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OPSC
Asst. Prof.
Previous Year Paper
(T.B & C.D)
17 Nov, 2024





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T.B.C. : APB-20-23/24

Sl. No. **2689**

Test Booklet Series

TEST BOOKLET

ASSISTANT PROFESSOR (BROAD SPECIALTY)

(T.B. & C.D.)



K-20

Time Allowed : 3 Hrs.

Maximum Marks : 200

INSTRUCTIONS TO CANDIDATES

1. IMMEDIATELY AFTER COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS TEST BOOKLET DOES NOT HAVE ANY UNPRINTED OR TORN OR MISSING PAGES OR ITEMS ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET OF SAME SERIES ISSUED TO YOU.
2. ENCODE CLEARLY THE TEST BOOKLET SERIES **A, B, C OR D**, AS THE CASE MAY BE, IN THE APPROPRIATE PLACE IN THE ANSWER SHEET USING BALL POINT PEN (BLUE OR BLACK).
3. You have to enter your **Roll No.** on the Test Booklet in the Box provided along side. **DO NOT** write *anything else* on the Test Booklet.
4. **YOU ARE REQUIRED TO FILL UP & DARKEN ROLL NO., TEST BOOKLET / QUESTION BOOKLET SERIES IN THE ANSWER SHEET AS WELL AS FILL UP TEST BOOKLET / QUESTION BOOKLET SERIES AND SERIAL NO. AND ANSWER SHEET SERIAL NO. IN THE ATTENDANCE SHEET CAREFULLY. WRONGLY FILLED UP ANSWER SHEETS ARE LIABLE FOR REJECTION AT THE RISK OF THE CANDIDATE.**
5. This Test Booklet contains **200** items (questions). Each item (question) comprises four responses (answers). You have to select the correct response (answer) which you want to mark (darken) on the Answer Sheet. In case, you feel that there is more than one correct response (answer), you should mark (darken) the response (answer) which you consider the best. In any case, choose **ONLY ONE** response (answer) for each item (question).
6. You have to mark (darken) all your responses **ONLY** on the **separate Answer Sheet** provided, by **using BALL POINT PEN (BLUE OR BLACK)**. See instructions in the Answer Sheet.
7. All items (questions) carry equal marks. All items (questions) are compulsory. Your total marks will depend only on the number of correct responses (answers) marked by you in the Answer Sheet. There shall be negative marking for wrong answers. For each wrong answer, 0.25 marks shall be deducted from the marks awarded for correct answers.
8. Before you proceed to mark (darken) in the Answer Sheet the responses to various items (questions) in the Test Booklet, you have to fill in some particulars in the Answer Sheet as per instructions sent to you with your **Admission Certificate**.
9. After you have completed filling in all your responses on the Answer Sheet and after conclusion of the examination, you should hand over to the Invigilator the *Answer Sheet* issued to you. You are allowed to take with you the candidate's copy / second page of the Answer Sheet along with the **Test Booklet**, after completion of the examination, for your reference.
10. Sheets for rough work are appended in the Test Booklet at the end.

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1. All are true about primary cough headache except.
 - (A) It is prevented by coughing or sneezing, straining, laughing, or stooping
 - (B) It is diagnosis of exclusion
 - (C) Indomethacin 25-50 mg two to three times daily is the treatment of choice
 - (D) Complete cessation of their attacks with lumbar puncture occurs in 1/3rd patients
2. All are true about Isoniazid neuropathy except.
 - (A) Standard doses of INH (3-5 mg/kg per day) are associated with a 2% incidence of neuropathy
 - (B) Neuropathy develops in at least 17% of patients taking in excess of 6 mg/kg per day
 - (C) The elderly, malnourished, and "Fast acetylators" are at increased risk for developing the neuropathy
 - (D) INH inhibits pyridoxal phosphokinase, resulting in pyridoxine deficiency and the neuropathy
3. Purely conducting airways are
 - (A) First 13 generations
 - (B) First 14 generations
 - (C) First 15 generations
 - (D) First 16 generations
4. All are markers for the Type I alveolar epithelial cells except
 - (A) Caveolin 1
 - (B) Aquaporin 5
 - (C) SP-C
 - (D) RAGE
5. All are autosomal recessive except
 - (A) Primary Ciliary Dyskinesia
 - (B) Idiopathic Pulmonary fibrosis
 - (C) Cystic Fibrosis
 - (D) Alpha 1 Antitrypsin Deficiency
6. All of the following scoring systems are used for Fat embolism except
 - (A) Gurd and Wilson Criteria
 - (B) Schoenfeld's scoring system
 - (C) Modified Wells score
 - (D) Lindeque's criteria
7. What is known as "the defender of the alveolus"?
 - (A) Type I alveolar epithelial cells
 - (B) Type II alveolar epithelial cells
 - (C) Macrophages
 - (D) Dendritic cells

8. Bilevel S mode is used in all except

- (A) OSA
- (B) Central sleep apnea
- (C) COPD
- (D) Restrictive Lung Disease

9. Sternocleidomastoid muscle all are true except

- (A) It runs between the mastoid processes of the temporal bone and the manubrium sterni and medial portion of the clavicle
- (B) In humans, these muscles are electrically silent during quiet breathing, but they may be recruited with increased ventilatory load
- (C) These muscles are particularly important in high quadriplegics in whom they preserve their function
- (D) Innervated by the 12th cranial nerve and spinal nerves C1 to C2

10. Which surfactant protein is required for Survival After Birth?

- (A) SP-A
- (B) SP-B
- (C) SP-C
- (D) SP-D

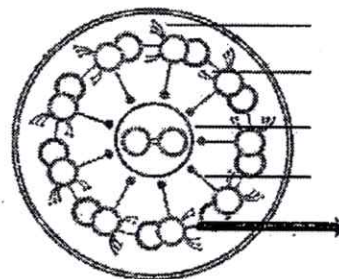
11. Grillos's criteria is used for

- (A) For lung transplant survival
- (B) Tracheal resection
- (C) Referral for bronchial radiotherapy
- (D) For chemotherapy induced complication for Ca lung

12. Which among following is not part of "rule of 3"- simple bedside tool, predicts successful direct laryngoscopy?

- (A) if the examiner can place three finger breadths (~6 to 7 cm) between the upper and lower teeth.
- (B) if the examiner can place three finger breadths (~6 to 7 cm) between the mandible and hyoid bones.
- (C) if the examiner can place three finger breadths (~6 to 7 cm) between the thyroid cartilage and sternal notch.
- (D) if the examiner can place three finger breadths (~6 to 7 cm) between the cricoid cartilage and sternal notch.

13. Name the structure shown by dark black arrow



- (A) Dyneine arm
- (B) Nexin
- (C) Radial spoke
- (D) Outer microtubule

14. Which opioid analgesic is safer in hepatic and renal failure with respect to its metabolism?
- (A) Fentanyl
 - (B) Remifentanyl
 - (C) Morphine
 - (D) Hydromorphone
15. What is chronic bronchitis?
- (A) A persistent cough that produces sputum for at least 3 months per year in 2 years
 - (B) A persistent cough that produces sputum for at least 3 months per year in 2 consecutive years
 - (C) A persistent cough that produces sputum for at least 2 months per year in 3 years
 - (D) A persistent cough that produces sputum for at least 2 months per year in 3 consecutive years
16. Which amongst following is most valid and reliable for determining level of consciousness in the setting of ongoing critical illness, even when patients are sedated and/or nonverbal due to placement of an endotracheal tube?
- (A) Richmond Agitation-Sedation Scale (RASS)
 - (B) Riker Sedation-Agitation Scale (SAS)
 - (C) Glasgow Coma Scale
 - (D) Both (A) & (B)
17. What is smallest anatomical lung unit identifiable clearly on High resolution computerised tomograph images of thorax?
- (A) Respiratory bronchiole
 - (B) Secondary Pulmonary Lobule
 - (C) Centrilobular lobule
 - (D) Terminal bronchiole
18. Peripheral neuropathy due to isoniazid is associated with
- (A) Increased risk of peripheral neuropathy with NAT1 variation
 - (B) Increased risk of peripheral neuropathy with NAT2 variation
 - (C) Both
 - (D) None
19. Functional Residual Capacity is
- (A) Volume of air that remains in the lungs at the end of a normal expiration
 - (B) Volume of air that remains in the lungs at the end of a forced expiration
 - (C) Volume of air that remains in the lungs at the end of a normal Inspiration
 - (D) Volume of air that remains in the lungs after a maximal expiratory effort

20. Laplace's law states that

- (A) The pressure inside a spherical structure is directly proportional to the tension in the wall and inversely proportional to the radius of curvature
- (B) Streamlines of gas that flows parallel to the sides of the tube and "slide" over one another
- (C) The pressure-flow characteristics of laminar flow depend on the length (l) and the radius (r) of the tube, as well as the viscosity of the gas (η)
- (D) The pressure of a gas is inversely proportional to its volume

21. Rasmussen's aneurysm is due to dilatation of

- (A) Pulmonary artery
- (B) Bronchial artery
- (C) Pulmonary vein
- (D) Bronchial vein

22. What is maximum score of ACT score (Asthma Control test)

- (A) 20
- (B) 25
- (C) 30
- (D) 40

23. What is high dose of fluticasone furoate for inhaler therapy in adults older than 12 years as per GINA 2023 guideline?

- (A) 100 mcg
- (B) 200 mcg
- (C) 250 mcg
- (D) 500 mcg

24. Oxygenated blood at any partial pressure of CO_2 as contains less total CO_2 content than deoxygenated blood at the same partial pressure. What is it?

- (A) Haldane's Effect
- (B) Bohr's effect
- (C) Alkaline Bohr's effect
- (D) None

25. Which factor influences the DLCO negatively?

- (A) Exercise
- (B) Supine position
- (C) High altitude
- (D) Patient on oxygen supplement

26. All of the following causes metabolic acidosis except

- (A) Ketoacidosis
- (B) Lactic acidosis
- (C) Carbonic anhydrase inhibitors
- (D) Chronic hypokalemia

27. All of the following are true about Hyper eosinophilic syndrome except
- (A) Persistent marked blood eosinophilia ($>1500/\mu\text{L}$)
 - (B) Hypoadrenalism
 - (C) Prominent tissue eosinophilia
 - (D) Eosinophil-induced organ damage or dysfunction
28. In Cystic fibrosis, levels of cationic eosinophil granule proteins correlate with
- (A) Good pulmonary function
 - (B) Worse pulmonary function
 - (C) No effect on pulmonary function
 - (D) Good prognosis
29. Largest class of protein present in the BAL fluid
- (A) Immunoglobulin A
 - (B) Hemoglobin
 - (C) Globulin
 - (D) Albumin
30. True about Common variable immunodeficiency (CVID) except
- (A) Characterized by hypogammaglobulinemia
 - (B) IgG levels are usually below 300 mg/dL and
 - (C) Low IgA and IgM levels as well
 - (D) Low autoimmune disease and malignancies
31. What is most common primary immunodeficiency in humans, occurring in roughly 1 in 500 individuals?
- (A) Isolated IgA deficiency
 - (B) Isolated IgG deficiency
 - (C) Common variable immunodeficiency
 - (D) Isolated IgM deficiency
32. What type of hypersensitivity reaction is Tuberculin skin test, based on Immune Pathway?
- (A) Type I
 - (B) Type II
 - (C) Type III
 - (D) Type IV

33. Clubbing is present in all of the following except
- (A) Emphysema
 - (B) Subacute bacterial endocarditis
 - (C) Regional enteritis
 - (D) Neurogenic diaphragmatic tumors
34. Spoken words assume a nasal or bleating quality and the sound "ee" is heard through the stethoscope as "ay." What is this sound labelled during auscultation?
- (A) Bronchophony
 - (B) Egophony
 - (C) Whispered pectoriloquy
 - (D) Bronchial breath sound
35. Continuous sounds longer than 250 ms, high-pitched; dominant frequency of 400 Hz or more, hissing sound is
- (A) Fine rale
 - (B) Sibilant rhonchus
 - (C) Sonorous rhonchus
 - (D) Coarse rale
36. What is grade of dyspnea as per American Thoracic Society Shortness of Breath Scale when patient complains he stops for breath after walking about 100 yards or after a few minutes on the level?
- (A) Grade I
 - (B) Grade II
 - (C) Grade III
 - (D) Grade IV
37. Dyspnea when the affected side of the chest is in the dependent position, thereby promoting ventilation-perfusion mismatch and resultant hypoxemia is
- (A) Orthopnea
 - (B) Platypnea
 - (C) Orthodeoxia
 - (D) Trepopnea
38. Breathing is characterized by alternating periods of hypoventilation and hyperventilation.
- (A) Cheyne-Stokes breathing
 - (B) Kussmaul breathing
 - (C) Biots breathing
 - (D) With CNS lesion

39. All of the following causes metabolic alkalosis except
- (A) Ryles tube aspiration
 - (B) Thiazide diuretic
 - (C) Loop diuretic
 - (D) Carbonic anhydrase inhibitor
40. Brassy cough is seen in
- (A) Aortic aneurysm
 - (B) Mediastinal tumor
 - (C) Foreign body
 - (D) Angiotensin-converting enzyme
41. Sputum resembles anchovy sauce is seen in
- (A) Klebsiella pneumonia
 - (B) Fungal pneumonia
 - (C) Parasitic abscess
 - (D) Amebic lung abscess
42. False about Methemoglobinemia
- (A) Blood is chocolate brown
 - (B) Ferric iron is oxidized to ferrous iron
 - (C) Due to the presence of hemoglobin M
 - (D) Methemoglobinemia may also result from drugs like phenacetin, or primaquine.
43. Least likely cause of hypertrophic osteoarthropathy (HOA)
- (A) Carcinoma of the lung
 - (B) Cyanotic Heart Disease
 - (C) Pulmonary tuberculosis
 - (D) Pregnancy
44. It is not part of CREST syndrome
- (A) Sclerodactyly
 - (B) Syndactyly
 - (C) Telangiectasias
 - (D) Calcinosis
45. Which Human herpesvirus has been identified and linked to all forms of Kaposi's sarcoma?
- (A) Human herpesvirus 5
 - (B) Human herpesvirus 6
 - (C) Human herpesvirus 7
 - (D) Human herpesvirus 8
46. Tripe palms are seen in
- (A) Squamous carcinoma of lung
 - (B) Connective tissue disorder
 - (C) Atopic dermatitis
 - (D) Drug reaction

47. Yellow Nail Syndrome is associated with all except
- (A) Pleural effusions
 - (B) Lymphoma
 - (C) Sleep apnea
 - (D) Upper limb yellow nails only
48. Multiple facial flesh-colored papules characterized histologically as trichodiscomas seen in
- (A) Tuberous sclerosis
 - (B) Birt-Hogg-Dube Syndrome
 - (C) Hereditary Hemorrhagic Telangiectasia
 - (D) Paraneoplastic Pemphigus
49. Pulmonary lesions are cystic and may be associated with recurrent spontaneous pneumothorax and hamartomas. Dermatological evaluation showed periungual and subungual fibromas. What is most likely diagnosis?
- (A) Birt-Hogg-Dube Syndrome
 - (B) Sarcoidosis
 - (C) SLE
 - (D) Tuberous sclerosis
50. Most preferred radiographic view in postoperative ICU patient is
- (A) PA view
 - (B) AP view
 - (C) Either
 - (D) End inspiratory PA view
51. Lingular lobe is best auscultated over
- (A) Anterior chest
 - (B) Posterior chest
 - (C) Lateral chest
 - (D) Lower posterior chest
52. In CT scan - Hounsfield units, what is absorption coefficient of air?
- (A) 1000
 - (B) -1000
 - (C) 0
 - (D) -100
53. Sniff test is used for
- (A) Esophageal evaluation
 - (B) Diaphragmatic evaluation
 - (C) Cough strength
 - (D) Olfactory function

54. How much radiation exposure does chest radiograph deliver?

- (A) 0.1-0.2 mSv
- (B) 1-2 mSv
- (C) 10-20 mSv
- (D) 100-200 mSv

55. "black blood" sequence & "bright blood" sequence are seen in

- (A) CT Angiography
- (B) Coronary Angiography
- (C) CT contrast Study
- (D) MRI

56. How much air trapping is seen in healthy subjects?

- (A) 10%
- (B) 15%
- (C) 20%
- (D) 25%

57. Emphysema which is basal predominant & exacerbated by smoking?

- (A) Panlobular emphysema
- (B) Paraseptal emphysema
- (C) Centrilobular emphysema
- (D) All of the above

58. Kerley line

- (A) Represent swollen pulmonary lymphatics
- (B) Represent edematous septae within the pulmonary interstitium
- (C) Represent edematous the pulmonary interstitium
- (D) All of the above

59. Which entity does Berylliosis mimic?

- (A) NSIP
- (B) Sarcoidosis
- (C) HP
- (D) IPF

60. The Fleischner Society guidelines stratify the risk of malignancy and recommend imaging follow-up intervals according to nodule size and clinical risk factors. What is dimension of nodule in a low-risk patient do not require follow-up?

- (A) 50-100mm³
- (B) < 100 mm³
- (C) 100-250 mm³
- (D) > 250 mm³

61. A benign pattern of calcification includes any of the following except
- (A) Diffuse
 - (B) Concentric
 - (C) Coarse
 - (D) Punctuate
62. How much decrease in mortality from lung cancer observed with implementation of low-dose computed tomography (LDCT) screening in the National Lung Screening Trial (NLST)?
- (A) 10%
 - (B) 15%
 - (C) 20%
 - (D) 25%
63. Luftsichel sign is seen in
- (A) Left Upper Lobe Consolidation
 - (B) Right Upper Lobe Consolidation
 - (C) Left Upper Lobe Collapse
 - (D) Right Upper Lobe Collapse
64. Several radiographic findings have been described as suggestive of, but not specific for, the presence of pulmonary hypertension. These include all except: (1) (2); (3); and (4).
- (A) Right heart enlargement, suggested by a distance of >44 mm from the midline to the prominent right heart border on a PA film, indicating right atrial enlargement;
 - (B) A right descending pulmonary artery (RDPA) ≥ 16 mm in diameter
 - (C) A left descending pulmonary artery (LDPA) ≥ 16 mm in diameter
 - (D) Peripheral vascular pruning on the PA film
65. Bochdalek hernia is located
- (A) Posterior & Central
 - (B) Anterior & Medial
 - (C) Posterior & lateral
 - (D) Anterior & Central
66. All are true about Thickness of the diaphragm (Tdi) and the thickening fraction (TF) except
- (A) Thickness of the diaphragm (Tdi) and the thickening fraction (TF) are used to evaluate diaphragm atrophy and contraction, respectively
 - (B) These measurements are obtained using the curvilinear probe visualizing the diaphragm at the zone of apposition
 - (C) Acute or subacute diaphragm paralysis may have a normal Tdi; however, the TF is diminished
 - (D) The TF is calculated as follows: $[(Tdi-insp - Tdi-exp)/Tdi-exp] \times 100$

67. All of the following are true about SPN (Solitary Pulmonary Nodule)

- (A) A solitary pulmonary nodule (SPN) is defined as a round or oval radiographic opacity in the lung parenchyma that measures up to 2 cm in size and is not accompanied by mediastinal adenopathy or atelectasis
- (B) CXR and CT scan are not accurate in differentiating benign from malignant, noncalcified pulmonary nodules that range 1 to 3 cm in diameter
- (C) Benign patterns of calcification and morphologic stability over two years are the most reliable signs of benignity
- (D) FDG-PET provides a highly accurate, noninvasive diagnostic assessment of solid SPNs >8 mm

68. All are true about mesothelioma except

- (A) Benign fibrous mesothelioma is, nonmalignant, localized tumor of the pleura due to asbestos exposure
- (B) Malignant pleural mesothelioma (MPM), is the most common primary pleural neoplasm
- (C) Patients affected with MPM have a median survival of 12 to 18 months
- (D) FDG-PET has shown promising results in differentiating MPM from benign pleural disease

69. Pneumotachography is based on principle of

- (A) Poiseuille's law
- (B) Law of conservation of mass
- (C) Boyle's law
- (D) Laplace's law

70. All are contraindication for performing Bronchoprovocation Testing except

- (A) Baseline FEV₁ /FVC% <50
- (B) Recent Influenza vaccination
- (C) Consumption of caffeine 6 hrs back
- (D) Recent Pneumococcal vaccination

71. British Thoracic society recommends, supplemental oxygen during air travel in following except

- (A) Baseline SpO₂ less than 92%
- (B) SpO₂ is between 92% to 95% with FEV₁ < 60%
- (C) SpO₂ is between 92% to 95% with travel within 6 weeks of hospital discharge of acute exacerbation of heart disease
- (D) SpO₂ is 94% with lung cancer

72. Factors associated with depressed ventilatory response to hypoxia
- (A) Long standing hypoxia
 - (B) Hypothyroidism
 - (C) Riley Day syndrome
 - (D) Hypercapnea
73. Condition associated with normal P_Imax (Peak inspiratory pressure maximum)
- (A) Poor effort
 - (B) Fatigue
 - (C) Neuromuscular Disease
 - (D) Decreased lung volume
74. 49 years old man, shipworker, Engineer, had TB 20 years back followed up with chest pain, breathlessness, fever on/off. Chest radiograph revealed pleural effusion. CT Thorax showed diffuse pleural thickening with effusion. Pleural biopsy confirmed mesothelioma. He fits into resectable mesothelioma and posted for extended pleurectomy decortication. What would you suggest him for further management as per MARS 2 trial results?
- (A) Surgery followed by chemotherapy has better outcomes
 - (B) Chemotherapy has better outcomes
 - (C) No significant difference in survival emerged after 42 months (Surgery vs chemotherapy alone arm)
 - (D) (B) & (C) are correct
75. 60 years old man, follows up in OPD with progressive breathlessness, fatigue, edema feet on/off, cough with mucus predominantly for more than 4 months a year. He is current smoker with 20 pack years. This has been consistent complaints for last 3 years. His BMI is 35 kg/m². He has been extensively evaluated for his breathlessness. What would be his clinical finding?
- (A) Static lung compliance & DL_{co} will be low
 - (B) Static lung compliance increased & DL_{co} low
 - (C) Static lung compliance & DL_{co} will be near normal
 - (D) Static lung compliance & DL_{co} will be increased
76. 58 years old man has been sick for 3 months. He has breathlessness, cough with expectoration, fatigue for last 5 years. He is taking MDI formoterol 6 mcg plus budesonide 200 mcg twice daily. For last 3 months he has breathlessness after walking less than 100 meters along with throat and chest discomfort. Recently he has abnormal sound while breathing predominantly inspiration. Chest radiograph showed opacity in right upper zone in right paratracheal region. Which of the following abnormality you would expect in spirometry
- (A) The expiratory arm of the flow-volume loop is primarily affected
 - (B) The inspiratory arm of the flow-volume loop is primarily affected
 - (C) Both inspiratory & expiratory arm of the flow-volume loop is primarily affected
 - (D) PEF/FEV1 < 8

77. Categorization of Reduction in Efficiency of Gas Transfer as severe
- < 40 DICO, Percent Predicted
 - 40 to 60 DICO, Percent Predicted
 - < 60 DICO, Percent Predicted
 - < 70 DICO, Percent Predicted
78. What value highly indicates a gas exchange abnormality of $P(A-a)O_2$. Alveolar-arterial oxygen gradient?
- $P(A-a)O_2$ is >15 mm Hg
 - $P(A-a)O_2$ is >20 mm Hg
 - $P(A-a)O_2$ is >25 mm Hg
 - $P(A-a)O_2$ is >35 mm Hg
79. What is RER (respiratory exchange ratio) in Cardio Pulmonary Exercise Test
- $\Delta V.O_2 / \Delta WR, mL \cdot min^{-1} \cdot W^{-1}$
 - Ratio of $V.CO_2$ to $V.O_2$
 - $V.E / V.O_2$ at peak exercise
 - VE / VCO_2 slope
80. Ultrathin bronchoscopes-flexible scopes has external diameters
- ≤ 3 mm
 - ≤ 4 mm
 - ≤ 5 mm
 - ≤ 6 mm
81. What is Tsuboi classification?
- For mab therapy in malignancy
 - Prognostic scale after EGFR therapy
 - Tumor debulking classification
 - Classification of tumor-bronchus relationship
82. What is the threshold for diagnosis of VAP using PSB (protected specimen brush)?
- 10^2 CFU per milliliter
 - 10^3 CFU per milliliter
 - 10^4 CFU per milliliter
 - 10^5 CFU per milliliter
83. Acute eosinophilic pneumonia the identification of more than _____% eosinophils on BAL is diagnostic in the appropriate clinical context.
- 10%
 - 15%
 - 20%
 - 25%
84. 59 years man followed up in OPD for cough, fever, hemoptysis and weight loss. He is being treated with antiplatelet and betablocker for IHD. ECHO revealed ejection fraction of 40%. Chest radiograph revealed left upper zone lesion. Chest tomograph revealed LUL mass causing collapse of lobe. Bronchoscopy done and during bronchoscopy he developed desaturation with cyanosis. Tachycardia of 110/min, Respiratory rate of 16/min, BP 110/70. Breath sounds decreased in left infraclavicular area. Blood drawn for ABG revealed slightly brownish colour. What would be cause this event?
- Midazolam / fentanyl induced respiratory depression.
 - Lidocain toxicity
 - Pneumothorax
 - Pulmonary embolism

85. All of the following conditions will have high lymphocyte CD4/CD8 ratio except
 (A) Asbestosis
 (B) Hypersensitivity Pneumonitis
 (C) Cryptogenic organizing pneumonia
 (D) Drug-induced lung disease
86. 70 years old man subjected for CT guided transthoracic biopsy. During the procedure he developed clinical symptoms of dyspnea at rest, continuous coughing and chest pain left sided. Neurological symptoms include, altered mental status. ABG no hypercarbia. Bedside ultrasound lung sliding present and no lung point. CT Pulmonary angiogram excluded embolism. What would you do immediately for this patient under given circumstances?
 (A) 100% oxygen should be administered through a nasal prong
 (B) Patient placed in the left lateral decubitus position, with the head down
 (C) Anticoagulant should be administered immediately
 (D) Patient placed in the right lateral decubitus position, with the head up
87. What is not true about crescentic, tracheobronchomalacia?
 (A) It is manifested by intact cartilaginous rings along with posterior membrane laxity
 (B) It is also known as EDAC
 (C) Gold standard for diagnosis is flexible bronchoscopy
 (D) Airway collapse is due to loss of cartilaginous ring structural integrity
88. Methacholine bronchoprovocation tests are useful for assessing bronchial hyperresponsiveness. How much drop in FEV1 compared to pretest is significant to call a positive test?
 (A) 10%
 (B) 15%
 (C) 20%
 (D) 25%
89. Follicular bronchiolitis found in all except
 (A) Asthma
 (B) Rheumatoid arthritis
 (C) IgA deficiency
 (D) Common variable immune deficiency
90. 70 years man active smoker with 30 cigarette pack years came to OPD. He was admitted for exacerbation in ICU, required NIV 2 years back. He has breathlessness on walking slight uphill, cough with purulent expectoration, fever, sore throat. CAT score of 10. Spirometry showed postbronchodilator FEV1/FVC of 68, FEV1- 1.5 L (70% predicted), FVC 2.2 L (78% predicted). What would be his GOLD class?
 (A) GOLD I
 (B) GOLD II
 (C) GOLD III
 (D) GOLD IV
91. Which of the following is not risk factors for COPD?
 (A) Occupation
 (B) Airway hyperreactivity
 (C) Gender
 (D) Low socioeconomic status

92. What is Fletcher Peto curve?
- Natural history of ILD decline in lung function
 - Natural history of COPD decline in lung function
 - Prognostic index of COPD decline in lung function
 - Prognostic index of ILD decline in lung function
93. Which of the following condition suggests Alpha1 Antitrypsin deficiency?
- Early onset emphysema predominantly in upper lobe in non-smoker
 - Bronchiectasis is most common radiological finding after emphysema
 - Family history of smoking related emphysema
 - None of the above
94. What is very severe COPD?
- FEV1 < 30%
 - FEV1 < 50% predicted with room air PaO₂ < 60 mm Hg
 - All of the above
 - None of the above
95. What is E in BODE Index?
- Body mass index
 - Expiratory volume in one second
 - Exercise capacity
 - Six minute walk distance
96. Which disease is ADO index used for prognostication?
- ILD
 - COPD
 - Bronchiectasis
 - TB COPD
97. COPD GOLD 2024 guideline, all of the following have once a daily dose except
- Vilanterol/Fluticasone furoate
 - Revefenacin
 - Fluticasone/Vilanterol/Umeclidinium
 - Aclidinium
98. What is indication of long term oxygen therapy?
- SpO₂ < 90%
 - PaO₂ < 60 mm of hg
 - SpO₂ < 88%
 - PaO₂ < 59 mm of hg
99. Fagerstrom Test is used for
- COPD mortality
 - Nicotine dependence
 - Vaping lung
 - Heavy smoking index
100. Sampter's triad consists
- Asthma
 - Nasal polyp
 - Aspirin sensitivity
 - Nasal perforation

101. The "cold Freon" effect is more likely seen with

- (A) MDI
- (B) DPI
- (C) Nebuliser
- (D) Inhaled vaccines

102. Roflumilast, is

- (A) Phosphodiesterase 1 inhibitor
- (B) Phosphodiesterase 2 inhibitor
- (C) Phosphodiesterase 3 inhibitor
- (D) Phosphodiesterase 4 inhibitor

103. An antibody to IL-5 receptor α (IL-5R α) is

- (A) Mepolizumab
- (B) Benralizumab
- (C) Reslizumab
- (D) Dupilumab

104. Asthma symptoms and lung function are well controlled, but where abrupt and unpredictable falls in peak flow may be catastrophic and result in sudden death. This has been termed as

- (A) Type I brittle asthma
- (B) Type II brittle asthma
- (C) Type III brittle asthma
- (D) Both (A) & (B)

105. The GINA guidelines classify exacerbations based on the peak flow as severe if Peak Expiratory Flow Rate (PEFR)

- (A) PEFR < 30%
- (B) PEFR < 40%
- (C) PEFR < 50%
- (D) PEFR < 60%

106. ABPA criteria proposed by Greenberger and Patterson includes all except

- (A) IgE > 500 IU/ml
- (B) Elevated serum anti-AF (Aspergillus Fumigatus) IgE and IgG (twofold higher than A. fumigatus allergic asthma controls)
- (C) Positive immediate hypersensitivity skin test to A. fumigatus
- (D) Serum IgG precipitating antibodies against A. fumigatus

107. Which is second most Common CFTR Mutations in cystic fibrosis?

- (A) $\Delta F508$
- (B) G542X
- (C) Spanish G551D
- (D) 3120+1G $\rightarrow$ A

108. Drug-Related Bronchiolitis Obliterans seen in all except

- (A) Penicillamine
- (B) Gold
- (C) Afatinib
- (D) Amiodarone

109. Which of the following is cause of exudative effusion?

- (A) Uremia
- (B) Subarachnoid pleural fistula
- (C) Urinothorax
- (D) Myxedema

110. All are true about Bulla except

- (A) Arises within secondary pulmonary lobule
- (B) Size ranges from 1 cm to 75% of lung parenchyma
- (C) It is lined by epithelium
- (D) It may be associated with bronchogenic carcinoma

111. Giant cell interstitial pneumonia is seen with

- (A) Crystalline silica dust
- (B) Cobalt tungsten carbide
- (C) Beryllium
- (D) Coal dust

112. All of the following cause upper lobe predominant ILD except

- (A) Sarcoidosis
- (B) Connective tissue disease-associated ILD
- (C) Silicosis
- (D) LCH

113. All of the following are features of UIP pattern on HRCT thorax except

- (A) Subpleural and basal predominant
- (B) Distribution is often heterogeneous
- (C) Honeycombing
- (D) Predominant GGO

114. All of the following suggest radiographic signs in ILD -collagen vascular disease except

- (A) Straight edge sign
- (B) Galaxy sign
- (C) Exuberant honeycombing
- (D) Anterior upper lobe sign

115. Find the mismatch in serological testing

- (A) Scleroderma – Scl70
- (B) Myositis and scleroderma overlap – PM/Scl75
- (C) Mixed connective tissue disease – Antihistone antibody
- (D) Antisynthetase syndrome – RNA polymerase III

116. All of the following are indications for Treatment of Sarcoidosis except

- (A) Painful lymphadenopathy
- (B) Uveitis unresponsive to topical corticosteroids
- (C) Progressive, persistent, or symptomatic pulmonary disease
- (D) Löfgren syndrome

117. All of the following trials were done for Nintedanib except

- (A) TOMORROW Trial
- (B) INPULSIS-1 Trial
- (C) INPULSIS-2 Trial
- (D) ASCEND Trial

118. 48 years old woman, non-smoker, symptomatic for last 4 years. She came with increased breathlessness for 4 months, dry cough, weight loss of 4 kg in 1 year. On examination she has playthorax apart from crepitations in upper interscapular region. HRCT Thorax revealed upper lobe dense subpleural consolidation with traction bronchiectasis and volume loss. Connective tissue disease markers are negative. Other lab diagnostic tests showed higher have elevated biomarkers for Krebs von den Lungen 6 (KL-6) antigen and surfactant protein D (SP-D), urinary desmosine. Spirometry is consistent with restrictive pattern with low DLCO. Biopsy report mentioned - subpleural homogenous, intra-alveolar fibrosis and elastosis with marked elastin deposition around alveolar walls with preserved alveolar structure, sparse/nonspecific inflammation. She was treated with low dose steroid and responded poorly. What is most likely diagnosis?

- (A) Cryptogenic organizing pneumonia
- (B) Idiopathic Pulmonary fibrosis
- (C) Pleuroparenchymal fibroelastosis (PPFE)
- (D) Non Specific Interstitial Pneumonia

119. Triple density sign on HRCT is seen in

- (A) CTD ILD
- (B) Hypersensitivity pneumonitis
- (C) Pleuroparenchymal fibroelastosis (PPFE)
- (D) Cryptogenic organizing pneumonia

120. All of the following are antigen source for Hypersensitivity pneumonitis except

- (A) Detergent enzymes
- (B) Iron dust
- (C) Green coffee dust
- (D) Pituitary powder

121. Which among the following is more likely to cause Lymphocytic interstitial pneumonitis?

- (A) PM-DM, polymyositis-dermatomyositis
- (B) MCTD, mixed connective-tissue disease
- (C) AS, ankylosing spondylitis
- (D) Sjögren syndrome

122. Diffuse alveolar damage (DAD) is the underlying histologic lesion seen in

- (A) RAILD
- (B) Idiopathic acute interstitial pneumonitis
- (C) Lymphocytic interstitial pneumonitis
- (D) Hypersensitivity pneumonitis

123. UIP (Usual interstitial Pneumonia) pattern on radiopathology is found in

- (A) Sjögren syndrome
- (B) Polymyositis-Dermatomyositis
- (C) RAILD
- (D) Systemic sclerosis

124. Pseudolymphoma pattern is found in

- (A) Systemic sclerosis
- (B) Sjögren syndrome
- (C) Polymyositis-Dermatomyositis
- (D) RAILD

125. Presence of BRAF mutation is helpful for diagnosis of

- (A) Rheumatoid arthritis
- (B) Mixed connective tissue disease
- (C) Ankylosing spondylitis
- (D) Pulmonary Langerhans cell histiocytosis

126. Guidelines for the diagnosis and management of LAM have been produced by the American Thoracic, Japanese Respiratory, and European Respiratory Societies. In a patient with a compatible clinical history and a characteristic CT of the chest, definite LAM may be diagnosed in the presence of any of the following except:

- (A) Renal angiomyolipoma
- (B) Chylous effusion
- (C) Angiofibromas
- (D) Elevated VEGF-D (levels >800 pg/mL)

127. Loss of function mutations in the folliculin (FLCN) gene, located on the short arm of chromosome 17 is seen in

- (A) Tuberous sclerosis
- (B) Birt-Hogg-Dubé syndrome
- (C) LAM
- (D) Neurofibromatosis

128. S100- and CD1a positive cells with intracellular Birbeck granules by electron microscopy; stellate fibrotic scars in late stages are found in

- (A) Tuberous sclerosis
- (B) Birt-Hogg-Dubé syndrome
- (C) Pulmonary Langerhans cell histiocytosis
- (D) Amyloidosis

129. Which among following is pauci-cystic disease (<10 cysts)?

- (A) Paragonimiasis
- (B) Amyloidosis
- (C) PJP infection
- (D) LIP

130. Pulmonary amyloidosis is commonly seen with

- (A) AL
- (B) ATTR
- (C) AA
- (D) Aβ2M

131. Drug-induced systemic lupus erythematosus (SLE), with or without pulmonary involvement, may occur from exposure to

- (A) Isoniazid
- (B) Rifampicin
- (C) Pyrazinamide
- (D) Ethambutol

132. 24 years man brought unconscious to ER. History revealed heavy smoking of 1 day prior. Clinical symptoms consist of fever, hypoxemia, hemoptysis. Hemogram showed leucocytosis without eosinophilia. LFT, RFT, Ddimer normal. Portable radiograph showed diffuse alveolar infiltrates, no pleural effusion. Echocardiography was normal. Based on clinical picture and heavy substance abuse diagnosis of "crack lung" was made. He required mechanical ventilator and steroid. What causes crack lung?

- (A) Marijuana
- (B) Cocaine
- (C) MDMA
- (D) Heroin

133. 13-years-old girl came with hemoptysis and respiratory failure. Chest radiograph demonstrated bilateral alveolar infiltrates. A right chest tube is in place from an open lung biopsy performed 2 days earlier. Open lung biopsy demonstrated small-vessel vasculitis (involving capillaries, arterioles, venules), geographic necrosis, hemorrhagic infarcts, a mixed inflammatory cellular infiltrate, and a granulomatous component. Circulating c-ANCA (PR-3 epitope) positive. Pulse methylprednisolone, followed by oral cyclophosphamide and prednisone, was associated with a complete remission and it is also most common of the pulmonary vasculitides. What is your diagnosis?

- (A) Granulomatosis with polyangiitis
- (B) Microscopic polyangiitis
- (C) Anti-glomerular basement membrane antibody disease
- (D) Eosinophilic granulomatosis with polyangiitis

134. 50 years old man, engineer, admitted in ward. He is being treated for asthma with ICS LABA for last 15 years. He was on ENT treatment for rhinosinusitis. He had received multiple courses of systemic steroid for asthma exacerbations. Asthma is uncontrolled for last 3 years. He came with chief complaints of fever, breathlessness grade 2 MMRC, macular rash on extensor aspect of elbow and hemoptysis for 5 days. Detailed history revealed he also has symptoms of peripheral neuropathy. Hemogram showed absolute eosinophil count of 1100. Renal profile, liver profile & blood sugars were normal. Urine analysis showed proteinuria and hematuria. CXR revealed bilateral diffuse infiltrate with non-cavitary nodules. Throat swab for COVID and influenza negative. Vasculitis work up done for pulmonary and renal involvement. c-ANCA negative, p-ANCA positive. Biopsy from macular rash revealed leukocytoclastic vasculitis with eosinophilic infiltration with palisading granulomas. What is your diagnosis?

- (A) Granulomatosis with polyangiitis
- (B) SLE
- (C) Rheumatoid arthritis
- (D) Eosinophilic granulomatosis with polyangiitis

135. What is Mendelson's syndrome?

- (A) Aspiration pneumonia
- (B) Aspiration pneumonitis
- (C) Genetic syndrome due to mendelian inheritance
- (D) Pneumonia due to anerobic bacteria

136. "Sellick maneuver" -is designed to occlude the cervical esophagus by compressing it between the _____ and the vertebral bodies?

- (A) Cricoid
- (B) Thyroid
- (C) Upper hypopharynx
- (D) Hyoid

137. Which is most common type of Pulmonary alveolar proteinosis (PAP)?

- (A) PAP occurs due to surfactant metabolic dysfunction disorders
- (B) PAP occurs due to comorbid condition that impairs surfactant clearance by alveolar macrophages
- (C) PAP occurs due to impaired granulocyte-macrophage colony-stimulating factor (GM-CSF)-dependent surfactant clearance by alveolar macrophages
- (D) Both (A) & (B)

138. Which among the following the whole lung lavage (WLL) for Pulmonary Alveolar proteinosis (PAP) is least effective?

- (A) Hereditary PAP
- (B) Congenital PAP
- (C) Autoimmune PAP
- (D) Secondary PAP

139. What is less likely seen Tropical Pulmonary eosinophilia?

- (A) Elevated serum antilarial IgE, IgG, Total IgE>1000, eosinophilia>3000
- (B) ill-defined, diffuse reticulonodular infiltrates primarily affecting the mid to lower lung fields
- (C) Low Serum α 1-antitrypsin
- (D) Clinical response to praziquantel 6mg/kg/day

140. Which amongst following is least likely to cause eosinophilic pneumonia?

- (A) Telmisartan
- (B) Montelukast
- (C) Ethambutol
- (D) Azithromycin

141. Which does group SAPH (Sarcoidosis Associated Pulmonary Hypertension) belong to, as per ERS/ESC 2023?

- (A) Group II
- (B) Group III
- (C) Group IV
- (D) Group V

142. REVEAL Risk Score Calculator 2.0 is calculated for which clinical entity?

- (A) Risk of malignancy in asbestos exposure
- (B) Recurrent thromboembolism
- (C) Pulmonary Arterial Hypertension
- (D) Recurrent pneumothorax

143. All are strong risk factors (Odds Ratio >10) for Venous Thromboembolism, except

- (A) Hospitalization for heart failure or atrial fibrillation/flutter (within previous 3 months)
- (B) Myocardial infarction (within previous 3 months)
- (C) Fracture of lower limb
- (D) Bed rest >3 days

144. How will you interpret score of 4 as per the Wells' Clinical Prediction Score for pulmonary embolism probability?

- (A) Pulmonary Embolism is likely
- (B) Pulmonary Embolism is unlikely
- (C) It can not predict
- (D) Both (B) & (C)

145. 25 years gravida 2 had PTB 3 years back. She delivered baby boy 20 min back after LSCS when she became breathless and saturation decreased to 90% with hypotension BP 90/60 mm of hg along with vaginal bleeding. Auscultation did not reveal anything except bronchial breath sound in right infraclavicular region with shift of trachea to right side. She was complaining of leg pain associated with right sided edema, however calf diameter was normal bilaterally and nontender. Blood investigation revealed leucocytosis of 18000, Hemoglobin 10, platelet 90000. She denied history of fever. Creatinine 1 mg, Bilirubin 1.4 mg, AST-ALT 52/40, INR 1.55, Prothrombin time increased more than 50%, Fibrinogen level 100mg/L, D-dimer 600. Chest radiograph showed diffuse bilateral opacities consistent with parahilar opacities with blunting of CP angles. Doppler study ruled out DVT. Echocardiography dilated right ventricle. What is most probable diagnosis?

- (A) Anesthetic shock (Distributive shock)
- (B) Acute Pulmonary Embolism
- (C) Amniotic Fluid Embolism
- (D) Air Embolism

146. Strawberry or mulberry gums are seen in

- (A) Eosinophilic Granulomatosis with Polyangiitis
- (B) Granulomatosis with polyangiitis
- (C) Microscopic Polyangiitis
- (D) Scurvy

147. Pleural fluid protein value more than 7 gm % found in
 (A) Waldenström macroglobulinemia
 (B) Multiple myeloma
 (C) Cholesterol effusion
 (D) All of the above
148. What is most common thoracic manifestation of rheumatoid arthritis (RA)?
 (A) Involvement of costochondral joints
 (B) RAILD
 (C) Pleural disease
 (D) Airway disease
149. What is most common nontraumatic cause of Chylothorax?
 (A) Down syndrome
 (B) Lymphoma
 (C) SVC syndrome
 (D) Sarcoidosis
150. What is true about Pseudo-chylothorax?
 (A) High cholesterol content (>200 mg/dL).
 (B) May have triglyceride crystals on microscopy
 (C) Triglyceride levels are typically above 110 mg/dL
 (D) Chylomicrons are present in high quantity
151. Butchart Staging System is devised for
 (A) Lung malignancy
 (B) Malignant mesothelioma
 (C) Sarcoidosis
 (D) Pleural thickening
152. Who is never smoker amongst following?
 (A) One has smoked less than 50 cigarettes in life time
 (B) One has smoked less than 100 cigarettes in life time
 (C) One has smoked less than 200 cigarettes in life time
 (D) One has smoked less than 300 cigarettes in life time
153. Which is false regarding typical carcinoid?
 (A) Screening for pulmonary carcinoid is recommended in patients with MEN1
 (B) Tumor cells have salt and pepper appearance
 (C) Criteria for diagnosis requires less than 5 mitoses per 2 square mm of visible tumor and necrosis
 (D) Typical carcinoid tumors are not associated with tobacco use
154. Which amongst following is not target for EGFR?
 (A) Erlotinib
 (B) Gefitinib
 (C) Osimertinib
 (D) Ceritinib
155. Which of the following doesn't occur as paraneoplastic syndrome in small cell carcinoma of lung?
 (A) SIADH
 (B) Cushing's syndrome
 (C) Myasthenia gravis
 (D) Lambert Eaton Myasthenic syndrome

156. Which lymph node station cannot be sampled by EBUS TBNA?
 (A) 2
 (B) 7
 (C) 5
 (D) 10
157. All the signs are seen in Pneumothorax on M Mode except
 (A) "Seashore" sign
 (B) "Stratosphere"
 (C) "Barcode" sign
 (D) alternating segments of "seashore" and "barcode" pattern
158. Mercedes Benz sign during bronchoscopy is for
 (A) Right Middle Lobe
 (B) Right Lower Lobe
 (C) Right Upper Lobe
 (D) Left Lower Lobe
159. Which anti TB drug not used in treatment of Non Tubercular Mycobacteria (NTM)?
 (A) Isoniazid
 (B) Rifampicin
 (C) Pyrazinamide
 (D) Ethambutol
160. Which of the following is not an absolute contraindication to Lung Transplant?
 (A) Septic Shock
 (B) Active Tobacco smoking
 (C) Cancer
 (D) Extensive previous thoracic surgery or pleurodesis
161. True about pyrazinamide Which anti TB drug not used in treatment of Mycobacterium bovis infection?
 (A) Mycobacterium bovis is resistant to pyrazinamide
 (B) Mycobacterium Kansasi is resistant to pyrazinamide
 (C) Both (A) & (B)
 (D) None of (A) & (B)
162. 45 years old man, Ex smoker 20 pack years, followed up in ER with acute breathlessness at rest. ICD was put for right sided pneumothorax. He was treated for TB 10 years back. Post ICD he was having air bubbling during inspiration. What is the grade of Cerfolio Classification of Air Leaks?
 (A) Grade I
 (B) Grade II
 (C) Grade III
 (D) Grade IV
163. All are part of middle Mediastinal Compartments except
 (A) Phrenic nerves
 (B) Vagus nerves
 (C) Azygos and hemiazygos veins
 (D) Esophagus
164. Which is most common mediastinal cyst?
 (A) Bronchogenic cysts below carina
 (B) Bronchogenic cysts above carina
 (C) Pericardial cysts
 (D) Thymic cysts

- 165.** Fractional exhaled nitric oxide (FeNO) is thought to reflect the presence of eosinophilic airway inflammation. What value that a FeNO level in children indicates that eosinophilic inflammation and responsiveness to corticosteroids is less likely? (as per the ATS guidelines recommendation)
- (A) < 10 ppb
(B) < 20 ppb
(C) < 35 ppb
(D) < 50 ppb
- 166.** Cobb angle is used measure severity of kyphoscoliosis. What is significant Cobbs angle at which patient will start having respiratory symptoms?
- (A) Cobb angle of 10 degrees
(B) Cobb angle of 60 degrees
(C) Cobb angle of 100 degrees
(D) Cobb angle of 120 degrees
- 167.** What is Haller Index used for?
- (A) Pectus Carinatum
(B) Pectus excavatum
(C) Ankylosing spondylitis
(D) Kyphoscoliosis
- 168.** Which of the following is not part of diagnostic criteria of Obesity Hypoventilation Syndrome?
- (A) BMI >30 kg/m² Daytime
(B) Pa CO₂ >45 mm Hg
(C) Rise in Pa CO₂ of >5 mm Hg during sleep
(D) Pa O₂ < 60 mm Hg
- 169.** Diaphragm is innervated by
- (A) C2 C3 C4
(B) C3 C4 C5
(C) C4 C5 C6
(D) C5 C6 C7
- 170.** What terminology is used for Linear/irregular opacities as per ILO (International Labour Office) Classification to describe Pneumoconiotic Opacities?
- (A) ABC
(B) PQR
(C) STU
(D) All of the above
- 171.** Schilling test is used for
- (A) Occupational Asthma
(B) Byssinosis
(C) Pneumoconiosis
(D) Hypersensitivity Pneumonitis
- 172.** What type of breathing pattern is expected in a patient with diabetic ketoacidosis?
- (A) Cheyne-Stokes
(B) Kussmaul
(C) Apneustic
(D) Biot

173. Which of the following conditions does not typically cause high anion gap metabolic acidosis?

- (A) Lactic acidosis
- (B) Ketoacidosis
- (C) Salicylate overdose
- (D) Administration of carbonic anhydrase inhibitor

174. What level of oxygen saturation do pulse oximeters accurately measure?

- (A) 60%
- (B) 70%
- (C) 80%
- (D) 90%

175. What is a primary spontaneous pneumothorax/ pneumomediastinum typically caused by?

- (A) Valsalva maneuver
- (B) Preceding trauma or lung injury
- (C) Various types of lung parenchymal disease
- (D) Pleural injury

176. What sweat chloride test results (mmol/L) are indicative of cystic fibrosis (CF)?

- (A) 0 to 30 mmol/L
- (B) 30 to 60 mmol/L
- (C) 40 to 60 mmol/L
- (D) ≥ 60 mmol/L

177. What is severe obstructive sleep apnea as AHI/hour?

- (A) $AHI < 5$ /hour
- (B) $AHI 5-15$ /hour
- (C) $AHI 15-30$ /hour
- (D) $AHI > 30$ /hour

178. Which of the following conditions is typically characterized by a flow-volume loop showing reduced airflow during both forced expiration and forced inspiration?

- (A) Tracheal stenosis
- (B) Supraglottic stenosis
- (C) Laryngomalacia (LM)
- (D) Extrathoracic tracheomalacia

179. Which type of sleep waves characterize N3 stage of sleep?

- (A) low-frequency, high-amplitude
- (B) unique, sharply negative
- (C) low-voltage mixed-frequency
- (D) brief bursts of high-frequency

180. What percentage of a normal night's sleep is typically spent in REM sleep stages?

- (A) 10-15%
- (B) 15-20%
- (C) 20-25%
- (D) 55-60%

181. At what time of day do asthma symptoms typically worsen the most?
- (A) Early Morning
 - (B) Early Afternoon
 - (C) Early Evening
 - (D) Early Night
182. Which type of toxic Irritants causes more damage and long exposure?
- (A) Low water soluble and more than 5 microns
 - (B) High water soluble and more than 5 microns
 - (C) Low water soluble and less than 5 microns
 - (D) High water soluble and less than 5 microns
183. What is minimum volume of fluid typically required to obscure the costophrenic angle on a chest X-ray due to a pleural effusion?
- (A) 50-100ml
 - (B) 100-150 ml
 - (C) 150-200 ml
 - (D) > 200 ml
184. A persistent asthma-like disease following acute exposure to an irritant inhalant, typically presents abruptly within 24 hours following exposure is
- (A) Reactive Airways Dysfunction Syndrome
 - (B) Brooks syndrome
 - (C) Irritant asthma
 - (D) Both (A) & (B)
185. What carboxyhemoglobin level typically frank carbon monoxide (CO) poisoning symptoms manifest?
- (A) 10%
 - (B) 20%
 - (C) 30%
 - (D) 40%
186. Which type of carcinoma biopsy commonly exhibits keratin pearls, intercellular bridges, IHC positive for p40?
- (A) Squamous cell carcinoma
 - (B) Adenocarcinoma
 - (C) Small cell lung carcinoma
 - (D) Large cell lung carcinoma
187. Which of the following does not cause atypical pneumonia?
- (A) Streptococcus pneumoniae
 - (B) Mycoplasma pneumoniae
 - (C) Legionella pneumophila
 - (D) Chlamydophila pneumoniae
188. Which bacterial pneumonia is caused by exposure to an infected bird?
- (A) M. Catarrhalis
 - (B) Chlamydophila pneumoniae
 - (C) Chlamydia psittaci
 - (D) A. Baumannii

189. What pleural fluid analysis result suggests the possible need for closed chest tube drainage?

- (A) pH >7.20
- (B) Glucose level <40 mg/dL
- (C) LDH <400 U/L
- (D) pH >7.40

190. Which of the following conditions is the most common cause of right-sided heart failure?

- (A) Venous insufficiency
- (B) Left-sided heart failure
- (C) Renal failure
- (D) Cardiac arrhythmias

191. What is the primary objective of using the simplified Well's Prediction Rule?

- (A) To diagnose pulmonary arterial hypertension (PAH)
- (B) To determine the likelihood of pulmonary embolism (PE) in a patient
- (C) To prevent unnecessary diagnosis of PE
- (D) To assess the likelihood of pulmonary hypertension (PH)

192. Which cardiac chamber is directly affected by pulmonary embolism (PE), resulting in pressure overload?

- (A) Right Atrium
- (B) Left Atrium
- (C) Right Ventricle
- (D) Left Ventricle

193. What does the D-dimer test indicate?

- (A) Is very sensitive, but not specific, for venous thromboembolism or PE
- (B) Is both sensitive and specific for venous thromboembolism or PE
- (C) Is used specifically to confirm PE
- (D) Is positive when the result is greater than 1500 µg/L

194. What is the method of choice for imaging the pulmonary vasculature in patients suspected of having a pulmonary embolism (PE)?

- (A) Ventilation-perfusion scanning
- (B) Pulmonary angiography
- (C) Magnetic resonance pulmonary angiography
- (D) Computed tomography pulmonary angiography

195. What type of blood flow circuit is the pulmonary circulation characterized as?

- (A) High-resistance
- (B) High-pressure
- (C) High-capacitance
- (D) Low-capacitance

196. What is the definitive diagnostic method for all forms of pulmonary hypertension (PH)?

- (A) Left heart catheterization
- (B) Echocardiography
- (C) Right heart catheterization
- (D) Ventilation-perfusion lung scan

197. Which class of medication is used to identify acute vasoreactivity in pulmonary hypertension?

- (A) Phosphodiesterase Type 5 inhibitor
- (B) Endothelin receptor antagonist
- (C) Prostacyclin analogue
- (D) Calcium channel blocker

198. Which type of shock is classified as distributive?

- (A) Neurogenic
- (B) Cardiogenic
- (C) Septic
- (D) Hypovolemic

199. Which of the following is not a clinical criterion for ARDS according to the Berlin definition?

- (A) Onset within 1 week of a known clinical insult
- (B) Respiratory failure not explained by fluid overload
- (C) Pulmonary artery wedge pressure ≤ 18 mm Hg
- (D) Bilateral infiltrates on chest x-ray

200. Which of the following is not a direct cause of ARDS?

- (A) Traumatic injury with lung contusion
- (B) Viral Pneumonia
- (C) Acute Pancreatitis
- (D) Aspiration

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