

PROVISIONAL ANSWER KEY (CBRT)

Name of The Post	Professor, Tuberculosis & Chest Diseases, 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. The appearance of Type 1 (flat) cells and Type 2 (surfactant producing) cells occurs at which stage in the development of lung
 (A) Canalicular (B) Pseudoglandular
 (C) Saccular (D) Alveolar
- 002.. Which of the following statements regarding respiratory muscles is false
 (A) Mainly have to overcome resistive and elastic loads
 (B) Contract rhythmically and continuously
 (C) They are the only smooth muscles on which life depends
 (D) None of the above
003. Majority of fibers of the human diaphragm are
 (A) Type IIa fibers (B) Type IIx fibers
 (C) Type III fibers (D) Type I fibers
004. Alveolar capillary dysplasia is a Mendelian disease caused by mutation in which gene
 (A) TERT (B) FOXF1
 (C) BTK (D) CFTR
005. The strongest genetic risk factor for COPD is
 (A) ANXA11 (B) BMPR2
 (C) SERPINA 1 (D) FAM13A
006. Which of the following is true regarding surfactant proteins
 (A) SP-A and SP-D are hydrophobic
 (B) SP-A and SP-D act as opsonins
 (C) SP-A and SP-D are the sole protein components of animal derived surfactant replacement preparations used for treatment of IRDS
 (D) None of the above
007. All of the following are markers of Type 1 alveolar epithelial cell except
 (A) Caveolin 1 (B) Aquaporin 5
 (C) Alkaline phosphatase (D) Carboxypeptidase M
008. Bohr effect is the shift of the oxygen dissociation curve produced by changes in
 (A) PCO₂ (B) pH
 (C) Both (A) and (B) (D) None of the above
009. Which is of the following is not a cause of metabolic acidosis
 (A) Chronic hypokalemia (B) Chronic aldosterone deficiency
 (C) Reduced renal mass (D) Villous adenoma
010. Which of the following is false regarding aging of the cardio-respiratory system
 (A) Increased rigidity of chest wall
 (B) Glandular atrophy of conducting airways
 (C) Decreased maximal heart rate and cardiac output
 (D) None of the above

011. Which of the following anti TB drugs requires dose modification in patients with renal impairment
- (A) Isoniazid (B) Rifampicin
 (C) Ethambutol (D) Ethionamide
012. Which among the following non TB mycobacteria is a slow grower
- (A) M. Ulcerans (B) M. Abscessus
 (C) M. Marinum (D) None of the above
013. Which of the following drugs is considered 'safe to use' with Bedaquiline
- (A) Atorvastatin (B) Terbinafine
 (C) Pantoprazole (D) Phenytoin
014. QT prolongation may be caused by
- (A) Bedaquiline (B) Moxifloxacin
 (C) Delamanid (D) All of the above
015. Poly drug resistant TB refers to a TB patient whose biological specimen is resistant to
- (A) More than one first line anti TB drug, other than both isoniazid and rifampicin
 (B) Both isoniazid and rifampicin, with or without resistance to other first line drugs
 (C) Both (A) and (B)
 (D) None of the above
016. The turn around time for line probe assay is
- (A) 8 days (B) 2 hours
 (C) 72 hours (D) None of the above
017. A child is considered as 'probable MDR TB' if
- (A) Close contact with a person who died whilst on TB treatment
 (B) Previous treatment with second line drugs
 (C) Close contact with a person who failed TB treatment
 (D) All of the above
018. Which of the following is false about Bedaquiline
- (A) Acts by blocking mycolic acid synthesis (B) Metabolized in liver
 (C) Bactericidal (D) None of the above
019. Which of the following is not an exclusion criterion for Delamanid
- (A) Lactation (B) Controlled stable arrhythmia
 (C) History of heart failure (D) None of the above
020. Which of these is a platform for the National Tuberculosis Surveillance System
- (A) Swasthi (B) Arogya
 (C) Nikshaya (D) Mitreya
021. All of the following are associated with reduced peak inspiratory pressure during pulmonary function testing except
- (A) Poor effort (B) Decreased lung volume
 (C) Fatigue (D) Neuromuscular disease

022. Which of the following sounds is described as a low pitched continuous snoring sound longer than 250 ms, with a dominant frequency of 200 Hz or less
- (A) Coarse crackle (B) Fine crackle
(C) Wheeze (D) Rhonchus
023. Which of the following agents is used in tests of bronchial reactivity
- (A) Methacholine (B) Histamine
(C) Carbocholine (D) All of the above
024. Who developed flexible fiberoptic bronchoscope
- (A) Gustav Killian (B) Shigeto Ikeda
(C) James D. Hardy (D) John Black
025. Which cell constitutes the highest proportion of cells in the human pulmonary parenchyma
- (A) Interstitial cells (B) Type II alveolar epithelial cells
(C) Type I alveolar epithelial cells (D) Alveolar macrophages
026. Diseases for which a mutation in one of several different genes can lead to the same clinical phenotype is referred to as
- (A) Genetic heterogeneity (B) Allelic heterogeneity
(C) Heterozygote (D) None of the above
027. Which of the following is an anti inflammatory adipokine linked to asthma
- (A) Leptin (B) Resistin
(C) Apelin (D) Adiponectin
028. Oxidative stress is implicated in the pathogenesis of which of the following diseases
- (A) Asthma (B) ARDS
(C) COPD (D) All of the above
029. Diffusing capacity is increased in
- (A) Interstitial lung disease (B) Alveolar hemorrhage
(C) Pulmonary hemorrhage (D) None of the above
030. Acrokeratosis paraneoplastica is also known as
- (A) Bazex Syndrome (B) Tripe palms
(C) Acanthosis nigricans (D) None of the above
031. Which of the following is most often associated with Ectopic ACTH production
- (A) Carcinoid tumor of bronchus (B) Squamous cell carcinoma of lung
(C) Small cell carcinoma of lung (D) Lung metastasis
032. CD4/CD8 ratio in broncho alveolar lavage is increased in which of the following diseases
- (A) Hypersensitivity pneumonitis (B) Cryptogenic organizing pneumonia
(C) Eosinophilic pneumonia (D) Chronic beryllium disease
033. Bronchial thermoplasty may be used in which of the following diseases
- (A) Tuberculosis (B) Asthma
(C) Interstitial Lung Disease (D) Pulmonary Hypertension

034. Which of the following is not a contra indication for Video Assisted Thoracic Surgery
 (A) Coagulopathy (B) Pleural Adhesions
 (C) Mediastinal Lymph nodes (D) Severe COPD
035. What is the distribution of air space enlargement in case of normal aging
 (A) Paraseptal emphysema (B) Uniform involvement of lung
 (C) Apical predominance (D) Lower lobe predominance
036. Cell of origin of alpha 1 antitrypsin is
 (A) Bronchial epithelial cell (B) Hepatocyte
 (C) Mono nuclear phagocyte (D) All of the above
037. Which of the following is not a nicotine withdrawal symptom
 (A) Anxiety (B) Decreased heart rate
 (C) Increased appetite (D) None of the above
038. Which of the following is not an expected result of pulmonary rehabilitation in COPD patients
 (A) Increases quality of life (B) Increased Exercise tolerance
 (C) Improvement in lung function test (D) Prolonged survival
039. Which is the most common arrhythmia seen in COPD patients
 (A) Junctional rhythm (B) Supra ventricular tachy arrhythmia
 (C) Ventricular tachycardia (D) Torsade de pointes
040. Condition suggesting alpha 1 antitrypsin deficiency in a patient with COPD
 (A) Weber Christian disease (B) Emphysema in a non-smoker
 (C) Wegners Granulomatosis (D) All of the above
041. Which of the following is not considered a risk factor for development of Asthma
 (A) Obesity (B) Tobacco smoking
 (C) Parasite infection (D) Beta blocker drug
042. Which NSAIDs is well tolerated in Aspirin Induced Asthma
 (A) Selective COX2 inhibitors (B) Ketorolac
 (C) Mefenemic acid (D) Indomethacin
043. Patterson's criteria is used for the diagnosis of
 (A) Exercise induced asthma (B) Allergic Broncho pulmonary aspergillosis
 (C) Cryptogenic Organizing Pneumonia (D) Sarcoidosis
044. Diagnostic criteria for Severe Asthma with fungal sensitivity includes all except
 (A) Total Serum Ig E > 1000 IU/ml
 (B) Poorly controlled asthma
 (C) No radiographic evidence of bronchiectasis
 (D) None of the above
045. Mainstay of therapy for Allergic Broncho pulmonary aspergillosis
 (A) Inhaled corticosteroids (B) Systemic corticosteroids
 (C) Prophylactic anti bacterial treatment (D) Amphotericin B

046. Which of the following is a cause of tracheal stenosis
 (A) Sarcoidosis (B) Pulmonary amyloidosis
 (C) Relapsing polychondritis (D) All of the above
047. Pattern of inheritance of Cystic Fibrosis
 (A) Autosomal Dominant (B) Autosomal recessive
 (C) X linked Dominant (D) X linked Recessive
048. Most common pathogen isolated from sputum cultures of Cystic Fibrosis patients
 (A) Anaerobes (B) Streptococcus pneumonia
 (C) Hemophilus influenza (D) Pseudomonas aeruginosa
049. Which of the following is also called Smoker's Bronchiolitis
 (A) Bronchiolitis obliterans (B) Follicular Bronchiolitis
 (C) Respiratory Bronchiolitis (D) Diffuse pan Bronchiolitis
050. Which of the following arises within the visceral pleura
 (A) Bleb (B) Bulla
 (C) Cyst (D) None of the above
051. Which of the following is false regarding pulmonary function test in bullous disease
 (A) FEV1/FVC normal (B) Residual volume increased
 (C) Total lung capacity normal (D) None of the above
052. Which of the following pathogens is associated with development of bronchiectasis
 (A) Moraxella (B) Streptococcus pneumoniae
 (C) Hemophilus influenza (D) Staphylococcus aureus
053. Suberosis is associated with exposure to
 (A) Compost (B) Moldy Cork
 (C) Rat fur (D) Sauna water
054. All of the following antibiotics are associated with development of interstitial lung disease except
 (A) Nitrofurantoin (B) Minocycline
 (C) Cephalosporins (D) Meropenem
055. The interstitial lung disease which usually involves the lower lung zone
 (A) Silicosis (B) Asbestosis
 (C) Berylliosis (D) Sarcoidosis
056. Which radiographic characteristic is atypical for 'Definite UIP'
 (A) Honeycombing (B) Reticular marking
 (C) Profuse micronodules (D) All of the above
057. Which of the following has been called Mortimer's malady
 (A) Sarcoidosis (B) Tuberculosis
 (C) Silicosis (D) COPD
058. Histo pathologic features of sarcoidosis may also be seen in
 (A) Berylliosis (B) Crohns Disease
 (C) Local sarcoid reactions (D) All of the above

059. Which of the following is false regarding Sarcoidosis
 (A) Respiratory symptoms occur in upto 60% patients
 (B) Chest radiograph carries prognostic information
 (C) Pulmonary function test may be normal even when chest radiograph shows pulmonary infiltrates
 (D) None of the above
060. Most common manifestation of ocular sarcoidosis
 (A) Conjunctivitis (B) Uveitis
 (C) Retinitis (D) Optic neuritis
061. Which of the following is false regarding Idiopathic Pulmonary Fibrosis
 (A) Most common cause of interstitial lung disease
 (B) More common in females
 (C) Nintedanib a tyrosine kinase inhibitor has role in treatment
 (D) None of the above
062. Hamman Rich Syndrome refers to
 (A) Acute interstitial pneumonia (B) Cryptogenic Organizing Pneumonia
 (C) Idiopathic Interstitial Fibrosis (D) Lymphoid Interstitial Pneumonia
063. Probable antigen in Cheeseworke's disease
 (A) Penicillium (B) Aspergillus
 (C) Rhizopus (D) Candida albicans
064. Stipatosis is a type of hypersensitivity pneumonitis associated with exposure to
 (A) Silkworm larvae (B) Sauna water
 (C) Esparto grass (D) Turkey products
065. Diffuse alveolar damage occurs with greatest frequency in which among the following
 (A) Systemic Lupus Erythematosus (B) Rheumatoid Arthritis
 (C) Systemic sclerosis (D) Ankylosing spondylitis
066. Which of the following is false regarding Lymphangiomyomatosis
 (A) A multi system disorder more common in men
 (B) May be inherited or sporadic
 (C) Seen in patients with Tuberous sclerosis complex
 (D) None of the above
067. Pulmonary Alveolar proteinosis is due to alveolar deposition of
 (A) Amyloid (B) Surfactant
 (C) Calcium (D) Water
068. Bleomycin causes which of the following
 (A) Chronic pneumonitis (B) Radiation recall pneumonitis
 (C) Hemolytic Uremic syndrome (D) None of the above
069. Interstitial lung disease may be caused by which of the following
 (A) Imatinib (B) Gefitinib
 (C) Trastuzumab (D) All of the above

070. Differentiation syndrome is a pulmonary toxicity caused by
 (A) Paclitaxel (B) All trans retinoic acid
 (C) Interleukin 2 (D) Procarbazine
071. Diagnostic criteria for Tropical Pulmonary Eosinophilia includes
 (A) Elevated serum IgE (B) Infiltrates on chest radiograph
 (C) Leukocytosis with eosinophilia (D) All of the above
072. Idiopathic Hyper eosinophilic syndrome is also known as
 (A) Eosinophilic leukemia
 (B) Loeffler fibroplastic endocarditis
 (C) Disseminated eosinophilic cardiovascular disease
 (D) All of the above
073. Blood Eosinophilia may be absent in
 (A) Hyper eosinophilic syndrome (B) Tropical Pulmonary eosinophilia
 (C) Acute eosinophilic pneumonia (D) None of the above
074. Which of the following statements is false
 (A) Pulmonary circulation is normally a low flow, high resistance, low pressure system
 (B) Mean pulmonary arterial pressure is 20 mmHg
 (C) Pulmonary hypertension is defined as Mean pulmonary arterial pressure greater than or equal to 25 mm Hg at rest
 (D) None of the above
075. Pathogenetic mechanism of pulmonary hypertension in mitral stenosis
 (A) Passive (B) Obstructive
 (C) Obliterative (D) Hyperkinetic
076. Most common presenting symptom of Pulmonary Arterial Hypertension
 (A) Dyspnea on exertion (B) Palpitation
 (C) Syncope (D) Chest pain
077. Dietary pulmonary hypertension may be caused by
 (A) Fefluramine (B) Aminorex
 (C) Rapeseed oil adulterated with aniline (D) All of the above
078. Respiratory manifestations occur frequently in which of the following
 (A) Kawasaki disease (B) Behcets disease
 (C) Cryoglobulinemic vasculitis (D) Takayasu arteritis
079. Cough that persists more than how many weeks is defined as chronic cough
 (A) 2 weeks (B) 4 weeks
 (C) 6 weeks (D) 8 weeks
080. Which of the following about primary hypertrophic osteoarthropathy is false?
 (A) Autosomal dominant disorder
 (B) Periosteal new bone formation
 (C) Smooth and undulating periosteal surface
 (D) Hyperhydrosis

081. Fishman's classification is used for
 (A) Cyanosis (B) Anemia
 (C) Clubbing (D) Jaundice
082. The volume of gas that is exhaled from lungs in going from Total lung capacity to Residual volume is
 (A) Expiratory reserve volume (B) Functional residual capacity
 (C) Vital capacity (D) Tidal volume
083. Which of the following respiratory functions cannot be measured by a spirometer
 (A) Vital capacity (B) Expiratory reserve volume
 (C) Inspiratory capacity (D) Functional residual capacity
084. Pulse oximeter calculates O₂ saturation by measuring absorption of how many wavelengths of light
 (A) 2 (B) 5
 (C) 8 (D) 12
085. Hot potato voice is a feature of
 (A) Oropharyngeal candidiasis (B) Lemierre's disease
 (C) Vincent's angina (D) Ludwig's angina
086. Which of the following is called house dust mite
 (A) Dermatophagoides pteronyssinus (B) Betula verrucosa
 (C) Phleum pratense (D) Ambrosia artemisiifolia
087. Thunderstorm asthma is due to
 (A) Fungal spores (B) Domestic pets
 (C) Pollen grains (D) Cockroaches
088. Infection with which of the following may be associated with a reduced risk of asthma
 (A) Mycoplasma (B) Chlamydia
 (C) Hookworm (D) All of the above
089. In asthma the characteristic histologic finding in airways is
 (A) Normal parenchymal attachments (B) Thickened airway smooth muscle
 (C) Goblet cell metaplasia (D) Thickening of basement membrane
090. Theophylline activates which of the following
 (A) Growth factor related receptor tyrosine kinase
 (B) Histone deacetylase 2
 (C) DNA methyl transferase
 (D) All trans retinoic acid
091. Route of administration of Omalizumab in asthma is
 (A) Subcutaneous (B) Intravenous
 (C) Intra muscular (D) Aerosol
092. Almost all cases of allergic bronchopulmonary aspergillosis represents a hypersensitivity reaction to
 (A) Aspergillus fumigatus (B) Aspergillus flavus
 (C) Aspergillus niger (D) Aspergillus niger

093. Particles below what size can be carried to lower airways
 (A) 10 micron (B) 7.5 micron
 (C) 5 micron (D) 2.5 micron
094. The clinical and pathological features of acute silicosis are similar to those of
 (A) ABPA (B) Asthma
 (C) Acute pneumonitis (D) Pulmonary alveolar proteinosis
095. Eggshell pattern of hilar node calcification is seen in
 (A) Asbestosis (B) Berylliosis
 (C) Silicosis (D) Coal workers pneumoconiosis
096. Which of the following is implicated in Tight building syndrome
 (A) Dust mites (B) Perfumes
 (C) Latex particles (D) None of the above
097. Interstitial lung disease in which of the following conditions is more common in men
 (A) Lymphangioleiomyomatosis (B) Tuberos sclerosis
 (C) Hermansky Pudlak syndrome (D) Rheumatoid arthritis
098. Which of the following chest X-ray findings is indicative of a poor prognosis in a case of ILD
 (A) Bibasilar reticular pattern (B) Honeycombing
 (C) Nodular pattern of alveolar filling (D) Mixed pattern of alveolar filling
099. Most common pulmonary manifestation in Systemic Lupus Erythematosus
 (A) Atelectasis (B) Pleuritis
 (C) Pulmonary vascular disease (D) Infectious pneumonia
100. ILD occurs more commonly in the subgroup of polymyositis dermatomyositis patients having which antibody
 (A) Anti Smith antibody (B) Anti Ro antibody
 (C) Anti Jo 1 antibody (D) Anti La antibody
101. Elevated levels of beta 2 transferrin in pleural fluid is seen in
 (A) Urinothorax (B) Cholesterol effusion
 (C) Duropleural fistula (D) Esophageal rupture
102. In which of the following stages of empyema, is a patient most likely to respond to antibiotics without pleural drainage
 (A) Exudative (B) Fibrinopurulent
 (C) Organizing (D) None of the above
103. Pleural fluid protein levels more than 7g/dl is seen in
 (A) Waldenstroms macroglobulinemia (B) Multiple myeloma
 (C) Cholesterol effusion (D) All of the above
104. Most common cause of chylothorax is
 (A) Lymphoma (B) Trauma
 (C) Idiopathic (D) Constrictive pericarditis

105. Which of the following is false regarding pleural fluid test results in lupus pleuritis
 (A) High complement (B) Positive ANA
 (C) Low rheumatoid factor (D) None of the above
106. Which of the following is the second most common cause of malignant pleural effusion (most common cause being lung cancer)
 (A) Carcinoma breast (B) Lymphoma
 (C) Carcinoma stomach (D) Carcinoma ovary
107. Which of the following is false regarding malignant mesothelioma
 (A) Usually bilateral
 (B) Epithelial and sarcomatous types of malignant mesothelioma behave differently
 (C) Distant metastasis is unusual
 (D) None of the above
108. Which of the following conditions causes 'stratosphere sign' in M mode lung ultrasound
 (A) Massive pleural effusion (B) Pneumothorax
 (C) Normal lungs (D) Severe asthma
109. Which of the following is not a content of middle mediastinum
 (A) Thoracic duct (B) Aorta
 (C) Trachea (D) Lymph nodes
110. Most common presenting complaint in case of descending necrotizing mediastinitis is
 (A) Dyspnea (B) Chest pain
 (C) Odynophagia (D) Neck swelling
111. Which of the following does not improve in a patient with kyphoscoliosis, by use of noninvasive mechanical ventilation
 (A) FEV1 (B) PaO₂
 (C) Survival (D) None of the above
112. Which of the following is likely to be normal in a patient with chronic neuro muscular disease
 (A) Vital capacity (B) Total lung capacity
 (C) Residual volume (D) Functional residual capacity
113. Which of the following is not a major criteria for airway intubation and mechanical ventilation in Guillain Barre Syndrome
 (A) Hypercarbia (B) Hypoxemia
 (C) Reduced vital capacity < 15cc/kg (D) None of the above
114. Organic dust toxic syndrome is also called
 (A) Atypical farmers lung (B) Pulmonary mycotoxicosis
 (C) Toxic pneumonitis (D) All of the above
115. Which of these is not an established health effect of involuntary exposure to tobacco smoke
 (A) Increased frequency of middle ear disease
 (B) Onset of asthma
 (C) Reduced birth weight
 (D) None of the above

127. Which of the following is bacteriostatic
 (A) Ethionamide (B) Cycloserine
 (C) PAS (D) Ethambutol
128. Which of the following is considered as the gold standard diagnostic test in case of *Pneumocystis jiroveci*
 (A) Induced sputum (B) Broncho alveolar lavage
 (C) Open lung biopsy (D) Needle aspirate
129. Which of the following is true regarding *Rhodococcus equi* respiratory infection
 (A) History of exposure to horses (B) Gram negative cocci
 (C) Immuno competent patient (D) All of the above
130. According to Mallampati scale for characterizing the airway, if only the soft palate and base of uvula are visible, the patient belongs to
 (A) Class I (B) Class II
 (C) Class III (D) Class IV
131. At what lung volume does the outward recoil of the chest wall equal the inward elastic recoil of the lung
 (A) Expiratory reserve volume (B) Functional residual capacity
 (C) Residual volume (D) Tidal volume
132. Chronic silicosis is related to an increased risk of which of the following conditions
 (A) Infection with invasive *Aspergillus* (B) Tuberculosis
 (C) Lung cancer (D) All of the above
133. Ivacaftor works in patients with Cystic fibrosis by having which of the following actions on CFTR protein
 (A) Corrects protein slicing abnormalities
 (B) Improves conductance through the chloride ion pore
 (C) Increases synthesis of CFTR
 (D) Promotes CFTR binding at the cell membrane
134. All of the following are risk factors for COPD except
 (A) Coal dust exposure (B) Recurrent respiratory infections
 (C) Exposure to fumes of biomass fuels (D) Passive cigarette smoking
135. What would be the expected finding on broncho alveolar lavage in a patient with diffuse alveolar hemorrhage
 (A) Hemosiderin laden macrophages
 (B) Ferruginous bodies
 (C) Milky appearance with foamy macrophages
 (D) None of the above
136. Hamman's sign is characteristic of
 (A) Pneumomediastinum (B) Tension pneumothorax
 (C) Chronic mediastinitis (D) None of the above

137. Disturbances of PaCO₂ reflect which of the following
 (A) Altered CO₂ production (B) Altered minute ventilation
 (C) Altered dead space fraction (D) All of the above
138. Ondine's curse is best related to
 (A) Hyperventilation (B) Obstructive sleep apnea syndrome
 (C) Central hypoventilation syndrome (D) Obesity hypoventilation syndrome
139. Congenital pulmonary alveolar proteinosis is caused by mutation in
 (A) SPA gene (B) SP B gene
 (C) SP C gene (D) SP D gene
140. Which of the following is a congenital cause of bronchiectasis
 (A) Kallmann syndrome (B) Mc Cune Albright syndrome
 (C) Mounier Kuhn syndrome (D) None of the above
141. Which of the following is not a feature of yellow nail syndrome
 (A) Lymphedema (B) Pleural effusion
 (C) Mediastinal lymphadenopathy (D) Yellow discoloration of nails
142. Neutrophil is the dominant cell type in alveolar space in which of the following pathological phase of pneumonia
 (A) Edema (B) Red hepatization
 (C) Gray hepatization (D) Resolution
143. To be adequate for culture, sputum sample should have
 (A) > 25 PMN and < 10 squamous cells per low power field
 (B) > 25 PMN and < 20 squamous cells per low power field
 (C) > 50 PMN and < 10 squamous cells per low power field
 (D) > 50 PMN and < 20 squamous cells per low power field
144. Urinary antigen detection by ELISA is done for which of the following lung infection
 (A) Streptococcus pneumonia (B) Mycobacterium tuberculosis
 (C) Histoplasma capsulatum (D) Neisseria meningitides
145. Number of variables in the Pneumonia Severity Index is
 (A) 8 (B) 15
 (C) 20 (D) 26
146. The foul odor of sputum of patients with lung abscess is due the organisms production of
 (A) Short chain fatty acids (B) Medium chain fatty acids
 (C) Long chain fatty acids (D) All of the above
147. Which cranial nerve is most commonly involved in sarcoidosis
 (A) III (B) V
 (C) VI (D) VII
148. Significant elevation of ACE level is seen in
 (A) Sarcoidosis (B) Gauchers disease
 (C) Hyperthyroidism (D) All of the above

149. Pleural effusions that occur in the first few weeks following coronary artery bypass surgery are which sided
 (A) Left (B) Right
 (C) Bilateral (D) All of the above
150. Sleep apnea is defined as an intermittent cessation of airflow most commonly at the level of
 (A) Soft palate (B) Tongue base
 (C) Lateral pharyngeal walls (D) Epiglottis
151. The characteristics of lung cancer found in never smokers include all except
 (A) Older age (B) Female
 (C) Adenocarcinoma (D) None of the above
152. Most common cause of Pancoast syndrome is
 (A) Non small cell lung cancer (B) Small cell lung cancer
 (C) Mesothelioma (D) None of the above
153. Hypercalcemia of malignancy is most commonly associated with
 (A) Squamous cell carcinoma (B) Small cell carcinoma
 (C) Adenocarcinoma (D) Metastasis
154. Which of the following statements about carcinoid tumors is false
 (A) Occurs mostly in smokers
 (B) Usually in proximal airways
 (C) Lung carcinoids generally do not produce carcinoid syndrome
 (D) All of the above
155. Which of the following is not a positive immuno histo chemical marker for lung adenocarcinoma
 (A) Cytokeratin 7 (B) Napsin
 (C) Thyroid transcription factor 1 (D) PAX 2
156. Wells clinical model is related to predicting the pre test probability of
 (A) Lung cancer (B) Pulmonary embolism
 (C) Occupational lung disease (D) None of the above
157. Anti U1 RNP antibody is seen in
 (A) Systemic Sclerosis (B) Mixed connective tissue disease
 (C) Sjogrens syndrome (D) SLE
158. Which of the following is false with regard to physiologic effects of hypercapnia
 (A) Increased surfactant secretion
 (B) Increased cerebral blood flow
 (C) Leftward shift of hemoglobin oxygen dissociation curve (Bohr effect)
 (D) Large airway constriction (vagally mediated)
159. Most frequent complication in ECMO (extra corporeal membrane oxygenation) patients is
 (A) Bleeding (B) Infection
 (C) Thrombo embolism (D) Arrhythmias

160. The physicians obligation to avoid harm is referred to as
 (A) Beneficience (B) Non maleficence
 (C) Autonomy (D) Justice
161. Which among the following is the most frequent neoplasm in a lung transplant recipient
 (A) Non melanoma skin cancer (B) Post transplant lympho proliferative disorder
 (C) Lung cancer (D) Hairy cell leukemia
162. Non invasive ventilation is recommended in acute respiratory failure occurring in all of the following except
 (A) COPD (B) After major abdominal surgery
 (C) Severe ARDS (D) Acute cardiogenic pulmonary oedema
163. Which of the following statements is correct
 (A) Clara cells are ciliated secretory cells in the bronchioles
 (B) Compared with systemic arteries, the thickness of the pulmonary arterial wall is reduced about in proportion to systolic pressure, by a factor of 1:4
 (C) Bronchus-associated lymphoid tissue (BALT) is absent in normal adult human lungs
 (D) The Club cells “taste” the chemical composition of the airway lining
164. Regarding respiratory muscles which one of the following statement is wrong
 (A) Type IIb fibers permit high power outputs necessary for sneezing and coughing
 (B) The costal and crural parts of diaphragm have different embryological origin
 (C) The maximal blood flow to diaphragm is higher than that of limb muscles
 (D) Respiratory muscles with a dual respiratory and postural function lose activity during REM sleep
165. Which of the following is not true regarding pleural effusion due to cardiac failure?
 (A) In 25% of patients with pleural effusions due to cardiac failure the effusion may be classified as an exudate as per Light’s criteria.
 (B) Most widely accepted pleural fluid NT pro-BNP threshold value for identifying cardiac failure is 1000 pg/mL.
 (C) 10% of pleural effusions in cardiac failure are left sided unilateral effusions.
 (D) Demonstration of pleural effusion by thoracic ultrasound in chronic heart failure is an accurate marker for body fluid retention.
166. Treatment of PCP includes all except
 (A) Dapsone with trimethoprim (B) Pyrimethamine with sulfadiazine
 (C) Piritrexim with folinicacid (D) Pentamidine aerosol
167. Which of the following is not true regarding Solitary Fibrous Tumour of the Pleura?
 (A) Peak incidence occurs in the sixth and seventh decades of life
 (B) 5% of affected patients secrete Insulin like Growth Factor 2
 (C) Immunohistochemistry in SFTP shows Vimentin negative, Keratin positive and in most of the cases also CD 34 positive
 (D) Sessile tumours are more likely to undergo recurrence after resection when compared to pedunculated tumours

168. Diagnostic threshold for Quantitative culture by protected specimen brush is
 (A) $\geq 10^3$ CFU/ml (B) $\geq 10^4$ CFU/ml
 (C) $\geq 10^5$ CFU/ml (D) $\geq 10^6$ CFU/ml
169. Galactomannan assay is used in the diagnosis of
 (A) Histoplasmosis (B) Mucormycosis
 (C) Pulmonary aspergillosis (D) Pulmonary amoebiasis
170. Which of the following is not a feature of Pulmonary Hypertension
 (A) Presence of plexiform lesions
 (B) Increased apoptosis
 (C) Presence of in situ thrombus
 (D) Increase in Cytosolic free Calcium ion concentration
171. Which of the following is not a component of both original and simplified PESI Score
 (A) Male sex
 (B) Chronic cardiopulmonary disease
 (C) Arterial oxygen saturation less than 90%
 (D) Pulse > 110 beats/minute
172. All the following are FDA approved biologicals for severe asthma EXCEPT
 (A) Benralizumab (B) Mepolizumab
 (C) Lebrikizumab (D) Dupilumab
173. Dose of TMP -SMX in the treatment of pneumocystis pneumonia based on the dose of trimethoprim component
 (A) 20 mg/kg/day (B) 80-100 mg/kg/day
 (C) 15-20 mg/kg/day (D) 960 mg/day
174. Indication for adjunctive corticosteroid for pneumocystis pneumonia include all except
 (A) $\text{PaO}_2 < 70$ mmHg
 (B) Multilobar involvement in chest X-ray
 (C) Alveolar arterial oxygen gradient ≥ 35 mmHg
 (D) Resting room air oxygen saturation $< 92\%$
175. Which of the following ILD is more common in males?
 (A) Systemic Sclerosis (B) Rheumatoid Arthritis
 (C) Hermansky-Pudlak Syndrome (D) Lymphocytic Interstitial Pneumonitis
176. Which of the following drug can cause ILD?
 (A) Streptomycin (B) Rifampicin
 (C) Pyrazinamide (D) Ethambutol
177. Which of the following is not true regarding a chylothorax?
 (A) LDH levels in a chylothorax is elevated.
 (B) Among lymphomas, non-Hodgkin's lymphomas are more likely to present with a chylothorax rather than Hodgkin's Lymphoma.
 (C) Damage to the thoracic duct below the level of the fifth thoracic vertebra results in a right sided chylothorax.
 (D) Octreotide has been found to be useful in the conservative management of a chylothorax.

178. Among the following which one is a CRITERIA pollutant
 (A) Lead (B) Benzene
 (C) Polycyclic aromatic hydrocarbons (D) Formaldehyde
179. Mendelson syndrome is a type of
 (A) Anaerobic lung abscess (B) Chemical pneumonitis
 (C) Empyema (D) Staphylococcal pneumonia
180. All of the following are radiological signs of hydatid cyst except
 (A) Serpent sign (B) Camelot sign
 (C) Grape skin sign (D) Onion peel sign
181. Bronchial rheoplasty is trialled in
 (A) Bronchiectasis (B) Asthma
 (C) Chronic bronchitis. (D) Relapsing polychondritis.
182. A 42 yr old male wishes to learn to scuba dive. Which of the following is a contraindication?
 (A) Exercise induced asthma
 (B) Previous treated Tuberculosis
 (C) Previous pneumothorax treated with chest drainage
 (D) Sinusitis
183. Which of the following is not true regarding tuberculous pleural effusion?
 (A) Low pleural fluid ADA adequately excludes the diagnosis in regions having high prevalence of pulmonary tuberculosis.
 (B) Pleural fluid ADA above 40 IU/L in a lymphocyte predominant exudative effusion confirms tuberculous aetiology with a specificity of 90%.
 (C) High pleural fluid ammonia levels can interfere with ADA assays causing false negative results.
 (D) Elevated ADA levels in tuberculous pleurisy represent the ADA 1 isoform.
184. Which of the following is not true about obesity hypoventilation syndrome (OHS)?
 (A) Patients with OHS are able to voluntarily hyperventilate to eucapnia.
 (B) Commonest initial presentation is Acute-on-chronic exacerbation with acute respiratory alkalosis.
 (C) Serum bicarbonate from venous blood could be used as a sensitive test to screen for chronic hypercapnia in OHS.
 (D) They are morbidly obese with awake day time hypercapnia and hypoxemia.
185. Fungal infection commonly associated with AIDS include all except
 (A) Blastomyces dermatidis (B) Coccidioides immitis
 (C) Nocardia asteroides (D) Sporothrix schenckii
186. For the diagnosis of PCP, the yield for induced sputum is
 (A) 30-75% (B) more than 50%
 (C) more than 90% (D) less than 60%

187. Which of the following is a feature of Hereditary Hemorrhagic Telangiectasia
 (A) The Activin receptor like kinase –I gene on chromosome 11 is a locus for HHT
 (B) 65% occur in the upper lobes
 (C) Brain abscess could be the first symptom of an occult PAVM
 (D) Embolotherapy is not successful when the feeding vessel is more than 3mm in diameter
188. All the following scores are used in risk assessment in Pulmonary Embolism except
 (A) PERC Rule (B) Charlottes rule
 (C) Wicki Criteria (D) REVEAL Registry risk score
189. Which of the following Vasculitis is not associated with presence of ANCA
 (A) Microscopic Polyangitis (B) Polyarteritis nodosa
 (C) Granulomatosis with polyangitis (D) IgA vasculitis
190. Delamanid has a half-life of
 (A) 12 hrs (B) 24 hrs
 (C) 36 hrs (D) 48 hrs
191. Dosage of Pyrazinamide in 46-70kg weight band in MDR TB conventional regimen is
 (A) 750 mg (B) 1250 mg
 (C) 1750 mg (D) 2000 mg
192. Which of the following will be least recommended as a VAP prevention strategy in India
 (A) Hand hygiene
 (B) Continuous aspiration of subglottic secretions
 (C) Selective decontamination of digestive tract
 (D) Chlorhexidene based oral care
193. Which of the following is false regarding prone position ventilation in ARDS
 (A) Best survival benefits are obtained in severe ARDS cases with PaO₂ – FIO₂ ratio < 150
 (B) In severe ARDS cases, early adoption is more beneficial
 (C) Proning for long hours (15 – 21 hours a day) has to be done for clinical benefits
 (D) Superior benefits are obtained when combined with HFOV
194. The agent responsible for the Bhopal gas tragedy in 1984 was
 (A) Phosgene (B) 1, 3-butadiene
 (C) Methyl isocyanate (D) Acrolein
195. As per GINA guidelines 2019, in asthma all the following are indications for considering referral for expert advice EXCEPT
 (A) Near-fatal asthma attack at any time in the past
 (B) Anaphylaxis or confirmed food allergy in a patient with asthma
 (C) Suspected occupational asthma
 (D) Asthma in pregnancy

196. Statements regarding secondary prophylaxis for pneumocystis pneumonia in PLHIV include all except
- (A) May be stopped if HIV plasma RNA levels are undetectable for >6 months irrespective of CD4 counts
 - (B) May be stopped if CD4 count \geq 200 cells/cc for 3 months
 - (C) TMP -SMX is the most effective agent for prophylaxis
 - (D) Secondary prophylaxis should be initiated immediately after successful completion of pneumocystis pneumonia treatment
197. “lambda panda” sign is seen in
- (A) IPF
 - (B) HSP
 - (C) Sarcoidosis
 - (D) COP
198. Obstructive airflow limitation may be found in:
- (A) COP
 - (B) Lymphangioliomyomatosis
 - (C) IPF
 - (D) NSIP
199. A finding of more than _____% CD-1a positive cells in BAL is strongly suggestive of Pulmonary Langerhans Cell Histiocytosis
- (A) 2
 - (B) 5
 - (C) 10
 - (D) 20
200. Which of the following is true regarding pleural effusions after lung transplantation?
- (A) Early post-transplant effusions that typically resolve by the 9th post-operative day are lymphocyte predominant exudates.
 - (B) Late post-transplant effusions developing from 2 weeks to 3 months post-transplant are usually neutrophil predominant exudates.
 - (C) Pleural effusions that occur in the setting of acute rejection are typically lymphocyte predominant exudates.
 - (D) Post-transplant Lymphoproliferative Disorder (PTLD) cannot manifest with pleural effusion in the absence of solid organ involvement.