AYH

PROVISIONAL ANSWER KEY (CBRT)

Name of the post	**Associate Professor, Orthopaedics, General State Service, Class-1**
Advertisement No.	**05/2020-21**
Preliminary Test held on	**02-09-2021**
Question No	**001 – 200**
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THE LINK FOR ONLINE OBJECTION SYSTEM WILL START FROM 04-09-2021; 04:00 PM ONWARDS

Instructions / સૂચના

Candidate must ensure compliance to the instructions mentioned below, else objections shall not be considered: -

(1) All the suggestion should be submitted through **ONLINE OBJECTION SUBMISSION SYSTEM** only. Physical submission of suggestions will not be considered.

(2) Question wise suggestion to be submitted in the prescribed format (proforma) published on the website / online objection submission system.

(3) All suggestions are to be submitted with reference to the Master Question Paper with provisional answer key (Master Question Paper), published herewith on the website / online objection submission system. Objections should be sent referring to the Question, Question No. & options of the Master Question Paper.

(4) Suggestions regarding question nos. and options other than provisional answer key (Master Question Paper) shall not be considered.

(5) Objections and answers suggested by the candidate should be in compliance with the responses given by him in his answer sheet. Objections shall not be considered, in case, if responses given in the answer sheet /response sheet and submitted suggestions are differed.

(6) Objection for each question should be made on separate sheet. Objection for more than one question in single sheet shall not be considered.

ઉમેદવારે નીચેની સૂચનાઓનું પાલન કરવાની તકેદારી રાખવી, અન્યથા વાંધા-સૂચન અંગે કરેલ રજૂઆતો ધ્યાને લેવાશે નહીં

(1) ઉમેદવારે વાંધા-સૂચનો ફક્ત **ઓનલાઈન ઓબ્જેક્શન સબમીશન** સીસ્ટમ દ્વારા જ સબમીટ કરવાના રહેશે. રૂબરૂ અથવા ટપાલ દ્વારા આયોગની કચેરીએ મોકલવા આવેલ વાંધા-સૂચનો ધ્યાને લેવામા આવશે નહીં જેની ખાસ નોંધ લેવી.

(2) ઉમેદવારે વાંધા-સૂચનો રજૂ કરવા વેબસાઈટ / ઓનલાઈન ઓબ્જેક્શન સબમીશન સીસ્ટમ પર પ્રસિધ્ધ થયેલ નિયત નમૂનાનો જ ઉપયોગ કરવો.

(3) ઉમેદવારે પોતાને પરીક્ષામાં મળેલ પ્રશ્નપપુસ્તિકામાં છપાયેલ પ્રશ્નક્રમાક મુજબ વાંધા-સૂચનો રજૂ ન કરતા તમામ વાંધા-સૂચનો વેબસાઈટ પર પ્રસિધ્ધ થયેલ પ્રોવિઝનલ આન્સર કી (માસ્ટર પ્રશ્નપત્ર)ના પ્રશ્ન ક્રમાંક મુજબ અને તે સંદર્ભમાં રજૂ કરવા.

(4) માસ્ટર પ્રશ્નપત્રમાં નિર્દિષ્ટ પ્રશ્ન અને વિકલ્પ સિવાયના વાંધા-સૂચનો ધ્યાને લેવામાં આવશે નહીં.

(5) ઉમેદવારે પ્રશ્નના વિકલ્પ પર વાંધો રજૂ કરેલ છે અને વિકલ્પ રૂપે જે જવાબ સૂચવેલ છે એ જવાબ ઉમેદવારે પોતાની ઉત્તરવહીમાં આપેલ હોવો જોઈએ. ઉમેદવારે સૂચવેલ જવાબ અને ઉત્તરવહીનો જવાબ ભિન્ન હશે તો ઉમેદવારે રજૂ કરેલ વાંધા-સૂચનો ધ્યાનમા લેવાશે નહીં.

(6) એક પ્રશ્ન માટે એક જ વાંધા-સૂચન પત્રક વાપરવું. એક જ વાંધા-સૂચનો પત્રકમાં એકથી વધારે પ્રશ્નોની રજૂઆત કરેલ હશે તો તે અંગેના વાંધા-સૂચનો ધ્યાને લેવાશે નહીં.

Website link for online objection submission system : www.safevaults.in/login

001. Which of the following MRI parameter changes would result in decreased metallic susceptibility artifact?

(A) Increased receiver bandwidth
(B) Increased field strength
(C) Increased voxel size
(D) Increased slice thickness

002. Placing an MRI receiver coil farther than normal from the area of interest will result in

(A) increased signal to noise ratio.
(B) decreased receiver bandwidth.
(C) decreased spatial resolution.
(D) decreased signal to noise ratio.

003. Fluid appears as increased signal on a T2 weighted image because it has which of the following?

(A) Short T2 relaxation time
(B) Short T1 relaxation time
(C) Long T2 relaxation time
(D) Long T1 relaxation time

004. Which of the following will achieve high resolution imaging of small MSK structures?

(A) Use 2D imaging with thin slices.
(B) Use 3D imaging with thin slices.
(C) Use 2D imaging with a large number of averages.
(D) Use proton density imaging.

005. Which of the following would be the best method to achieve quality T2 weighted images in a patient with difficulty remaining still during imaging?

(A) Use single echo spin echo imaging.
(B) Use gradient echo imaging.
(C) Use a radial imaging such as BLADE (MRI acronym, Siemens) or PROPELLOR (MRI acronym, GE).
(D) Use the body coil instead of a surface coil.

006. Injecting a gadolinium contrast agent causes a sarcoma to

(A) appear bright on T1 weighted images.
(B) appear dark on T2 weighted images.
(C) appear isointense to skeletal muscle on T1 weighted images.
(D) appear bright on proton density–weighted images.

007. What percentage of bone mineralization must be lost to be detected by radiographs?

(A) 10% to 20%
(B) 30% to 40%
(C) 50% to 60%
(D) 70% to 80%

008. A 20 year old male endures a wrist injury after a fall. Which of the following studies would offer the best spatial resolution to detect a subtle fracture of the scaphoid cortex?

(A) STIR axial images
(B) Thin section CT
(C) T1 weighted axial images
(D) Bone scan

009. A 45 year old male presents with clinical concern for vertebral osteomyelitis. The patient has an MRI incompatible implanted device. Which of the following studies below is suggested for evaluation of vertebral osteomyelitis?

(A) Tc 99m MDP
(B) Tc 99m HMPAO
(C) Ga 67 citrate
(D) In 111 WBC

010. Typically, no grid is used when acquiring extremity radiographs. Which of the following isthe best explanation?

(A) The use of the grid will block primary x rays.

(B) The use of the grid will degrade image quality.

(C) Scatter radiation is not significant in imaging the hand and foot.

(D) The use of the grid will decrease patient dose.

011. Muscles paralysed in Erb's palsy are except

(A) Biceps **(B)** Triceps

(C) Brachoradialis **(D)** Brachialis

012. Sunderland classification is used for injury of

(A) Ligaments **(B)** Muscles

(C) Peripheral nerves **(D)** Tendons

013. Injury to radial nerve just distal to the spiral groove

(A) Spares the nerve supply of extensor carpi radialis longus

(B) results in paralysis of anconeus

(C) Leaves wrist extension intact

(D) Weakens forearm pronation

014. Inability to extend MCP joint of fingers is because of

(A) Radial nerve **(B)** Anterior interosseous nerve

(C) Posterior interosseous nerve **(D)** Ulnar nerve

015. Ulnar paradox is seen in

(A) Low ulnar lesion **(B)** High ulnar lesion

(C) Triple nerve disease **(D)** Radial nerve injury

016. Which of these nerves gives best prognosis on nerve repair

(A) Radial nerve **(B)** Ulnar nerve

(C) Median nerve **(D)** Axillary nerve

017. Froment's sign tests which muscle

(A) Abductor pollicis brevis **(B)** Abductor pollicis longus

(C) Extensor pollicis brevis **(D)** Adductor pollicis

018. Lumbrical palsy causes

(A) Claw hand **(B)** Erb's palsy

(C) Mallet finger **(D)** Hammer toe

019. Modified jones tendon transfer involves transfer of pronator teres to:

(A) ECRB **(B)** EPL

(C) Palmaris longus **(D)** EDC

020. Compression neuropathy means

(A) Muscle entrapped in closed space **(B)** Artery entrapped in closed space

(C) Vein entrapped in closed space **(D)** Nerve entrapped in close space

021. Investigation for entrapment neuropathy is

(A) CT scan (B) Ultrasound

(C) EMG, Nerve conduction study (D) Clinical examination

022. Chiralgia paresthetica involves

(A) Superficial radial nerve (B) Median nerve

(C) Ulnar nerve (D) Circumflex brachial nerve

023. Painful arc syndrome is caused by impingement of

(A) Sub acromial bursa (B) Sub deltoid bursa

(C) Rotator cuff tendon (D) Biceps tendon

024. de Quervain's disease involves

(A) Abductor pollicis longus and Extensor pollicis brevis

(B) Adductor pollicis brevis and Extensor pollicis longus

(C) Abductor pollicis brevis and Extensor pollicis longus

(D) Adductor pollicis longus and extensor pollicis brevis

025. Epiphyseal tumor before fusion of epiphysis

(A) Giant cell tumor (B) Chondroblastoma

(C) Chondrosarcoma (D) Ewing's sarcoma

026. Bone tumors arising from diaphysis

(A) Chondrosarcoma (B) Ewing's tumor

(C) Osteoclastoma (D) Chondroblastoma

027. Osteochondroma arises from

(A) Metaphysis (B) Diaphysis

(C) Epiphysis (D) Periosteum

028. Most common benign tumor of bone in less than 30 years age group is

(A) Osteoma (B) Osteoid osteoma

(C) Osteoblastoma (D) Chondroblastoma

029. Codman's triangle and onion peel appearance is most commonly seen in

(A) Benign bone tumors (B) Malignant bone tumors

(C) Traumatic conditions (D) Pagets's disease

030. A 30 year old man with radiodense mass around elbow with a clear zone between the mass and humerus. What is the probable diagnosis?

(A) Paraosteal osteosarcoma (B) Pariosteal osteosarcoma

(C) Myositis ossificans (D) Tumor calcinosis

031. According to Enneking system, NOT true regarding an active benign tumor is

(A) Intracapsular (B) Margin of reactive bone

(C) Thick rim of reactive bone (D) Extended curettage is the treatment

032. Pathological fracture is NOT seen in

(A) Ewing's tumor (B) Giant cell tumor

(C) Osteochondroma (D) Enchondroma

033. Osteosarcoma occurs in

(A) Osteoma **(B) Osteoporosis**

(C) Osteomalacia **(D) Osteitis deformans**

034. The most common tumor of the small bones of thehands and feet is:

(A) Enchondroma **(B) Osteochondroma**

(C) Osteoclastoma **(D) Cancellous osteoma**

035. A 20-year-old male presented because of increasingpain in his left lower thigh. Examination revealed tenderfusiform thickening of the lower end of the femur with asmall effusion into the knee joint. The overlying skinwas warm and the seat of dilated veins but movementsof the knee were free and painless. X-ray examinationrevealed:

(A) Acute osteomyelitis of the lower end of the femur

(B) Brodie's abscess

(C) Bone sarcoma

(D) Parosteal fibrosarcomae. Ewing's tumor

036. Nidus is seen in

(A) Osteosarcoma **(B) Osteoid osteoma**

(C) Ewing's sarcoma **(D) Chondroblastoma**

037. A 60-year-old male with 3 months history of severeback-ache anemia and loss of weight, developed severegirdle pains with weakness of the lower limbs.Examination revealed low grade fever with markedtenderness over the spine, ribs, sternum, skull andpelvic bones. X-ray examination of the skeletonrevealed multiple punched out defects without any newbone formation. The most probable diagnosis is:

(A) Bone metastases from an occult primary

(B) Multiple myeloma

(C) Osteitis fibrosa cystica

(D) Hand Schuller-Christian's disease

038. Pain in osteoid osteoma is specifically relieved by

(A) Salicylates **(B) Narcotic analgesics**

(C) Radiation **(D) Splinting**

039. A child is diagnosed with osteosarcoma based on sunray appearance seen on X-Ray. This is because of

(A) Calcification along the periosteum **(B) Calcification along the blood vessels**

(C) Periosteal reaction **(D) Soft tissue invasion**

040. What is the most common site of osteosarcoma?

(A) Lower end of femur **(B) Upper end of humerus**

(C) Lower end of tibia **(D) Upper end of femur**

041. Management plan for osteosarcoma of lower end of femur must include

(A) Radiotherapy + amputation + chemotherapy

(B) Surgery alone

(C) Chemotherapy + limb salvage therapy

(D) Chemotherapy + radiotherapy

042. Calcification in osteosarcoma is due to

(A) High calcium in blood (B) Bone matrix

(C) Osteoblasts (D) High calcitonin

043. Pulsating bone tumor is

(A) Chondroma (B) Ewing's sarcoma

(C) Osteoclastoma (D) Osteosarcoma

044. Osteoid osteoma consists of

(A) Osteoblasts (B) Osteoclasts

(C) Both of the above (D) None of the above

045. True about hereditary osteochondromatosis

(A) Occur mainly in neonates (B) Occur in first decade

(C) Does not until 4-6 years (D) Occur after puberty

046. The signs of malignant transformation in osteochondroma are all except

(A) Pain (B) Weight loss

(C) Increase in size (D) Increase in thickness of cartilage size

047. What is seen in Mafucci Syndrome?

(A) Enchondromas with hemangioma

(B) Hemangiomas and limb hyperplasia

(C) Hemangioma and capillary malformation

(D) Hemangiomas and precocious malformation

048. Ollier's Disease is

(A) Osteochondromatosis (B) Multiple enchondromatosis

(C) Metaphyseal dysplasia (D) Osteopetrosis

049. A 8 year old child present with fracture of humerus after trivial injury, X-Ray shows lytic lesion. Diagnosis is

(A) Osteoclastoma (B) Osteomyelitis

(C) Simple Bone Cyst (D) Aneursymal bone cyst

050. Histological features of Unicameral Bone cyst include

(A) Blood filled cavities (B) Endpthelial lining

(C) Fibrous tissue lining the cystic cavity (D) Single cavity with connective tissue lining

051. Fallen leaf sign is seen in

(A) Aneurysmal bone cyst (B) Simple bone cyst

(C) Ostersarcoma (D) Osteoclastoma

052. A 20 year old female presents with eccentric cystic expansile growth from metaphysic of femur. X-Ray shows soap bubble appearance. What is the probable diagnosis?

(A) Aneurysmal bone cyst (B) Osteochondroma

(C) Osteosarcoma (D) Osteoclastoma

053. The malignant component of GCT is
(A) Giant cells (B) Mononuclear cells
(C) Both (A) and (B) (D) None of the above

054. Small round cell tumor is
(A) Rhabdomyosarcoma (B) Ewing's sarcoma
(C) Secondaries (D) Chondrosarcoma

055. Cloacae is present in :
(A) Sequestrum (B) Involucrum
(C) Normal bone (D) Myositis

056. Brodie's abscess is :
(A) Acute osteomyelitis (B) Chronic osteomyelitis
(C) Subacute osteomyelitis (D) Septic arthritis

057. Salmonella osteomyelitis is common in :
(A) I/V drug addicts (B) HIV
(C) Pregnancy (D) Sickle cell disease

058. All are components of SAPHO syndrome except:
(A) Osteitis (B) Acne
(C) Synovitis (D) Hypertension

059. Tom smith arthritis is :
(A) Tubercular involvement of hip joint (B) Tubercular involvement of knee joint
(C) Syphlitic involvement of hip joint (D) Septic arthritis of hip joint in infants

060. Septic arthritis is diagnosed by:
(A) X rays (B) Joint aspiration
(C) USG (D) MRI

061. Bony ankylosis occurs following :
(A) Tuberculosis (B) Septic arthritis
(C) Gouty arthritis (D) Behcet's syndrome

062. Infection of ulnar bursa ,which is positive:
(A) Chvostek's sign (B) Kanavel's sign
(C) Gower's sign (D) Tinel's sign

063. Most common complication of felon is:
(A) Osteomyelitis (B) Subungual hematoma
(C) Septic arthritis (D) None of the above

064. Pulp space infection is painful due to:
(A) Rich blood supply (B) Rich nerve supply
(C) Small bone –phalanx (D) Dense fibrous tissue

065. Tuberculosis of bone is characterized by:
(A) Paucibacillary and hematogenous (B) Multibacillary and hematogenous
(C) Multibacillary and lymphatogenous (D) Paucibacillay and lymphatogenous

066. Complication of advance TB arthritis is:

(A) Bony ankylosis (B) Fibrous ankylosis

(C) Normal healing (D) Charcot's joint

067. The treatment of acute septic synovitis includes the following except:

(A) Massive antibiotics (B) Splintage in the position of function

(C) Aspiration and antibiotic injection (D) Excision and Winnett Orr-treatment

068. Hong Kong operation is done for :

(A) Leprosy (B) Tuberculosis

(C) Osteomyelitis (D) Septic arthritis

069. True about genu valgum

(A) known as knock knee (B) pathological condition

(C) both physiological and pathological (D) same as bow-legs

070. Q angle increased in ?

(A) patellar subluxation (B) genu varum

(C) femoral anteflexion (D) medial positioning tibial tuberosity

071. Blounts disease is characterized by

(A) genu valgum (B) genu varum

(C) genu recurvatum (D) meniscal injury

072. Congenital knee dislocation presents as

(A) varus (B) valgus

(C) flexion (D) hyperextension

073. Microfracture technique is carried out for

(A) non union (B) osteochondral defects

(C) tumors (D) osteoporosis

074. commonest cause of loose bodies in joints

(A) tuberculous tenosynovitis (B) rheumatoid arthritis

(C) osteoarthritis (D) osteochondritis dissecans

075. Pirani scoring is used for

(A) ctev (B) ddh

(C) perthes disease (D) slipped capital femoral epiphysis

076. Ponsetti method is useful for ?

(A) rickets (B) blounts disease

(C) CTEV (D) congenital vertical talus

077. CTEV surgery after 2 years of age

(A) Arthrodesis (B) soft tissue release

(C) osteotomy (D) no surgery

078. Tenotomy of which tendon is carried out in ponsetti method ?

(A) Tibialis anterior (B) Tibialis posterior

(C) Flexor halluces longus (D) Tendo Achilles

079. You are called to evaluate a patient following inadvertent IV contrast infiltration. The technologist informs you that ~100 mL of iodinated contrast extravasated into the antecubital fossa. Which of the following is the primary clinical concern?

(A) Compartment syndrome (B) Nephrogenic systemic fibrosis

(C) Contrast related renal dysfunction (D) Vasospasm

080. Single step posteromedial release is known as

(A) ponseti (B) kite

(C) Cincinnati (D) turco

081. Rocker bottom foot is due to

(A) neural tube defect (B) malunited calcaneal fracture

(C) horizontal talus (D) congenital vertical talus

082. Which ligament is involved in pesplanus ?

(A) spring ligament (B) deep transverse ligament

(C) long and short plantar ligament (D) deltoid ligament

083. Dilwyn Evans procedure for CTEV is

(A) 4-8 years (B) >12 years

(C) 2-4 years (D) 8-12 years

084. Low viscosity of synovial fluid seen in all Except:

(A) Gout (B) Septic arthritis

(C) Osteoarthritis (D) RA

085. Which joint is spared in RA

(A) MCP joint (B) DIP joint

(C) PIP joint (D) Atlanto axial joint

086. Herberden arthropathy affects

(A) Lumbar spine (B) Sacrailiac joint

(C) Distal interphalangeal joint (D) Knee joint

087. All are true about osteotomy except

(A) Correction can be achieved more than 30 degrees

(B) Indicated in unicompartmental OA

(C) Performed through cancellous bone

(D) Recurrence is a long term complication

088. In gout, tophi is found in

(A) Synovial fluid (B) Articular cartilage

(C) Joint capsule (D) Skin

089. Calcification of menisci is seen in

(A) Acromegaly (B) Pseudogout

(C) Renal failure (D) Hyperparathyroidism

090. Chondrocalcinosis is seen in

(A) Rickets (B) Hypervitaminosis D

(C) Ochronosis (D) Hypoparathyroidism

091. The change seen in vertebral columns of Ochronosis is

(A) Increased disc space (B) Bamboo spine

(C) Calcification of intervertebral disc (D) None of the above

092. Increased alkaline phosphatase is seen in

(A) Osteoporosis (B) Multiple myeloma

(C) Paget's disease (D) Osteolytic metastasis

093. Which of the following is an advantage of performing a biopsy of a soft tissue mass under ultrasound guidance?

(A) Allows for the shortest passage of the needle to the target

(B) Eliminates the need for conscious sedation

(C) Areas of vascularity and viable tissue can be assessed throughout the procedure

(D) Allows for use of a smaller gauge biopsy needle

094. Drug induced osteomalacia is known to be associated with the use of

(A) Steroids (B) Heparin

(C) Phenytoin (D) Gentamicin

095. Osteotomy in rickets is done after

(A) Calcium becomes normal (B) ALP is normal

(C) Healing of growth plate (D) knee movement is normal

096. The X ray finding seen in osteomalacia are all except

(A) Loozer's zone (B) Biconcave vertebrae

(C) Absence of pathological fracture (D) Trefoil pelvis

097. Wimberger's ring is seen in

(A) Haemophilia (B) Paget's disease

(C) Syphilis (D) Scurvy

098. Osteoporosis is caused by all except

(A) Fluorosis (B) Hypogonadism

(C) Hyperthyroidism (D) Hyperparathyroidism

099. Gold standard for diagnosis for osteoporosis

(A) DEXA (B) Single beam densitometry

(C) Quantitative computed tomography (D) Bone histomorphometric

100. Most common site of osteoporotic fracture

(A) Humerus (B) Vertebrae

(C) Scapula (D) Flat bones

101. Myodesis means

(A) suturing muscle to bone (B) suturing muscle to tendon

(C) suturing muscle to muscle (D) none of above

102. In elderly (50-75 years) most common cause of amputation is

(A) trauma (B) peripheral vascular disease

(C) tumours (D) none of above

103. Cauda equina lesion is

(A) Lower motor lesion **(B) Upper motor lesion**

(C) Cerebellar lesion **(D) All of the above**

104. Hyperbaric 02 is useful in

(A) Aerobic infection **(B) Anaerobic infection**

(C) Viral infection **(D) None of the above**

105. Best source of bone graft for an infant is

(A) Father **(B) Mother**

(C) Brother **(D) Sister**

106. Osgood Schlater's disease is osteochondritis is

(A) Scaphoid **(B) Femoral head**

(C) Tibial tuberosity **(D) Calcaneum**

107. Senile osteoporosis radiologically manifest _____ % of skeleton has lost

(A) 25% **(B) 30%**

(C) 40% **(D) 80%**

108. Tissue most sensitive to radiation is

(A) Osteoblast **(B) Cartilage**

(C) Epiphysis **(D) Metaphysis**

109. Clutton's joints refers to which of the following

(A) Acutely inflamed joint in Gouty arthritis

(B) Swollen and stiff joint in O.A.

(C) Joint with haemarthrosis

(D) Joint with effusion in congenital syphilis

110. Prolonged immobilization does not produce

(A) Kidney stone **(B) Gall stones**

(C) Osteopprosis **(D) Stiffness of joints**

111. Normal tuber angle is adult is roughly.

(A) 20 degree **(B) 30 degree**

(C) 40 degree **(D) 50 degree**

112. Bone is

(A) Mesodermal in origin **(B) Endodermal in origin**

(C) Ectodermal in origin **(D) None of the above is true**

113. Fabella is

(A) Same as fibula **(B) A sesamoid bone**

(C) Fracture of condyle of **(D) none of the above**

114. Apart from tibia which other bone can develop congenital pseudo arthrosis

(A) Clavicle **(B) Humerus**

(C) Femur **(D) All of the above**

115. Achondroplasia occurs due to

(A) Defect in collagen formation (B) Defect in endochondral ossification

(C) Defect in enzyme metabolism (D) None of above

116. Which of these most commonly used Isotopes for radioneuceid bone scanning.

(A) Ga. (B) I 131

(C) TC 99 (D) Sr, 85

117. Who made the Ist prosthesis to replace femoral head.

(A) Moore (B) Thompson

(C) Judet (D) Smith-Peterson

118. The term ORTHOPAEDICS was coined by

(A) Hung Owen Thomas (B) Thomas Bryant

(C) Sir Robert Jones (D) Nicholas Andrey

119. Wimberger's ring is seen in

(A) Haemophelia (B) Paget's disease

(C) Syphilis (D) Scurvy

120. Osteotomy in rickets is done after

(A) Calcium becomes normal (B) ALP is normal

(C) Healing of growth plate (D) knee movement is normal

121. Drug induced osteomalacia is known to be associated with the use of

(A) Steroids (B) Heparin

(C) Phenytoin (D) Gentamicin

122. Increased alkaline phosphatase is seen in

(A) Osteoporosis (B) Multiple myeloma

(C) Paget's disease (D) Osteolytic metastasis

123. The essential examination of the hip in order to clinch the diagnosis of chronic slipped femoral epiphysis is:

(A) Measuring for shortening of the leg. (B) Palpation of the femoral head.

(C) A-P plain x-ray view of the hip. (D) Lateral x-ray view of the hip.

124. The average duration of Perthes' disease is:

(A) 1-2 years. (B) 3- 4 years.

(C) 1 month - 6 months. (D) 6 months - 1 year.

125. First bone to ossify in foetal life is:

(A) Femur. (B) Tibia.

(C) Clavicle. (D) Sternum.

126. Spontaneous bleeding into joints in haemophilia occurs when factor VI level is less than:

(A) 50%. (B) 25%.

(C) 10%. (D) 5%.

127. Stenosing tenovaginitis commonly affects:

(A) Abductor pollicis. (B) Flexor pollicis longus.

(C) Opponens pollicis. (D) All of the above.

128. The most severe growth disturbance results from which of the following types of epiphyseal injuries:

(A) Separation of the epiphysis at the metaphyseal side of the epiphyseal plate

(B) Crashing injuries compressing the epiphyseal plate without displacement

(C) Intra-articular fracture involving the articular cartilage epiphysis and epiphyseal plate

(D) Intra-articular fracture extending from the joint surface through the epiphysis and epiphyseal plate to the metaphysic

129. The correct treatment of traumatic myositis ossificans is by:

(A) Prolonged immobilization (B) Active exercises

(C) Passive stretching and massage (D) Both (A) and (B)

130. Recurrent dislocations of shoulder joint are best treated by:

(A) Hippocrates' method of closed reduction

(B) Kocher's manipulation

(C) Modified Milch's manoevre

(D) Open reduction

131. Fractures of the shaft of the humerus are best treated by:

(A) Closed reduction and shoulder spica

(B) Continuous skeletal traction

(C) Open reduction and internal fixation with plate

(D) Hanging plaster cast

132. An elderly ♀ sustained Colles' fracture which was properly treated. However, she developed severe pain & stiffness of the wrist with coldness and cyanosis of the hand. X-ray examination revealed diffuse decalcification of the bones. She proved to be suffering from:

(A) Causalgia (B) Tuberculous arthritis of wrist joint

(C) Traumatic tenosynovitis (D) Sudek's atrophy

133. Tear of the meniscus of the knee result from which of the following strain:

(A) Hyperextension (B) Abduction

(C) Combined flexion and rotation (D) Rotation

134. In a football game, an athlete felt severe pain in his Rt knee while turning to the left side with the joint flexed and taking the body weight. Soon after, the joint became swollen and painful but recovery followed rest for 3 weeks. Thereafter, the patient suffered from recurrent locking with pain and a feeling of "giving way" in the joint. The most probable diagnosis is:

(A) Solitary loose body (B) Fracture of the tibial spine

(C) Rupture of the medial ligament (D) Rupture of the medial semilunar cartilage

135. Irregular epiphyseal line with calcifying periosteal haematoma found on X-ray examination is indicative of:

(A) Infantile rickets (B) Scurvy

(C) Hemophilia (D) Hypoparathyroidism

136. Osteoporosis is a deficiency in:

(A) Calcium metabolism (B) Calcium deposition

(C) Protein supporting tissue (D) All of the above

137. A 33-year-old male is involved in a road traffic accident sustaining a fracture dislocation of the cervical spine. He has absent motor function, absent sensation and anal tone. The bulbocavernous reflex is intact. Which of the following best describes this spinal cord injury pattern?

(A) Central cord syndrome. (B) Incomplete spinal cord injury.

(C) Complete spinal cord injury. (D) Neurogenic shock.

138. An MRI of a 32-year-old patient shows a left foraminal disc herniation of the L5–S1 disc. Which of the following is unlikely to be present?

(A) Left lateral foot numbness.

(B) Left extensor hallucis longus (EHL) weakness.

(C) Left dorsomedial foot numbness

(D) Left lateral calf numbness.

139. Traction injury to epiphysis of the vertebra is known as

(A) Osgood schlatter's disease (B) sinding Larsen syndrome

(C) scheurmann's disease (D) severs disease

140. The following is true for spondylolisthesis

(A) slipping of S1 over L5 (B) posterior arch defect

(C) congenital defect (D) more in pregnancy

141. Causes of painful limb are all except

(A) perthe's disease (B) congenital coxa vara

(C) SCFE (D) Tb hip

142. SCFE is commonly seen in

(A) 1st decade (B) 2nd decade

(C) 3rd decade (D) 4th decade

143. Coxa vara is found in

(A) perthe's disease (B) Tb

(C) rickets (D) rheumatoid arthritis

144. Most common cause of quadriceps femoris fibrosis

(A) arthrogryposis (B) trauma

(C) repeated injections (D) chronic osteomyelitis of femur

145. Formula of dry plaster of paris is

(A) CaSO4 ½ H2O (B) CaSO4 only

(C) CaSO4 2H2O (D) CaSO4 5H2O

146. Myositis ossificans is most common around

(A) knee (B) hip

(C) wrist (D) elbow

147. Most important sign in VIC is

(A) pain (B) pallor

(C) numbness (D) obliteration of radial pulse

148. VIC mostly involves

(A) flexor digitorum superficialis (B) pronator teres

(C) flexor digitorum profundus (D) flexor carpi radialis longus

149. A recessive form of Osteogenesis imperfecta may closely resemble

(A) Alkaptonuria (B) Cretinism

(C) hypophosphatasia (D) Homocystinuria

150. Stellate ganglion block is mainly used for

(A) compound palmar ganglion (B) de quervan's synovitis

(C) sudeck's osteodystrophy (D) OA of CMC joint

151. Dugas test is helpful for

(A) dislocation of hip (B) scaphoid fracture

(C) fracture NOF (D) anterior dislocation of shoulder

152. All are related to recurrent shoulder dislocation except

(A) hill sachs lesion (B) bankarts lesion

(C) lax capsule (D) rotator cuff injury

153. Meyer's procedure is a method of treatment for

(A) recurrent shoulder dislocation (B) habitual dislocation of patella

(C) congenital dislocation of hip (D) fracture neck of femur

154. Rotator cuff is composed of 4 of the following except

(A) teres minor (B) supraspinatus

(C) infraspinatus (D) teres major e. subscapularis

155. Anterior dislocation of shoulder is most commonly complicated by

(A) axillary artery injury (B) circumflex nerve injury

(C) recurrent dislocation (D) axillary nerve injury

156. Bennett's fracture is fracture dislocation of base of the _____ metacarpal

(A) 4^{th} (B) 3^{rd}

(C) 2^{nd} (D) 1^{st}

157. Lower branch of brachial plexus injury leads to

(A) Erb's palsy (B) Klumpke's palsy

(C) Bell's palsy (D) wrist drop

158. Middle palmar space ends distally

(A) along the digital sheaths (B) into the flexor tendon sheaths
(C) into the web space (D) by mixing with the superficial palmar space

159. Fracture femur in infants is best treated by –
(A) open reduction (B) closed reduction
(C) IMIL nailing (D) Gallows traction

160. Mc Murray's osteotomy is based on the following principle-
(A) biological (B) biomechanical
(C) biotechnical (D) mechanical

161. All of the following names are associated with tests / operations around the hip joint except –
(A) Bryant (B) Shenton
(C) Mc Murrays (D) Salter

162. Fatigue fractures (stress fractures) are most commonly seen in
(A) metatarsals (B) tibia
(C) fibula (D) neck of femur

163. One of the following fractures requires POP cast in equinus position
(A) distal fracture both bones leg (B) distal fibula fracture
(C) bimalleolar fractures (D) talus fracture

164. Cotton's fracture is
(A) avulsion fracture of C7 (B) trimalleolar
(C) bimalleolar (D) burst fracture of talus

165. Compression fracture is commonest in
(A) cervical spine (B) upper thoracic spine
(C) lower thoracic spine (D) lumbosacral region

166. True regarding Hangman's fracture is –
(A) Odontoid process fracture of C2 (B) spondylolisthesis of C2 over C3
(C) whiplash injury (D) fracture of hyoid bone

167. In pelvis fractures the amount of blood loss is around –
(A) 1 – 4 units (B) 2 – 4 units
(C) 2 – 6 units (D) 4 – 8 units

168. Best diagnostic test for ACL injury
(A) Lachman's test (B) Pivot shift test
(C) Anterior drawer test (D) Mc Murray's test

169. Most common mode of meniscal injury is –
(A) extension of knee (B) flexion of knee
(C) flexion and rotation movement (D) extension and rotation movement

170. The most common ligament injured around the ankle joint is
(A) Anterior talofibular (B) Deltoid ligament
(C) Posterior talofibular (D) Spring ligament

171. The "card test" tests the function of –

(A) median nerve (B) ulnar nerve

(C) axillary nerve (D) radial nerve

172. Distance from olecranon in amputation should be

(A) 5 – 10 cms (B) 10 – 15 cms

(C) 15 – 20 cms (D) 20 – 30 cms

173. Test for tight iliotibial band –

(A) Ober's test (B) Osber's test

(C) Simmand's test (D) Charnley's test

174. Bone apposition is best seen in –

(A) osteoblastic activity at the areas of stress

(B) endochondral ossification

(C) subperiosteal cambium layer

(D) osteoblastic activity in Howship's lacunae

175. In actinomycosis of the spine, the abscess usually erodes

(A) intervertebral disc (B) into the pleural cavity

(C) into the peritoneal cavity (D) towards the skin

176. Triple arthrodesis involves

(A) calcaneocuboid, talonavicular and talocalcaneal

(B) tibiotalar, calcaneocuboid and talonavicular

(C) ankle joint, calcaneocuboid and talonavicular

(D) none of the above

177. Trendelenburg's sign is negative in an IT fracture because of –

(A) Gluteus medius (B) Gluteus maximus

(C) Gluteus minimus (D) Tensor fascia lata

178. Classification system for heterotopic ossification

(A) Brooker classification (B) Della balle classification

(C) Mayo's classification (D) March's classification

179. Medial meniscus is more vulnerable to injury because of –

(A) its fixity to tibial collateral ligament (B) its semilunar shape

(C) action of adductor magnus (D) its attachment to fibrous capsule

180. Minimum diameter of the interconnected pores in scaffolding used for stem cells should be?

(A) 25 μm (B) 50 μm

(C) 75 μm (D) 100 μm

181. Which of the following is currently not an indication for stem cell therapy:

(A) Simple bone cyst (B) Infection control

(C) Spinal fusion (D) Osteochondritis Dissecans

182. Gene therapy could be used to incorporate marrow stem cells that over-express the CSF-1

gene in the management of:

(A) Osteomalacia (B) Osteogenesis Imperfecta

(C) Osteopetrosis (D) Marfan's disease

183. Which of the following factors does not have an effect on the function of injected growth factors in fracture healing?

(A) Vascularity (B) Time of delivery

(C) Location of fracture (D) Mechanical stability

184. Which of the following is not a part of Kambin's triangle?

(A) superior endplate of lower lumbar vertebra

(B) inferior endplate of upper thoracic vertebra

(C) exiting nerve root

(D) traversing nerve root

185. Graft for mosaicplasty used in the treatment of osteochondral defect is primarily harvested from which region of trochlea?

(A) Supero-medial (B) Infero-lateral

(C) Supero-lateral (D) Infero-medial

186. Which of the following is true regarding spinal fusion techniques?

(A) Larger implant can be used from posterior approach

(B) ALIF provides more comprehensive disc evacuation

(C) PLIF is sufficient in isthmic spondylolisthesis

(D) Facet joints need not be undercut during PLIF

187. Autologous Chondrocyte Implantation involves harvesting of which cartilage?

(A) Articular cartilage from weight bearing site

(B) Non-articular cartilage from weight bearing site

(C) Articular cartilage from non-weight bearing site

(D) Non-articular cartilage from non-weight bearing site

188. Platelet rich plasma has recently been proven to be effective in which of the following procedures?

(A) Spinal Decompression (B) Total Hip Arthroplasty

(C) Spinal fusion (D) ACL repair

189. Bohler's Angle Measure gives reference for

(A) Calcaneum (B) Tibia

(C) Femur (D) Pelvis

190. Spinal injury with no radiological finding is commonly seen in

(A) children (B) older men

(C) older women (D) in middle aged

191. Radiological appearance of pseudo fracture in osteomalacia is usually termed as

(A) Milk man's syndrome (B) Looser's zone

(C) Stress fracture (D) Pathological fracture

192. Enlarged tender epiphyses with bowing of long bones and X-ray evidence of delayed carpal

ossification suggest the diagnosis of:

(A) Scurvy (B) Infantile rickets

(C) Syphilitis epiphysitis (D) Osteogenesis imperfecta

193. Which statement is untrue in renal rickets:

(A) Results from renal insufficiency in infancy

(B) Is due to deficient phosphorus, excretion

(C) Manifests itself by marked dwarfism

(D) Causes no deformities in the limbse. Ends fatally from uraemia at puberty

194. The following statements about diaphyseal aclasis are true except that it:

(A) Is a common hereditary condition (B) Never affects membrane bones

(C) Is characterized by multiple exostoses (D) Spares the metaphyses of long bones

195 Spine Ventosa is

(A) Tuberculosis dactylitis (B) Septic arthritis of finger joint

(C) Tuberculosis infection of spine (D) Pyogenic infection of phalanx

196. Melon seed bodies in joint fluid are characteristic of:

(A) Rheumatoid arthritis. (B) Tuberculous arthritis.

(C) Septic arthritis. (D) None of the above.

197. Which of the following is seen in popliteal entrapment syndrome:

(A) Evidence of atherosclerosis

(B) Exercise induced calf claudication's

(C) Abnormal relation between popliteal artery and lateral head of gastrocnemius

(D) Decreased ankle pulses with ankle extension

198. Tufting of distal phalanx is characteristic radiological finding of

(A) Hyperparathyroidism (B) Gout

(C) Psoriatic arthropathy (D) Osteoarthritis

199. A patient after THR develops breathlessness, what is the definitive management?

(A) Thrombolysis (B) Bronchodilators

(C) Steroids (D) Oxygen

200. Osteogenesis imperfecta is characterized by thefollowing features except:

(A) Blue sclerae (B) Brittle shell-like bones

(C) Multiple fractures (D) Osteoporosis