

BCO

PROVISIONAL ANSWER KEY (CBRT)

Name of the post	Associate Professor Tuberculosis & Respiratory Medicine/Pulmonary Medicine (T.B. & Chest Diseases), GSS, Class-1
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THE LINK FOR ONLINE OBJECTION SYSTEM WILL START FROM 16-12-2021; 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 : www.safevaults.in/login

001. All viruses show an outbreak in winter, except-
(A) Para Influenza virus (B) Hantavirus
 (C) Para Influenza virus 3 (D) Para influenza virus 1
002. In influenza viral infection, viral shedding peaks at
(A) Within 6 hrs (B) Between 24-48 hrs
(C) Between 4-7 days (D) Beyond 2 weeks
003. Which among these drugs inhibits the action of Neuraminidase receptors-
(A) Rimantidine (B) Oseltamivir
(C) Acyclovir (D) Amantadine
004. The Trivalent influenza Vaccine is an
(A) Live attenuated (B) Killed
 (C) Inactivated (D) Toxoid
005. Zanamavir is administered by the following route
(A) Oral (B) Subcutaneous
(C) Intradermal (D) Inhalation
006. Mortality in immunocompromised patients secondary to Invasive fungal infections
(A) 20-25% (B) 10-15%
 (C) 50-70% (D) 80-100%
007. False statement regarding Criteria for Diagnosis of ABPA
(A) Episodic bronchial asthma
(B) Peripheral blood eosinophilia ($>1000/\text{mm}^3$)
(C) Elevated serum IgE levels ($>1000\text{ng/ml}$)
 (D) Peripheral bronchiectasis on Chest CT scans
008. ABPA is common in Asthmatics and Cystic Fibrosis patients due to increased activity of
(A) TH1 CD2 cells (B) TH2 CD4 cells
(C) TH1 CD8 cells (D) TH2 CD8 cells
009. Aspergillus infection induces activation of antibodies
(A) IgE (B) IgG
(C) None of the above (D) Both (A) and (B)
010. Characteristic sign of ABPA on Chest Xray
(A) Water Lily sign (B) Finger in Glove Pattern
(C) Loss of peripheral blood markings (D) Tubular Heart
011. Evidence of tuberculosis (TB) has been found in archeological digs dating back
 (A) 15000 years back (B) 10000 years back
(C) 5000 years back (D) 1000 years back
012. Within the body, TB organisms
 (A) engulfed and killed by macrophages.
(B) reside indefinitely in an active stage in the body.
(C) walled off by macrophages in encapsulated granulomas called tubercles.
(D) replicate and gain access to lymphatic channels through the blood stream.

013. The average time of exposure to someone with active TB until acquisition of infection is about
 (A) two hours. (B) two days.
 (C) two weeks (D) two months.
014. During the asymptomatic phase, the only evidence of infection with TB may be
 (A) dry cough and fever. (B) chest pain and dyspnea.
 (C) cervical node enlargement. (D) skin-test reactivity to tuberculin.
015. Recurrence of TB occurs in what percentage of those with latent TB infection?
 (A) 1% to 2% (B) 10% to 15%
 (C) 25% to 30% (D) 80% to 90%
016. The most common early symptoms of pulmonary TB are
 (A) dry cough.
 (B) rales and rhonchi.
 (C) chest pain upon inspiration.
 (D) productive cough, malaise, and weight loss.
017. Groups considered high risk for contracting TB who should be screened include HIV- infected persons, injecting drug users, and
 (A) all hospital workers.
 (B) emergency medical personnel.
 (C) persons with healthy immune systems.
 (D) residents in areas with severe air pollution.
018. Foreign-born persons originating from countries with high TB prevalence should be
 (A) quarantined.
 (B) administered BCG vaccine.
 (C) screened for possible TB infection.
 (D) started on chemoprophylaxis as soon as possible.
019. When teaching a patient to produce a sputum specimen, instruct him or her to
 (A) drink a large glass of water before coughing.
 (B) collect the specimen just before going to sleep at night.
 (C) cough gently and expectorate into the sputum container.
 (D) bring the specimen up from their lungs (not throat) after a deep cough.
020. Nucleic acid amplification (NAA) tests for the diagnosis of TB
 (A) are not approved by the FDA.
 (B) require more than one month for results.
 (C) may not be used with smear-positive specimens.
 (D) are able to differentiate between different species of *M. tuberculosis*.
021. The most common site for extrapulmonary TB is the
 (A) Lymph Node. (B) Skin.
 (C) Kidney. (D) Adrenal gland.
022. Millitary tuberculosis refers to an infection affecting the
 (A) Skin. (B) Testes.
 (C) GI tract. (D) Entire lungs.

023. Two first-line drugs used in the treatment of drug-susceptible TB include
 (A) isoniazid and rifampin. (B) rifabutin and streptomycin.
 (C) rifapentine and capreomycin. (D) ethionamide and ethambutol.
024. The dosage recommendation for Pyrazinamide as per NTEP guidelines
 (A) 25 mg/kg body weight (B) 5 mg/kg body weight
 (C) 15 mg/kg body weight (D) 20 mg/kg body weight
025. Optic neuritis is a common side effect of this drug
 (A) Isoniazid (B) Rifampicin
 (C) Aminoglycosides (D) Ethambutol
026. Peripheral neuritis seen in certain patients on ATT, can be corrected by addition of
 (A) Antacids (B) Pyridoxine (Vitamin B6)
 (C) Thiamine (Vitamin B1) (D) Meth cobalamin (Vitamin B12)
027. Chemoprophylaxis is recommended for all of the following groups of people with a positive tuberculin test of 6 mm, EXCEPT:
 (A) Children older than 4 years of age
 (B) Persons with known or suspected HIV infection
 (C) Close contacts of persons with infectious, clinically active TB
 (D) Persons who inject drugs and who are known to be HIV negative
028. Bacille Calmette-Guérin (BCG) vaccine
 (A) is used regularly in the United States.
 (B) does not have any effect on the tuberculin skin test.
 (C) is one of the most widely used vaccines in the world.
 (D) is internationally regulated to ensure that only one strain is used.
029. The diluent for BCG vaccine is
 (A) Sodium chloride (B) Ringer lactate
 (C) Distilled water (D) 5% Dextrose
030. It is important for the healthcare professional to explain to the patient with TB and his/her caregiver
 (A) the signs and symptoms of drug toxicity.
 (B) instructions outlining which medications to take and how often.
 (C) information about where financial assistance and free medications can be found in the community.
 (D) All of the above
031. Which of the following is TRUE regarding the development of pneumonia?
 (A) Pneumonia is an acute inflammatory condition within the parenchyma of the lung.
 (B) Immunocompromised individuals are at an increased risk of developing pneumonia.
 (C) Pneumonia often develops as a consequence of bacterial colonization and microaspiration of upper respiratory tract secretions during a period of impaired host pulmonary defense mechanisms.
 (D) All of the above

032. Which of the following is TRUE regarding the classification of pneumonia?
- (A) Pneumonia is broadly classified as either healthcare-associated or nosocomial.
 - (B) Causative pathogens of pneumonia can be easily identified in virtually all cases in which testing is done.
 - (C) Only two distinct categories, hospital-acquired and ventilator-associated, exist within the broader classification of pneumonia associated with healthcare facilities.
 - (D) Classifying pneumonia according to the setting in which it develops, rather than the causative pathogen, is more useful for clinical purposes.
033. All of the following are risk factors for community-acquired pneumonia, EXCEPT:
- (A) Female gender
 - (B) Smoking history
 - (C) Occupational dust exposure
 - (D) History of childhood pneumonia
034. Which bacterial pathogen is the most common cause of community-acquired pneumonia in adults?
- (A) Staphylococcus aureus
 - (B) Mycoplasma pneumoniae
 - (C) Streptococcus pneumoniae
 - (D) Chlamydia pneumoniae
035. All of the following are common symptoms of community-acquired pneumonia in adults, EXCEPT:
- (A) Fever
 - (B) Bradycardia
 - (C) Sputum production
 - (D) Malaise
036. Because of time and technical limitations to viral cultures, the laboratory diagnosis of viral pneumonia in adults usually relies on
- (A) lung biopsy.
 - (B) acute and convalescent serologic testing.
 - (C) nasal swab for slide preparation and staining.
 - (D) rapid antigen detection, often using molecular techniques.
037. In adults with community-acquired pneumonia, which of the following is NOT among the minor criteria that would suggest the need for ICU admission?
- (A) Uremia
 - (B) Leukopenia
 - (C) Decreased respiratory rate
 - (D) Low PaO₂/fraction of inspired oxygen ratio
038. Macrolides may be an acceptable choice for the outpatient treatment of mild pneumonia in previously healthy adults who have not been exposed to antimicrobials within the past
- (A) 2 weeks
 - (B) 30 days
 - (C) 3 months
 - (D) 12 months

039. Which of the following statements regarding viral and bacterial causes of community-acquired pneumonia in children is TRUE?
- (A) *Staphylococcus aureus* is the most common pneumonia-causing bacterial pathogen in school-aged children.
 - (B) Bacterial pathogens are responsible for most cases of community-acquired pneumonia in preschool-aged children.
 - (C) Viral pathogens cause pneumonia in seriously ill, hospitalized children more often than in children treated on an outpatient basis.
 - (D) As many as 80% of cases of community-acquired pneumonia in children younger than 2 years of age can be attributed to a virus.
040. Guidelines state that a child with community-acquired pneumonia should be admitted to an ICU or unit with continuous cardiorespiratory monitoring capabilities if the child
- (A) has altered mental status as a result of pneumonia.
 - (B) requires acute use of noninvasive positive pressure ventilation.
 - (C) Requires mechanical ventilation
 - (D) All of the above
041. The primary preventive strategy for community-acquired pneumonia is
- (A) antibiotic therapy.
 - (B) good hand hygiene.
 - (C) adherence to healthy lifestyle behaviors.
 - (D) immunization with pneumococcal and influenza vaccines.
042. According to national surveys, what is the overall rate of pneumococcal vaccination among adults 65 years of age and older?
- (A) 25%
 - (B) 42%
 - (C) 75%
 - (D) 79%
043. Risk factors for hospital-acquired pneumonia include all of the following, EXCEPT:
- (A) Obesity
 - (B) Presence of COPD
 - (C) Duration of surgery
 - (D) Age more than 60 years
044. Nearly half of all cases of ventilator-associated pneumonia develop within how many days of mechanical ventilation?
- (A) 2 days
 - (B) 4 days
 - (C) 7 days
 - (D) 10 days
045. Which of the following pathogens is most frequently identified as the cause of severe pneumonia in long-term care facilities?
- (A) *Klebsiella* spp.
 - (B) *Pseudomonas. aeruginosa*
 - (C) *Streptococcus. pneumoniae*
 - (D) *Chlamydia. pneumoniae*
046. The ATS/IDSA guideline includes all of the following recommendations for management of hospital-acquired and ventilator-associated pneumonia, EXCEPT:
- (A) Begin treatment promptly.
 - (B) Consider de-escalation of antibiotics after the results of cultures.
 - (C) Obtain a specimen from the lower respiratory tract for culture before beginning antibiotic therapy.
 - (D) After an optimal antibiotic regimen is confirmed, a three-day course of therapy is recommended.

047. For current smokers, smoking cessation is recommended for at least how many weeks prior to surgery to prevent pulmonary complications?
- (A) 2 weeks (B) 6 weeks
 (C) 8 weeks (D) 12 weeks
048. Both the ATS/IDSA and SHEA/IDSA guidelines recommend maintaining the head of the bed at what angle to prevent ventilator-associated pneumonia?
- (A) 5 to 25 degrees (B) 30 to 45 degrees
 (C) 90 degrees (D) Guidelines recommend no elevation.
049. The Institute for Healthcare Improvement recommends all of the following interventions for the prevention of ventilator-associated pneumonia, EXCEPT:
- (A) Elevation of the head of the bed
 (B) Prophylaxis of peptic ulcer disease
 (C) Weekly oral care with chlorhexidine
 (D) Regular assessment of readiness to extubate and daily interruptions of sedation
050. In a guideline developed by a multidisciplinary panel, what recommendation was made for preventing pneumonia among health care workers?
- (A) Annual influenza vaccination for residents
 (B) Annual influenza vaccination for nursing staff
 (C) Pneumococcal vaccination at admission, if indicated
 (D) All of the above
051. During sleep apnea, there occurs a temporary pause in breathing for
- (A) 15 seconds (B) 10 seconds
 (C) 30 seconds (D) 40 seconds
052. A 26-year-old female admitted in ICU had excessive hyperventilation. ABG- pH- 7.5, pO₂- 112, PCO₂- 20, HCO₃⁻- 12. The likely abnormality is
- (A) Respiratory acidosis (B) Metabolic alkalosis
 (C) Respiratory alkalosis (D) Metabolic alkalosis
053. A 50-year-old female visits a pulmonary clinic with complaints of breathlessness. She gives a history of Scleroderma. On evaluation, her lung function tests reveal a reduced FEV₁ & FVC, with normal FEV₁/FVC ratio. The likely diagnosis is
- (A) COPD (B) Interstitial Lung Disease
 (C) Congestive cardiac failure (D) Bronchial asthma
054. An 18-year-old male, presents to the emergency room following road traffic accident. On examination, patient is restless, tachypneic (RR- 45 CPM), tachycardia (HR- 160 BPM), oxygen saturation being 75% at room air, absent breath sounds on left. Most likely provisional diagnosis
- (A) Tension Pneumothorax (B) Aspiration pneumonia
 (C) Pulmonary contusion (D) Pulmonary Thromboembolism
055. A 65-year-old male, chronic smoker presents with cough and hemoptysis for past 2 weeks. No h/o fever, weight loss. No past history of pulmonary tuberculosis. On examination, signs of right lung collapse are present. On bronchoscopy, there was a mass obstructing the right main bronchus. A biopsy was taken and sent for histopathological analysis. The likely malignancy is
- (A) Squamous cell carcinoma (B) Adenocarcinoma
 (C) Small cell carcinoma (D) Large cell carcinoma

056. A 45-year-old female presented with h/o progressive dyspnea and cough for 7 months. On examination, she had clubbing, cyanosis and basal crepitations. Her HRCT thorax was showing bilateral reticulo-nodular pattern, predominantly subpleural and basal with extensive honey-combing. Spirometry showed severe restrictive defect. The possible diagnosis is
- (A) UIP (B) NSIP
(C) AIP (D) LIP
057. A 21-year-old presented to the emergency room with breathlessness MMRC grade IV, and unable to lie down on his back. He has a history of OP poisoning 2 weeks back, for which he was on ventilatory support for 5 days. The most likely diagnosis is
- (A) Tracheal stenosis (B) Aspiration pneumonia
(C) OP related cardiomyopathy (D) Foreign body inhalation
058. World COPD Day 2021 theme
- (A) Living well with COPD- Everybody, Everywhere
(B) Healthy Lungs- Never more important
(C) All together to end COPD
(D) Never too early, never too late
059. A patient with pelvic bone fracture was admitted to the ICU, after surgical correction. On post operative day 2, he developed sudden chest pain and breathlessness. The most likely diagnosis
- (A) Shock (B) ARDS
(C) Hospital acquired pneumonia (D) Pulmonary thromboembolism
060. All are used in the treatment of bronchial asthma except
- (A) Steroids (B) Salbutamol
(C) Morphine (D) Theophylline
061. Most common form of lung cancer in non-smokers
- (A) Squamous cell carcinoma (B) Small cell carcinoma
(C) Large cell carcinoma (D) Adenocarcinoma
062. Hypercalcemia is common in which lung cancer
- (A) Squamous cell carcinoma (B) Large cell carcinoma
(C) Small cell carcinoma (D) Adenocarcinoma
063. All are the adverse effects of salbutamol except
- (A) Hyperkalemia (B) Tachycardia
(C) Hypokalemia (D) Tremors
064. All are seen in restrictive lung diseases except
- (A) FEV1 low (B) FVC low
(C) FEV1/FVC ratio < 80% (D) TLC is reduced
065. The following is true with respect to emphysema
- (A) RV is normal (B) FVC is reduced
(C) PEER is normal (D) PaCO₂ is high

066. A 75 year chronic smoker presents with breathlessness and cough with expectoration. His ABG is as follows-
- pH – 7.30
 pO₂- 65
 pCO₂- 80
 HCO₃- 29
- The likely diagnosis is
- (A) COPD (B) MDR tuberculosis
 (C) Bronchiectasis (D) Mesothelioma
067. An 18 year old female is brought to the casualty with sudden onset breathlessness. On enquiry she is a known case of Bronchial asthma. Despite administration of nebulized salbutamol and IV steroid, her condition does not improve. What is the next line of action
- (A) Another dose of IV steroids (B) Nebulisation with salbutamol
 (C) IV magnesium (D) Intubation and ventilatory support
068. A 64 year old male presents to a respiratory clinic with complaints of cough with expectoration, breathlessness since few years. He is a former smoker and has a 20 pack-year history. His PFT analysis is
- FEV₁- 63%
 FVC- 95%
 FEV₁/FVC- 0.63
- The pattern is consistent with
- (A) Obstructive lung disease (B) Restrictive lung disease
 (C) Mixed pattern (D) Normal study
069. Mr. Ashok is a 70 year old man who is a known case of COPD on treatment with inhalers. He has currently visited his pulmonologist for a routine follow up. His present PFT report is given below. Interpret the severity based on the findings
- FVC- 88%, FEV₁- 45%
 FEV₁/FVC- 0.45
- (A) Mild disease (B) Moderate disease
 (C) Severe disease (D) Very severe disease
070. A 55 year old woman, a former school teacher presents to a pulmonary clinic with complaints of progressive dyspnoea, dry cough and weight loss recently. On examination, she has parrot beak appearance of fingers and inspiratory crepitations on auscultation. Her Chest Xray is showing no obvious mass, though there is some haziness at the lung bases. The likely cause of this presentation could be
- (A) COPD (B) Idiopathic pulmonary fibrosis
 (C) Lung cancer (D) Tuberculosis

071. The least common type of lung cancer is
 (A) small cell (B) squamous cell
 (C) large cell (D) adenocarcinoma.
072. Staging for small cell cancer
 (A) as limited disease predicts median survival of 5 years
 (B) as extensive disease describes metastatic spread beyond the hemithorax
 (C) is similar to that for non-small cell cancer
 (D) depends on the tumor, node and metastasis classification
073. In the context of lung cancer, which of the following is NOT a paraneoplastic syndrome?
 (A) Lambert-Eaton syndrome (B) Idiopathic orthostatic hypotension
 (C) Extra thoracic metastasis (D) Cushing's syndrome
074. Which of the following is NOT commonly associated with sleep apnoea?
 (A) Daytime hypersomnolence (B) Increased risk of hypertension
 (C) Nocturia (D) Increased heart rate
075. The cystic fibrosis transmembrane conductance regulator (CFTR)
 (A) is activated by cyclic guanine monophosphate
 (B) is an epithelial sodium channel
 (C) controls mucus hydration and viscosity
 (D) is only present in the epithelium of the lower airway
076. Cystic fibrosis is
 (A) an autosomal dominant trait
 (B) due to the DF508 mutation in <50% of cases
 (C) associated with infertility in males more commonly than in females
 (D) characterized by increased mucus production
077. The most important treatment for cystic fibrosis is
 (A) improve nutrition (B) control infection
 (C) promote mucus clearance (D) reduce inflammation
078. Katgener's syndrome is a risk factor for this disease
 (A) Bronchiectasis (B) COPD
 (C) Bronchial Asthma (D) C A Lung
079. Which statement is NOT true concerning bronchiectasis?
 (A) It is caused by persistent infection and inflammation in proximal bronchi
 (B) Finger clubbing is often seen in patients with bronchiectasis
 (C) Most cases in India are associated with tuberculosis
 (D) It can rarely be detected by radiographic imaging.
080. A pneumothorax that causes mediastinal shift and compression of the functioning lung is called
 (A) primary pneumothorax (B) secondary pneumothorax
 (C) traumatic pneumothorax (D) tension pneumothorax
081. Primary pneumothorax
 (A) occurs in 8 per 100,000 young men over 1.9 m in height in a year
 (B) most common form of pneumothorax
 (C) usually occurs when there is an underlying lung disease
 (D) caused by air leaking across the parietal pleura.

082. Secondary pneumothorax is a particular risk for
 (A) Mechanical ventilation for lung disease
 (B) Tuberculosis
 (C) Pneumonia
 (D) Asthma
083. Concerning community-acquired pneumonia.
 (A) The incidence is 5-11 cases per 10,000 population
 (B) The most frequently identified organisms are gram-negative bacteria
 (C) Risk factors include age (<5, >65 years)
 (D) Symptoms always include pleurisy and hemoptysis
084. The HIV-positive patient
 (A) HIV causes depletion of CD4 T-lymphocytes
 (B) The commonest chest infection is PCP (Pneumocystis jirovicii pneumonia)
 (C) In INDIA 10% of cases with Mycobacterium tuberculosis are co-infected with HIV
 (D) All of the above
085. Which of the following does NOT suggest increased risk of mortality in patients admitted to hospital for pneumonia?
 (A) Respiratory rate > 30/min
 (B) Age > 65 years
 (C) Mean blood pressure > 110 mmHg
 (D) Urea > 22 mmol/L
086. Which statement is INCORRECT concerning TB?
 (A) Infection with TB is via inhalation
 (B) Susceptibility to TB is greater in the elderly
 (C) Infection results in formation of a granuloma
 (D) The Ghon's focus is known as the primary complex
087. Which of the following is NOT a common feature of TB?
 (A) Erythema nodosum
 (B) Pleural effusions
 (C) Pulmonary oedema
 (D) Bronchiectasis.
088. Which of the following is NOT normally associated with immunosuppression?
 (A) Diabetes
 (B) Treatment with steroids
 (C) Smoking
 (D) Malnutrition
089. Which of the following is NOT a consequence of chemotherapy?
 (A) Neutropenia
 (B) Impaired T-cell function
 (C) Complement deficiency
 (D) Increased susceptibility to fungal infections
090. Pulmonary hypertension is defined as
 (A) mean pulmonary artery pressure (PAP) > 25 mmHg during exercise
 (B) mean PAP - 15 mmHg at rest that increases to >20 mmHg during exercise
 (C) mean PAP >25 mmHg at rest or >30 mmHg during exercise
 (D) mean PAP > 90 mmHg at rest or >110 mmHg during exercise.
091. Airway smooth muscle
 (A) Originates from the primitive endoderm of foregut
 (B) Originates from splanchnic mesoderm
 (C) Mostly formed during the pseudo glandular period
 (D) Does not appear in terminal bronchioles until after birth

092. During diving
 (A) descending rapidly while holding your breath may cause lung rupture
 (B) nitrogen narcosis is a potential problem when breathing compressed air
 (C) decompression sickness is due to bubbles of CO₂ forming in the tissues
 (D) breathing air through a long tube open at the surface of the water is an alternative to using compressed gas during dives up to 5 m below the surfaces.
093. Which of the following statements about Farmer's lung is UNTRUE?
 (A) It is the most common example of extrinsic allergic alveolitis
 (B) It is due to contamination with thermophilic actinomycetes bacteria
 (C) It can lead to interstitial fibrosis
 (D) Removal of exposure always results in rapid recovery
094. Pleurisy
 (A) common term used for all diseases of the pleura
 (B) due to inflammation of the pleura
 (C) present in the initial phases of pleural effusion
 (D) absent in pneumothorax
095. Which of the following is NOT a characteristics of Asthma?
 (A) Increase in IgG immunoglobulins
 (B) Airway hyperresponsiveness
 (C) Infiltration of eosinophils into the airways
 (D) Characterized by increased mucus production.
096. The fluid between the parietal and visceral pleurae
 (A) normally protein rich
 (B) primarily drained by the visceral lymphatics
 (C) formed by net filtration of a transudative fluid
 (D) has a volume of >300 mL.
097. Pneumoconiosis
 (A) is caused by inhalation of organic materials
 (B) can in some cases develop into progressive massive fibrosis
 (C) tends to result in reversible airways obstruction
 (D) does not include asbestosis.
098. The most common disease caused by exposure of smoke is
 (A) COPD (B) lung fibrosis
 (C) pneumonia (D) Bronchial asthma.
099. The lung increases in size over the first 3 years after birth
 (A) as a result of morphogenesis
 (B) until there are about 30 generations of airways
 (C) largely due to increased number of alveoli and respiratory bronchioles
 (D) due to growth of airway smooth muscle and cartilage.
100. At which vertebral level does the trachea bifurcate?
 (A) T7 (B) T6
 (C) T5 (D) T4

101. Which of the following do not elevate the ribs?
 (A) Serratus posterior superior (B) Serratus posterior inferior
 (C) External intercostals (D) Levator costum
102. All of the structures pass posterior to the crus of diaphragm except
 (A) Aorta (B) Azygous vein
 (C) Thoracic duct (D) Greater splanchnic nerve
103. Which one of the following causes bronchodilation?
 (A) Substance P (B) Vasoactive intestinal peptide
 (C) Leukotrienes (D) Cholinergic stimulation
104. Maximal smooth muscle relative to wall thickness is
 (A) Terminal bronchiole (B) Trachea
 (C) Bronchi (D) Respiratory bronchioles
105. The total number of airway generations between the trachea and alveoli is
 (A) 21 (B) 22
 (C) 23 (D) 24
106. The structure passing through the central tendon of the diaphragm is
 (A) Esophagus (B) Aorta
 (C) Inferior vena cava (D) Sympathetic Chain
107. Up to which level does the bronchial artery supplies blood to the lungs?
 (A) Tertiary bronchioles (B) Respiratory bronchioles
 (C) Alveolar ducts (D) Terminal bronchioles
108. Which of the following statements is false regarding the bronchopulmonary segment?
 (A) It is surgically resectable
 (B) It is named according to the segmental bronchus supplying it
 (C) It is drained by independent intrasegmental branch of pulmonary vein
 (D) It is the largest subdivision of a lobe.
109. The bronchopulmonary segments are aerated by
 (A) Secondary bronchi (B) Tertiary bronchi
 (C) Terminal bronchioles (D) Respiratory bronchioles
110. Which is not a lobe of lungs?
 (A) Superior (B) Inferior
 (C) Middle (D) Lingula
111. Which is the most superior structure at the hilum of the left lung?
 (A) Pulmonary veins (B) Bronchial artery
 (C) Bronchus (D) Pulmonary artery
112. What does the pleural cupola refer to?
 (A) Costal part of parietal pleura
 (B) Mediastinal part of parietal pleura
 (C) Visceral pleura forming pulmonary septa
 (D) Cervical part of parietal pleura

113. Compared to a gas-ventilated lung, a liquid-ventilated lung has
 (A) Has reduced airway resistance (B) Has increased residual volume
 (C) Is more compliant (D) Has more hysteresis
114. The factor responsible for hysteresis is
 (A) Elastic recoil (B) Surfactant
 (C) Negative intrapleural pressure (D) All of the above
115. How many bronchopulmonary segments are there in the right and left lungs, respectively?
 (A) 9, 11 (B) 11, 9
 (C) 10, 10 (D) 11, 10
116. Which among the following is not Bacteriostatic?
 (A) Clindamycin (B) Macrolides
 (C) Vancomycin (D) Chloramphenicol
117. Which among The following are not Respiratory Stimulants ?
 (A) Acetazolamide (B) Medroxy progesterone
 (C) Methylxanthane (D) All of the above
118. Fluoroquinolones are
 (A) Bacterostatic (B) Bactericidal
 (C) None of the above (D) Both (A) and (B)
119. QT Prolongation is a side effect of?
 (A) Macrolides (B) Antifungals
 (C) Fluoroquinolones (D) All of the above
120. All of the following are Beta 2 agonist except -
 (A) Isoprenaline (B) Salbutamol
 (C) Terbutaline (D) All of the above
121. All of the are following are matched except
 (A) Salbutamol - Beta 2 agonist causing bronchodilation
 (B) Sodium Cromoglicate-Mast cell stabilizer
 (C) Zafirlukast -leukotriene modulator
 (D) Theophylline- non selective Beta 2 agonist causing bronchodilation
122. Which of the following inhibit Ach-mediated Bronchospasm?
 (A) Theophylline (B) Ephedrine
 (C) Ipratropium (D) None of the above
123. Which of the following is not a side effect of Systemic corticosteroids?
 (A) Adrenal suppression (B) Fluid retention
 (C) Hyperglycemia (D) Sleep disorders
124. Antitubercular drug which is Bacteriostatic?
 (A) Pyrizaramide (B) Isoniazid
 (C) Ethambutol (D) Rifampicin
125. Systemic corticosteroid are indicated in following EXCEPT .
 (A) Mild episodic asthma
 (B) Severe chronic asthma
 (C) Status asthmaticus
 (D) To prevent neonatal respiratory distress syndrome

126. Development of peripheral neuritis is associated with
 (A) Ethambutol (B) Isoniazid
 (C) Streptomycin (D) Rifampicin
127. Most serious adverse reaction caused by ethambutol?
 (A) Ototoxicity (B) Ocular toxicity
 (C) Gout (D) Hepatotoxicity
128. Which among the following is correct dosing?
 (A) Ethambutol - 20-25 mg/kg (B) Isoniazid - 10 mg/kg
 (C) Pyrizinamide - 15-20 mg/kg (D) Rifampicin - 10 mg/kg
129. Functional residual capacity is
 (A) is the volume left in the lungs after a maximum expiration
 (B) is the sum of residual volume and tidal volume
 (C) is affected by the elastic recoil of both the lungs and chest wall but not the strength of the inspiratory or expiratory muscles
 (D) is the volume in the lungs when intrapleural pressure is about 0.5 kPa above atmospheric.
130. Intrapleural pressure
 (A) is usually measured by putting a needle through the ribs into the intrapleural space
 (B) is negative (below atmospheric pressure) throughout the respiratory cycle during quiet breathing
 (C) is always higher than alveolar pressure at the same level
 (D) is more negative at the lung bases than the lung apices in an upright subject.
131. Type II pneumocytes
 (A) make up most of the area of the alveolar epithelium
 (B) are unable to divide to produce new cells
 (C) ciliated
 (D) the main source of pulmonary surfactant
132. Intercostal spaces
 (A) Contain an intercostal nerve, intercostal vein and intercostal artery lying just above the top of the rib
 (B) Contain the main expiratory muscles
 (C) Stiffened during inspiration and expiration by the contraction of the intercostal muscles
 (D) Contain muscles which are too weak to maintain adequate resting ventilation if the diaphragm is paralyzed.
133. The diaphragm
 (A) sensory innervation from the same cervical roots as the shoulder
 (B) as the esophagus passing through it at the aortic opening
 (C) contracts upwards during expiration
 (D) less important than the other inspiratory muscles in the newborn.
134. Accessory inspiratory muscles include all of the following EXCEPT
 (A) the sternomastoid (B) serratus anterior
 (C) pectoralis major (D) rectus abdominis.

135. The transpulmonary pressure is the pressure difference between
 (A) Intrapleural and atmospheric pressure
 (B) Intra alveolar and intrapleural pressure
 (C) Intrapulmonary and atmospheric pressure
 (D) None of the above
136. With reference to atmospheric pressure, the alveolar pressure at the end of normal inspiration (in cms of H₂O) is.
 (A) +1.0 (B) 0
 (C) -1.0 (D) -6.0
137. The intrapleural pressure (cm of H₂O) at the beginning of inspiration is around
 (A) -3.4 (B) -2.5
 (C) 0 (D) +2.5
138. The intrapleural pressure is negative both during inspiration and expiration because
 (A) Intrapulmonary pressure is negative
 (B) Thoracic cage and lung recoil in opposite direction
 (C) Transpulmonary pressure determines negativity
 (D) Surfactant prevents lung collapse
139. The intrapleural pressure is.
 (A) Always positive
 (B) Sometimes positive and sometimes negative
 (C) Negative except in forced expiration
 (D) Negative at apex but positive at base
140. Which is the best metabolic function of the lung?
 (A) Inactivation of serotonin
 (B) Inactivation of bradykinin
 (C) Metabolism of basic drugs
 (D) Conversion of angiotensin I to angiotensin II
141. Stability of alveoli is maintained by.
 (A) Lung compliance (B) Negative intrapleural pressure
 (C) Alveolar surface area by surfactant (D) Residual air in alveoli
142. Surfactant is composed mainly of
 (A) Phosphatidyl glycerol (B) Cephalin
 (C) Lecithin (D) Protein
143. Which of the cells secrete surfactant in lungs?
 (A) Type 1 pneumocyte (B) Alveolar macrophage
 (C) Dust cells (D) Type 2 pneumocyte
144. Each molecule of hemoglobin carries molecules of O₂.
 (A) 2 (B) 4
 (C) 8 (D) 16
145. O₂ delivery to tissues depends on all except
 (A) Type of fluid administered (B) Hemoglobin
 (C) Ventilation (D) Cardiac output

146. The Oxygen-hemoglobin dissociation curve is sigmoid shape because
 (A) Binding of one O₂ molecule increases the affinity of binding of subsequent O₂ molecules
 (B) Binding of one O₂ molecule decreases the affinity of binding of subsequent O₂ molecules
 (C) Bohr effect
 (D) Haldane effect
147. Percentage of O₂ carried chemically (Bound to Hb) is
 (A) 97 (B) 3
 (C) 37 (D) 66
148. Transport of CO is diffusion limited because
 (A) Alveolar membrane is less permeable to CO
 (B) High affinity of CO to hemoglobin
 (C) CO crosses epithelial barrier slowly
 (D) None of the above
149. Oxygen comes from alveoli to blood by
 (A) Osmosis (B) Active transport
 (C) Diffusion (D) Receptor mediated
150. Normal range of HCO₃ levels
 (A) 10-16 mEq/L (B) 22-26 mEq/L
 (C) 20-25 mEq/L (D) 23-27 mEq/L
151. Warfarin dose monitoring is assessed by
 (A) apTT (B) PT/INR
 (C) BT/CT (D) WBC
152. Alpha 1 antitrypsin deficiency is associated with
 (A) Emphysema (B) Chronic bronchitis
 (C) Bronchial Asthma (D) Bronchiectasis
153. Besnier-Boeck-Schauman disease refers to?
 (A) Hydatid disease of lung (B) Syphilis of lung
 (C) Sarcoidosis (D) Miliary tuberculosis
154. Condition known to cause granulomas is ?
 (A) Fungal infections (B) Malignancy
 (C) Beryllium (D) All of the above
155. Which of the following is false about sarcoidosis ?
 (A) Inflammatory disease
 (B) Noncaseating granulomas
 (C) Multisystem involvement
 (D) Involvement in ≥ 3 organs for a specific diagnosis
156. Organ most frequently affected in sarcoidosis is ?
 (A) Lung (B) Skin
 (C) Eye (D) Lymph node
157. Which of the following organs is least affected in sarcoidosis ?
 (A) Heart (B) Liver
 (C) Ovary (D) Central nervous system

158. The location of lesions in “lupus pernio” is on ?
 (A) Nape of the neck (B) Cheek and nose
 (C) Heel (D) Elbows
159. Most common abnormality of liver function in sarcoidosis is ?
 (A) Elevation of alkaline phosphatase level (B) Elevation of transaminase levels
 (C) Elevation of bilirubin level (D) None of the above
160. Most common form of pulmonary involvement in connective tissue disorders is ?
 (A) Respiratory bronchiolitis (B) Desquamative interstitial pneumonia
 (C) Cryptogenic organizing pneumonia (D) Both (A) and (B)
161. Rheumatoid pneumoconiosis is also called ?
 (A) Hermansky-Pudlak syndrome (B) Churg-Strauss syndrome
 (C) Caplan’s syndrome (D) Goodpasture’s syndrome
162. Most common pulmonary manifestation in Systemic Lupus Erythematosus (SLE) is ?
 (A) Atelectasis (B) Pleuritis
 (C) Pulmonary vascular disease (D) Infectious pneumonia
163. 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
164. Which of the following about pulmonary alveolar proteinosis (PAP) is false ?
 (A) Impaired ability to process surfactant
 (B) Accumulation of PAS positive lipo-proteinaceous material in distal air spaces
 (C) Extensive lung inflammation
 (D) Preserved lung architecture
165. In pulmonary alveolar proteinosis (PAP), the neutralizing IgG antibody is against which of the following ?
 (A) Surfactant
 (B) GM-CSF
 (C) PAS positive lipoproteinaceous material
 (D) All of the above
166. Which of the following is the most common class of Pulmonary Alveolar Proteinosis (PAP)?
 (A) Acquired (B) Congenital
 (C) Secondary (D) None of the above
167. Congenital PAP is caused by mutation in ?
 (A) SP-A gene (B) SP-B gene
 (C) SP-C gene (D) SP-B and SP-C gene
168. Radiographically, ‘bat-wing’ distribution of lung opacities is suggestive of which of the following ?
 (A) Churg-Strauss syndrome
 (B) Pulmonary lymphangioleiomyomatosis (LAM)
 (C) Pulmonary alveolar proteinosis (PAP)
 (D) Goodpasture’s syndrome

169. Pulmonary lymphangiomyomatosis (LAM) is seen in ?
 (A) Female child (B) Premenopausal women
 (C) Postmenopausal women (D) All of the above
170. In Pulmonary lymphangiomyomatosis (LAM), there occurs proliferation of which of the following ?
 (A) Type 1 pneumocytes
 (B) Type 2 pneumocytes
 (C) Pulmonary lymphatic vessels
 (D) Atypical pulmonary interstitial smooth muscle
171. Atypical smooth-muscle cells that proliferate in pulmonary lymphangiomyomatosis (LAM) react with which of the following monoclonal antibody ?
 (A) HMB42 (B) HMB43
 (C) HMB44 (D) HMB45
172. Linear deposition of immune complexes is seen in examination of lung or renal tissue by immunofluorescent techniques in ?
 (A) SLE (B) Goodpasture's syndrome
 (C) Henoch-Schönlein purpura (D) Anti-GBM disease
173. Inherited diseases that produce interstitial lung disease include ?
 (A) Tuberos sclerosis (B) Neurofibromatosis
 (C) Niemann-Pick disease (D) All of the above
174. Caplan's syndrome is ?
 (A) Seronegative Rheumatoid arthritis + Neutropenia
 (B) Seropositive Rheumatoid arthritis + splenomegaly
 (C) Seropositive Rheumatoid arthritis + progressive massive fibrosis (PMF)
 (D) Seronegative Rheumatoid arthritis + bronchial asthma
175. Potential clinical complication of silicosis is ?
 (A) Mycobacterium tuberculosis infection (B) Rheumatoid arthritis
 (C) Scleroderma (D) All of the above
176. Which of the following is not a feature of acute farmer's lung ?
 (A) Onset 4 – 8 h after exposure (B) Fever with chills
 (C) Cough and dyspnea (D) Wheezing
177. Clinical stages of allergic bronchopulmonary aspergillosis in order
 (A) acute, remission, exacerbation, steroid dependant asthma
 (B) remission, exacerbation, acute, fibrotic lung disease
 (C) exacerbation, acute, remission, steroid dependent asthma
 (D) fibrotic lung disease, steroid dependent asthma, remission, acute
178. Hyper eosinophilic syndrome is characterized by TEC ?
 (A) $> 2.5 \times 10^9 / L$ (B) $> 5 \times 10^9 / L$
 (C) $> 1 \times 10^9 / L$ (D) $> 1.5 \times 10^9 / L$

179. "Fugitive dust" includes ?
 (A) Pollens
 (B) Windblown dust
 (C) Dust from mechanical industrial processes
 (D) All of the above
180. In lower respiratory tract, the first symptom of CF is?
 (A) Cough (B) Dyspnea
 (C) Pain chest (D) Hemoptysis
181. Which of the following is often the first organism recovered from lung secretions in newly diagnosed CF patients?
 (A) *P. aeruginosa* (B) *Haemophilus influenzae*
 (C) *Aspergillus fumigatus* (D) *Klebsiella*
182. Earliest chest x-ray change in CF lungs is that of?
 (A) Hyperinflation (B) Bronchial cuffing
 (C) Bronchiectasis (D) Pleural effusion
183. CF is caused by mutation of
 (A) TCF7L2 (B) CFTR
 (C) GWAS (D) RAS
184. Which of the following can occur in CF ?
 (A) Pneumothorax (B) Cor pulmonale
 (C) Clubbing of digits (D) All of the above
185. All of the following are useful tests for CF except?
 (A) Sweat chloride concentration (B) Semen Analysis
 (C) Serum lipids (D) Nasal Potential-Difference Measurements
186. What value of sweat Cl⁻ concentration is typical in CF adults ?
 (A) > 40 meq/L (B) > 50 meq/L
 (C) > 60 meq/L (D) > 70 meq/L
187. What is the strength of hypertonic saline that is recommended for inhalation in CF ?
 (A) 2% (B) 3%
 (C) 5% (D) 7%
188. Which of the following examples of causes of pulmonary hypertension is incorrectly matched to the group classification?
 (A) Group 1 Pulmonary Hypertension: Idiopathic or heritable causes of pulmonary arterial hypertension
 (B) Group 2 Pulmonary Hypertension: Degenerative mitral valve disease causing left sided heart failure
 (C) Group 3 Pulmonary Hypertension: Congenital heart disease with left-to-right shunting
 (D) Group 4 Pulmonary Hypertension: Pulmonary thromboembolism

189. Which method can be used to measure or estimate pulmonary hypertension?
 (A) Systemic blood pressure put into the modified Bernoulli's equation
 (B) cardiac catheterization for direct measurement
 (C) Velocity of mitral regurgitation during echocardiography
 (D) Velocity of tricuspid regurgitation during echocardiography
190. Factors increasing risk of perioperative aspiration except
 (A) OSA (B) Cerebral infarction /bleed
 (C) COPD (D) Diabetic neuropathy
191. Bullous lung disease occurs in all except
 (A) Marfans syndrome (B) Ehlers Danlos syndrome
 (C) Fabry's disease (D) Neimann pick syndrome
192. In simple pulmonary eosinophilia, hypersensitivity occurs most commonly to
 (A) Ancylostomiasis (B) Ascaris lumbricoides
 (C) Necator americanus (D) Strongyloidiasis
193. Anti-TB drugs which can cause eosinophilic pneumonias
 (A) Ethambutol (B) Isoniazid
 (C) Pyrazinamide (D) Both (A) and (B)
194. Diagnostic criteria for tropical pulmonary eosinophilia
 (A) Paroxysmal nocturnal cough, dyspnoea (B) Infiltrate on chest radiograph
 (C) Leucocytosis with eosinophilia (D) All of the above
195. Which of the following occurs in NPC2 mutation in Neiman pick disease A
 (A) Bullous lung disease (B) Pulmonary alveolar proteinosis
 (C) Both (A) and (B) (D) None of the above
196. Pulmonary involvement in Hermansky -Pudlak syndrome presents as
 (A) PAP (B) fibrosis
 (C) bullous lung disease (D) None of the above
197. Hallmark of Churg Strauss syndrome
 (A) granulomas
 (B) eosinophils
 (C) palisading histiocytes in extravascular tissues
 (D) all of the above
198. All of the above are features of Lofgren's syndrome except
 (A) Erythema nodosum (B) Bilateral hilar lymphadenopathy
 (C) Polyarthritits (D) Lupus pernio
199. Which of the following is not a part of Well's score for predicting the probability of pulmonary embolism?
 (A) HR>100 (B) Haemoptysis
 (C) Age>50 (D) Malignancy
200. Birbeck granules seen in
 (A) Systemic sclerosis (B) Systemic lupus erythematosus
 (C) Sjogren's syndrome (D) Langerhans cell histiocytosis