

ALV
PROVISIONAL ANSWER KEY (CBRT)

Name of The Post **Professor, Pathology, General State Service, Class-1**

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Suggestion (S)

Instructions / સૂચના

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

- (1) All the suggestion should be submitted Physically in prescribed format of suggestion sheet.
- (2) Question wise suggestion to be submitted in the prescribed format of Suggestion Sheet published on the website.
- (3) All suggestions are to be submitted with reference to the Master Question Paper with provisional answer key, 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 /response sheet. Objections shall not be considered, in case, if responses given in the answer sheet /response sheet and submitted suggestions are differed. For the purpose, the candidate shall attach a copy of his answersheet/ Response sheet along with his application(s).
- (6) Objection for each question shall be made on separate Suggestion sheet. Objection for more than one question in single Suggestion 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 વેબસાઈટ 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 વેબસાઈટ 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. આ હેતુ માટે, ઉમેદવારે પોતાની અરજી(ઓ) સાથે પોતાની જવાબવહીની એક નકલનું બિડાણ કરવાનું રહેશે.
- (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. Name the following classification of Hodgkin lymphoma.
 Lymphocytic and histiocytic, nodular
 Lymphocytic and histiocytic, diffuse
 Mixed cellularity
 Nodular sclerosis
 Diffuse fibrosis
 Reticular
 (A) Rye conference (B) Lukes
 (C) WHO (D) Smetana and Cohens
002. Soldier's plaque is known as
 (A) Oral Hairy Leukoplakia (B) Plasma Cell balanitis
 (C) Healed Acute Pericarditis (D) Lichen Planus
003. Brandwein – Gensler Grading system is used in
 (A) Adenoid Cystic Carcinoma (B) Acinic Cell Carcinoma
 (C) Epithelial Myoepithelial carcinoma (D) Mucoepidermoid carcinoma
004. The most common form of salivary gland type tumor of larynx is
 (A) Adenoid Cystic Carcinoma (B) Mucoepidermoid Carcinoma
 (C) Acinic Cell Carcinoma (D) Myoepithelioma
005. Fordyce granules are seen in
 (A) Oral mucosa (B) Respiratory mucosa
 (C) Skin (D) None of the above
006. Which among the following is NOT a feature of Ackerman tumor?
 (A) Classic location is oral cavity (B) May invade perineural space
 (C) Swollen Voluminous rete pegs (D) Small nests of cells with more mitotic activity
007. The most common site of Nasopharyngeal carcinoma (NPC) is
 (A) Salpingopharyngeal fold (B) Fossa of Rosenmuller
 (C) Pharyngeal tonsil (D) Lateral Pharyngeal wall.
008. Which one of the following is NOT a developmental odontogenic cyst?
 (A) Dentigerous cyst (B) Periapical cyst
 (C) Lateral Periodontal cyst (D) Gingival cyst of the adult.
009. Sugar tumor is
 (A) Myofibroblastoma (B) Glomus tumor
 (C) Clear Cell tumor (D) Perineuroma
010. The microscopic sign of early rejection of heart transplant is
 (A) Early focal myocytolysis (B) Endocardial and interstitial oedema
 (C) Polymorphonuclear leukocytic infiltrate (D) Interstitial haemorrhage.
011. Carney triad is
 (A) Pulmonary hamartomas, Gastric stromal tumors & extra adrenal pheochromocytoma.
 (B) Extra adrenal pheochromocytoma, Atrial myxoma & Pulmonary hamartoma.
 (C) Pulmonary hamartoma, myxoid neurofibroma, Mucocutaneous myxoma.
 (D) Gastric stromal tumor, Atrial myxoma & Pulmonary hamartoma.

012. All are true about quilty effect EXCEPT
 (A) Quilty effect is one of the non rejection findings
 (B) The follicular dendritic cells in the centre of quilty lesion stains positive for CD 21
 (C) Dense subendocardial lymphocytic infiltrate
 (D) It is composed of only B cells and not T cells.
013. After treatment of H.pylori induced gastritis the neutrophils in tissue disappears with in
 (A) 54 weeks (B) 8 weeks
 (C) 4 weeks (D) 7 days
014. Watermelon stomach is
 (A) Gastric Antral Vascular Ectasia (B) Dieulafoy disease
 (C) Gastritis Cystica profunda (D) Pseudomelanois
015. The size of small early gastric carcinoma is
 (A) 6-10 mm (B) ≤ 6 mm
 (C) ≤ 5 mm (D) 1-2 mm
016. The most Common mesenchymal neoplasm of the stomach is
 (A) Lymphoma (B) GIST
 (C) Lipoma (D) Adenocarcinoma
017. Resection for ulcerative colitis requires sequential sections spaced at every
 (A) 2 cm (B) 4 cm
 (C) 5 cm (D) 10 cm
018. For grading and staging chronic hepatitis, the number of portal tracts the liver biopsy should possess is
 (A) 5 (B) 3
 (C) 11 (D) 0
019. All the following histologic features are the basis for French Federation National de centres de Luke Centre le Cancer (FNCLCC) grading of soft tissue sarcomas EXCEPT
 (A) Differentiation (B) Mitoses
 (C) Extent of invasion (D) Tumour Necrosis
020. Differentiating features of megaloblastic anaemia from myelodysplastic syndrome are all EXCEPT
 (A) Normal blast percentage (B) Improvement of cytopenias
 (C) Absence of karyotypic abnormalities (D) Dyspoiesis
021. Oculocutaneous albinism is seen in
 (A) Hurler syndrome (B) Gaucher disease
 (C) Niemann – Pick disease (D) Hermansky – Pudlak syndrome.
022. Leukocyte common Antigen (LCA) is
 (A) CD 23 (B) CD 45
 (C) CD 34 (D) CD 56
023. Immunohistochemical studies show that Giant cell fibroblastoma is positive for
 (A) S₁₀₀ Protein (B) CD 34
 (C) Desmin (D) Keratin

024. Which among the following diseases of penis mimicks pustular psoriasis?
 (A) Plasma Cell balanitis (B) Balanitis Xerotica obliterans
 (C) Balanitis circinata (D) Balanoposthitis
025. Meigs syndrome is associated with
 (A) Fibroma of ovary (B) Thecoma
 (C) Granulosa cell tumor (D) Sertoli cell tumor
026. Which of the following is true regarding Aneurysmal Bone Cyst (ABC)?
 (A) Occurs frequently in short bone
 (B) Cyst contains a clear yellow fluid
 (C) Morphologically indistinguishable from periarticular soft tissue
 (D) Multiple vertebral lesions.
027. These nodules have a pale tan colour on diascopy
 (A) Papulonecrotic tuberculid (B) Lupus Vulgaris
 (C) Erythema Induratum (D) Atypical mycobacteriosis
028. The following facts about pseudoepitheliomatous hyperplasia are true EXCEPT
 (A) It is seen at sites of trauma, chronic irritation and ulcers
 (B) It is a reparative hyperplasia of the epidermis
 (C) The proliferating strands of epithelium are broad & markedly elongated
 (D) Associated with dermal fibrocytic and vascular proliferation
029. This cyst is lined by thin layer of stratified squamous epithelium resembling the ductal portion of sebaceous gland. Lobules of sebaceous glands and small hair follicles are present. Name this cyst.
 (A) Dermoid cyst (B) Epidermoid cyst
 (C) Hydrocystoma (D) Steatocystoma
030. True statement about Pancoast syndrome is
 (A) Pain felt in the distribution of Ulnar nerve
 (B) Carcinomas located in the central portion of lung
 (C) It has azzopardi effect
 (D) The cells are arranged in lepidic pattern
031. The common denominator of autoimmune thyroiditis is
 (A) Diffusely hyperplastic follicles
 (B) Extensive lymphocytic infiltration with germinal center formation
 (C) Follicular cells with oncocyctic change
 (D) Medium sized veins with inflammation on their wall.
032. POEMS syndrome represents
 (A) Osteosclerotic myeloma (B) Parosteal osteosarcoma
 (C) Erdheim – Chester disease (D) Osteofibrous dysplasia

033. All are the histological features of solitary benign follicular lesion of thyroid EXCEPT
 (A) Complete but delicate capsule
 (B) Sequestered thyroid in / near the capsule
 (C) Transcapsular mushrooming
 (D) Juxtaposed thyroid tissue near vessels, with intact endothelium
034. Pick the false statement about TARTs
 (A) TARTs are manifestation of 21-hydroxylase deficiency
 (B) TARTs are bilateral & multifocal
 (C) The differential diagnosis is leydig cell tumor (LCT)
 (D) TARTs are not immunoreactive for synaptophysin.
035. Poor prognostic indicator of papillary carcinoma of thyroid is
 (A) Cervical node metastasis (B) Presence of squamous metaplasia
 (C) Extracapsular extension (D) Microvessel density.
036. All are true about Schatzki ring EXCEPT
 (A) Located in the lower esophagus
 (B) Associated with iron deficiency anaemia
 (C) Transverse circumferential fold of mucosa
 (D) Treatment is endoscopic dilation.
037. Intestinal lesion consisting of fissures, non-caseating sarcoid granuloma and transmural involvement are typical triad of
 (A) Crohn disease (B) Ischaemic colitis
 (C) Ulcerative colitis (D) Collagenous colitis
038. Multiple hamartoma syndrome of intestine is called as
 (A) Cronkhite – Canada syndrome (B) Cowden syndrome
 (C) Peutz – Jeghers syndome (D) Turcot syndrome
039. Von Meyenburg complex is seen in
 (A) Kidney (B) Biliary tract
 (C) Liver (D) Spleen
040. All are true about intraductual papillary mucinous neoplasm of pancreas EXCEPT
 (A) Epithelial tumor arising in pancreatic duct
 (B) Typically involves only in tail of pancreas
 (C) Grossly the tumors are ≥ 1 cm
 (D) The mucinous epithelium is of gastric type, intestinal type, pancreatobiliary and oncocytic type
041. The microscopic appearance of cribriform, fused small acinar or poorly formed glands in prostatic adenocarcinoma falls under which grade of Gleason grading system?
 (A) Grade 2 (B) Grade 3
 (C) Grade 4 (D) Grade 5

042. Presence of fibrin clumps in endometrial stroma indicates
 (A) Dysfunctional uterine bleeding (B) Normal menstrual endometrium
 (C) All the above (D) None of the above
043. Malignant giant cell tumour of uterus is regarded as a variant of
 (A) Granulocytic sarcoma (B) Serous tumour
 (C) Malignant giant cell tumour (D) Leiomyosarcoma.
044. Endometriosis + Endosalpingiosis + endocervicosis in mesosalpinx is known as
 (A) Mullerianosis (B) Appendix Vesiculosa
 (C) Lipoid granuloma (D) Hydatid of Morgagni
045. Thrombophlebitis involving the breast and thoraco abdominal wall is
 (A) Weber – Christian disease (B) Mondor disease
 (C) Zuska disease (D) Rosai – Dorfman Disease
046. Which one of the following tumour is invariably Triple negative tumor?
 (A) Metaplastic Carcinoma of breast (B) Mucinous carcinoma of breast
 (C) Medullary carcinoma of breast (D) Microinvasive carcinoma of breast
047. A self healing congenital form of Langerhans cell histiocytosis is
 (A) Hashimoto – Pritzker disease (B) Letterer – Siwe disease
 (C) Hand – Schuller – Christian diseases (D) Erdheim – Chester disease
048. Which is the commonest Sarcoma that metastasizes to lymph node?
 (A) Sclerosing rhabdomyosarcoma (B) Alveolar rhabdomyosarcoma
 (C) Pleomorphic rhabdomyosarcoma (D) Embryonal rhabdomyosarcoma
049. Small eosinophilic strongly ubiquitin – positive intranuclear inclusions in pigmented brain stem neurons is called
 (A) Pick bodies (B) Lewy bodies
 (C) Marinesco bodies (D) Hirano bodies
050. The most sensitive method for identifying osteoclasts histologically is by
 (A) Tetracycline labelling
 (B) Tartrate resistant acid phosphatase (TRAP) staining
 (C) Hematoxyline & Eosin staining
 (D) Vonkossa stain with a basic fuchsin counterstain
051. Which one of the following is an antigen presenting cell?
 (A) T Lymphocyte (B) Natural Killer Cell
 (C) Dendritic cell (D) B Lymphocyte
052. Which one of the following is a T cell-mediated hypersensitivity disease?
 (A) Type 1 diabetes mellitus (B) Bronchial asthma
 (C) Good pasture syndrome (D) Systemic lupus erythematosus
053. The second most common genetic cause of mental retardation is
 (A) Down syndrome (B) Angelman syndrome
 (C) Fragile X syndrome (D) Turner Syndrome

054. Which of the following gene is most commonly associated with autoimmunity?
 (A) AIRE (B) FAS
 (C) NOD2 (D) HLA
055. Which one of the following antibodies are virtually diagnostic of systemic lupus erythematosus?
 (A) Ro/SS-A and La/SS-B (B) RNA Polymerase III and ANAs
 (C) Double-stranded DNA and Ro/SS-A (D) Double-stranded DNA and Smith antigen
056. Graft-versus host disease is most commonly seen in
 (A) Kidney transplants (B) Hematopoietic stem cell transplants
 (C) Liver transplants (D) Heart transplants
057. Hemodialysis-associated amyloidosis is due to
 (A) β 2-microglobulin (B) Transthyretin
 (C) Prion proteins (D) Bence-Jones protein
058. Which of the following feature is NOT specific to malignancy?
 (A) Metastasis (B) Mitosis
 (C) Invasiveness (D) Anaplasia
059. Mutated tumour suppressor genes usually behave as a
 (A) Passenger mutation (B) Dominant fashion
 (C) Recessive fashion (D) None of the above
060. Which of the following is the most frequently mutated oncogenic pathway in human neoplasms?
 (A) JAK/STAT (B) Receptor tyrosine kinase
 (C) G protein-coupled receptor (D) WNT
061. RB gene is a key negative regulator in which stage of cell cycle?
 (A) G2/M cell cycle transition (B) S/G2 cell cycle transition
 (C) S Phase (D) G1/S cell cycle transition
062. Which one of the following is called the Guardian of the Genome?
 (A) CDK (B) TP53
 (C) TP57 (D) RB
063. Which one of the statement is false ?
 (A) A positive tuberculin test is virtually diagnostic of tuberculosis
 (B) A positive tuberculin test signifies T-Cell-mediated immunity to mycobacterial antigens
 (C) A positive tuberculin test does not differentiate between infection and active disease
 (D) All of the above
064. Which of the following will give protection against Candida infection?
 (A) Neutrophils (B) Macrophages
 (C) TH 17 cells (D) All of the above
065. Which one of the following Plasmodium will bind to Duffy blood group antigen?
 (A) P. falciparum (B) P. ovale
 (C) P. vivax (D) P. knowlesi

066. Which one of the following is the major cause of nonimmune hydrops?
 (A) B₁₂ deficiency (B) Rh incompatibility
 (C) Vitamin A deficiency (D) Cardiovascular defects
067. Which one of the following is a DNA repair gene?
 (A) RAS (B) BRCA 1
 (C) MYC (D) All of the above
068. The Oncogenic activity of Human Papilloma virus gene E6 is largely due to the degradation of
 (A) p53 gene (B) RB gene
 (C) RAS gene (D) BRCA2 gene
069. Activated p53 thwarts neoplastic transformation by inducing
 (A) Transient cell cycle arrest (B) Senescence
 (C) Apoptosis (D) All of the above
070. Which one of the following is an oncofetal antigen?
 (A) MAGE (B) CA-125
 (C) AFP (D) CTLA-4
071. Which one of the following is the constituent of tobacco smoke?
 (A) Tar (B) formaldehyde
 (C) Nicotine (D) All of the above
072. The most important cause of aortic aneurysm is
 (A) Atherosclerosis (B) Hypertension
 (C) None of the above (D) Both (A) and (B)
073. Chromothripsis means
 (A) Epigenetic change (B) Gene amplification
 (C) Chromosome shattering (D) Chromosome deletion
074. Which of the following changes in heart will be accompanied by decrease in resting heart rate and blood pressure?
 (A) Volume-load hypertrophy (B) Pressure hypertrophy
 (C) Both (A) and (B) (D) None of the above
075. The bright-red colour imparted by triphenyl-tetrazolium chloride solution to noninfarcted myocardium is due to
 (A) Creatinine kinase (B) Lactate dehydrogenase activity
 (C) Troponins (D) Myoglobin
076. Which fusion gene is present in Philadelphia chromosome?
 (A) PML-RARA (B) MYC-IGH
 (C) BCR-ABL (D) None of the above
077. The cause of megaloblastosis in folic acid deficiency is
 (A) Lack of intrinsic factor (B) Hepcidin deficiency
 (C) Ineffective erythropoiesis (D) Suppressed synthesis of DNA

078. Which one of the following is associated with Thrombotic Thrombocytopenic Purpura?
 (A) Factor VIII (B) ADAMTS13
 (C) Escherichia coli (D) JAK2
079. Spontaneous, nontraumatic bleeding occurs when the platelet count is less than
 (A) 20,000 platelets/ μ L (B) 50,000 platelets/ μ L
 (C) 20,000 – 50,000 platelets/ μ L (D) None of the above
080. Which one of the following is the most common cause of sudden, unexplained death in young athletes?
 (A) Dilated cardiomyopathy
 (B) Restrictive cardiomyopathy
 (C) Hypertrophic cardiomyopathy
 (D) Arrhythmogenic right ventricular cardiomyopathy
081. Which one of the following is a favourable prognostic marker in Acute lymphoblastic leukemia?
 (A) Age < 2 years
 (B) Age between 2 and 10 years
 (C) First presentation in adulthood
 (D) Peripheral blood blast counts greater than 100,000 cells/ mm^3
082. Which of the following can cause Transfusion-Related Acute Lung Injury?
 (A) Fresh frozen plasma (B) Platelets
 (C) Whole blood (D) All of the above
083. Disseminated intravascular coagulation is triggered by
 (A) Thrombocytopenia (B) Widespread endothelial injury
 (C) Factor VIII deficiency (D) All of the above
084. Which one of the following is NOT seen in the bone marrow smear of multiple Myeloma?
 (A) Mott cells (B) Russell bodies
 (C) Dutcher bodies (D) Pawn ball megakaryocytes
085. Which one of the following should be left intact during autopsy for embalming of bodies?
 (A) Subclavian artery (B) Iliac arteries
 (C) Common Carotid artery (D) All of the above
086. Livor Mortis in postmortem is
 (A) Chilling of the body
 (B) Stiffness of the muscles of the body
 (C) Accumulation of blood in the dependent parts of the body
 (D) None of the above
087. Lemon-yellow appearance of the fat during autopsy indicates
 (A) Pernicious anemia (B) Addison's disease
 (C) Gold therapy (D) Cyanosis
088. Sample from which part of the heart is ideal for blood culture while doing autopsy?
 (A) Aorta (B) Left atrium
 (C) Right atrium (D) Left Ventricle

089. Which one of the following is NOT a feature of postmortem clot?
 (A) More elastic than thrombus (B) Chicken fat appearance
 (C) Gelatinous (D) Attached to the vessel.
090. The term “bread-and-butter pericardium” is used for which one of the following condition?
 (A) Hemopericardium (B) Acute pericarditis
 (C) Healed pericarditis (D) None of the above
091. The use of 27 gauge needles in FNAC are recommended for all EXCEPT
 (A) Children (B) Orbit
 (C) Thyroid (D) Soft tissue tumors
092. The technique of fine needle biopsy without aspiration was introduced by
 (A) Zajdela (B) Lobes Cardozo
 (C) Naylor (D) Leyden
093. Bombesin is a tumor marker for
 (A) Melanoma (B) Neuroendocrine tumours
 (C) Pleomorphic spindle cell tumour (D) Mesothelioma
094. A 20 years female with a firm mass in the lateral neck. On FNA, thick, yellow pus like fluid obtained. Smears show anucleate keratinized cells, squamous epithelial cells of variable maturity against the background of amorphous debris. What may be the diagnosis?
 (A) Cystic metastasis of squamous carcinoma
 (B) Thyroglossal cyst
 (C) Branchial cyst
 (D) Low grade mucoepidermoid tumor
095. Intranuclear cytoplasmic inclusions are seen in the cytology smears of all EXCEPT
 (A) Bronchiolo-alveolar carcinoma (B) Paraganglioma
 (C) Hepatocellular carcinoma (D) Follicular carcinoma of thyroid.
096. The Characteristic grumele pattern of nuclear chromatin is seen in
 (A) Small lymphocytic lymphoma (B) Lymphoplasmacytic lymphoma
 (C) Follicular lymphoma (D) Mantle Cell lymphoma
097. The minimal adequacy criteria for thyroid FNA is
 (A) Six groups of follicular cells with 10 cells in each group on a single slide
 (B) Two groups of follicular cells with 6 cells in each group on a single slide
 (C) Single group of follicular cells with 10 cells in each group on single slide
 (D) Two groups of follicular cells with 6 cells in each group on two slides.
098. A Palpable illdefined lesion in breast with mammographically detectable microcalcifications. Cytologically the lesion is composed of apocrine ductal cells and muciphages. What may be the diagnosis?
 (A) Lobular adenocarcinoma (B) Ductal Carcinoma in situ.
 (C) Ductal adenocarcinoma (D) Fibrocystic change

099. The Bethesda system of reporting cervical smears was developed in
 (A) 1980 (B) 1988
 (C) 1976 (D) 1990
100. All are the cytomorphological features of epithelial repair EXCEPT
 (A) The cells are arranged in 'school of fish' pattern
 (B) Cellular polarity maintained with streaming
 (C) Variable cytoplasmic borders
 (D) Prominent smooth, round to oval nucleoli.
101. Which one of the following fixative is efficient for microwave fixation of tissues for histopathology?
 (A) Glyoxal-based fixatives (B) Formalin fixatives
 (C) Acetone (D) Osmium tetroxide
102. Fixative of choice for electron microscopy is
 (A) Alcohol (B) Osmium tetroxide
 (C) B5 (D) All of the above
103. Which one of the following is an embedding reagent in histopathology
 (A) Toluene (B) Resin
 (C) Both (A) and (B) (D) None of the above
104. Which one of the following chemical is used in the fluid used for restoration of tissues dried in processing?
 (A) Dithionite (B) Formalin
 (C) Paraffin wax (D) Celloidin
105. Tissue microarray (TMA) technique can be used in
 (A) H & E staining (B) Fluorescent in situ Hybridization
 (C) Both (A) and (B) (D) None of the above
106. Which of the following is a progressive stain?
 (A) Mayer's Haematoxylin (B) Carazzi's Haematoxylin
 (C) Both (A) and (B) (D) None of the above
107. Which one of the following is NOT a mordant in Haematoxylin stains?
 (A) Sodium iodide (B) Molybdenum
 (C) Aluminium ammonium sulfate (D) Potash alum
108. Which one of the following is a trichrome stain?
 (A) Masson-Fontana (B) Van Gieson
 (C) Gill's (D) Alizarin red S
109. All of the following methods identify amyloid in tissues EXCEPT
 (A) Immunohistochemistry (B) Polarizing microscopy
 (C) Phase contrast microscopy (D) Laser microdissection
110. Which of the following stain can be used to visualize fungi in human tissues?
 (A) Congo red (B) Modified Fite method
 (C) Alizarin Red S (D) Haematoxylin and Eosin

111. Which one of the following can be used to decalcify bone tissue?
 (A) Ammonium oxalate (B) EDTA
 (C) Formalin (D) Xylene
112. In immunohistochemical technique, pressure cooker is used for
 (A) Blocking endogenous enzymes (B) Blocking background staining
 (C) Antigen retrieval (D) Staining
113. Michel medium is used
 (A) To freeze tissue in frozen section
 (B) As a clearing agent in frozen section
 (C) As a buffer in immunohistochemistry
 (D) To transport tissues for immunofluorescent techniques.
114. Glass Knives are used in
 (A) Electron microscopy work (B) Frozen section cutting
 (C) Rotary microtomes (D) None of the above
115. The reagent that fixes lipids during processing of tissues is
 (A) Osmium tetroxide (B) Alcohol
 (C) Picric acid (D) Oil red O
116. Autoradiography provides excellent results with
 (A) Paraffin sections (B) Freeze-dried sections
 (C) Resin embedded sections (D) Celloidin sections.
117. Which one of the following is NOT a decalcifying fluid
 (A) Perenyi's fluid (B) Von Ebner's fluid
 (C) Gooding and Stewart's fluid (D) Iron alum solution.
118. B5 fixative is a
 (A) Dichromate fixative (B) Mercuric fixative
 (C) Dehydrant fixative (D) Formalin fixative
119. Which one of the following is not a metachromatic stain
 (A) Methyl violet (B) Crystal violet
 (C) Toluidine blue (D) Acid fuchsin
120. Quenching is
 (A) Removal of ice from tissues (B) Removal of water molecules from tissues
 (C) Rapid freezing of fresh tissue (D) All of the above
121. Which of the following abnormality is seen both in iron deficiency anaemia and anaemia of chronic disease?
 (A) Decreased serum iron (B) Low Ferritin
 (C) Normal iron binding capacity (D) All of the above
122. Which of the following parameters are useful in diagnosing Disseminated intravascular Coagulation
 (A) Low platelet count, elevated APTT and PT, and elevated BUN
 (B) Low platelet count, decreased APTT and PT, and decreased bleeding time
 (C) Normal platelet count and Bleeding time, elevated APTT and PT
 (D) Normal platelet count, increased clotting time, decreased APTT and PT.

123. The preferred anticoagulant for blood lipid and lipoprotein estimation is
 (A) Citrate (B) Oxalate
 (C) EDTA (D) Heparin
124. Which one of the following is a liver canalicular enzyme?
 (A) Aspartate aminotransferase (B) Alkaline Phosphatase
 (C) Lactate dehydrogenase (D) Alanine aminotransferase
125. Which one of the following is the finding in subclinical hyper thyroidism?
 (A) Elevated TSH, T_4 and T_3 within reference range
 (B) Low TSH, T_4 and T_3 within reference range
 (C) Elevated TSH, T_4 and T_3
 (D) Normal TSH, T_4 and T_3
126. Which of the following method is used to measure specific gravity of urine?
 (A) Reagent strip (B) Falling drip method
 (C) Urinometer (D) All of the above
127. What may be the effect of sodium fluoride as a preservative on the detection of urine sugar?
 (A) False negative readings (B) False positive readings
 (C) No effect on the result (D) Both (A) and (B)
128. Which microscope is most useful in the detection of very translucent formed elements of urinary sediment like casts?
 (A) Bright field microscope (B) Fluorescence microscope
 (C) Phase-contrast microscope (D) Polarized microscope
129. C.S.F. is ordinarily collected in three test tubes and marked 1, 2 and 3. Which tube is ideal for cell count and differential?
 (A) 1st Tube (B) 2nd Tube
 (C) 3rd Tube (D) Any one of the Tube.
130. Clot formation in CSF specimen is NOT seen in
 (A) Traumatic tap (B) Subarachnoid haemorrhage
 (C) Suppurative meningitis (D) None of the above
131. The normal liquefaction time of Semen specimen is
 (A) Less than 20 minutes (B) 30 minutes
 (C) More than one hour (D) None of the above
132. The primary use of 'Fresh Frozen Plasma' is in
 (A) Volume expansion
 (B) Patients with multiple coagulation factor deficiencies
 (C) Correction of thrombocytopenia
 (D) Thalassemia
133. Blood transfusion containing neocytes may be useful in
 (A) GVHD (B) Bleeding disorders
 (C) Acute blood loss (D) Thalassemia

134. Cryoprecipitate is frozen at -18°C and stored upto
 (A) One month (B) One day
 (C) One year (D) Five years
135. Which one of the following antibody is either IgM or may have IgM component?
 (A) Anti-H allo-antibody (B) Immune Rh autoantibodies
 (C) Anti-A antibody (D) All of the above
136. Indirect antiglobulin test has application in
 (A) To demonstrate attachment of antibodies to red cells
 (B) Crossmatching
 (C) Both (A) and (B)
 (D) None of the above.
137. All of the following are artefacts in a peripheral blood smear EXCEPT
 (A) Crenated RBC (B) Apoptosis
 (C) Ragged cytoplasmic margins (D) Budding in Lymphocyte nucleus
138. Which of the following person will have highest Haemoglobin concentration among the four?
 (A) 25 year old Antenatal Woman
 (B) 25 year old endurance athlete
 (C) 25/M living at an altitude of 3000m above sea level
 (D) 40/F with uterine bleeding
139. Which one of the following is the largest circulating leukocyte?
 (A) Monocyte (B) Basophil
 (C) Eosinophil (D) None of the above
140. It is best to do platelet counts in anticoagulated blood sample within
 (A) 2 days (B) 1 day
 (C) 12 hours (D) 2 hours
141. Which form of the haemoglobin is NOT measured by cyanmethemoglobin method
 (A) HbO_2 (B) Hi
 (C) HbCO (D) SHb
142. Cloudy plasma in a hematocrit tube indicates
 (A) Hematocrit done after fat-rich meal (B) Nephrosis
 (C) Hyperglobulinemias (D) All of the above
143. Mean Cell Haemoglobin Concentration (MCHC) increases in
 (A) Thalassemia (B) Spherocytosis
 (C) Megaloblastic anemia (D) All of the above
144. Reticulated platelet counts can be an estimate of
 (A) Leukocytosis (B) Thrombopoiesis
 (C) Hematocrit (D) None of the above
145. Which of the following stain will give excellent staining for malarial parasites?
 (A) Geimsa (B) Jenner's
 (C) Leishman's (D) MacNeal's

146. The presence of normoblasts and immature cells of the neutrophilic series in the blood is known as
 (A) Erythroid hyperplasia (B) Leukocytosis
 (C) Leukoerythroblastic reaction (D) Myelopoiesis
147. Which of the following cell is NOT an artifact in peripheral blood smear?
 (A) Basket cell (B) Acanthocyte
 (C) Rieder cell (D) All of the above
148. What is the effect on Erythrocyte Sedimentation Rate (ESR) if the concentration of the anticoagulant used is higher than that recommended in Westgren method?
 (A) Elevated (B) Decreased
 (C) Haemolysis (D) ESR will not be affected.
149. Which one of the following cell will have decreased osmotic fragility?
 (A) Spherocyte (B) Elliptocyte
 (C) Hypochromic RBC (D) All of the above
150. Which hemoglobin confers protection from falciparum malaria?
 (A) HbAS (B) HbAC
 (C) HbF (D) None of the above
151. Which one of the following is an experimental study design?
 (A) Cohort (B) Case Control
 (C) Randomized controlled Trial (D) Ecological
152. All of the following are advantages of Non probability sampling EXCEPT
 (A) Quick result (B) Free distribution
 (C) Less cost (D) Less manpower
153. Cross-sectional studies are used to
 (A) Estimate prevalence (B) Generate hypothesis
 (C) Describe trends (D) All of the above
154. The most commonly used statistical measure of central tendency in a medical research is
 (A) Mean (B) Mode
 (C) Median (D) All of the above
155. Which one of the following is example of ordinal variable
 (A) Mild Hypertension (B) Male
 (C) Eye Colour (D) All of the above
156. Neyman Bias in sampling in a medical research refers to
 (A) Admission rate bias (B) Prevalence – Incidence bias
 (C) Unmasking bias (D) Diagnostic suspicion bias
157. All of the following are the basic ethical principles defined in Belmont Report EXCEPT
 (A) Autonomy (B) Beneficence
 (C) Academic Training (D) Justice
158. Which of the following diagram will give the variation and skewness in the data?
 (A) Histogram (B) Box and whiskers plot
 (C) Line diagram (D) Polygon

159. Descriptive epidemiology study designs can answer all of the following questions EXCEPT
(A) Who? (B) When?
(C) Where? (D) Why?
160. Type II error in hypothesis testing in a research study occurs when
(A) The null hypothesis is not rejected when it is false
(B) The null hypothesis is rejected when it is false
(C) The null hypothesis is rejected when it is true
(D) The null hypothesis is not rejected when it is true
161. The process which tends to produce results or conclusions that are systematically different from the truth, in a research is referred as
(A) Chance (B) Design
(C) Random error (D) Bias
162. A research study which starts with the outcome of interest and look backwards for the exposure is called
(A) Cohort study (B) Case control study
(C) Both (A) and (B) (D) None of the above
163. As per the Indian Medical Council regulation 2002, a physician should maintain the medical records pertaining to his/her indoor patients, from the date of commencement of treatment for a period of
(A) 10 years (B) One year
(C) 3 years (D) Till the death of the patient
164. As per the Indian Medical Council regulation 2002, which one of the following is NOT construed as unethical on the part of a physician?
(A) Advertising on starting practice
(B) Soliciting of patients directly
(C) Running an open shop for sale of medicine for prescriptions by doctors other than himself
(D) Prescribing a secret remedial agent
165. The first step for writing a successful protocol for research studies is
(A) Ethics approval
(B) Methodology
(C) Identify topic, research question and objectives
(D) Literature review
166. Study design, sample specification and study period are included in the following section of protocol for research studies
(A) Justification (B) Subjects and Methods
(C) Literature review (D) Objectives
167. Willingness of study participants to participate in the research study must be obtained by
(A) Oral consent (B) Audio recording
(C) Informed written consent (D) All of the above

168. Find the median in the following sample of observations:
3, 7, 4, 7, 5, 2, 10, 8, 6, 12, 2, 5
- (A) 12 (B) 5.5
(C) 6 (D) 7.5
169. Which one of the lesion is NOT visualized in post-mortem MRI?
- (A) Coronary artery lesions (B) Renal anomalies
(C) Pulmonary hypoplasia (D) CNS malformations
170. Which of the following is useful in identification of early malignant change in pleomorphic adenoma?
- (A) MIB 1
(B) Extend of invasion beyond the original benign tumour
(C) CK 14
(D) HER-2/neu
171. Which one of the following is the most common forms of DNA variation in human genome?
- (A) Pleiotropism (B) Chromatin erasers
(C) SNP (D) Heterochromatin
172. Which one of the following is called jumping genes?
- (A) Regulatory RNAs (B) Transposons
(C) Telomeres (D) Centromeres
173. Histone deacetylases in DNA Causes
- (A) Chromatin condensation (B) Acetylation
(C) Polymorphism (D) Disequilibrium
174. Which one of the following is NOT a property of miRNA?
- (A) Do not encode proteins
(B) It causes post transcriptional silencing of genes
(C) Modulate the translation of target mRNAs
(D) Causes gene activation
175. Low-density lipoprotein molecule is endocytosed by which of the following mechanism
- (A) Caveolae-mediated (B) Receptor-mediated
(C) Transcytosis (D) Potocytosis
176. Which one of the following is a cytoskeleton?
- (A) Catenin (B) Desmin
(C) Desmosome (D) Cadherin
177. Which one of the following is a ligand for intracellular class of receptors?
- (A) Vitamin D (B) LDL
(C) Growth factors (D) Insulin
178. Which one of the following is the most important property of stem cells?
- (A) DNA synthesis (B) Mitosis
(C) Asymmetric division (D) Premitotic growth

179. All of the following are adaptations of cellular growth EXCEPT
 (A) Hypertrophy (B) Hyperplasia
 (C) Metaplasia (D) Dysplasia
180. Deficiency of retinoic acid induces
 (A) Columnar metaplasia (B) Squamous metaplasia
 (C) Connective tissue metaplasia (D) Myositis ossificans
181. Which type of the nitric oxide is involved in microbial killing?
 (A) iNOS (B) eNOS
 (C) nNOS (D) Both (B) and (C)
182. Which one of the following arachidonic acid metabolite will suppress inflammation?
 (A) Prostaglandins (B) Lipoxins
 (C) Leukotrienes (D) None of the above
183. All of the following are acute-phase proteins EXCEPT
 (A) C-reactive protein (B) Fibrinogen
 (C) Prostaglandins (D) Serum amyloid A
184. Which among the substances present in eosinophil granules is toxic to parasites?
 (A) Chemokines (B) Interferons
 (C) Major basic protein (D) Interleukins
185. Inadequate formation of granulation tissue during tissue repair leads to
 (A) Ulceration (B) Keloid
 (C) Aggressive fibromatosis (D) Contraction
186. Which one of the following event is an important feature in healing by secondary union?
 (A) Proliferation of epithelial cells (B) Wound contraction
 (C) Scar maturation (D) Neovascularization
187. Which one of the following is not matched correctly?

<u>Pathophysiologic Category of Edema</u>	<u>Example</u>
(A) Increased Hydrostatic Pressure	Heat
(B) Reduced Plasma Osmotic Pressure	Nephrotic syndrome
(C) Lymphatic Obstruction	Neurohumoral dysregulations
(D) Inflammation	Angiogenesis
188. Which one of the following factor will limit coagulation?
 (A) Prothrombin (B) Tissue factor
 (C) Fibrinogen (D) Plasmin
189. Antiphospholipid Antibody Syndrome may give false-positive serologic test for syphilis, because of the antigen
 (A) Lectin (B) Cardiolipin
 (C) Antinuclear antibody (D) All of the above
190. Which one of the following is a venous embolus?
 (A) Vegetations (B) Fat embolism
 (C) Mural thrombi (D) Paradoxical embolism

191. The cause of insulin resistance in septic shock is due to
 (A) Impaired expression of GLUT-4 (B) Suppression of insulin release
(C) Destruction of islet cells (D) Both (A) and (B)
192. Familial Hypercholesterolemia is primarily due to
(A) Failure to inactivate a tissue damaging substrate
(B) An enzyme defect
(C) Adverse reaction to drugs
 (D) Defect in receptor protein
193. Crumpled tissue paper appearance of the cytoplasm of macrophages is seen in which disease?
 (A) Gaucher disease (B) Niemann-Pick Disease
(C) Mucopolysaccharidoses (D) All of the above
194. Which one of the following is NOT a function of Helper lymphocytes?
(A) Inflammation (B) Activation of B lymphocytes
 (C) Complement activation (D) Activation of macrophages
195. Majority of the deaths in untreated patients with AIDS are due to
(A) Tumours (B) Opportunistic Infections
(C) Central Nervous System Disease (D) None of the above
196. Angelman Syndrome is an example for
(A) Single-gene disorder
 (B) Single-gene disorder with nonclassic inheritance
(C) Cytogenetic disorder
(D) Autosomal dominant disorder
197. Warburg effect is
(A) Oxidative Phosphorylation (B) Anaerobic glycolysis
 (C) Aerobic glycolysis (D) Glycogenolysis
198. Which cell is abundant in late-phase of Type I Hypersensitivity reaction?
(A) Mast cell (B) Neutrophil
(C) Macrophage (D) Eosinophil
199. Which of the following Karyotype belongs to Down Syndrome?
 (A) 46, XX, der(14;21)(q10;q10), +21 (B) 46, XX / 47, XX, +18
(C) 47, XX, +13 (D) None of the above
200. Which one of the following genetic diagnostics is used to identify heritable chemical modifications of DNA?
(A) PCR (B) Epigenetics
(C) FISH (D) GWAS