

AVJ

PROVISIONAL ANSWER KEY (CBRT)

Name of the post	Radiologist, GH & MS (Specialist Service), Class 1
Advertisement No.	1/2020-21
Preliminary Test held on	06-07-2021
Question No.	001 -200 (Concern Subject)
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THE LINK FOR ONLINE OBJECTION SYSTEM WILL START FROM 08-07-2021; 04:00 PM ONWARDS	

Instructions / સૂચન

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 ઓનલાઇન 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 વેબસાઇટ / ઓનલાઇન ઓબ્જેક્શન સબમીશન સીસ્ટમ પર પ્રસિધ્ધ થયેલ નિયત નમૂનાનો જ ઉપયોગ કરવો.
- (3) ઉમેદવારે પોતાને પરીક્ષામાં મળેલ પ્રશ્નપુસ્તિકામાં છપાયેલ પ્રશ્નક્રમાંક મુજબ વાંધા-સૂચનો રજૂ કરતા તમામ વાંધા-સૂચનો વેબસાઇટ 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 : http://150.129.165.5/GPSC_Suggestion/

001. In case of intestinal tuberculosis, chest x-ray may show active disease in
 (A) About 1.5%-2.0% (B) About 50%-60%
 (C) About 15%-20% (D) About 5%-6%
002. Uncommon malignances that can metastasize to GIT may include.
 (A) Metastatic lung cancer (B) Breast cancer
 (C) Melanoma (D) Renal cell carcinoma
003. Linitis plastica like appearance is the most common and characteristic appearance of.
 (A) RCC (B) HCC
 (C) Lung cancer (D) Metastatic lobular cancer of breast
004. Single most sensitive test for diagnosis of disseminated Mycobacterium avium - intra - cellular complex is
 (A) Peripheral blood culture (B) Stool culture
 (C) Gastric lavage culture (D) Pus culture from the site
005. Bile duct Hamartoma is also known as
 (A) Von Meyenburg's complex (B) Von Recklinghausen's Disease
 (C) All of the above (D) None of the above
006. Missing duct sign is found in
 (A) Iatrogenic stricture of common hepatic duct
 (B) Stricture of bile duct in recurrent pyogenic cholangitis
 (C) Biliary Cyst adenoma
 (D) Bile duct adenoma
007. Which is true in case of Biliary Papillomatosis
 (A) No potential for malignant transformation
 (B) It spreads deeply
 (C) Tumours are seen in the outer surface of the biliary tree
 (D) Causes non obstructive dilatation of entire biliary tree
008. Not true in case of Biliary cyst adenoma
 (A) Appears as multiple cystic mass
 (B) Usually no communication between the cystic mass and bile ducts
 (C) Appears as solitary cystic mass
 (D) Usually the cystic tumour in multiloculated
009. Most common malignant tumour arising from epithelium of bile ducts
 (A) Adenocarcinoma (B) Hepatocellular carcinoma
 (C) Cholangiocarcinoma (D) Tumours of Ampulla of Vater
010. Not true in case of Biliary cystadenocarcinoma
 (A) An oval unilocular cyst containing a solid mass with an irregular surface.
 (B) Calcifications are never seen.
 (C) Presents as a single cyst.
 (D) The septa and mural nodules are typically enhanced on contrast enhanced CT and MRI.

011. On investigation
1. ERCP shows amorphous filling defect in CBD
 2. Plain CT after ERCP shows intra luminal filling defect in GB
 3. CECT shows mild thickening of GB wall and intraluminal hyper dense substance
- (A) Gangrenous cholecystitis (B) Acute cholecystitis
 (C) CA Gall bladder (D) Hemorrhagic cholecystitis
012. True about gall stone ileus
- (A) Occurring in 0.3% to 0.5% of all cases of all cases of cholelithiasis
 (B) 0.03% to 0.05% of all cases of all cases of cholelithiasis
 (C) 3% to 5% of all cases of all cases of cholelithiasis
 (D) None of above
013. Appropriate statement in case of pathophysiological phenomena that contributes to fatty infiltration of liver parenchyma
- (A) Decreased mitochondrial fatty and beta oxidation
 (B) Increased endogenous fatty acid synthesis
 (C) Deficient incorporation
 (D) All of above
014. Following of the drugs causes hepatic veno-occlusive disease except
- (A) Azathioprine (B) Pyrrolizidine alkaloid
 (C) Cysteamine (D) Rifampicin
015. Contrast enhanced MDCT shows irregular perfusion with heterogeneous attenuation throughout the hepatic parenchyma, suggestive of.
- (A) Acute viral hepatitis (B) Chronic Hepatitis
 (C) Amoebic hepatitis (D) All of the above
016. Agents associated with development of Peliosis Hepatitis.
- (A) Antimalarials (B) Antibiotics
 (C) Antituberculars (D) Anabolic steroids& corticosteroids
017. True in case of focal Nodular Hyperplastic of liver.
- (A) It is a tumour like condition in non-cirrhotic liver.
 (B) It is a tumour like condition in cirrhotic liver.
 (C) Most of the cases occur in men.
 (D) Intraperitoneal rupture is very common.
018. Not true in care of polycystic Liver disease
- (A) Can be seen in pediatric period.
 (B) When complicated by congenital hepatic fibrosis, may be associated with portal hypertension and esophageal varices
 (C) In 89% of cases pancreas is involved.
 (D) Renal cysts are also present in approx. 70% of cases.

019. Not true in case of focal Nodular Hyperplasia (FNH)
- (A) Kupfer's cells are present in FNH, the signal intensity decreases on SPIO enhanced.
 (B) SPIO is also taken over by other lesions such as hepatic adenomas, well differentiated HCC, dysplastic nodules. Care is required in differential diagnosis.
 (C) Hepato-biliary agents such as Mn-DPDP and Gd-EOB-DTPA are useful in the characterization of FNH.
 (D) Because of hepatocytes in FNH take up these agents, FNH shows hypointensity on T1 weighted images enhanced by them.
020. 'Central dot sign' is seen.
- (A) Biliary Hamartoma. (B) Caroli's disease.
 (C) Nodular Regenerative hyperplasia. (D) Polycystic Liver disease.
021. Not true in mesenchymal hamartoma of liver
- (A) Seen in children younger than 2 yrs.
 (B) 7% of all hepatic tumours in pediatric population.
 (C) More frequently in the Right lobe
 (D) T1 weighted MR images show hyperintensity and T2 weighted images show marked Hypointensity.
022. Which of the following is true in case of Gallbladder carcinoma.
- (A) May have mutation of TP53 gene. (B) Over expression of the C-erbB-2 gene.
 (C) Decreased expression of nm23 gene. (D) All of above.
023. According to liver cancer study group of Japan, CCC is derived into the following types except.
- (A) Mass forming. (B) Pre ductal infiltrating.
 (C) Intraductal growing. (D) Cellular.
024. In modified CT severity Index of Acute Pancreatitis, inflammation - pancreas and/ or peripancreatic fat implies percentage of necrosis.
- (A) > 30% (B) ≤ 30%
 (C) 30-50% (D) ≥ 50%
025. Principal forms of chronic pancreatitis
- (A) Calcific chronic Pancreatitis (B) Obstructive chronic Pancreatitis
 (C) Autoimmune Pancreatitis (D) All of the above.
026. In case of Emphysematous pancreatitis, which modality/ modalities is/are sensitive for detections even the smallest amount of gas.
- (A) CT (B) MRI
 (C) All of the above (D) None of the above
027. A smooth dilated Pancreatic duct with duct width to total gland width ratio greater than 0.5 is suggestive of.
- (A) Chronic Pancreatitis (B) Acute Pancreatitis
 (C) Carcinoma (D) All of the above

028. Which is not true
- (A) Pancreatoduodenectomy is a curative surgical technique for treatment of pancreatic adenocarcinoma
 - (B) MRI is the modality of choice for follow up of post-surgical patients
 - (C) Recurrent pathology presents with raised serial CA 19-9 levels
 - (D) PET CT is useful for detecting tumour recurrence and differentiating it from post-operative changes
029. Virtually pathognomonic of serouscystadenoma of pancreas
- (A) Honeycomb pattern consisting of a collection of cysts.
 - (B) Fine, external lobulations
 - (C) Enhancement of Septa
 - (D) A fibrous central scar with or without calcification.
030. In case of hemorrhage in the peritoneal cavity, density changes more rapidly because of
- (A) Diluted by peritoneal fluid
 - (B) Chemical reaction of pancreatic juice
 - (C) Fibrinolytic activity of peritoneum
 - (D) All of the above
031. Necrosis of lymph node suggests
- (A) Malignant lymphadenopathy
 - (B) Inflammatory diseases
 - (C) SLE
 - (D) All of the above
032. Not a basic histopathologic variant of Castleman's disease
- (A) Hyalin vascular
 - (B) Plasma cell
 - (C) Mixed subtype
 - (D) Hyperproliferative
033. Not true about chordoma
- (A) Low grade malignant of fetal notochord
 - (B) Treated with surgical resection, radiation therapy or chemotherapy
 - (C) Local recurrence rate after surgery is minimal
 - (D) It occurs most often in sacro-coccygeal region
034. All are true in case of solitary fibrous tumour except.
- (A) Rare neoplasm of mesenchymal origin.
 - (B) Majority occur in intrathoracic location
 - (C) Extra thoracic SFT is more common in man.
 - (D) May present with symptoms and signs.
035. All are true in case of multiple myeloma except
- (A) MM is a B-cell malignancy of antibody secreting plasma cells.
 - (B) Clinical manifestation related to bone marrow infiltration.
 - (C) Renal failure.
 - (D) Hypocalcaemia.
036. No true in case of Granulomatous prostatitis.
- (A) T2 Hypointense nodularity
 - (B) Benign post-infectious prostatitis
 - (C) Associated with tuberculosis
 - (D) Fungal infection

037. Following are true in case of Fournier's disease except.
- (A) Is an uncommon polymicrobial necrotizing fasciitis.
(B) Tubercular infection is very common.
 (C) Is a result of extracellular enzymatic destruction of fascial planes, ultimately results in an obliterative endarteritis
 (D) Infection of scrotum with spread to penis.
038. Following are true in case of testicular malignancy except
- (A) Most common malignancy of young man (20-34 yrs.)
 (B) Increasing in incidence
 (C) Validated risk factor is cryptorchidism
(D) Approximately 5% are germs cell tumours
039. Standard for testicular cancer staging
- (A) Ultrasound **(B) CT**
 (C) MRI **(D) PET MRI**
040. As per international staging system of prostate cancer; Bladder, external sphincter or rectal invasion comes under
- (A) T2C **(B) T3A**
 (C) T3B **(D) T4**
041. Most appropriate statement about benign metastasizing leiomyoma
- (A) Tumours present in uterine and extra uterine location, rarely in lung.
 (B) An origin from vascular invasion of uterine leiomyoma has been proposed.
 (C) Hormonally sensitive
(D) All of the above
042. In case of adenomyosis, Cyclical haemorrhage is not typical because the ectopic tissue derives from.
- (A) Mesenchymal cells **(B) Endothelium**
 (C) Endometrium **(D) Stratum basale**
043. True about uterine leiomyosarcoma
- (A) Develops mostly as de novo lesions** **(B) From a preexisting leiomyoma**
 (C) Secondary from elsewhere **(D) All of the above**
044. True in case of peritoneal inclusion cysts
- (A) Accumulation of fluid produced by peritoneum
(B) Typically found in pre-menopausal women
 (C) Not associated with history of surgery or PID
 (D) In contrast imaging wall enhancement is missing.
045. In case of endometriotic cysts of the ovaries except
- (A) The most common cause of chronic pelvic pain in women of child bearing age.
 (B) Bilateral ovarian involvement occurs in one third to one half of patients.
 (C) Serum CA 125 may be elevated
(D) On T2 weighted images 'Shading' is not a specific sign

046. Most inappropriate in ovarian cancer spreads
 (A) Commonly disseminates to inguinal nodes via round ligaments.
 (B) Directly via the peritoneum
 (C) Lymphatic drainage
 (D) Broad ligament and parametria to the external iliac & obturator nodes
047. Imaging modality of choice for staging ovarian cancer
 (A) Ultrasound (B) CT
 (C) MRI (D) PET MRI
048. CT may display septal calcification in
 (A) Cystadenofibroma (B) Brenner Tumour
 (C) Fibroma (D) Fibrothecoma
049. In case of modified FIGO staging of ovarian cancer extension to other pelvic tissues.
 (A) Stage IIA (B) Stage IIB
 (C) Stage IIC (D) Stage III
050. Find out the most appropriate answer - Delayed diagnosis or inadequate treatment of PID may lead to
 (A) Pyosalpinx, Tubo-ovarian abscess (B) Infertility
 (C) Ectopic pregnancy (D) All of the above
051. Find out the most appropriate answer - CT, Plain Radiography and scintigraphy may result in negative find in multiple myeloma.
 (A) Focal form (B) Diffuse form
 (C) Mixed form (D) All of the above
052. Not true in case of Osteosarcoma
 (A) Administration of Gadolinium can help to distinguish viable tumour from reactive inflammation.
 (B) Lack of enhancement indicates tumour necrosis
 (C) Both of the above
 (D) None of the above
053. Find out the inappropriate statement of Desmoid tumour
 (A) Histologically the tumour is benign and does not metastasize
 (B) Locally aggressive
 (C) Composed of myeloblasts
 (D) Tend to recur after resection
054. Synovial sarcoma develops from
 (A) Synovium (B) Under differentiated Mesenchymal cells
 (C) Endothelial cells (D) All of above
055. Find out the most appropriate statement-following muscles with their tendons form the rotator cuff
 (A) Supra spinatus and infra spinatus (B) A+Teresminor
 (C) B+Subscapularis (D) C+Teres major

056. Find out the most appropriate statement - in case of impingement syndrome. Characterized by
 (A) Stage I - Minimal involvement of Rotator cuff orbiceps tendon
 (B) Stage II - tendonitis, thickening of same group of tendon
 (C) Stage III - partial thickness or full thickness tear of rotator cuff or biceps tendon along with osseous changes.
 (D) All of the above
057. Avulsion of the periosteal sleeve of the glenoid can occur in conjunction with an antero-inferior labral tear (anterior Labroligamentous periosteal sleeve avulsion [ALPSA]) indicates
 (A) Acute lesion (B) Chronic lesion
 (C) Acute on chronic lesion (D) All of the above
058. Hill-sach's deformity is associated with
 (A) Anterior gleno-humeral dislocation (B) Posteriorgleno-humeral dislocation
 (C) Rheumatoid Arthritis (D) Neurogenic shoulder dysfunction
059. The tendon of flexor digitorumlongus runs behind the posterior tibialand out to
 (A) Great toe (B) 2nd to 5th toes
 (C) 3rd to 5th toes (D) 2nd and 3rd toes
060. Find out the inappropriate statement - Healed Achillestendon
 (A) Thickened (B) Fusifom shape
 (C) Does not contain internal signal (D) Diffuse hyperintense signal
061. Of the three medial angle tendons - most prone to tear
 (A) Posterior tibial (B) Flexor degitorumlongus
 (C) Flexor hallucislongus (D) All of the above
062. The OsTrigonom syndrome is a common sesamoid bone located close to
 (A) Calcaneum (B) Talus
 (C) Cuboid (D) First metatarsal
063. Pilon fracture is any fracture that involves the distal articular playfond of
 (A) Fibula (B) Femur
 (C) Tibia (D) Humerus
064. In weber type A injury AP radiograph of ankle shows
 (A) (i) Medial displacement of talus
 (ii) Horizontal avulsion fracture through the lateral malleolus
 (iii) Vertically oriented compression fracture through medial malleolus
 (B) (i) Lateral displacement of talus
 (ii) Horizontal avulsion fracture through medial malleolus
 (iii) An obliquely vertically oriented compression fracture through the distal fibula below the level of syndesmosis
 (C) (i) Horizontal avulsion fracture through medial malleolus
 (ii) obliquely vertically oriented compression fracture through the distal fibula about the level of syndesmosis
 (iii) Syndesmosis is disrupted and abnormally widened with no overlap between tibia and fibula
 (D) All of the above
065. Traumatic talar fractures are considered surgical emergency because of high risk.
 (A) Hematoma (B) Infection
 (C) Avascular necrosis (D) Associated ligament injury

066. Find out the most inappropriate one in case of Meckel-Gruber syndrome.
 (A) Autosomal recessive disorder
 (B) Triad of occipital encephalocele, polydactyly and cystic dysplastic kidney.
 (C) Other associated anomalies are cleft palate, cardiac abnormalities
 (D) Compatible with life
067. Following are true in case of Von Hippel-Lindau disease except.
 (A) Autosomal dominant
 (B) Genetic defect in long arm of chromosome 3
 (C) Manifestations include retinal angiomas, CNS haemangioblastomas, pancreatic cysts etc.
 (D) Abdominal lesions are best detected in CT.
068. Best for evaluating venous extension of RCC.
 (A) Corticomedullary phase (B) Excretory phase
 (C) Nephrographic phase (D) All of the above
069. In case of TNM classification of RCC where tumour position is IVC infradiaphragmatic
 (A) T3a (B) T3b
 (C) T3c (D) T4b
070. Contents of the Tarsal tunnel-Tendons of
 (A) Anterior tibial, Extensor, hallucis longus, extensor digitorum longus
 (B) Posterior tibial, flexor digitorum longus, flexor hallucis longus
 (C) Peroneus brevis, peroneus longus
 (D) None of the above
071. In a clinically suspected Navicular stress reaction Fat suppressed T2-weighted image was taken because it is.
 (A) More pain sensitive (B) Better visualization of hairline fracture
 (C) Sensitive for edema (D) None of the above
072. Jones fracture occurs at the proximal metadiaphysis of
 (A) First metatarsal (B) Second metatarsal
 (C) Fourth metatarsal (D) Fifth metatarsal
073. Most sensitive investigation for detection of free peritoneal gas
 (A) X-ray (B) CT
 (C) USG (D) MRI
074. ACL tears are more prevalent in
 (A) Women (B) Men
 (C) All of the above (D) None of the above
075. Find out the most appropriate answer in up to two third of patients, the menisco-femoral ligaments of Humphrey and Wrisberg are seen as low signal intensity dots anterior and posterior to PCL and should not be mistaken for a
 (A) Displaced meniscal fragments (B) Intact PCL in presence of PCL tear
 (C) Both (A) and (B) (D) None of the above
076. In case of posterior oblique ligament injury, tearing is most commonly seen at
 (A) Proximal aspect (B) Distal aspect
 (C) In the middle (D) All of the above

077. Most patellar ligament injuries (jumpers knee) are the result of repetitive forced movement of knee
- (A) Extension (B) Flexion
(C) External rotation (D) Internal rotation
078. Staging system to assess femoral head AVN-Radiographs show femoral head osteoporosis and areas of cystic lucency and sclerosis
- (A) Stage 0 (B) Stage 1
(C) Stage 2 (D) Stage 3
079. Following are true in case of sub-ependymoma except.
- (A) Consists of both highly differentiated ependymal cells and astrocytes.
(B) Classified as malignant glial neoplasm
(C) Typically solid and homogenous
(D) Most commonly occurs in the fourth ventricle
080. All are true in case of oligodendroglioma except
- (A) Derive from Oligodendrocytes
(B) Much less common in childhood and adolescence
(C) Also involve subcortical white matter and the overlying cortex
(D) GFAP positive
081. Find out the most inappropriate statement about Desmoplastic infantile Ganglioma (DIG)
- (A) Occurs in young infants
(B) Consists of immature neurons and astrocytes together with extensive fibrocollagenous thickening and cyst formation.
(C) Not favourable long term prognosis even after complete excision.
(D) Occurs mainly in frontal and parietal lobes
082. Find out the most appropriate statement about Retinoblastoma
- (A) Peak incidence is first two decade of life
(B) Histologically and histochemically identical with other primitive neuroectodermal tumours
(C) Locally invasive and may spread into the third ventricle, the thalamus and quadrigeminal plate.
(D) All of the above
083. Trilateral retinoblastoma is a composition of
- (A) Bilateral retinoblastoma with pineoblastoma
(B) Bilateral retinoblastoma with pineocytoma
(C) Bilateral retinoblastoma with medulloblastoma
(D) Bilateral retinoblastoma with neurocytoma
084. Find out the most inappropriate one in case of medulloblastoma
- (A) Highly malignant
(B) Common childhood posterior cranial fossa tumour
(C) Strong tendency to seed via C & F
(D) Radio-resistant

085. In case of schwannoma, following statements are true except
 (A) Benign tumour
 (B) Common in females
 (C) First and second cranial nerve may be involved
 (D) Commonest site of intracranial involvement is superior vestibular division of eight cranial nerve
086. Find out the most appropriate statement about supratentorial primitive neuroectodermal tumour
 (A) Common in paediatric age group
 (B) Aggressive tumour may present clinically with signs and symptoms
 (C) Imaging shows heterogeneous and well circumscribed. Solid portion demonstrates strong contrast enhancement.
 (D) All of the above
087. Following statements are true in case of hemangiopericytoma except
 (A) Hyper vascular mass with aggressive clinical behavior
 (B) Mesenchymal in origin
 (C) Intracranial mass
 (D) Intense and homogenous contrast enhancement
088. Hemangioblastoma-all are true except
 (A) Majority occur in cerebellum
 (B) Majority are sporadic in occurrence and solitary
 (C) Symptoms are usually related to CSF obstruction
 (D) Vascular tumour hemorrhage is very common
089. Most common site of occurrence of extra osseous chondrosarcoma is
 (A) Respiratory system (B) Bones
 (C) CNS (D) All of the above
090. Which statement is most inappropriate in case of hemangioblastoma
 (A) Malignant (B) Childhood tumour
 (C) Extra cranial (D) All of the above
091. Find out the most appropriate statement-majority of the secondary CNS lymphoma are
 (A) Tcell (B) Bcell
 (C) Plasma cell (D) Angiotropic
092. Axial brain CT image of a patient with AIDS shows
 1. Band like hyper density in the sub-ependymal white matter at the margins of frontal horns with surrounding peritumoural edema
 2. Following IV administration of contrast, diffuse enhancement of the periventricular tumour is noted
 3. Axial post contrast CT image at a slightly higher level demonstrates symmetrical sub-ependymal tumour enhancement with surrounding white matter edema along the margins of frontal horns, atria, occipital horns of both lateral ventricles and lateral margins of third ventricle
 (A) Ventriculitis (B) Tuberculous
 (C) Primary CNS lymphoma (D) All of the above

093. Geographical skull (Multifocal osteolytic lesions in membranous bones of skull) usually occurs in children due to
 (A) Secondary from Wilm's tumour (B) Secondary from bone tumour
 (C) Hand-Schuller Christian disease (D) All of the above
094. In case of pituitary adenoma (microadenoma), cells that secrete prolactin and growth hormone and the tumours arising from them tend to be located in the
 (A) Lateral portions of the gland (B) Central portions of the gland
 (C) Medial portions of the gland (D) Posterior portions of the gland
095. Find out the inappropriate statement on craniopharyngioma
 (A) Benign partly cystic epithelial tumour occur in the sellar region
 (B) About two thirds of cases of craniopharyngioma occur in 5-14 years, majority of these are adamantinomatous variants
 (C) Second peak (40-50 yrs) almost all are papillary group
 (D) Craniopharyngioma has strong gender predilection
096. Find out the most inappropriate statement
 (A) On DWI, subdural effusion shows hypointensity
 (B) High ADC value
 (C) All of the above
 (D) None of the above
097. A hypointense rim representing inflamed disease is seen on T2 weighted MR images
 (A) Epidural empyema (B) Subdural empyema
 (C) All of the above (D) None of the above
098. Subacute sclerosing panencephalitis - most inappropriate statement is
 (A) Caused by measles virus
 (B) Elevated levels of neutralizing antibody to the virus can be detected in blood and CSF
 (C) Girls are more affected than boys
 (D) Early findings include language difficulty and behavioural problems
099. An infant shows in CT
 1. Subependymal calcifications in imaging
 2. Low density in white matter
 3. Ventricular dilatation Possible diagnosis is
 (A) TORCH syndrome (B) Toxoplasmosis
 (C) CMV (D) Tubercular
100. Late cerebritis is as
 (A) 11-15 days (B) 15-30 days
 (C) 7-10 days (D) None of the above
101. Unique feature of cerebral abscess
 (A) Wall enhancement (B) Presence of sclerotic lesions
 (C) Perilesional edema (D) All of the above
102. In tubercular meningitis-communicating hydrocephalus may result from obstruction at the level of
 (A) Perimesencephalic cistern (B) Basal cistern
 (C) 4th ventricle (D) All of the above

103. CSF from spinal tap reveals decreased glucose, increased protein, pleocytosis with predominant lymphocytes- most probable diagnosis is
 (A) JE virus infection (B) Bacterial infection
 (C) Tubercular infection (D) All of the above
104. Which territory is commonly involved in tubercular meningitis
 (A) ACA (B) MCA
 (C) PCA (D) Posterior cranial fossa
105. Which of the fungal infection of the brain may show dilated Virchow-Robin spaces in basal ganglia and cortico-medullary junction on CT or MRI and ocular symptoms
 (A) Cryptococcosis (B) Mucormycosis
 (C) Coccidioidomycosis (D) Aspergillosis
106. Find out the most appropriate statement - Lacunar infarcts are associated with
 (A) Lenticulostriate arteries (B) Thalamoperforate arteries
 (C) Deep cortical and pontine perforators (D) All of the above
107. In CT obscuration of lentiform nucleus and loss of insular cortex ribbon are caused by
 (A) Sinus thrombosis (B) Japanese encephalitis
 (C) Acute MCA stroke (D) SLE
108. Heubner's artery usually supplies
 (A) Body of caudate nucleus
 (B) Tail of caudate nucleus
 (C) Tail of caudate nucleus and posterior limb of internal capsule
 (D) Head of caudate nucleus and anterior limb of internal capsule
109. Which artery gives rise to the artery of internal auditory canal
 (A) PICA (B) AICA
 (C) SCA (D) All of the above
110. Diffusion weighted image in acute stroke
 (A) A region of cerebral ischaemia are hyperintense in DWI with diminished ADC value
 (B) Iso-intense with no change of ADC value
 (C) Hypo-intense with no change of ADC value
 (D) Hypo-intense with increased ADC value
111. Carbon monoxide poisoning is associated with selective infarction of
 (A) Putamen (B) Globus pallidus
 (C) Head of caudate nucleus (D) All of the above
112. Leigh disease is result of
 (A) Toxin in the brain (B) Hypoglycemia
 (C) Mitochondrial enzyme abnormality (D) Hypoxic ischaemic encephalopathy
113. On CT and MRI studies, presence of multiple areas of ischaemia involving number of small cortical and subcortical lesions are involved
 (A) Hypoglycaemia (B) Multiple small aneurysmal rupture
 (C) Vasculitis (D) Hypoxia
114. When CT and MR angiography are normal, a catheter cerebral angiography may be required to exclude cerebral aneurysm in case of
 (A) Suspected aneurysm in circle of Willis (B) To find out cause of 3rd nerve palsy
 (C) To detect AVM (D) All of the above

115. As per Hunt and Hess grading scale for subarachnoid hemorrhage - a person with confusion, drowsiness and mild focal neurological deficit
 (A) Grade II (B) Grade III
 (C) Grade IV (D) Grade V
116. Find out the most appropriate statement - Diffusion Tensor Tractography is an MRI technique that has been used
 (A) To detect unidentified aneurysmal bleeding
 (B) To detect unidentified white matter ischaemic insult
 (C) To confirm AVM involvement of nearby white matter tracts
 (D) To detect early cytogenic edema
117. Find out the most appropriate statement in case of Diffuse axonal injury
 (A) Detection in FLAIR sequences are better than T2 weighted imaging
 (B) DWI is useful and better than T2, T2*, GRE or FLAIR sequences
 (C) Usually have decreased ADC
 (D) All of the above
118. A functional hydrocephalus in presence of elevated CSF protein is seen in
 (A) Choroid plexus papilloma
 (B) Choroid plexus carcinoma
 (C) Spinal cord tumours, typically ependymoma
 (D) Extensive disc herniation
119. Find out the most inappropriate statement in Huntington's disease
 (A) Autosomal Recessive
 (B) Determined by a gene localized to the long arm of chromosome 4
 (C) No change of neurotransmitter concentration
 (D) All of the above
120. In Parkinson's disease, tick the most inappropriate statement
 (A) A significant narrowing of the pars compacta of the substantia nigra, best visualized in T2 weighted sequences
 (B) There is potential for detecting presymptomatic diseases
 (C) Deep brain stimulator implants which have been successful in treatment of medically refractory tremor
 (D) Brain biopsy is essential to demonstrate presence of Lewy bodies
121. Tick the most appropriate statement with regards to Friedreich's ataxia
 (A) Progressive spinocerebellar degeneration
 (B) Transmitted as autosomal dominant
 (C) Transmitted as autosomal recessive
 (D) All of the above
122. Virchow - Robin space
 (A) A space between the long fibers (B) Subdural space
 (C) Subarachnoid space (D) Perivascular spaces within subpial space
123. Subdural hygromas result from leakage of
 (A) Congenital cyst (B) Parasitic cyst
 (C) Both of the above (D) Leakage of CSF into subdural space

124. Infection spreads from basal cisterns via perivascular spaces to the basal ganglia, brain stem, internal capsule and thalamus. On MRI scans, non-enhancing dilated perivascular spaces caused by infiltration with gelatinous pseudocysts.
- (A) Aspergillus (B) Cryptococcus
(C) Coccidioides (D) All of the above
125. Meningeal enhancement sign occurs after
- (A) Day 0-Day 2 after infarction (B) Day 2-Day 6 after infarction
(C) Day 7-Day 15 after infarction (D) Day 16-Day 30 after infarction
126. Spontaneous intracranial hypotension, probable cause is
- (A) Severe dehydration (B) Injudicious use of Furosemide
(C) Water restriction (D) Spontaneous CSF leak may be inciting factor
127. Neoplasms originating from dura are
- (A) Mesenchymal origin (B) Meningothelial cells
(C) Endothelial cells (D) Plasma cells
128. Most appropriate statement is - In case of Radiation necrosis of brain can be differentiated from recurrent tumour of brain by
- (A) MR spectroscopy (B) PET
(C) Stereotactic biopsy in selected areas (D) All of the above
129. Following are true in case of radiation induced leukoencephalopathy except
- (A) More common than radiation necrosis
(B) CT shows diffuse low density white matter without contrast enhancement and no mass effect
(C) MRI shows abnormal signal intensity in white matter on T2 weighted and PD images
(D) Lesions coalesce to become asymmetrical
130. In hypoxic insults, which part of the brain has greater vulnerability
- (A) White matter (B) Grey matter
(C) Meninges (D) All of the above
131. Following statements are true in case of central pontine myelinolysis except
- (A) Associated with history of alcoholism (B) Hypernatremia
(C) Systemic hypotension-etiological factor (D) Typical presentation-Quadriplegia
132. True about adrenoleukodystrophy (ALD) are all except
- (A) Associated with adrenocortical insufficiency
(B) Manifestation - progressive neurological dysfunction
(C) Caused by a deficiency in the enzyme - Acetyl Co-enzyme synthetase
(D) Transmitted by an X linked dominant gene
133. Metachromatic leukodystrophy is caused by deficiency of
- (A) Glucose-6-Phosphatase (B) Arylsulphatase
(C) Acetyl Co-enzyme A (D) Acetyl Co-enzyme A synthetase
134. True about Wilson's disease are all except
- (A) Disease of copper metabolism (B) Basal ganglia is affected
(C) KF rings (D) Autosomal dominant

135. Following CT features
1. Focal decreased attenuation in the periventricular white matter
 2. Contrast enhancing plaque
 3. Less commonly cerebral atrophy are suggestive of
- (A) Hypoxic ischaemic leukoencephalopathy (B) Adrenoleukodystrophy
 (C) Multiple sclerosis (D) Binswanger's disease
136. Following are contents of superior orbital fissure except
- (A) Cranial nerves III, IV, VI, V1 (B) Lacrimal and frontal nerves
 (C) Cranial nerve V2 (D) Superior and inferior ophthalmic veins
137. Extraconal sub periosteal abscess medially is a complication of
- (A) Abscess in medial rectus muscle (B) Hematogenous spread
 (C) Ethmoid sinusitis (D) Panophthalmitis
138. True about orbital pseudotumour except
- (A) Idiopathic nongranulomatous inflammatory process
 (B) Often involves extra ocular muscles and orbital fat
 (C) Usually painful
 (D) Often bilateral
139. Most common neoplasm of orbit
- (A) Optic glioma (B) Lymphoma
 (C) Melanoma (D) Optic nerve sheath meningioma
140. True about optic glioma are all except
- (A) Most often occur in adults
 (B) Usually benign
 (C) Usually involves anterior optic apparatus
 (D) Half of all patients are associated with Neurofibromatosis type 1
141. The epitympanic space is linked to the mastoid antrum by a narrow isthmus called
- (A) Vestibular aqueduct (B) Aditus ad antrum
 (C) Mastoid air cells (D) Vestibule
142. Acquired cholesteatoma develop in patients with chronic perforation of the tympanic membrane, mostly at the
- (A) Pars flaccida (B) Pars nervosa
 (C) Pars tensa (D) Pars vascularis
143. Tympanic membrane is usually retracted in patients with chronic otitis media
- (A) Outwards (B) Inwards
 (C) Upwards (D) Downwards
144. Most appropriate statement about Juvenile nasopharyngeal angiofibroma
- (A) Occurs almost exclusively in adolescent boys
 (B) Nasal speech attributed to nasal obstruction
 (C) Severe recurrent epistaxis
 (D) All of the above

145. Following clinical and imaging, statements about metastasis to the adrenal glands from non-small cell lung carcinoma are true except
 (A) Size greater than 3 cm
 (B) Poorly defined margins with irregularly enhancing rim
 (C) Invasion of adjacent structures
 (D) Metastasis to adrenal glands are rare
146. According to Takashima et al, sensitivity, specificity and accuracy for resectability of esophageal carcinoma on CT are
 (A) 80%, 75 % and 60% respectively (B) 100%, 84 % and 87% respectively
 (C) 90%, 80 % and 70% respectively (D) 92%, 82 % and 68% respectively
147. A pulsionoesophageal diverticulum is caused by
 (A) Fibrosis in the adjacent perioesophageal tissues
 (B) Increased intraluminal pressure related to motility issues
 (C) All of the above
 (D) None of the above
148. In general the normal gastric wall is
 (A) 2-5 mm thick with 10 mm being the upper limit for normal
 (B) 1-3 mm thick with 6 mm being the upper limit for normal
 (C) 0.2-0.5 mm thick with 1.0 mm being the upper limit for normal
 (D) 2-4 mm thick with 6 mm being the upper limit for normal
149. Not true in case of primary gastric plasmocytoma
 (A) Absence of serum M protein component
 (B) No Bence Jones proteinuria
 (C) No bone marrow infiltration
 (D) Extensive visceral involvement other than stomach
150. Not a cause of bowel loop separation
 (A) Fibrofatty infiltration within the mesentery
 (B) Ascites
 (C) Thickened bowel wall
 (D) Mesenteric lymphadenopathy
151. Comb sign is found in
 (A) Intestinal tuberculosis (B) Ischaemic colitis
 (C) Crohn's disease (D) Topical sprue
152. Not true in case of salmonellosis
 (A) Terminal ileum may be affected mainly
 (B) Gram negative non spore forming
 (C) Stricture formation is very common
 (D) Small bowel perforation with peritonitis may occur occasionally
153. Lymphangiectasia is a congenital defect affecting
 (A) Intestinal mucosa (B) Lymphatics
 (C) Muscular layer (D) Serous layer

154. GVHD is a significant complication after transplantation as a consequence of immunological assault
- (A) Donor lymphoid cells against host target organs
 - (B) Host lymphoid cells against donor organs
 - (C) All of the above
 - (D) None of the above
155. In strangulated small bowel obstruction medium loops tend to cause shock and death by formation of
- (A) Exotoxin of E.coli
 - (B) Following peritonitis
 - (C) Exotoxin of Clostridium welchii
 - (D) Sequestration of large quantities of plasma
156. Following are some of the criteria's of the proposed well known diagnostic CT criteria for strangulated small bowel obstruction, except
- (A) Portal or mesenteric venous gas
 - (B) Abnormal bowel wall enhancement
 - (C) Serrated beak sign
 - (D) Usual mesenteric vascular course
157. Although bowel wall thickening is regarded as non-specific finding, paper thin bowel or nearly invisible bowel wall be a specific finding for the diagnosis of
- (A) Vasculitis
 - (B) Mesenteric infarction
 - (C) Diabetes mellitus type II
 - (D) Mesenteric ischemia of venous origin
158. Intensifying screens are used because they
- (A) Reduce film fog
 - (B) Decrease xray dose to the patient
 - (C) Reduce scatter radiation
 - (D) All of above
159. Two most important ingredient of a photographic emulsion of xray films are
- (A) Alkali and sodium sulphite
 - (B) Gelatin and silver halide
 - (C) Restrainer and silver halide
 - (D) None of the above
160. Heel effect is related to-
- (A) MRI
 - (B) CT
 - (C) XRAY
 - (D) USG
161. True about rotating anodes is/are-
- (A) Withstand the heat generated by large exposure
 - (B) Consists of large disc of tungsten
 - (C) Rotates at a speed of about 3600 rpm
 - (D) All of the above
162. In diagnostic radiology almost all scattered radiation encountered comes from
- (A) Coherent scattering
 - (B) Photoelectric effect
 - (C) Compton scattering
 - (D) Pair production
163. Which of the following interaction between xray & matter gives excellent tissue contrast-
- (A) Photoelectric effect
 - (B) Compton effect
 - (C) Pair production
 - (D) Anihilation

164. Grid ratio is-
- (A) Height of the lead strips & distance between them
 - (B) Length of the lead strips & distance between them
 - (C) Distance between the lead strips & length of the lead strips
 - (D) None of the above
165. Which is not a part of an xray film
- (A) Emulsion
 - (B) Base
 - (C) Adhesive
 - (D) Restrainer
166. Most common technique for Digital Subtraction Angiography-
- (A) Dual energy subtraction
 - (B) Time interval differencing
 - (C) Temporal filtering
 - (D) Mask subtraction
167. SI unit of absorbed dose is
- (A) Gray
 - (B) Rad
 - (C) Rem
 - (D) Sievert
168. Medical sonography employs frequency between-
- (A) 0.5-1 MHz
 - (B) 0.5-5 MHz
 - (C) 0.5-10 MHz
 - (D) 1-20 MHz
169. USG Transducer is a-
- (A) Transmitter
 - (B) Receiver
 - (C) Both transmitter & receiver
 - (D) None of the above
170. Doppler shift equation
- (A) $\Delta v = \frac{2vs}{v} \cos\theta$
 - (B) $\Delta v = \frac{vs}{2v} \cos\theta$
 - (C) $\Delta v = \frac{2vs}{v} \sin\theta$
 - (D) None of the above
171. Streak artifacts in CT is produced by
- (A) Patient motion
 - (B) Miscalibration of one detector
 - (C) High density material
 - (D) All of the above
172. Most commonly used image reconstruction method is-
- (A) Back projection
 - (B) Iterative methods
 - (C) Analytic method
 - (D) None of the above
173. T1 Weighted image
- (A) Short TE, Long TR
 - (B) Long TE, Long TR
 - (C) Short TE, Short TR
 - (D) Long TE, Short TR
174. Which of the following is true about monochorionic diamniotic twins on USG examination?
- (A) Twinpeaksign
 - (B) Entangledcord
 - (C) C.Tsign
 - (D) Two separate placenta
175. Which of the following is a 2nd trimester cranial sign in open Spina bifida?
- (A) Cerebellar banana sign
 - (B) Ventriculomegaly >10 mm
 - (C) C. Posterior Fossa funneling
 - (D) All of the above

176. Feature suggestive of alobar holoprosencephaly
 (A) Distinct interhemispheric division
 (B) Azygous anterior cerebral artery
 (C) Absent corpus callosum with mono ventricle
 (D) Fused fornices
177. USG features not seen in corpus callosal agenesis
 (A) Viking Helmet Sign (B) Highriding third ventricle
 (C) Teardrop shaped lateral ventricle (D) Visible CSP above fornices.
178. Cerebro-placental ratio (CPR):
 (A) $\frac{\text{Umbilical artery PI}}{\text{MCA PI}}$ (B) $\frac{\text{MCA PI}}{\text{Umbilical artery PI}}$
 (C) $\frac{\text{Umbilical artery RI}}{\text{MCA RI}}$ (D) $\frac{\text{MCARI}}{\text{Umbilical artery RI}}$
179. Which is not a USG feature of Adenomyosis?
 (A) Myometrial cysts (B) Subendometrial echogenic nodules
 (C) Asymmetrical thinning of myometrium (D) Attenuation or shadowing
180. First reliable sign of Intrauterine pregnancy is
 (A) Intradecidual sac sign (B) Double decidual sac sign
 (C) A yolk sac with embryo (D) A yolk sac within G sac
181. Which of the following is true about 1st trimester pregnancy?
 (A) Amniotic cavity expands to fill chorionic cavity by 9 weeks of gestation
 (B) Angiogenesis occurs in wall in 5th week of gestation
 (C) Amniotic cavity expands to fill the chorionic cavity by 12 weeks of gestation
 (D) Angiogenesis occurs in chorionic cavity by 9th week of gestation
182. Double decidual sac sign is produced by
 (A) Decidua capsularis and decidua basalis
 (B) Decidua parietalis and decidua basalis
 (C) Decidua parietalis and decidua capsularis
 (D) Decidua basalis, capsularis and parietalis together
183. Which of the following is not a risk for ectopic gestation?
 (A) History of PID (B) History of tubal surgeries
 (C) Family history of ectopic (D) Pregnant women with IUCD in situ
184. Antenatal USG done at 22nd week shows a fetus with full thickness defect in anterior abdominal wall with bowel loops freely floating within amniotic fluid. What is the probable diagnosis?
 (A) Omphalocele
 (B) Gastroschisis
 (C) Both the above can produce similar appearance
 (D) CDH
185. Which of the following is not a feature of hydrops fetal in USG?
 (A) Polyhydramnios (B) Ascites and pleural effusion
 (C) Small placenta with calcification (D) Placentomegaly

186. Which of the following is not a sign of IUD
 (A) Spalding's sign (B) Robert's sign
 (C) Naclerio V sign (D) Echogenic liquor with macerated foetus
187. True about Twin-twin transfusion syndrome
 (A) Polyhydramnios in donor twin (B) Dilated bladder and renal pelvis in donor
 (C) Oligohydramnios in recipient (D) Possible hydrops in recipient
188. Which of the following is an indication for pre-natal diagnosis of genetic disorders?
 (A) Single gene defects (B) Chromosomal abnormalities
 (C) Infectious agents (D) All of the above
189. Which of the following is incorrect about IUGR?
 (A) Symmetrical IUGR begins in 2nd trimester
 (B) Asymmetrical IUGR occurs in 3rd trimester
 (C) Trunk is affected earlier and more severely than head in asymmetrical IUGR
 (D) Symmetrical IUGR is more common than asymmetrical IUGR
190. Which of the following is not seen in Spina bifida
 (A) Effacement of cisterna magna
 (B) Lemon sign
 (C) Splaying of posterior ossification centers of spine
 (D) Frog egg appearance
191. Snowstorm appearance is seen in
 (A) Ovarian ectopic pregnancy (B) Complete molar pregnancy
 (C) Partial mole (D) Choriocarcinoma
192. Rigier's sign on supine radiograph is diagnostic of
 (A) Pneumoperitoneum (B) Pneumomediastinum
 (C) Pneumothorax (D) Pneumocephalus
193. A 40-year old woman with obstructive jaundice undergoes an MRCP examination. This demonstrates a smooth stricture in mid-common duct with associated moderate intrahepatic biliary dilatation. The stricture is caused by extrinsic compression from a round filling defect within the cystic duct. What is the diagnosis
 (A) Acute bacterial cholangitis (B) Gall bladder carcinoma
 (C) Mirizzi syndrome (D) Post inflammatory biliary stricture
194. Best imaging for endometriosis
 (A) Transabdominal USG (B) Transvaginal USG
 (C) MRI (D) CT
195. Which statement is true regarding MRCP in the setting of gall stones in bile ducts?
 (A) Blood and gas in the biliary tree are a recognized cause of false positive MRCP
 (B) MRCP diagnostic quality reduces as the serum bilirubin rises
 (C) MRCP is reliant on contrast excretion into the biliary tree
 (D) The sensitivity of MRCP for choledocholithiasis is 60-70%
196. Gold standard for diagnosis of diffuse esophageal spasm is
 (A) Barium swallow (B) Barium follow through
 (D) Manometry

197. A contrast-enhanced CT of the abdomen is performed and demonstrates extensive thickening of the gastric body and antrum. Which additional feature would make a diagnosis of gastric carcinoma more likely than gastric lymphoma?
- (A) Direct invasion of the left lobe of the liver
 - (B) Coeliac axis lymphadenopathy
 - (C) Preserved perigastric fat planes
 - (D) Regional lymphadenopathy
198. Which MRI artefact can be utilized to confirm the diagnosis of focal fat deposition in liver?
- (A) Aliasing
 - (B) Chemical shift
 - (C) Magic angle
 - (D) Susceptibility
199. Radiological findings of testicular torsion is/are
- (A) A diffusely enlarged hypoechoic testis
 - (B) A small shrunken testis with a surrounding hydrocele and scrotal wall thickening
 - (C) Absent blood flow within the testis on colour flow Doppler but good flow within the tunica vaginalis
 - (D) All of the above
200. A 33- year old man is discovered to have a right testicular mass on ultrasound. Which additional ultrasound finding would suggest a diagnosis of Teratoma rather than Seminoma
- (A) A testicular mass that contains areas of calcification
 - (B) A testicular mass that demonstrates increased colour Doppler flow
 - (C) A testicular mass that is homogeneously anechoic with posterior acoustic enhancement
 - (D) A testicular mass that is hypoechoic compared with the surrounding testicular parenchyma