

AMC

PROVISIONAL ANSWER KEY (CBRT)

Name of The Post	Professor, Radio-Diagnosis, General State Service, Class-1
Advertisement No	40/2019-20
Preliminary Test Held On	04-02-2021
Que. No.	001-200
Publish Date	05-02-2021
Last Date to Send Suggestion (S)	12-02 -2021

Instructions / સૂચના

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

- (1) All the suggestion should be submitted in prescribed format of suggestion sheet Physically.
- (2) Question wise suggestion to be submitted in the prescribed format (Suggestion Sheet) published on the website.
- (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. 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 shall be made on separate sheet. Objection for more than one question in single sheet shall not be considered & treated as cancelled.

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

- (1) ઉમેદવારે વાંધા-સૂચનો નિયત કરવામાં આવેલ વાંધા-સૂચન પત્રકથી રજૂ કરવાના રહેશે.
- (2) ઉમેદવારે પ્રશ્નપ્રમાણે વાંધા-સૂચનો રજૂ કરવા વેબસાઇટ પર પ્રસિધ્ધ થયેલ નિયત વાંધા-સૂચન પત્રકના નમૂનાનો જ ઉપયોગ કરવો.
- (3) ઉમેદવારે પોતાને પરીક્ષામાં મળેલ પ્રશ્નપુસ્તિકામાં છપાયેલ પ્રશ્નક્રમાંક મુજબ વાંધા-સૂચનો રજૂ ન કરતા તમામ વાંધા-સૂચનો વેબસાઇટ પર પ્રસિધ્ધ થયેલ પ્રોવિઝનલ આન્સર કી (માસ્ટર પ્રશ્નપત્ર)ના પ્રશ્ન ક્રમાંક મુજબ અને તે સંદર્ભમાં રજૂ કરવા.
- (4) માસ્ટર પ્રશ્નપત્ર માં નિર્દિષ્ટ પ્રશ્ન અને વિકલ્પ સિવાયના વાંધા-સૂચન ધ્યાને લેવામાં આવશે નહીં.
- (5) ઉમેદવારે જે 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-સૂચન ધ્યાનમાં લેવાશે નહીં.
- (6) એક પ્રશ્ન માટે એક જ વાંધા-સૂચન પત્રક વાપરવું. એક જ વાંધા-સૂચન પત્રકમાં એકથી વધારે પ્રશ્નોની રજૂઆત કરેલ હશે તો તે અંગેના વાંધા-સૂચનો ધ્યાને લેવાશે નહીં.

001. 1 Roentgen (R) is defined as a unit of radiation exposure that will liberate a charge of
 (A) 2.58×10^{-4} coulombs per kilogram of air.
 (B) 2.58×10^{-5} coulombs per kilogram of air.
 (C) 2.58×10^{-6} coulombs per kilogram of air.
 (D) 2.58×10^{-7} coulombs per kilogram of air.
002. If an exposure is 2R at 1 metre, then at 4 metre; it will be –
 (A) $2R \times 1/4^2$ (B) $2R \times 1/8^2$
 (C) $2R \times 1/16^2$ (D) $2R \times 1/32^2$
003. The halide in medical X-ray film is about –
 (A) 90 – 99% silver bromide and 1-10% silver iodide.
 (B) 10% silver bromide and 90 – 99% silver iodide.
 (C) 10 – 20% silver bromide and 80 – 90% silver iodide.
 (D) 30 – 40% silver bromide and 60 – 70% silver iodide.
004. Intensifying screen are used because, they-
 (A) Silver bromide (B) Calcium tungstate
 (C) Calcium carbonate (D) Pottasium bromide
005. Doppler signal is in-
 (A) Above audible range (B) At Audible range
 (C) Below audible range (D) None of the above
006. Piezoelectric crystal are seen in
 (A) Transducer (B) X-ray film
 (C) CT film (D) Developer
007. Detectors used in modern CT scanners are
 (A) Scintillation detectors (B) Gas detectors
 (C) Both (A) and (B) (D) None of the above
008. Doppler shift produces information about
 (A) Location (B) RBC motion
 (C) Velocity (D) None of the above
009. Ring artifact is -
 (A) Motion artifact (B) Scanner based artifact
 (C) Physics based artifact (D) Cupping artifact
010. In X-ray, High contrast images are-
 (A) Noise limited (B) Sharpness limited
 (C) Both (A) and (B) (D) None of the above
011. 1 tesla equals to -
 (A) 10^4 gauss (B) 10^5 gauss
 (C) 10^6 gauss (D) 10^7 gauss
012. Corpus callosum agenesis is associated with -
 (A) Common trunk anterior cerebral artery (azygos anterior cerebral artery)
 (B) Middle cerebral artery
 (C) Posterior cerebral artery
 (D) None of the above

013. A voxel is a-
 (A) Picture element (B) Volume element
 (C) Both (A) and (B) (D) None of the above
014. Rayleigh – tyndall scattering is caused by
 (A) WBC (B) RBC
 (C) PLATELET (D) All of the above
015. The total thickness of a typical intensifying screen is about
 (A) 12 mm (B) 15 mm
 (C) 18 mm (D) 20 mm
016. What is the target material for Xray tubes used in Mamography ?
 (A) Molybdenum (B) Nickel
 (C) Chromium (D) Choline
017. The following materials are used for interventional radiology except
 (A) Aneurysmal Clip (B) Microcoils
 (C) Balloon (D) Onyx
018. The FLAIR images are use for subtraction of
 (A) Fat (B) Water
 (C) CSF (D) Protein
019. T1WI
 (A) Long TR and short TE (B) Long TR and long TE
 (C) Short TR and short TE (D) Short TR and long TE
020. In which MRI technique contrast use
 (A) Dynamic susceptibility contrast imaging (B) TOF MR Angiography
 (C) c Phase-Contrast Imaging (D) ASL technique
021. Three-dimensional (3D) constructive interference in steady state (CISS) is use in following conditions except
 (A) Evaluation of CSF rhinorrhea
 (B) Identification of the scolex of neurocysticercosis
 (C) Evaluation of the cranial nerves
 (D) Evalution of cortical tuber
022. Which of the following condition does not show restricted diffusion?
 (A) Brain tumor (B) Acute stroke
 (C) Arachnoid cyst (D) Intracranial Abscess
023. The following which is developer agent for processing radiograph
 (A) Alkalizer [Accelerator Na_2CO_3] (B) Acetic acid
 (C) Silver Bromide (D) Potassium alum
024. In General Radiography, filters are use which are commonly made of
 (A) Selenium (B) Moybdenum
 (C) Nickle (D) Aluminum

025. Radioactive Cobalt emits
 (A) Beta particles (B) Alpha particles
 (C) Gamma Ray (D) X-ray
026. The detector design in multi-detector CT scanners is
 (A) Translate - rotate (B) Rotate - Rotate
 (C) Rotate - Fixed (D) Electron beam
027. Flim contrast is depend on all except
 (A) Flim gamma (B) Use of screen
 (C) Flim density (D) Thickness of the tissue
028. Regarding Photoelectric effect, false statement is
 (A) Photon displaced completely
 (B) Produce ionize atom
 (C) Interaction between photon and bounded electron
 (D) Decreased with increased density
029. Which metabolites are detected on Proton MR spectroscopy except
 (A) n Acetyle Aspartate (B) Choline
 (C) Phosphorus (D) Lipid
030. Functional MRI is based on
 (A) Dynamic susceptibility contrast imaging
 (B) BOLD
 (C) ASL
 (D) CSF flow study
031. T2*- based MR Imaging are all except
 (A) Susceptibility-weighted Imaging (B) Perfusion MR Imaging
 (C) BOLD (D) T1 permeability Imaging
032. DICOM stands for
 (A) Digital Imaging and Communications in Medicine
 (B) Digital Imaging and Connections in Medicine
 (C) Digital Imaging in Community Medicine
 (D) Digital Imaging Combination in Medicine
033. AREB stand for
 (A) Atomic Energy Regulatory Board (B) American Energy Regulatory Board
 (C) Atomic Energy and Radiology Board (D) American Energy Radiology Board
034. Content of the X ray tube
 (A) Nitrogen gas (B) CO₂
 (C) He (D) Vaccum
035. 1 Sievert (Sv) is equal to
 (A) 1 rem (B) 10 rem
 (C) 100 rem (D) 1000 rem

036. Ring artifacts are result of
 (A) Miscalibration of one detector in a rotate -rotate geometry scanner
 (B) High density material severely reduces the X-ray transmission
 (C) Heterogenous X-ray beam
 (D) Patient movement
037. Melting point of Tungsten is
 (A) 300 degree C (B) 1500 degree C
 (C) 2200 degree C (D) 3370 degree C
038. The four layers of intensifying Screen consists of all except-
 (A) Base (B) Reflecting layer of CO₂
 (C) Phosphor layer (D) Protective layer
039. The State-of-the-Art Imaging of Acute Stroke consist of following imaging sequence to detect penumbra is all except
 (A) Perfusion (B) Angiography
 (C) Diffusion (D) T1 WI
040. The follwing materials are used for Piezoelectricity except
 (A) Barium Titanate (B) Lead Zirconate Titanate
 (C) Quartz (D) Iron Titanate
041. The primary factor that limits the maximum MA that can be used during a radiographic exposure is:
 (A) Anode angle (B) Focal spot size
 (C) Cathode temperature (D) Exposure time
042. Relatively low KV values are used in some X-ray procedures for the purpose of:
 (A) Increasing penetration (B) Increasing contrast sensitivity
 (C) Decreasing patient exposure (D) Decreasing area contrast
043. If you change from a low ratio to a high ratio grid you would expect:
 (A) A decrease in patient exposure (B) An increase in image contrast
 (C) An increase in grid X-ray penetration (D) Positioning to be less critical
044. An air gap technique will generally improve image contrast because:
 (A) It is used with a small focal spot
 (B) The air absorbs scattered radiation
 (C) It is used with a small field of view
 (D) The scatter is more diverging than the primary beam.
045. Quantum noise in radiography can generally be decreased by:
 (A) Using a film with lower sensitivity (speed)
 (B) Using smaller focal spots
 (C) Using high ratio grids
 (D) Increasing the aluminum filtration
046. When using a magnification technique in radiography it is essential to have:
 (A) Low KV (B) Low MAS
 (C) A short exposure time (D) A small focal spot.

047. The amount of contrast in a radiograph can be affected by following except
 (A) The latitude of the film (B) Processing conditions
 (C) Amount of exposure (D) Film-screen contact
048. Wada Test is done for:
 (A) Brain tumor surgery (B) Epilepsy surgery
 (C) AVM surgery (D) Spine surgery
049. High kilovoltage chest radiographs are used for:
 (A) Produced high contrast film
 (B) Miliary shadowing and calcification more clearly seen
 (C) Increased visualization of the hidden area of the lung
 (D) Increased magnification.
050. Polka dot appearance on axial CT images is seen in which of the following vertebral tumour:
 (A) Vertabral Hemangioma (B) Osteoblastoma
 (C) Metastasis (D) Multiple myeloma
051. Which of the following stone is radiolucent ?
 (A) Urate (B) Cystine
 (C) Calcium oxalate (D) Struvite
052. Which of the following is best for the diagnosis of pneumoperitoneum?
 (A) Erect Chest film (B) Erect abdominal film
 (C) Supine abdominal film (D) Supine Chest film
053. Which one of the following statements is incorrect about epidermoid cyst?
 (A) CP Angle cistern is the most common site
 (B) MRI shows CSF signal intensity in all pulse sequence
 (C) Shows restricted diffusion on DWI
 (D) May appear hyperintense signal intensity on T1WI
054. The most specific sign of acute stroke is-
 (A) Wedge shaped parenchymal hypodensity (B) Insular ribbon sign
 (C) Disappearing basal ganglia (D) Dense MCA sign
055. Restricted diffusion are seen in all except-
 (A) Epidermoid (B) Sub acute Hematoma
 (C) Acute stroke (D) Arachnoid cyst
056. Which material is used as a filter in Diagnostic Radiology?
 (A) Aluminum (Al) (B) Nickel (Ni)
 (C) Iron (Fe) (D) Chromium (Cr)
057. The following signs have been developed to help to identify the motor cortex in MRI except-
 (A) The precentral knob
 (B) The pars bracket sign
 (C) Thicker post central gyrus compare to precentral gyrus
 (D) The "M" shape of the inferior frontal gyrus
058. The following material have piezoelectric characteristics:
 (A) Amorphous silicon (B) Lead Zirconate titanate
 (C) Technetium 99 (D) Phosphorus 32

059. Which of the following material is used as a developing agent ?
 (A) Ammonium Thiosulfate (B) Potassium Bromide
 (C) Sodium Thiosulfate (D) Acetic acid
060. Mammography X-Ray tubes are designed with all except-
 (A) Tungsten (B) Molybdenum
 (C) Rhodium (D) Copper
061. Which of the following conditions show water lilly sign in CT
 (A) Acute stroke (B) Epidermoid
 (C) Abscess (D) Hydatid cyst
062. MRI rooms are shielded completely by a continuous sheet or wire mesh of copper to shield the imager from external electromagnetic radiation. It is called
 (A) Maxwell Cage (B) Faraday cage
 (C) Edison cage (D) Ohms Cage
063. FLAIR image suppresses
 (A) CSF (B) Water
 (C) Fat (D) Bone
064. Racing car sign is seen in-
 (A) Corpus callosum agenesis (B) Pericallosal lipoma
 (C) Holoprocencephaly (D) None of the above
065. Dural tail enhancement is seen in:
 (A) Glioma (B) Meningioma
 (C) Schwannoma (D) Cavernoma
066. Pneumocystis carini occurs in all groups of immunocompromised people with reduced-
 (A) Cell mediated immunity (B) Humoral immunity
 (C) Both (A) and (B) (D) None of the above
067. Which of the brain tumor shows increased choline at peritumoral edema?
 (A) Metastasis (B) Meningioma
 (C) Glioblastoma multiforme (D) Epidermoid
068. Which of the following statement is correct about radiation protection for diagnostic radiography?
 (A) The wall of the X-Ray room on which primary X-Ray beam falls are not less than 35 mm thick brick or equivalent.
 (B) Wall of the X-Ray room on which scattered X-ray fall are not less than 20 cm.
 (C) The ceiling must have a thickness of concrete not less than 10 cm.
 (D) The doors are lined with 1 mm thick lead sheet.
069. The Brainstem consists of following parts except:
 (A) Midbrain (B) Pons
 (C) Medulla (D) Thalamus
070. The application of MR to imaging was first done by-
 (A) Paul lauterbur (B) R. Damadian
 (C) R. Egan (D) Hounsfield

071. For lymphangiogram which of the contrast is used:
 (A) Lipiodol (B) Iodinated contrast
 (C) Gadolinium (D) nBCA
072. In positron emission tomography scanning, which of the following radio isotope is used as a tracer?
 (A) Cobalt (B) 18-FDG
 (C) P-32 (D) He
073. Which of the following can be the most useful abdominal radiograph in a patient with acute abdomen?
 (A) Supine abdominal radiograph (B) Erect abdominal radiograph
 (C) Lateral decubitus (D) Lateral abdominal view
074. Which is the best Radiograph for pneumoperitoneum:
 (A) Erect Chest view (B) Erect Abdominal Radiograph
 (C) Lateral decubitus abdominal film (D) Lateral abdominal view
075. Investigation of choice for Acute Head injury is –
 (A) NCCT brain (B) CECT brain
 (C) MRI brain (D) X-ray
076. Radiological investigation of choice for acute osteomyelitis is-
 (A) X-ray (B) CT
 (C) MRI (D) None of the above
077. Water soluble contrast media used for myelography is
 (A) Metrizamide (B) Dianosil
 (C) Conray (D) Iohexol
078. Ankle fractures are best detected by-
 (A) MRI (B) CT
 (C) USG (D) X-ray
079. Contrast used in CT is-
 (A) Gadolinium (B) Technetium
 (C) Iodine (D) Chromium
080. IVU is not done in
 (A) Multiple myeloma (B) Secondaries in bone
 (C) Leukaemia (D) Renal tumours
081. Which of the following is not a risk factor for contrast induced nephropathy-
 (A) Dehydration (B) Diabetic Nephropathy
 (C) High Osmolar Agent (D) Obesity
082. The contrast material used in the diagnosis of esophageal atresia is
 (A) Gastrograffin (B) Conray
 (C) Dianosil (D) Urograffin
083. Father of medical ultrasound is
 (A) John Wild (B) Robert Egan
 (C) Ian Donald (D) Hounsefield

084. Comet tail sign on USG is seen in
 (A) Acute cholecystitis (B) Chronic cholecystitis
 (C) Gall bladder adenomyomatosis (D) Cholelithiasis
085. Stryker's view is used in shoulder joint to visualize
 (A) Muscle calcification (B) Recurrent subluxation
 (C) Sub acromial calcification (D) Bicipital groove
086. Harmonic imaging is related which of the imaging modalities
 (A) Sonography (B) DSA
 (C) MRCP (D) Nuclear imaging
087. All among the following are ionising radiation except-
 (A) Alpha rays (B) Beta rays
 (C) X-rays (D) MRI
088. PACS stands for
 (A) Picture Archiving and Communication System
 (B) Physics and Astronomy Classification Scheme
 (C) Photoconductor Array Camera and Spectrometer
 (D) None of the above
089. Annual equivalent recommended dose of AERB for radiation occupational worker is-
 (A) 20 mSv (B) 30 mSv
 (C) 50 mSv (D) 100 mSv
090. The AERB recommended dose limits to pregnant woman's abdomen is
 (A) 0.5 mSv per month
 (B) 0.1 mSv per month
 (C) 2.0 mSv for the remainder of the pregnancy
 (D) 5.0 mSv for the remainder of the pregnancy
091. BIRADS is used for
 (A) Mammography (B) Breast MRI
 (C) Breast USG (D) All of the above
092. In restricted diffusion
 (A) Hyperintense on DWI and hypointense on ADC
 (B) Hyperintense on DWI and hyperintense on ADC
 (C) Hypointense on DWI and hyperintense on ADC
 (D) Hypointense on DWI and hypointense on ADC
093. Which of the following statement of Digital Subtraction Angiography is correct:
 (A) Road map is a technique in which static fluoroscopic image is subtracted from densely opacified vessel
 (B) In Mask pixel shift, removing the pixels of the mask image to obviate the motion artefacts
 (C) In Temporal frame averaging two or more frames of a DSA acquisition are summed into a single image
 (D) In Mask-mode subtraction, two or more images are averaged to form single image with less noise

094. Permanent embolizing agents are all except
 (A) Onyx (B) PVA
 (C) N Butyl Cyanoacrylates (D) Gelatin sponge
095. Current recommendation of 1st imaging modality for Acute Stroke presented within 3 hours is
 (A) DWI (B) CT
 (C) CTA (D) MRA
096. Father of interventional radiology is
 (A) Alexander Margulis (B) Charles Dotter
 (C) Scott D. Schlesinger (D) Guido Guglielmi
097. Which of the following is the arthrographic finding of CDH:
 (A) Limbus is inserting into the joint
 (B) Hypertrophy of the ligamentum teres
 (C) Notch produced by contracted psoas tendon
 (D) All of the above
098. Investigation of choice for congenital uterine anomalies is
 (A) MRI (B) CT
 (C) USG (D) X-ray
099. Current indication of endovascular treatment of acute stroke is
 (A) Acute infarct with hemorrhagic transformation
 (B) Acute infarct involving < 1/3rd of MCA territory
 (C) Patient presented after 24 hours
 (D) Patient presented after 12hours
100. Intracranial aneurysm is common in the population, because intracranial artery have following layers except
 (A) Intima (B) Internal elastic lamina
 (C) Media (D) External elastic lamina
101. Yolk sac in an indicator of poor outcome of pregnancy if it is-
 (A) Too small yolk sac < 2 mm (B) Too large yolk sac > 6 mm
 (C) Solid yolk sac (D) All of the above
102. MR perfusion study and spectroscopy can be helpful in
 (A) Differentiating neoplastic from non-neoplastic lesion
 (B) Grading tumors
 (C) Guiding appropriate biopsy site
 (D) All of the above
103. Gestational sac can be detected on USG at the earliest by
 (A) 5 - 6 weeks gestation (B) 7 - 8 weeks gestation
 (C) 10 weeks gestation (D) 12 weeks gestation
104. All are true about transvaginal USG except
 (A) Bladder should be full (B) Bladder should be empty
 (C) Consent is mandatory (D) None of the above

105. Inferior rib notching is seen in all of the following except:
 (A) Aortic coarctation (B) Subclavian artery occlusion
 (C) Superior vena caval obstruction (D) Rheumatoid arthritis
106. Golden S sign is associated with which of the following :
 (A) Right upper lobe collapse. (B) Left upper lobe collapse.
 (C) Right middle lobe collapse. (D) Left lower lobe collapse.
107. Retrograde pyelography is indicated in all of the following conditions except:
 (A) Demonstration of the lower end of the obstructed ureter
 (B) A case of hematuria with no certain diagnosis on IVP
 (C) Inadequate demonstration of the filling defect in the collecting system
 (D) Reimplanted ureter in the ileal conduit
108. Which of the following is seen in the rheumatoid arthritis?
 (A) Increasing palmer flexion and ulnar deviation
 (B) Increasing dorsal flexion
 (C) Medial deviation of the toes
 (D) Proximal interpharyngeal joint extension and distal interpharyngeal joint flexion
109. Onion peel periosteal reaction occur in:
 (A) Ewing Sarcoma (B) Osteomyelitis
 (C) Osteosarcoma (D) All of the above
110. Plain film appearance of pulmonary venous hypertension is/are:
 (A) Hazy lower zones with attenuation of vessels
 (B) Upper zone vessels became prominent
 (C) Loss of definition of heart and mediastinal contours
 (D) All of the above
111. ACL tears are up to eight times more common in
 (A) Men (B) Women
 (C) Both (A) and (B) (D) None of the above
112. Shepherd's crook deformity is seen in:
 (A) Chondrodysplasia calcificans. (B) Fibrous dysplasia
 (C) Osteopoikylolysis (D) Paget's disease
113. All are true about the retrocaval ureter except:
 (A) It is always seen on the right side
 (B) The ureter is seen to deviate medially posterior to the IVC
 (C) Rarely associated with hydronephrosis
 (D) It may involve lower third of the ureter
114. A "Sausage digit" is seen in
 (A) Psoriatic arthritis (B) Reiter's syndrome
 (C) Ankylosing spondylitis (D) Forestier's disease
115. Licked candy stick appearance is seen in.
 (A) Psoriatic arthritis (B) Reiter's syndrome
 (C) Ankylosing spondylitis (D) Forestier's disease

116. Which of the following is not the X-ray finding of rickets:
 (A) Fraying of the metaphysic (B) Widening of the epiphyseal plate
 (C) Bowing (D) Wimberger's sign
117. False about Myositis Ossificans is
 (A) It is a heterotopic bone formation in soft tissue
 (B) Common in cardiac muscle
 (C) Results of surgical resection are best after complete maturation
 (D) MRI is nonspecific
118. Fascicular sign on MR is a feature of
 (A) Hemangioma (B) Muscular tear
 (C) Rhabdomyosarcoma (D) Benign peripheral nerve sheath tumor
119. Congenital Pseudoarthrosis of tibia seen in all except
 (A) Neurofibromatosis (B) Fibrous dysplasia
 (C) Ideopathic juvinal osteoporosis (D) Cleidocranial dysplasia
120. A 35 years old male shows an eccentric lytic expansile subarticular lesion with trabeculation in upper end of tibia with well defined sharp margin without sclerosis most likely diagnosis is:
 (A) Aneurysmal bone cyst (B) Osteochondroma
 (C) Giant cell tumour (D) Osteoblastoma
121. A young man complaining of severe right leg pain with marked sclerosis in the tibia with central lucency seen in sub periosteal location, the most likely diagnosis is:
 (A) Osteomyelitis (B) Osteoid osteoma
 (C) Osteosarcoma (D) Brodies' abscess
122. Type I Salter Harris classification
 (A) Injury through the epiphyseal plate
 (B) Fracture through the plate and metaphysis
 (C) Fracture through the epiphyseal plate and epiphysis
 (D) Fracture through the epiphyseal plate, epiphysis and metaphysis
123. Identification of the loops in the sigmoid volvulus are all except:
 (A) Left plank over lap syndrome (B) Apex above T8
 (C) Liver over lap sign (D) Air fluid ratio >2:1
124. Signs of acute cholecystitis are all except:
 (A) Gas within biliary system (B) Ileus of hepatic flexor of the column
 (C) Duodenal ileus (D) Liver over lap sign
125. Common site of involvement by typhilitis:
 (A) Duodenum (B) Cecum and ascending colon
 (C) Descending colon (D) Sigmoid colon
126. Water lily sign on Chest radiograph is suggestive of:
 (A) Hydatid cyst (B) Bronchiectasis
 (C) Bronchopleural fistula (D) Sequestration of lung
127. Comet tail sign is seen in:
 (A) Miliary tuberculosis (B) Rounded atelectasis
 (C) Pleural effusion (D) Pulmonary collapse

128. Signet ring appearance on HRCT of thorax is characteristic of:
 (A) Bronchiectasis (B) Emphysema
 (C) Chronic bronchitis (D) Asthma
129. Most reliable direct sign of lung collapse in X-ray:
 (A) Displacement of the interlobular fissure in X-Ray
 (B) Elevation of the hemidiaphragm
 (C) Mediastinal displacement
 (D) Hilar displacement
130. Peri-hilar fluffy opacity seen on chest radiograph is characteristic of:
 (A) Pulmonary arterial hypertension (B) Pulmonary venous hypertension
 (C) Pericardial effusion (D) Pulmonary artery embolism
131. Which angiographic finding is most commonly found in carotid dissection
 (A) string sign (B) distal thromboembolic branch occlusions
 (C) Double lumen sign (D) Dissecting aneurysms
132. Cervix sign & Nipple sign are both seen in –
 (A) Sigmoid volvulus
 (B) Cystocercoma phylloides
 (C) Congenital hypertrophic pyloric stenosis
 (D) Colonic carcinoma
133. A 32-year-old tennis player undergoes a MR arthrogram to investigate recurrent left shoulder instability following a previous glenohumeral dislocation. The MRI reveals a tear of the anterosuperior labrum, closely related to the insertion of the biceps tendon. How are these appearances best described?
 (A) Anterior labral tear
 (B) Bankart lesion
 (C) Hill-Sachs lesion
 (D) Superior labrum from anterior to posterior (SLAP) lesion
134. Father of modern mammography is
 (A) Charles Dotter (B) Robert Egan
 (C) Hounsfield (D) Roentgen
135. Which of the following is not a component of the Rotator Cuff Interval?
 (A) Long head of the Biceps (B) Coracohumeral ligament
 (C) Superior glenohumeral ligament (D) Inferior glenohumeral ligament
136. On Ultrasound Morant Baker's Cyst is seen as a collection of fluid between :
 (A) Semi membranous tendon – Medial head of gastrocnemius
 (B) Semi tendinosus tendon – Medial head of gastrocnemius
 (C) Semi tendinosus – Lateral head of gastrocnemius
 (D) Lateral & Medial heads of gastrocnemius
137. Amelogenesis imperfecta is a developmental disorder of
 (A) Dentine formation (B) Enamel formation
 (C) Cementum formation (D) None of the above

138. Most Common primary malignant bone tumour in children is
 (A) Osteosarcoma (B) Chondrosarcoma
 (C) Neuroblastoma (D) Ewing's sarcoma
139. CHARGE syndrome includes all except
 (A) Heart defects (B) Coloboma of the eye
 (C) Choanal atresia (D) Hearing defect
140. Kienbock's disease is
 (A) Osteonecrosis of the trapezium (B) Osteonecrosis of the lunate
 (C) Osteonecrosis of trapezoid (D) Osteonecrosis of scaphoid
141. Molar tooth appearance on MR imaging is seen in
 (A) Joubert's syndrome (B) DandyWalker malformation
 (C) Chiari malformation type I (D) Chiari malformation type II
142. Tarlov cyst is
 (A) Perineural lumbar cyst (B) Perineural thoracic cyst
 (C) Perineural sacral cyst (D) None of the above
143. Inhaled foreign bodies are most commonly lodged in
 (A) Right bronchus intermedius (B) Left bronchus intermedius
 (C) Carina (D) Distal bronchus
144. Content of herniated tissue in Chiari type II malformation includes
 (A) Lip of cerebellum
 (B) Part of cerebellum, fourth ventricle, medulla oblongata and pons
 (C) Large herniation of posterior fossa
 (D) Medulla oblongata and pons
145. Most common site of mandibular fracture
 (A) Body (B) Angle
 (C) Ramus (D) Condyle
146. Sunburst or spokedwheel appearance on skiagram of skull is a feature of
 (A) Haemangioma (B) Osteosarcoma
 (C) Both (A) and (B) (D) Bone of the above
147. Avascular necrosis of the caputulum of distal humerus is known as
 (A) Panner's disease (B) Mauclaire disease
 (C) Preiser's disease (D) Sever's disease
148. Bursting fracture of the atlas is
 (A) Hangman fracture (B) Jefferson's fracture
 (C) Bumper fracture (D) March fracture
149. Fetal mandibular abnormality is frequently associated with
 (A) Pierre Robins anomaly (B) Treacher Collin syndrome
 (C) Neulaxova and PanaShokier syndrome (D) All of the above
150. Definitive diagnostic criteria for Forestier's disease includes flowing calcification and ossification along the anterolateral aspect of -
 (A) Atleast 4 continuous vertebra (B) Atleast 5 continuous vertebra
 (C) Atleast 3 continuous vertebra (D) Atleast 2 continuous vertebra

151. Most common complex cardiac defect is
 (A) Situs inversus totalis (B) Dextrocardia
 (C) Situs solitus (D) Situs inversus with levocardia
152. Wimberger sign is radiological feature of
 (A) Scurvy (B) Beri Beri
 (C) Ricket (D) Hyperparathyroidism
153. Ronaldo fracture is
 (A) Intraarticular fracture at the base of the first metacarpal
 (B) Intraarticular fracture at the base of the second metacarpal
 (C) Intraarticular fracture at the base of the third metacarpal
 (D) Intraarticular fracture at the base of the fourth metacarpal
154. Type of Oesophageal atresia most commonly associated with down syndrome is
 (A) Fistula with the distal stump
 (B) Double fistula with both the stumps
 (C) Fistula with proximal stump
 (D) Fistula without concomittant oesophageal atresia
155. Short fourth metacarpal is seen in -
 (A) Trauma (B) Turner syndrome
 (C) Pseudohypoparathyroidism (D) All of the above
156. Bosniak classification on CT is used for -
 (A) Acute pancreatitis (B) Renal cysts
 (C) Endometrial cancer (D) Ovarian cyst
157. Non visualization of kidney on IVP is seen in -
 (A) Duplication (B) Polycystic kidney disease
 (C) Multicystic dysplastic kidney (D) Hypoplasia
158. Drooping lily sign in IVU is seen in
 (A) Horshoe kidney (B) Medullary sponge kidney
 (C) Duplicated Collecting system (D) Retrocaval Ureter
159. Modified CT severity index is related to -
 (A) Gastric Carcinoma (B) Acute Pancreatitis
 (C) Esophageal Carcinoma (D) None of the above
160. Earliest IVP finding of Tuberculosis is -
 (A) Moth eaten calyces (B) Golf ball on tee sign
 (C) Lobster claw sign (D) Ring sign
161. The most sensitive image modality in renal TB is -
 (A) CT IVP (B) CECT
 (C) NCCT (D) MRI
162. Dense persistent nephrogram is shown by -
 (A) Acute ureteric obstruction (B) Hydronephorsis
 (C) Acute complete arterial obstruction (D) ARPCKD

163. **Striated nephrogram is shown by all except –**
 (A) Acute pyelonephritis (B) ARPCKD
 (C) ADPCKD (D) Acute renal vein thrombosis
164. **Which of the following sign is seen on IVP in renal paillary necrosis-**
 (A) Lobster claw sign (B) Ball on tee
 (D) All of the above
165. **All are causes of medullary calcinosis except –**
 (A) Distal renal tubular acidosis (B) Medullary sponge kidney
 (D) Alports syndrome
166. **All are cause of Cortical nephrocalcinosis except –**
 (A) Hemolytic uremic syndrome (B) Graft rejection
 (C) Sarcoideosis (D) Chronic Glomerulonephritis
167. **String of beads sign of renal artery angiogram is seen in –**
 (A) Fibromascular Dysplacia (B) Renal artery thrombosis
 (C) Atherosclerosis (D) Takayaso Arteritis
168. **Which of the following investigation is done for the evaluation of renal scarring in reflux nephropathy –**
 (A) Tc 99m DMSA (B) Tc 99m DTPA
 (C) Tc 99m MAG3 (D) Tc 99m Per technetate
169. **All are true about Neuroblastoma except-**
 (A) Stippled calcification is common (B) Vascular encassment seen
 (D) Pulmonary metastasis common
170. **Thimble Bladder is seen in –**
 (A) Tuberculosis (B) Schistosomiasis
 (C) Neurogenic bladder (D) Pelvic abcess
171. **Fluid- Fluid Level Is Seen In-**
 (A) Aneurysmal Bone Cyst (ABC) (B) Giant Cell Tumors (GCT)
 (D) All of the above
172. **BLADDER WALL CALCIFICTION is seen in –**
 (A) Tuberculosis (B) Schistosomiasis
 (C) Both (A) and (B) (D) None of the above
173. **All are causes of tear drop bladder except-**
 (A) Neorogenic baldder (B) Pelvic abcess
 (C) Pelvic lipomatosis (D) Pelvic hematoma
174. **Primary diagnostic procedure for evaluation of vesicoureteric reflux is a-**
 (A) MCU (B) Tc DTPA Scan
 (C) USG (D) Tc DMSA
175. **Keyhole sign in USG is a finding seen in –**
 (A) VUR (B) Posterior urethral valve
 (C) Ureterocle (D) Horshoe kidney

176. Goblet sign is seen in –
 (A) Retrocaval ureter (B) TB Ureter
 (C) Transitional cell cancer of ureter (D) Duplicated collecting system
177. Investigation of choice for testicular torsion –
 (A) CT (B) DOPPLER
 (C) MRI (D) PET
178. Best way to visualize minimum pneumoperitoneum in injured individual-
 (A) X-ray AP view of abdomen
 (B) Erect X-ray of abdomen
 (C) Right lateral decubitus Chest X-ray with horizontal beam
 (D) Left lateral decubitus abdomen X-ray with horizontal beam
179. The first region scanned in FAST-
 (A) Pericardial (B) Right Flank
 (C) Left Flank (D) Pelvic
180. Double duct sign is seen in-
 (A) Periampullary cancer (B) Chronic cholecystitis
 (C) CBD stone (D) Sclerosing Cholangitis
181. Frostburg inverted 3 sign is seen in-
 (A) CA head of pancreas (B) Duodenal ulcer
 (C) Coarctation of aorta (D) Caroli's disease
182. Sunburst calcification with central fibrotic scar is seen in –
 (A) Pancreatic adenocarcinoma (B) Mucinous cystadenocarcinoma
 (D) Serous cystadenoma of pancreas
183. Central dot sign is seen in
 (A) Caroli's disease (B) HCC
 (C) Hemangioma (D) Hydatid
184. Neonate triangular cord sign on USG is seen in
 (A) Galactosemia (B) Biliary atresia
 (C) Hepatitis (D) None of the above
185. Which of the following is not a diagnostic indication of TRUS (trans rectal ultrasound) –
 (A) Benign prostatic hyperplasia (B) Prostatitis
 (C) Prostatic abscess aspiration (D) Rectal mass evaluation
186. Which of the following is true about PET
 (A) Single photon peak at 511 keV (B) Dual photon peak at 511 keV
 (C) X-rays are used (D) Lead collimators are used
187. Which of the following is the likely explanation for symmetric uptake in bilateral supraclavicular areas with no uptake on paratracheal nodes in a patient with ca oesophagus –
 (A) Brown adipose tissue (B) Paraneoplastic polymyositis
 (C) Recent trauma (D) Recent URTI
188. Which of the following compounds are used in PET scan
 (A) Fluorodeoxyglucose (B) Technitium
 (C) Chromium (D) Cobalt

199. At what thickness of the cartilage cap of osteochondroma in an adult patient it is suspicious to have undergone malignant transformation?
- (A) 4 cm (B) 1 cm
(C) 2 cm (D) 3 cm
200. What is the differentiating feature between Maffucci's syndrome and Ollier's disease?
- (A) Enchondromatosis (B) Hemangiomas
(C) Phleboliths (D) None of the above