प्रश्न-पत्र पुस्तिका संख्या को उत्तर पत्रक पर सावधानीपूर्वक अंकित करें। इसमें किसी भी प्रकार की त्रुटि होने पर जिम्मेदारी अभ्यर्थी की होगी।

The candidate fill the Question Paper Booklet No. on Answer Sheet carefully after opening the Paper Seal / Polythene bag. Candidate himself shall be responsible for any error.

**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 प्वाइंट 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-पत्र निकाल कर ध्यान से केवल नीले बॉल पॉइंट 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 है। 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।

**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.

**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.

16-□



1. Double density sign on bone scan seen in

- (1) Osteoid osteoma
- (2) Osteochondroma
- (3) Unicameral bone cyst
- (4) Ewing's Sarcoma

2. Cortical desmoid occurs in

- (1) Posterolateral aspect of distal femoral metaphysis.
- (2) Postero medial aspect of distal femoral metaphysis.
- (3) Postero medial aspect of proximal tibial metaphysis.
- (4) Anterior lateral aspect of proximal tibial metaphysis.

3. Classic jailhouse appearance is seen in

- (1) Aneurysmal bone cyst
- (2) Hemangioma
- (3) Brown tumour
- (4) Unicameral bone cyst

4. Langerhan's cell histiocytosis refer to group of disorder consist all of the following except

- (1) Eosinophilic granuloma
- (2) Chondromyxoid fibroma
- (3) Hand-schüller-christian disease
- (4) Letterer-siwe disease

5. On histological examination small blue cells are found in all of the following except

- (1) Ewing's sarcoma
- (2) Osteosarcoma variant
- (3) Lymphoma
- (4) Chondrosarcoma

6. Which of the following statement is incorrect ?

- (1) Chordoma are second most common primary malignancy in spine.
- (2) Commonest site for chordoma is base of skull.
- (3) Chordoma occurs in fourth to seventh decade of life.
- (4) There is a marked male predominance in incidence of chordoma.

7. Cave of Retzius contains
- (1) Bladder, prostate, thin tissue
  - (2) Bladder, prostate, iliace vessel
  - (3) Prostate, iliace vessel
  - (4) Spermatic cord
8. Which of following is true for adductor compartment of thigh ?
- (1) superficial layer contains adductor longus and gracilis.
  - (2) middle layer contains adductor brevis.
  - (3) deep layer contains adductor magnus.
  - (4) All of the above.
9. Nerve supply of semimembranosus is
- (1) L4-L5
  - (2) L3 L4 L5
  - (3) S1 S2
  - (4) L5 S1 S2

10. Relation of popliteal vein to popliteal artery in popliteal fossa is
- (1) Medial to artery
  - (2) Anterior to artery
  - (3) Lateral to artery
  - (4) Posterior to artery
11. All are true regarding congenital persistent dislocation of patella except
- (1) Required early surgical correction.
  - (2) Often obvious in infancy.
  - (3) Patella dislocates and reduces spontaneously with flexion and extension of knee joint.
  - (4) Frequently associated with generalized syndrome.
12. All are true about streeter band of soft tissue of leg except
- (1) Is a rare condition 1 : 10,000
  - (2) Associated with other anomalies
  - (3) Most were present in zone 1 of lower limb
  - (4) Fractures of tibia and fibula may be present at the level of the streeter band



13. Lobster foot also called is

- (1) Cleft foot
- (2) Cavus foot
- (3) Club foot
- (4) Macroductyly foot

14. All are true regarding percutaneous Achilles tenotomy in clubfoot except

- (1) Prevent development of rocker bottom deformity.
- (2) Done when maximum abduction and 15 degree of dorsiflexion is achieved by casting.
- (3) Post tenotomy cast is applied in abduction and dorsiflexion for one week.
- (4) Can be done under local anesthesia in clinic setting.

15. Dywer osteotomy is

- (1) Osteotomy of calcaneus, medial opening wedge.
- (2) Osteotomy of calcaneus, lateral closing wedge.
- (3) Calcaneo-cuboid osteotomy, lateral opening wedge.
- (4) Calcaneo-cuboid osteotomy, medial opening wedge.

16. Most common site of infection of actinomycosis is

- (1) Vertebrae
- (2) Mandible
- (3) Ribs
- (4) Calcaneus

17. The main difference between tubercular granuloma and granuloma of other granulomatous condition is

- (1) presence of giant cell
- (2) presence of epithelioid cells
- (3) presence of caseation necrosis
- (4) presence of large number of lymphocytes

18. Most commonly affected bone in Hydatid disease is

- (1) Vertebrae
- (2) Pelvic bone
- (3) Ribs
- (4) Scapula

19. All of the following are causes of secondary gout, except
- (1) renal failure
  - (2) diuretic use
  - (3) myeloproliferative disorder
  - (4) rheumatoid arthritis

20. Center of medullary cavity of tibia is on

- (1) Lateral half of tibial tuberosity
- (2) Central part of tibial tuberosity
- (3) Medial half of tibial tuberosity
- (4) Posterolateral half of tibial tuberosity

21. All are true regarding upper 1/3 fracture of tibia except

- (1) Herzog bend comes at the level of fracture site and causes angulation.
- (2) Malunion may occur with Valgus angulation, flexion deformity and posterior translation.
- (3) Entry portal must be medial, directly at the edge of articular margin.
- (4) Muscles of anterior compartment contribute to valgus angulation.

22. Which is not the type of synovial joint ?

- (1) Arthrodiar
- (2) Ginglymus
- (3) Trochoid
- (4) Harmonia

23. Complete articular disc are found in all of following except

- (1) Acromioclavicular joint
- (2) Mandibular joint
- (3) Sternoclavicular joint
- (4) Joint between distal ulna and carpus

24. All are bursae around the shoulder joint except

- (1) Subacromial bursae
- (2) Subdeltoid bursae
- (3) Subscapular bursa
- (4) Bursae under the supraspinatus



25. Rhomboid ligament attachment are

- (1) 1<sup>st</sup> rib and costal cartilage to costal tubercle of clavicle.
- (2) Inner end of clavicle to manubrium sterni.
- (3) Coracoid process to clavicle.
- (4) Posterolateral part of corocoid process to apex of acromion.

26. Strongest ligament in the body is

- (1) Iliofemoral ligament
- (2) Ischiofemoral ligament
- (3) Pubofemoral ligament
- (4) Patellar ligament

27. Which statement is false regarding extensor compartment of wrist ?

- (1) 1<sup>st</sup> compartment contains abductor pollicis longus and extensor pollicis brevis.
- (2) 2<sup>nd</sup> compartment contains extensor carpi radialis longus and bravis.
- (3) 3<sup>rd</sup> compartment contains extensor pollicis longus and extensor communis digitorum.
- (4) 6<sup>th</sup> compartment contents extensor carpi ulnaris.

28. Meralgia paraesthetica – all statement are true except

- (1) Caused by compression of lateral cutaneous nerve of thigh.
- (2) Pain and paraesthesia present in lateral aspect of thigh.
- (3) Site of compression is beneath the inguinal ligament mid to anterior superior iliac spine.
- (4) Pain relieved in recumbent position.

29. All are true regarding measurement of length of long bone, except

- (1) Humerus-angle of acromion to lateral epicondyle of humerus.
- (2) Radius-lateral epicondyle of humerus to tip of styloid process of radius.
- (3) Ulna-medial epicondyle of humerus to the tip of ulner styloid.
- (4) Tibia-medial knee joint line to lower border of medal-malleolus.

30. Codman tumour is also known as

- (1) Enchondroma
- (2) Osteochondroma
- (3) Osteoid osteoma
- (4) Chondroblastoma

31. All are true of Osteochondroma, except

- (1) Sarcomatous changes occur in 10-15% of multiple osteochondromas.
- (2) Sarcomatous changes occur in 1% of solitary osteochondroma.
- (3) Cartilagenous cap measuring more than 2 cm suggest sarcomatous changes.
- (4) Multiple osteochondroma in multiple hereditary exostosis are more often pedunculated.

32. Adamantinoma of long tubular bones affect following bone most commonly

- (1) Tibia and fibula
- (2) Humerus
- (3) Femur
- (4) Radius and ulna

33. All are true of osteopoikilosis except

- (1) Autosomal recessive disease.
- (2) Osseous dysplasia consisting of multiple osteosclerotic foci.
- (3) Affect epiphysis and metaphysis of long bones.
- (4) Usually asymptomatic.

34. Which one of the following is wrong ?

- (1) Osteonecrosis of lunate is Kienbock diseases.
- (2) Osteonecrosis of scaphoid is Preiser disease.
- (3) Osteonecrosis of lateral femoral condyle is Ahlback disease.
- (4) Osteonecrosis of metatarsal head is Kohler-Freiberg disease.

35. Following are the signs of flexion type of vertebral injury except

- (1) Wide disc space above involved vertebrae
- (2) Compression fragmentation of burst vertebral bodies
- (3) Anterolisthesis
- (4) Wide interspinous space



36. Bowler's thumb is

- (1) Rupture of extensor slip of distal phalanx.
- (2) Rupture of ulnar collateral ligament of 1<sup>st</sup> MCP joint.
- (3) Perineural fibrosis of ulnar digital nerve of thumb.
- (4) Tenovaginitis of flexor tendon of thumb.

37. Durkan test is done to diagnose

- (1) Dequervains tenosynovitis
- (2) Carpal tunnel syndrome
- (3) Ulnar tunnel syndrome
- (4) Trigger thumb

38. Dequervains disease affects tendon of

- (1) Abductor pollicis longus and extensor pollicis longus.
- (2) Extensor pollicis longus.
- (3) Abductor pollicis longus and extensor pollicis brevis.
- (4) Adductor pollicis and extensor pollicis brevis.

39. Swimming pool granuloma found in condition of

- (1) Mycobacterium tuberculosis infection of hand
- (2) Non tuberculous mycobacterium infection of hand
- (3) Gout
- (4) Rheumatoid arthritis

40. Most common tarsal coalition is

- (1) Talocalcaneal
- (2) Talonavicular
- (3) Calcaneocuboid
- (4) Naviculocuboid

41. Tailor's bunion present over

- (1) Lateral side of fifth metatarsal.
- (2) Medial side first metatarsal
- (3) Lateral side of 1<sup>st</sup> metatarsophalangeal joint.
- (4) Medial side of 5<sup>th</sup> metatarsophalangeal joint.



42. Anterior drawer sign used to demonstration

- (1) Anterior cruciate ligament tear
- (2) Anterior talofibular ligament tear
- (3) Deltoid ligament
- (4) Spring ligament

43. Pseudo locking of knee occurs in following condition

- (1) Meniscus injury
- (2) Chondromalacia patella
- (3) Housemaids knee
- (4) Posterior cruciate ligament injury

44. Pellegrini-stieda disease affects which of the following ?

- (1) Medial collateral ligament of knee
- (2) Lateral collateral ligament of knee
- (3) Tibial tuberosity
- (4) Under surface of patella

45. Examination findings of following can be used in pirani scoring system for CTEV except

- (1) Empty feet
- (2) Posterior crease
- (3) Ankle dorsiflexion
- (4) Medial border of foot

46. Coleman block test is used for assessment of

- (1) Congenital vertical talus
- (2) Pes planus
- (3) Pes cavus
- (4) Pes valgus

47. Following is incorrect regarding Hallux rigidus

- (1) Caused by Arthritis of first metatarsophalangeal joint.
- (2) Osteochondritis of first metatarsal head may be the cause in young patient.
- (3) Bunion is present over medial aspect of 1<sup>st</sup> metatarsophalangeal joint.
- (4) Male and female gets affected in equal frequency.



48. Following are true regarding radial tunnel syndrome except
- (1) Symptoms resemble tennis elbow.
  - (2) Weakness of MCP joint extension present.
  - (3) Resisted wrist extension may present pain.
  - (4) Electrodiagnostic test are not helpful.
49. All are true regarding Duchenne muscular dystrophy except
- (1) Sex linked inheritance disease.
  - (2) Gowers sign present on examination.
  - (3) Muscles of facial expression are not affected.
  - (4) By the age of 10-12 yrs, child usually lost ability to walk.
50. Commonest site of Osteofibrous dysplasia is
- (1) Anterior cortex of tibia
  - (2) Medial femoral condyle
  - (3) Proximal humerus
  - (4) Clavicle
51. Following are the principle of fracture treatment except
- (1) Stable reduction
  - (2) Preservation of blood supply
  - (3) Early active pain free mobilization
  - (4) Stable internal fixation
52. Minimum deformation required to break the bone is
- (1) 1 % of its length
  - (2) 4 % of its length
  - (3) 6 % of its length
  - (4) 2 % of its length
53. Following statement is incorrect regarding prebending of plate for internal fixation
- (1) Outer screw should be applied first.
  - (2) Prebending produces friction far from the bone.
  - (3) Torque applied without contact at fracture surface produces shear.
  - (4) When fixed to the bone plate compressed the far cortex as well.

54. All are true of 3.5 mm cortex screw.  
Except
- (1) Screw head is 6 mm in diameter
  - (2) Core diameter is 2.5 mm
  - (3) Pitch is 1.25 mm
  - (4) Drill bit for the gliding hole is 3.5 mm

55. Following is incorrect of tension band fixation
- (1) Plate or wire must be able to withstand tensile forces.
  - (2) An intact buttress of opposite cortex.
  - (3) Bone must not comminuted on either side.
  - (4) None of the above.

56. Following are indication of non operative treatment of proximal radius fractures in children except
- (1) > 5mm displacement of radial head or neck.
  - (2) < 30° degree angulation of neck, if age is > 10 years
  - (3) < 45° degree of angulation of neck, if age in < 10 years
  - (4) Full pronation and supination present

57. Which of the following is incorrect regarding indication for operative treatment of olecranon fractures in children ?

- (1) Fracture with incongruent articular surfaces.
- (2) Fracture with more than 2 mm displacement.
- (3) Acceptable alignment cannot be achieved with closed method.
- (4) None of the above.

58. Following are monteggia equivalent lesion except

- (1) Fracture of ulnar metaphysis with lateral dislocation of radial head.
- (2) Posterior dislocation of elbow.
- (3) Isolated dislocation of radial head.
- (4) Fracture of ulnar diaphysis with radial neck fracture.

59. Most common site of langer han's cell histiocytosis
- (1) Phalanges
  - (2) Scapula
  - (3) Pelvis
  - (4) Skull

60. Most common soft tissue sarcoma in children is
- (1) Liposarcoma
  - (2) Fibrosarcoma
  - (3) Rhabdomyosarcoma
  - (4) Myxofibrosarcoma

61. All are true regarding Brown-Sequard lesion except
- (1) It is defined as incomplete hemispherical cord lesion.
  - (2) Below the lesion ipsilateral upper motor neuron weakness.
  - (3) Below the lesion there is ipsilateral loss of skin sensibility.
  - (4) At the lesion ipsilateral loss of sensibility.

62. Most common type of spinal dysraphism is
- (1) Meningocele
  - (2) Myelomeningocele
  - (3) Open myelomeningocele
  - (4) Spina bifida occulta

63. Which of the following is an example of Hereditary Motor and Sensory Neuropathy (HMSN) except
- (1) Peroneal muscular atrophy
  - (2) Friedreich's ataxia
  - (3) Charcot-marie-tooth disease
  - (4) Benign spinal muscular atrophy

64. Which of the following is incorrect of clinical presentation of neuralgic amyotrophy ?
- (1) Winging of scapula
  - (2) Sudden onset of pain
  - (3) Wasting of shoulder girdle muscles
  - (4) No sensory loss

65. Following are the examples of complex regional pain syndrome except

- (1) Sudeck's dystrophy
- (2) Algodystrophy
- (3) Reflex sympathetic dystrophy
- (4) Fibromyalgia

66. All are correct regarding tinel sign except

- (1) Dysaesthesia caused by nerve percussion
- (2) Positive in neuropraxia
- (3) Elicited by percussing distal to proximal
- (4) Advances at a rate of 1 mm each day

67. Which of the following is incorrect about preganglionic lesion of brachial plexus ?

- (1) Paralysis of scapular muscles.
- (2) Absence of pain in involved hand.
- (3) Presence of horner's syndrome.
- (4) Hyper reflexia in lower limbs.

68. Most common rib fracture is

- (1) 1<sup>st</sup> to 3<sup>rd</sup> rib
- (2) 5<sup>th</sup> to 9<sup>th</sup> rib
- (3) 10<sup>th</sup> to 11<sup>th</sup> rib
- (4) 12<sup>th</sup> rib

69. During recovery of spinal shock following order is correct regarding return of cutaneous reflexes

- (1) Deep plantar response, bulbocavernous, cremasteric, Achilles, Babinski.
- (2) Cremasteric, deep plantar response, Babinski, bulbocavernous, Achilles.
- (3) Bulbocavernous, Babinski, cremasteric, deep plantar response, Achilles.
- (4) Achilles, Babinski, cremasteric, bulbocavernous, deep plantar.

70. Harris rule of 12 includes measurement of

- (1) Basion-axis interval
- (2) Basion-dens interval
- (3) Both of the above
- (4) Atlanto-dens interval



71. Cobb's angle is angle subtended between these two lines from superior and inferior adjacent uninjured vertebrae

- (1) Line drawn from superior end plate of superior vertebrae and inferior end plate of inferior vertebrae.
- (2) Superior end plate of superior vertebrae and superior end plate of inferior vertebrae.
- (3) Inferior end plate of superior vertebrae and inferior end plate of inferior vertebrae.
- (4) Inferior end plate of superior vertebrae and superior end plate of inferior vertebrae.

72. All are indication for operative treatment of odontoid fracture in younger patient except

- (1) Fracture displacement greater than 5 mm
- (2) Fracture angulation greater than  $5^{\circ}$
- (3) Neurological deficit
- (4) Substantial comminution

73. Hangman fracture is

- (1) Fracture of odontoid process.
- (2) Fracture of atlas with atlanto-axial dislocation.
- (3) Fracture of C2 pars with dislocation of C2-C3 facet joint.
- (4) Fracture of atlas alone.

74. Watson-Jones approach of hip is

- (1) Lateral approach
- (2) Anterolateral approach
- (3) Anterior approach
- (4) Posterolateral approach

75. Garden alignment index is used for

- (1) Classification of femoral neck fracture.
- (2) To measure the quality of reduction in femoral neck fracture.
- (3) To measure the quality of reduction in IT fracture femur.
- (4) None of the above.

76. Anatomical axis of femoral shaft relative to knee averages about
- (1) 6-7 degree of valgus
  - (2) 6-7 degree of varus
  - (3) 3-5 degree of valgus
  - (4) 3-5 degree of varus

77. SU classification is for
- (1) Periprosthetic fracture of distal femur relative to femoral component.
  - (2) Periprosthetic fracture tibia relative to tibial component.
  - (3) Periprosthetic fracture humerus.
  - (4) Fracture of patella related to patella component.

78. Following statement is incorrect regarding compartments of leg
- (1) Anterior compartment also contains deep paroneal nerve and anterior tibial artery.
  - (2) Lateral compartment also contains superficial paroneal nerve.
  - (3) Posterior superficial compartment also contains paroneal artery.
  - (4) Posterior deep also compartment also contains posterior tibial artery and tibial nerve.

79. Ruedi-Allgower classification used for fractures of
- (1) Distal radius fractures
  - (2) Tibial-plafond fractures
  - (3) Distal femur fractures
  - (4) Calcaneal fractures

80. Antero inferior tibio fibular ligament arises from
- (1) Tubercle of Chaput
  - (2) Tubercle of Wagstaffe
  - (3) Wolkmann's tubercle
  - (4) Interosseous membrane

81. Following are parts of deltoid ligament of ankle except
- (1) Superficial Calcaneo-tibial ligament
  - (2) Superficial Talo-tibial ligament
  - (3) Superficial Talo-navicular ligament
  - (4) Deep Anterior Talo-tibial ligament



82. Maisonneuve injury is

- (1) Fracture of distal fibula and deltoid ligament injury.
- (2) Fracture of Proximal fibula with medial malleolar fracture/deltoid ligament injury.
- (3) Fracture of medial malleolus and lateral ligament injury.
- (4) Fracture of lateral and medial malleolus.

83. Rate of non union is highest in

- (1) Fracture of middle shaft of clavicle.
- (2) Fracture of medial shaft of clavicle.
- (3) Fracture of lateral end of clavicle.
- (4) Fracture of medial end of clavicle.

84. In Luxatio Erecta

- (1) Inferior dislocation of humeral head and arm in abduction.
- (2) Inferior dislocation of humeral head with arm in adduction.
- (3) Anterior dislocation of humeral head with arm in abduction.
- (4) Posterior dislocation of humeral head with arm in internal rotation.

85. In Sacroiliac joint posterior stability is provided by all except

- (1) Sacro-coccygeal ligament
- (2) Sacro-tuberous ligament
- (3) Ilio-lumbar ligament
- (4) Sacro-spinous ligament

86. In which Pipkin type fracture of femur head is associated with fracture of femur neck

- (1) Pipkin type I
- (2) Pipkin type II
- (3) Pipkin type III
- (4) Pipkin type IV

87. Incidence of AVN after posterior dislocation of hip are

- (1) 10%
- (2) 20%
- (3) 30%
- (4) 50%



88. Most sensitive and specific investigation to diagnose occult hip fracture is
- (1) X-Ray in 20° internal rotation
  - (2) CT Scan
  - (3) MRI
  - (4) Bone Scan
89. Incidence of non-union in femur neck fracture is
- (1) 20%
  - (2) 30%
  - (3) 40%
  - (4) 10%
90. Following is incorrect of Hawkins classification of fracture of neck of Talus
- (1) Type-I undisplaced fracture.
  - (2) Type-II Displaced fracture with normal subtalar joint.
  - (3) Type-III Displaced fracture with dislocation of body of talus from ankle joint.
  - (4) Type-IV Displaced vertical talar neck fracture with talo-navicular joint disruption.

91. Seat belt injury is also known as
- (1) Wedge compression fracture
  - (2) Chance fracture
  - (3) Jeffersons fracture
  - (4) Clayshovellers fracture
92. Sensory innervation of saddle area is from
- (1) S<sub>3</sub>-S<sub>4</sub>
  - (2) S<sub>2</sub>, S<sub>3</sub>
  - (3) S<sub>1</sub> S<sub>2</sub> S<sub>3</sub>
  - (4) S<sub>2</sub> S<sub>3</sub> 4<sub>3</sub>
93. Average radial tear drop angle is
- (1) 40°
  - (2) 50°
  - (3) 70°
  - (4) 30°
94. In Dorsal Intercalated Segment Instability (DISI) scapho-lunate angle is
- (1) < 30°
  - (2) < 60°
  - (3) > 60°
  - (4) > 30°



95. Tourniquet is inflated to above systolic pressure

- (1) 50 mm Hg in upper limb, 100 mm Hg in lower limb.
- (2) 30 mm Hg in upper limb, 60 mm Hg in lower limb.
- (3) 60 mm Hg in upper limb, 100 mm Hg in lower limb.
- (4) 40 mm Hg in upper limb, 80 mm Hg in lower limb.

96. Distraction Osteogenesis; which is incorrect ?

- (1) Low energy corticotomy is performed.
- (2) Purest form of intramembraneous ossification.
- (3) Fibrous inter zone appears at 2 weeks.
- (4) Micro columnner formation zone appears after 3 weeks.

97. Colla-graft; All are true except

- (1) Is a synthetic bone graft substitute
- (2) Collagraft contents type I bone derived fibriller collagen
- (3) Contains calcium sulfate cerramic
- (4) Contains tricalcium phosphate

98. All are true regarding Locking Head Plate (LHP) except

- (1) LHP is single beam construct.
- (2) LHP is fixed angle device.
- (3) It acts as internal fixator.
- (4) Plate is main load transferring element in LHP system.

99. All are type of Atrophic non-union except

- (1) Torsion wedge non-union
- (2) Comminuted non-union
- (3) Defect non-union
- (4) Oligotrophic non-union

**100.** Classify following SLAP lesion:  
Vertical tear in superior labrum (bucket handle tear) while remaining part of superior labrum and biceps attached firmly to glenoid

- (1) SLAP type II
- (2) SLAP type III
- (3) SLAP type IV
- (4) SLAP type V

**101.** All are part of Codman's four segment classification of proximal Humerus except

- (1) Greater tuberosity
- (2) Lesser tuberosity
- (3) Surgical neck
- (4) Humerus shaft

**102.** Following is false about Holstein-Lewis fracture of humerus

- (1) Oblique fracture of lower one-third of humerus
- (2) Proximal fragment is abducted
- (3) Distal fragment is in Varus
- (4) Associated with radial nerve injury

**103.** Compactodactyly is

- (1) Bent little finger
- (2) Conjoint digit
- (3) Cleft hand
- (4) Multiple digit syndactyly

**104.** Earliest X-Ray change in Perthe's disease is

- (1) Increased density of proximal femoral epiphysis
- (2) Fragmentation of proximal femoral epiphysis
- (3) Widening of medial joint space
- (4) Rarefaction and cystic changes in metaphysis

**105.** Steel and Capener's signs are used for diagnostic imaging of

- (1) Perthe's disease
- (2) Congenital dislocation of hip
- (3) Slipped capital femoral epiphysis
- (4) Transient synovitis hip



106. A modified Thomas splint with knee flexion piece is called

- (1) Fisk splint
- (2) Agnes hunt splint
- (3) Roser Andersons splint
- (4) Balkan beam

107. Following is incorrect regarding Jaipur foot

- (1) Bare foot walking
- (2) Cosmetically accepted
- (3) Provide enough dorsiflexion
- (4) No inversion/eversion movement

108. Quadrilateral socket prosthesis is used in

- (1) Syme's amputation
- (2) Trans femoral amputation
- (3) Below knee amputation
- (4) Trans humeral amputation

109. Following is incorrect regarding Schatzker classification of tibial plateau fracture

- (1) Type I – pure cleavage pattern.
- (2) Type II – cleavage with articular depression.
- (3) Type III – fracture of medial condyle.
- (4) Type VI – tibia plateau fracture with dissociation of metaphysis and diaphysis.

110. Calcaneo-tibial fusion and excision of Talus done in following amputation of foot

- (1) Pirogoff's amputation
- (2) Boyd's amputation
- (3) Both of the above
- (4) Chopart amputation

111. Following test are positive in Carpal tunnel except

- (1) Phalen test
- (2) Tinel sign
- (3) Finkelstein's test
- (4) Durkan test



112. Which of the following is type of Endemic O.A ?

- (1) Kashin Beck disease
- (2) Mseleni joint disease
- (3) Both of the above
- (4) Muller's disease

113. Which of the following is not a feature of nail Patella syndrome ?

- (1) Autosomal dominant inheritance
- (2) Scapular hypoplasia
- (3) Knee instability
- (4) Posterior dislocation of elbow

114. Which flexor zone of hand is called as No man's land ?

- (1) Zone - I
- (2) Zone - II
- (3) Zone - III
- (4) Zone - IV

115. Cause of lumbrical plus finger is

- (1) Avulsion of flexor digitorum profundus.
- (2) Severance of flexor digitorum profundus.
- (3) Amputation through middle phalynx.
- (4) All of the above.

116. Satisfactory return of function can occur after nerve repair within \_\_\_\_\_ of injury.

- (1) 3 months
- (2) 6 months
- (3) 9 months
- (4) 12 months

117. Following are true about Arthroscopy of wrist except

- (1) Usual portals located within the extensor compartment.
- (2) There are 9 portals for radio-carpal and inter carpal access.
- (3) Two portal for DRUJ.
- (4) Two mid-carpel portals on either side of 3<sup>rd</sup> meta carpal.



118. Following is examples of ectopic Dupuytren's disease deposits

- (1) Ledderhose disease
- (2) Peron's disease
- (3) Garrod nodule
- (4) All of the above

119. Following are indications of Keller's resection arthroplasty except

- (1) Hallux valgus angle  $< 30^\circ$
- (2) Inter meta-tarsal angle  $13^\circ-16^\circ$
- (3) Incongruous 1<sup>st</sup> MTP joint
- (4) Lateral displacement of sesamoid

120. Superior gluteal nerve supplies following muscle except

- (1) Gluteus maximus
- (2) Gluteus medius
- (3) Gluteus minimus
- (4) Tensor fasciae latae

121. Median nerve innervates following muscles except

- (1) Abductor pollicis brevis
- (2) Flexor pollicis brevis
- (3) Opponens pollicis
- (4) Abductor pollicis longus

122. Abduction of the thumb is carried out by following

- (1) Radial nerve
- (2) Median nerve
- (3) Radial and median nerve
- (4) Ulnar nerve

123. Long thoracic nerve supply following muscle

- (1) Latissimus dorsi
- (2) Teres major
- (3) Subscapularis
- (4) Serratus anterior

124. Abduction of hip joint is carried out by all except

- (1) Gluteus maximus
- (2) Gluteus medius
- (3) Piriformis
- (4) Tensor fascilata

125. Following are correct causality priority categories color coding except

- (1) Priority 1 immediate-Red
- (2) Priority 2 urgent-Yellow
- (3) Priority delayed-Green
- (4) Priority 4 dead-white

126. Following all parameter are included in Glasgow coma scale-verbal response, except

- (1) Oriented
- (2) Obey's
- (3) Confused
- (4) Sound's

127. Most common type of shock in poly trauma patients is

- (1) Hypovolaemic shock
- (2) Cardiogenic shock
- (3) Neurogenic shock
- (4) Anaphylactic shock

128. All are true regarding cementless porous coated femoral implant, Except

- (1) Optimal pore size for bone in growth into porous surface is 100-400  $\mu\text{m}$ .
- (2) Porous titanium closely resembles the structure of cancellous bone.
- (3) On growth surfaces are created by plasma spray or grit blasting.
- (4) Thickness of porous coating is 50-155  $\mu\text{m}$ .

129. DORR categorization is for

- (1) Acetabulum cavity
- (2) Proximal femur
- (3) Femoral stems
- (4) Acetabular component

- 130.** Following are true regarding dual mobility acetabular component except
- (1) This is unconstrained bipolar design.
  - (2) Two areas of articulation share same motion center.
  - (3) It contains porous coated shell, large polyethylene ball and inner metal/ceramic head.
  - (4) It improve stability without reducing range of motion.

**131.** Following are contraindications for total hip replacement except

- (1) Morbid obesity.
- (2) Untreated skin infection.
- (3) Insufficiency of abductor musculature.
- (4) Asymptomatic bacteriuria.

**132.** Following approach to hip is used for Original Charnley Technique of total hip replacement

- (1) Antero lateral approach
- (2) Direct lateral approach
- (3) Postero lateral approach
- (4) Anterior approach

**133.** Which trochantric osteotomy is of greatest benefit for removing well fixed femoral implant ?

- (1) Standard trochantric osteotomy
- (2) Trochantric slide osteotomy
- (3) Extended trochantric osteotomy
- (4) All of the above

**134.** Following is true regarding Otto pelvis except

- (1) Type of secondary protrusio acetabuli.
- (2) It occurs most often in younger females.
- (3) Bilateral affection is common.
- (4) Causes pain and limitation of movement at early age.

**135.** In Howship's lacunae following bone cells are found

- (1) Osteocytes
- (2) Osteoprogenitor cells
- (3) Osteoblast
- (4) Osteoclast



136. Most common growth plate disease of bone is

- (1) Osteogenesis imperfecta
- (2) Achondroplasia
- (3) Chondroblastoma
- (4) Osteochondroma

137. Steal syndrome is a feature of

- (1) Renal osteodystrophy
- (2) Osteogenesis imperfecta
- (3) Pagets disease of bone
- (4) Hyper parathyroidism

138. Acute inflammatory demyelinating polyradiculo neuropathy is also called as

- (1) Guillain-Barre syndrome
- (2) Refsum's disease
- (3) Reley-day syndrome
- (4) Emery-Dreyfus syndrome

139. Herring bone pattern arrangement of malignant cells are seen in

- (1) Fibrosarcoma
- (2) Osteosarcoma
- (3) Evings sarcoma
- (4) Osetoclastoma

140. All are true regarding flexion and extension gap in total knee arthroplasty except

- (1) Distal femoral cut influences only extension gap.
- (2) Posterior femoral condylar cut influences only the flexion gap.
- (3) Proximal tibial cut influences only flexion gap.
- (4) Rotation of femoral component largely influences flexion gap.

141. Following are true regarding mechanical axis of lower limb except

- (1) Extends from center of femoral head to center of ankle joint.
- (2) Passing near or through the center of knee joint.
- (3) It is in  $6^\circ$  of Valgus from the vertical axis of the body.
- (4) Implantation of femoral component in  $5^\circ$ - $7^\circ$  of Valgus is necessary for neutral mechanical axis of femur.



142. All are true for correction of flexion contracture in total knee arthroplasty except

- (1) Required medial and lateral release.
- (2) Posterior capsular release and osteophyte can be performed.
- (3) Less than 4 mm elevation of joint line can be done.
- (4) Excessive distal femoral resection will produce extension instability.

143. Which of the following is not correct regarding patellar clunk syndrome ?

- (1) Associated with posterior stabilized knee.
- (2) Hypertrophic nodule forms just superior to patella.
- (3) Arthroscopic debridement recommended.
- (4) Causes knee to pop or clunk at 90° of flexion.

144. Most common complication of total shoulder arthroplasty is

- (1) Gleno-humeral instability
- (2) Component loosening
- (3) Rotator cuff tear
- (4) Infection

145. Following is not an indication of total shoulder arthroplasty

- (1) Osteonecrosis of humeral head.
- (2) End stage degenerating Gleno-humeral arthritis.
- (3) Capsulorrhaphy arthropathy.
- (4) Post traumatic arthritis with rotator cuff tear.

146. Average retro version angle of humeral head is

- (1) 21°-22°
- (2) 5°-6°
- (3) 41°-42°
- (4) 8°-10°

147. Following is incorrect regarding Vancouver classification of periprosthetic fracture of proximal femur

- (1) Type A fracture involves greater trochanter.
- (2) Type B fracture involves lesser trochanter.
- (3) Type C fracture distal to implant stem tip.
- (4) None of the above.

**148.** Calcium pyro phosphate dehydrate deposition occurs in the following condition :

- (1) Hyperthyroidism
- (2) Hyperparathyroidism
- (3) Hypothyroidism
- (4) None of the above

**149.** Alkaptonuria is a condition caused by deficiency of

- (1) Xanthine oxidase
- (2) Homogentisic acid oxidase
- (3) Both of above
- (4) Parathyroid hormone

**150.** In acute osteomyelitis periosteal new bone appears on X-ray at

- (1) End of third week
- (2) End of second week
- (3) Fourth week
- (4) Sixth week

**151.** Sub cute hematogenous osteomyelitis is caused by

- (1) B. Haemolytic streptococci
- (2) Staph aureus
- (3) Streptococcus pyogenes
- (4) Haemophilus influenza

**152.** Caffey's disease is a manifestation of

- (1) Osteomyelitis
- (2) Scurvy
- (3) Infantile cortical hyperostosis
- (4) Rickets

**153.** Commonest causative organism in acute suppurative arthritis in infants is

- (1) E.Coli
- (2) Streptococci
- (3) Staphylococcus aureus
- (4) Haemophilus influenza

**154.** Commonest cause of septic arthritis in adult is

- (1) Staph aureus
- (2) H. influenza
- (3) Neisseria gonorrhoea
- (4) B. Hemolytic streptococci



155. Bone or joint tuberculosis is

- (1) Primary Lesion
- (2) Secondary Lesion
- (3) Tertiary Lesion
- (4) All of the above

156. Healing in tuberculous arthritis usually occurs as

- (1) Bone ankylosis
- (2) Fibrous ankylosis
- (3) Both of the above
- (4) Unstable Flail Joint

157. Undulant Fever is a term used for

- (1) Brucellosis
- (2) Ewing's sarcoma
- (3) Reiter's disease
- (4) Tuberculosis

158. Definitive host in hydatid disease is

- (1) Dog
- (2) Sheep
- (3) Man
- (4) Cattle

159. All are true regarding granular type of tuberculosis except

- (1) Less destructive
- (2) Insidious onset
- (3) Occurs more often in children
- (4) Less exudation

160. Image en-grelet is seen in

- (1) Chronic pyogenic osteomyelitis
- (2) Osteosarcoma
- (3) Tubercular-osteomyelitis
- (4) Osteomyelitis garre's

161. Position of function for shoulder joint ankylosis is

- (1) Abduction, forward flexion, internal rotation.
- (2) Adduction, forward flexion, internal rotation.
- (3) Abduction, forward flexion, external rotation.
- (4) Abduction, neutral flexion, internal rotation.

162. Ivory vertebrae occurs in

- (1) Osteomalacia
- (2) Ankylosing spondylitis
- (3) Spondyloarthropathy
- (4) Pott's spine

163. Speed Test is positive in which of the following condition ?

- (1) Bicipital tendinitis
- (2) Dequervains teno-synovitis
- (3) Pulled elbow
- (4) Acromio-clavicular subluxation

164. Fair bank triangle is seen in

- (1) Infantile coxavara
- (2) Congenital dislocation hip
- (3) Arthrogryposis
- (4) Perthes disease

165. Normal Q-angle in male is

- (1)  $8^{\circ}$ - $10^{\circ}$
- (2)  $10^{\circ}$ - $15^{\circ}$
- (3)  $15^{\circ}$ - $18^{\circ}$
- (4)  $5^{\circ}$ - $8^{\circ}$

166. Slocum test is used for diagnosis of

- (1) Congenital dislocation hip
- (2) Anterolateral instability of knee
- (3) Posterior cruciate ligament instability
- (4) Meniscus injury

167. Post reduction varus/valgus angulation in supracondylar humerus fracture is determined by

- (1) Baumann's angle
- (2) Blumensaat line
- (3) Carrying angle
- (4) Fat pad sign

168. Reduction of pulled elbow is done by

- (1) Pronation-extension of elbow
- (2) Supination and extension of elbow
- (3) Supination and flexion of elbow
- (4) Pronation and flexion of elbow

169. Calcification of cartilage is usually seen in
- (1) Sec. metastasis
  - (2) Pseudo gout
  - (3) Fluorosis
  - (4) Hyperparathyroidism
170. Spina ventosa is a condition which occurs in
- (1) Pyogenic osteomyelitis
  - (2) Syphilitic dactylitis
  - (3) Tuberculous dactylitis
  - (4) Enchondroma
171. Correct sequence of organization of Physis is
- (1) Germinal zone, hypertrophic zone, proliferative zone, zones of endochondral ossification.
  - (2) Germinal zone, hypertrophic zone, zones of endochondral ossification, proliferative zone.
  - (3) Germinal zone, proliferative zone, hypertrophic zone, zones of endochondral ossification.
  - (4) Hypertrophic zone, germinal zone, proliferative zone, zones of endochondral ossification.

172. Apophysis is composed of
- (1) Hyaline cartilage
  - (2) Fibrocartilage
  - (3) Columnar cartilage
  - (4) Fibrocartilage and columnar cartilage
173. Salter-harris classification of physal injury adopted from
- (1) Poland classification
  - (2) Aitken classification
  - (3) Poland classification and Aitken classification
  - (4) None of the above
174. Linear arrest of medial malleolus develop after following injury
- (1) Salter harris type-II injury
  - (2) Salter harris type-I and II injury
  - (3) Salter harris type-V injury
  - (4) Salter harris type-III & IV injury

175. Sugar tong splint immobilization is used in

- (1) Shoulder and arm support
- (2) Wrist and fore arm support
- (3) Arm and elbow support
- (4) Hand and wrist support

176. Following statement are correct for compartment of foot except

- (1) Central compartment content flexor digitorum brevis.
- (2) Adductor compartment content-adductor hallucis, interosseous muscle.
- (3) Medial compartment content abductor hallucis brevis and flexor hallucis brevis.
- (4) Lateral compartment content flexor digity minimi and abductor digity minimi.

177. Standard hindquarter amputation is done at the level of

- (1) Hip joint & SI joint
- (2) Hip joint and Ilium
- (3) Pubic symphysis and SI joint
- (4) Pubic symphysis and Ilium

178. Medial transfemoral amputation is done at the level of

- (1) Upper 1/3 of thigh
- (2) Middle 1/3 of thigh
- (3) Lower 1/3 of thigh
- (4) Supracondylar level

179. In Gledhill classification of subacute hematogenous osteomyelitis, type III is described as

- (1) subperiosteal new bone and onion skin layering.
- (2) cortical hyperostosis in diaphysis and onion skin reaction.
- (3) metaphyseal radiolucency with cortical erosion.
- (4) central radiolucency in epiphysis.

180. Commonest organism found in infective arthritis in IV drug abuser is

- (1) Pseudomonas species
- (2) Staph aureus
- (3) Mycobacterium species
- (4) Straptococcus epidermidis



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