

# لجنة الطب البشري

رؤية تنير دروب تميّزكم

Second Year - Second Semester

Respiratory System



# لجنة الطب البشري

رؤية تُنير دُرُوب تميِّزكم

**Second Year - Second Semester**

## Microbiology

**Dr. Ashraf Khasawneh**



## Athar batch's questions

**1. A 5-year-old child comes to the clinic complaining of a three-week history of cough. He started with a runny nose, fever, and sneezing for a few days followed by a dramatic cough that keeps him up at night. He complains of episodes of coughing where he will "fits" off coughing with 10-15 coughs during one exhalation to the point that he is afraid that he will never be able to take in a breath. These coughing episodes are so severe that his ribs are extremely sore. An organism you should consider would be:**

- A. Streptococcus pneumoniae.
- B. Mycobacterium Tuberculosis.
- C. Bordetella pertussis.
- D. Haemophilus influenzae.
- E. Bacillus anthracis.

**Answer: C**

**2. Which of the following characteristics is true of Legionella infections?**

- A. Are more susceptible to penicillins and cephalosporins than azithromycin or erythromycin.
- B. Are spread predominately via person-to- person contact.
- C. Are responsible for whooping cough.
- D. Are associated chiefly with environmental water sources.
- E. Cause Pontiac fever with high mortality rate.

**Answer: D**

**3. A 4-year-old child presented to the ENT clinic complaining of left ear pain. The mother said that his symptoms started 2 days ago and was associated with mild fever. The child had URTI 8 days ago. The most likely causative organism is:**

- A. Neisseria meningitides.
- B. Haemophilus influenza.
- C. Rhinovirus.
- D. Streptococcus agalactiae.
- E. Influenza virus.

**Answer: B**

**4. The DTaP immunization is for?**

- A. Dermatomycoses, tetanus, pontiac fever.
- B. Diphtheria, TB, pneumococcal pneumonia.
- C. Diphtheria, tetanus, pertussis.
- D. Dermatomycoses, TB, pertussis.
- E. Diphtheria, tetanus, parainfluenza.

**Answer: C**

**5. The gram negative bacilli that has the ability to grow at 42C, produces pyocyanin and is Oxidase and catalase positive is?**

- A. Pseudomonas aeruginosa.
- B. Haemophilus influenzae.
- C. Bacillus anthracis.
- D. Moraxella catarrhalis.
- E. Bordetella pertussis.

**Answer: A**

**6. Which one of the following organisms is the MOST frequent bacterial cause of pharyngitis?**

- A. Streptococcus pneumoniae.
- B. Staphylococcus aureus.
- C. Neisseria meningitidis.
- D. Streptococcus pyogenes.
- E. Bordetella pertussis.

**Answer: D**

**7. One of the following is NOT a common direct cause of ARDS?**

- A. Pneumonia.
- B. Sepsis.
- C. Drug overdose.
- D. Aspiration of gastric content.
- E. Severe trauma with shock.

**Answer: C**

**8. Which of the following is correctly matched?**

- A. Moraxella catarrhalis is associated with empyema.
- B. Haemophilus influenzae is associated with intravenous drug abuse.
- C. Pseudomonas aeruginosa has a propensity to invade blood vessels at the site of infection.
- D. Staphylococcus aureus was observed in patients who are chronic alcoholics.
- E. Klebsiella pneumoniae is associated with acute exacerbations of COPD.

**Answer: C**

**9. Which of the following statements is true regarding Roflumilast?**

- A. It's an inhibitor for PDE4 and is available only as an inhaler.
- B. It is recommended for severe COPD (chronic bronchitis).
- C. It's a bronchodilator and can be used in acute attacks.
- D. It has anti-inflammatory effects by decreasing cAMP levels.
- E. It is widely used for COPD with minimal adverse effects.

**Answer: B**

**10. All of the following are characteristics of Tb expect?**

**Answer: Getting stained by gram stain.**

## Yaqeen batch's questions

**11. Which of the following pathogen-virulent factor is NOT matched correctly?**

- A. Adenovirus - early E3 region protein.
- B. Bacillus anthracis - Lethal factor (LF).
- C. Streptococcus pyogenes – Streptokinase.
- D. Streptococcus pneumoniae – IgA protease.
- E. Haemophiles influenza type b - Tracheal cytotoxin (TCT).

**Answer: E**

**12. A 4-year-old child presented to the ENT clinic complaining of left ear pain. The mother said that his symptoms started 2 days ago and was associated with mild fever. The child had URTI 8 days ago. The most likely causative organism is?**

- A. Neisseria meningitides.
- B. influenza virus.
- C. Rhinovirus.
- D. Streptococcus agalactiae.
- E. Streptococcus pneumoniae.

**Answer: E**

**13. A 16-year-old boy with sickle cell disease hospitalized for a severe infection. His spleen has autosplenectomized, and he has had other minor infections in the past. His symptoms include fever, chills, cough, and chest pain. Bacteria from the patient's sputum yield optochin sensitive organisms. Which of the following is the most likely pathogen?**

- A. Escherichia coli.
- B. Haemophiles influenza.
- C. Klebsiella pneumonia.
- D. Neisseria gonorrhoeae.
- E. Streptococcus pneumonia.

**Answer: E**

**14. Croup is a common problem among children, choose the incorrect phrase for croup?**

- A. Most cases of laryngotracheitis are due to viruses.
- B. It can be prevented by Hib vaccine.
- C. It may be associated with Haemophiles influenzae type b epiglottitis.
- D. It is common among children aged 2 to 5 years.
- E. It is uncommon in adults.

**Answer: A**

**15. The Tdap immunization protects against and is given to patients aged?**

- A. Diphtheria, tetanus, pertussis—3,4,5 months of age.
- B. Diphtheria, TB, pneumococcal pneumonia—15-18 months.
- C. Diphtheria, tetanus, pertussis—above 12 years of age.
- D. Dermatomyces, TB, pertussis-preschool children.
- E. Diphtheria, tetanus, parainfluenza--3,4,5 months of age.

**Answer: C**

**16. Whooping cough is characterized by all the following but not?**

- A. Paroxysmal stage continues for 2-4 weeks.
- B. Whooping sound associated with expiration.
- C. Sometimes it causes cerebral damage (encephalopathy).
- D. It is preventable by 3 doses of killed vaccine.
- E. Azythromycin decrease the risk of secondary complications .

**Answer: B**

**17. All of the following microorganism-disease pairs are matched correctly EXCEPT?**

- A. Bordetella Pertussis- Whooping cough.
- B. Bacillus anthracis- Anthrax.
- C. Coronavirus- Coronavirus disease 19 (COVID-19).
- D. H. Influenza- Acute Epiglottitis.
- E. Coccidioides immitis- Fungus ball.

**Answer: E**

**18. An 11-year-old boy presented to ER with fever up to 39 degrees, joint pain and swelling, along with shortness of breath. His right ankle and left knee are quite tender, painful, and swollen. He also has some shortness of breath with lying down flat when he is trying to sleep. On examination: Enlarged, erythematous tonsils with exudates. Heart sounds are tachycardic with a holosystolic murmur 3/6 heard at apex. Investigation: ESR 110, chest X-ray with cardiomegaly present, ECG reveals a prolonged PR interval. ASO titer is 754 (normal <200). The patient presentation can be best explained by?**

- A. Toxin production by beta hemolytic bacteria
- B. Antigen-antibody deposition in the joints
- C. Molecular mimicry
- D. Delayed type hypersensitivity
- E. More than one of the above.

**Answer: E**

**19. All the Following statements are Correct about pneumonia EXCEPT?**

- A. pseudomonas aeruginosa tend to cause pneumonia in neutropenic patients and those on chemotherapy and cause coagulative necrosis in lung parenchyma and invade the wall of the blood vessels.
- B. Thick & gelatinous sputum is characteristic of gram negative mycoplasma bacterial pneumonia because the microorganism produces an abundant viscid capsular polysaccharides, which the individual have a difficulty to cough out.
- C. Moraxella catarrhalis, It is being recognized as a common cause of bacterial pneumonia in the elderly, and it is the second commonest cause of bacterial exacerbation in COPD in adults.
- D. Staphylococcus aureus is associated with high incidence of complication as lung abscess and empyema.
- E. Haemophiles influenza can cause a life-threatening form of pneumonia & meningitis in children, often following a viral respiratory tract infection.

**Answer: B**

Hashemite University

**Hope batch's questions**

**20. A 4-year-old child presented to the ENT clinic complaining of left ear pain. The mother said that his symptoms started 2 days ago and was associated with mild fever. The child had URTI 8 days ago. The most likely causative organism is?**

- A. Neisseria meningitides.
- B. Haemophilus influenza.
- C. Rhinovirus.
- D. Streptococcus agalactiae.
- E. All of the above.

**Answer: B**

**21. Which of the following statements about Group B streptococci (Streptococcus agalactiae) is Correct?**

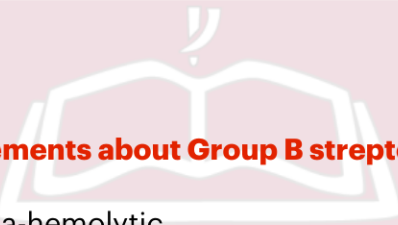
- A. These organisms are alpha-hemolytic.
- B. May be associated with septicemia and meningitis.
- C. give a negative result on bile solubility test.
- D. They are important causes of toxic strep syndrome.
- E. They are frequent colonizers of the oropharynx.

**Answer: B**

**22. The entire following are correct for Diphtheria but not?**

- A. If not treated the child could die from suffocation.
- B. Incubation period is 2-5 days.
- C. The microorganism secretes toxins which cause cardiac and neurological complication.
- D. It can be prevented by immunization.
- E. Source of infection is animal.

**Answer: E**



**23. The Tdap immunization protects against and is given to patients aged?**

- A. Diphtheria, tetanus, pertussis-above 6 years of age.
- B. Diphtheria, TB, pneumococcal pneumonia-15-18 months.
- C. Diphtheria, tetanus, parainfluenza--3,4,5 months of age.
- D. Diphtheria, tetanus, pertussis-3,4.5 months of age.
- E. Dermatomycoses, TB, pertussis-preschool children.

**Answer: A**

**Previous batch' questions**

**24. Choose the incorrect phrase from the followings?**

- A. Many viruses of respiratory tract infections thrive in the low humidity of The winter.
- B. Upper respiratory infection is contagious and can spread from person to person.
- C. Proper hand washing may reduce the spread of upper respiratory infections.
- D. The incubation period Tuberculosis is 2 weeks.
- E. Smoking increases the risk of respiratory tract infections by destroying the cilia.

**Answer: D**

**25. Choose the correct sequence for whooping cough stages?**

- A. Paroxysmal Stage, Convalescent Stage, Catarrhal Stage.
- B. Convalescent Stage, Catarrhal Stage, Paroxysmal Stage.
- C. Catarrhal Stage, Paroxysmal Stage, Convalescent Stage.
- D. Paroxysmal Stage, Catarrhal Stage, Convalescent Stage.
- E. Catarrhal Stage, Convalescent Stage, Paroxysmal Stage.

**Answer: C**

**26. Bull neck is swollen neck and throat occurs in which infection?**

- A. Whooping cough.
- B. Tuberculosis.
- C. Respiratory Syncytial Virus.
- D. Legionnaires disease.
- E. Diphtheria.

**Answer: E**

**27. Streptococcus pneumonia and H. influenza are implicated in the following infections?**

- A. Sinusitis and otitis media.
- B. Acute epiglottitis and chronic bronchitis.
- C. Laryngo-tracheo-bronchitis.
- D. Scarlet fever and glomerulonephritis.
- E. More than one of the above.

**Answer: E**



**28. All of the following statements about the M-protein of Group A Streptococci are correct EXCEPT?**

- A. The amino terminal portion (distal portion) is variable, accounting for over 80 distinct serotypes.
- B. M proteins allow streptococci to resist phagocytosis.
- C. Antibodies to M protein confer type-specific immunity.
- D. M protein is the major virulence factor of Group A streptococci.
- E. M protein is the major constituent of the capsule of Group A streptococci.

**Answer: E**

**29. Which one of the following virulence factors is specific to Bacillus anthracis?**

- A. Lethal factor (LF).
- B. Adenylate cyclase toxin (ACT).
- C. Tracheal cytotoxin (TCT).
- D. Polyribosyl ribitol phosphate (PRP).
- E. Filamentous hemagglutinin (FHA).

**Answer: A**

**30. A 25 year old woman has a 4 year old son who is now recovering from Group A strep pharyngitis. Out of curiosity, the pediatrician does a throat culture on the mother which is positive for Group A strep even though she doesn't have a sore throat. The pediatrician also does an ASO –Anti streptolysin O- titer and anti DNase B assay on her both of which are negative. At this point we would say that she?**

- A. Has asymptomatic infection.
- B. Has opportunistic infection.
- C. Is a carrier.
- D. Is immunosuppressed.
- E. None of the above.

**Answer: C**

**31. Choose the incorrect phrase regarding Whooping Cough?**

- A. Animal is the main reservoir.
- B. Bacterial disease.
- C. Most death occur in children <1 yr.
- D. Causative agent is Bordetella pertussis.
- E. Mode of transmission is air born infection.

**Answer: A**

**32. A 16-year-old boy with sickle cell disease hospitalized for a severe infection. His spleen has autosplenectomized, and he has had other minor infections in the past. His symptoms include fever, chills, cough and chest pain. Bacteria from the patient's sputum yield optochin sensitive organisms. Which of the following is the most likely pathogen?**

- A. Escherichia coli.
- B. Haemophilus influenza.
- C. Klebsiella pneumonia.
- D. Neisseria gonorrhoeae.
- E. Streptococcus pneumonia.

**Answer: E**

**33. Which of the following is INCORRECT about vaccination for respiratory tract pathogens?**

- A. The 13-valent Pneumococcal vaccine is a conjugated vaccine that can be given for infants aged 2 months.
- B. DTaP is an inactivated vaccine that is given at the beginning of the 3rd, 4th and 5th months of age as part of the national vaccination program.
- C. Adenovirus vaccine is recommended and used for new military recruits in the US, and it contains live attenuated Adenovirus types 4 and 7.
- D. H. influenzae type b PRP-protein is T-cell independent and can confer strong immunity to infants if given as early as 2 months of age.
- E. There is no available vaccine for rhinovirus because of multiple serotypes (more than 100 serotypes).

**Answer: D**

**34. The micro-organism that is responsible to cause whooping cough is?**

**Answer: Bordetella pertussis.**

**35. A 24-year-old woman has fever, malaise and a dry nonproductive cough. She also complains of 31 headache, muscle aches and leg pain. Laboratory values were significant for elevated cold agglutinins. The most likely shape of colonies of the causative organism on media is?**

- A. Fried egg.
- B. Ground glass.
- C. Bread crumbs.
- D. Medusa head.
- E. None of the above.

**Answer: A**

**36. A patient comes to the clinic with an earache. There is a foul smelling otorrhea coming out of his ear, and his auricle is swollen. What is the most likely organism to cause these signs?**

**Answer: Pseudomonas aeruginosa.**

**37. A boy present to the ER with strawberry tongue, rash on the chest and fever, his mother noticed whitish exudate on his tonsils 3 days ago, the causative microorganism?**

**Answer: Strep pyogenes.**

**38. Which one not caused by Haemophilus influenzae ?**

**Answer: influenza.**

**39. Not true about diphtheria?**

**Answer: Treated by antibiotic only.**

**40.DTaP refers to?**

**Answer: Diphtheria ,tetanus ,pertussis.**

**41. A case:A girl of 15 years came to your clinic with her mother complaining from a rash on most of her body , with a red tongue . according to your diagnosis the micro-organism that is suspected is?**

**Answer : Gram + cocci , beta hemolytic , catalase negative.**

**42.The most common cause of bacterial pharyngitis is?**

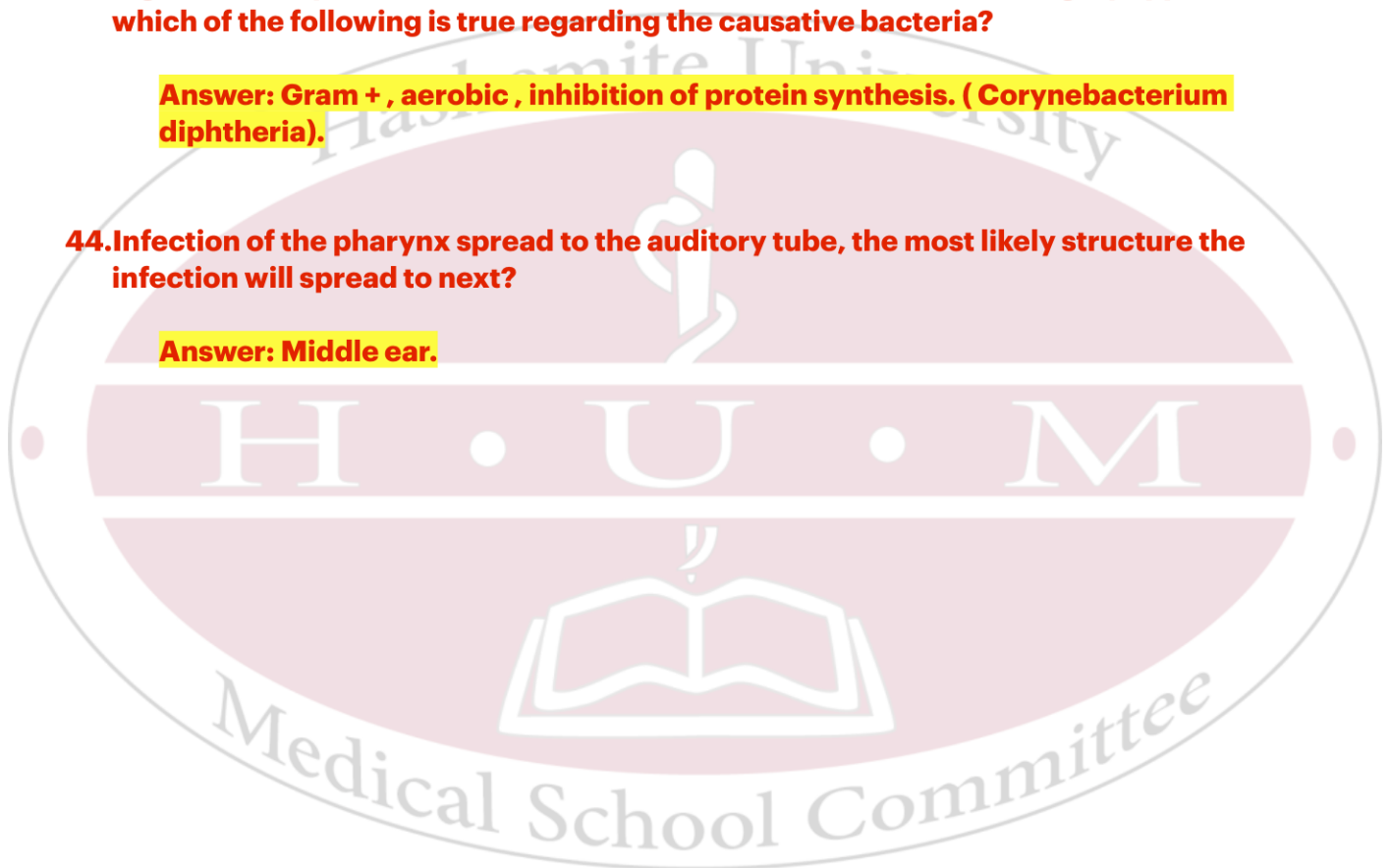
**Answer: Streptococcus pyogenes.**

**43.A girl came to your clinic with fever , sore throat, and tissue in white gray appearance which of the following is true regarding the causative bacteria?**

**Answer: Gram + , aerobic , inhibition of protein synthesis. ( Corynebacterium diphtheria).**

**44.Infection of the pharynx spread to the auditory tube, the most likely structure the infection will spread to next?**

**Answer: Middle ear.**



# لجنة الطب البشري

رؤية تُنير دُرُوبَ تميِّزكم

**Second Year - Second Semester**

## Pharmacology



**Athar batch's questions**  
**Dr. Sofian AlShboul**

**45. A patient suffers an asthma attack when trying to smell a flower on a trip and requires a rapidly acting bronchodilator. Unfortunately the pharmacy has run out of all albuterol inhalers. In this situation, what other option if available, might be most effective to treat his symptoms?**

- A. Montelukast.
- B. Zafirlukast.
- C. Aclidinium.
- D. Ipratropium.
- E. Indacaterol.

**Answer: D**

**46. During your night shift, a 3-year-old child was brought to the ER by his parents complaining of cough with "crowing/barking" sound, fever, stridor and runny nose. They say it started during the day but now its getting worse. X-ray was performed and shown to the right. Which of the following options can be used for this child?**

- A. Oral corticosteroids.
- B. Intravenous macrolide.
- C. Penicillin G.
- D. Epinephrine nebulizer.
- E. Ampicillin nebulizer.

**Answer: D**

**47. Which of the following statements is true regarding Roflumilast?**

- A. It's an inhibitor for PDE4 and is available only as an inhaler.
- B. It is recommended for severe COPD (chronic bronchitis).
- C. It's a bronchodilator and can be used in acute attacks.
- D. It has anti-inflammatory effects by decreasing cAMP levels.
- E. It is widely used for COPD with minimal adverse effects.

**Answer: B**

**48. In the lab, you have a mice strain with established allergic rhinitis and you were asked to develop new compounds to manage the symptoms. Upon administrating your compound, the mice looked drowsy, confused and suffered from hypotension and tachycardia. Which of the following drugs has similar effects to your compounds?**

- A. Azelastine.
- B. Beclomethasone.
- C. Oxymetazoline.
- D. Cromolyn.
- E. Chlorpheniramine.

**Answer: E**

**49. A 58-year-old woman with COPD has been hospitalized three times in the past year for COPD exacerbations. She reports only mild symptoms between exacerbations. Her regimen for the past year has included inhaled salmeterol twice daily and inhaled tiotropium once daily. Her current FEV<sub>1</sub> is below 60%. Which is an appropriate change in her drug therapy?**

- A. Discontinue the tiotropium.
- B. Discontinue the salmeterol.
- C. Change the salmeterol to a combination (vilanterol/fluticasone DPI).
- D. Add theophylline.

**Answer: C**

**50. A patient taking codeine and came to the clinic for routine visit, he said that he take the drug 3 times a day even if he doesn't have a cough, what's the adverse effect?**

**Answer: Addiction**

Hashemite University

**Yaqeen batch's questions  
Dr. Ahmad Sha'ban**

**51. Montelukast. Which of the following is incorrect?**

- A. Although is ineffective in acute attacks, it is one of top ten selling drugs in pediatrics in many countries.
- B. Is used in patients who develop asthmatic attacks on exercise or cold exposure.
- C. Montelukast, zafirlukast and zileuton are given once, twice and 4 times daily respectively.
- D. It decreases specific liver enzymes.
- E. It causes serious neuropsychiatric manifestations.

**Answer: D**

**52. Epinephrine therapy in asthmatics. Which of the following is incorrect?**

- A. Compared to salbutamol, epinephrine is more potent as antiasthmatic and less potent as bronchodilator.
- B. Tolerance to epinephrine and salbutamol is caused by stimulation of alpha 1 adrenoceptors in bronchial muscle and locked lung syndrome, respectively.
- C. Epinephrine may cause fatal hypertensive crisis or cardiac arrhythmias.
- D. Epinephrine is used in severe acute asthmatic attacks specially in children.
- E. In severe life – threatening anaphylaxis by drugs, epinephrine is preferably given by subcutaneous injection.

**Answer: E**

Medical School Committee

**53. Inhaled steroids in bronchial asthma. Which of the following is incorrect?**

- A. Due to flat dose – response curve, small doses are preferred.
- B. They cause oropharyngeal candidiasis, cough and hoarseness of voice.
- C. Their full effects take 2 days to develop.
- D. Large doses cause hyperglycemia, hypertension and osteoporosis.
- E. They include mometasone and fluticasone while hydrocortisone sodium hemisuccinate is given IV in status asthmaticus.

**Answer: C**

**Previous batch's questions**

**54. Montelukast. Which of the following is incorrect?**

- A. Is used in aspirin asthma.
- B. Unlike zafirlukast, it is not enzyme inhibitor.
- C. Increases liver enzymes and causes neuropsychiatric manifestations.
- D. Is used in prophylaxis of asthma caused by allergy, exercise and cold exposure.
- E. Is given twice daily away from meals.

**Answer: E**

**55. Regarding alpha 1 antitrypsin, which of the following statements is false.**

- A. Deficiency of this protein causes cystic fibrosis.
- B. It is the chief alpha 1- globulin.
- C. It is an acute phase protein.
- D. It is produced by the hepatocytes and macrophages.
- E. Smoking inactivates alpha 1- antiproteinase.

**Answer: E**

**56. Compared to salbutamol, salmeterol has the following except?**

- A. Longer duration.
- B. Delayed onset.
- C. Is used mainly orally.
- D. Is used mainly as prophylaxis.
- E. Has antiinflammatory actions.

**Answer: C**

**57. Omalizumab. Which is incorrect?**

- A. Is monoclonal antibody.
- B. Is expensive.
- C. Is used in severe cases with inadequate control.
- D. Is given orally.
- E. Is given every 2-4 weeks.

**Answer: D**

**58. Anticholinergic receptor?**

- A. M2
- B. M3
- C. Both

**Answer: C**

**59. In the emergency room , asthmatic patients are given?**

- A. adrenaline.
- B. prednisolone.

**Answer: A**

**60. Which of the following agents known as anti-inflammatory as well as bronchodilation activity ?**

- A. Cromolyn.
- B. Salbutamol.
- C. Tiotropium.
- D. Omalizunab.
- E. Theophylline.

**Answer: E**

**61. If you changed the treatment from oral to inhaled corticosteroid you must tapering the dose to avoid?**

- A. adrenal crisis.
- B. CNS disturbances.
- C. Osteomyelitis.

**Answer: A**

**62. concerning inhaled steroids in asthma, which is incorrect?**

- A. Inhibit all actions involved in pathogenesis of bronchial asthma.
- B. For prophylaxis, are most effective when given late afternoon.
- C. May be combined with selective  $\beta_2$  agonists but not ipratropium bromide.
- D. May cause oropharyngeal candidiasis.
- E. Cause attenuation of bronchial circadian rhythm.

**Answer: C**

**63. Montelukast is one of top 10 drugs in children. Which is incorrect?**

- A. Is leukotriene antagonist.
- B. May be used before exercise.
- C. Is used mainly in acute attacks.
- D. Is not affected by food.
- E. Is not enzyme inhibitor.

**Answer: C**



**64. Histamine antagonism is used in the following except:**

- A. Epinephrine in severe anaphylaxis.
- B. Antihistaminics in motion sickness.
- C. H1 antagonists in allergic rhinitis.
- D. H1 antagonists in hypotension.

**Answer: D**

**65. Drug used in cystic-fibrosis?**

**Answer: Acetylcystin**

**66. The best anticough drug is?**

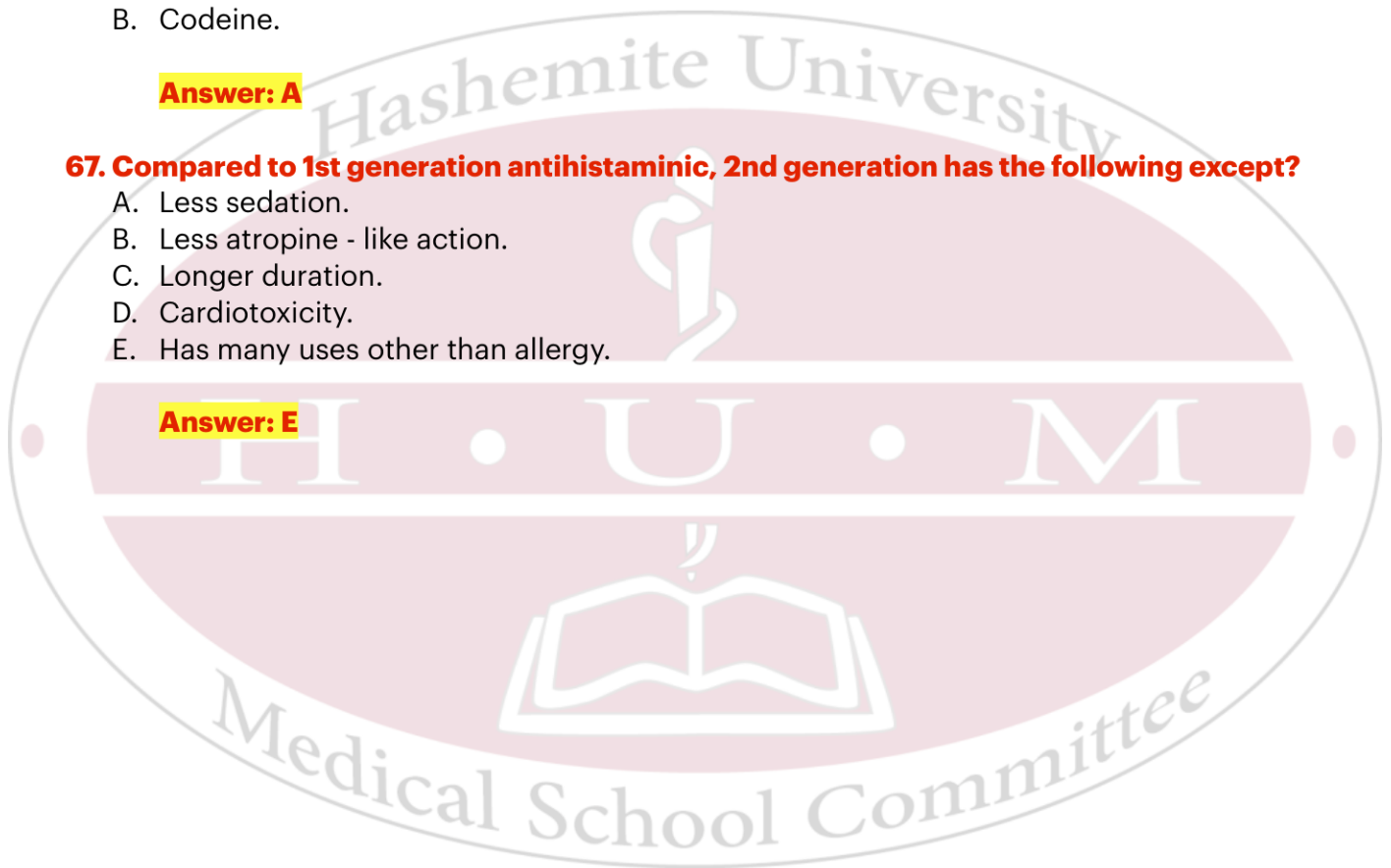
- A. Dextromethorphan.
- B. Codeine.

**Answer: A**

**67. Compared to 1st generation antihistaminic, 2nd generation has the following except?**

- A. Less sedation.
- B. Less atropine - like action.
- C. Longer duration.
- D. Cardiotoxicity.
- E. Has many uses other than allergy.

**Answer: E**



# لجنة الطب البشري

رؤية تُنير دُرُوبَ تميِّركم

**Second Year - Second Semester**

## Physiology

**Dr. Zuheir Hasan**



## Vein batch's questions

**68. IF the area of the lung is not ventilated due to obstruction of the airways, but has normal Perfusion , the blood leaving the area will have a partial pressure of gases which is closely the partial pressure**

- A. Inspired air
- B. systemic arterial pressure
- C. pulmonary arterial pressure
- D. bronchial arterial pressure

**Answer: C**

**69. which of the following decrease the diffusion because of the thickening of the interstitial alveolar wall:**

**Answer : interstitial fibrosis**

## Athar batch's questions

**70. If we double the alveolar ventilation, we will have:**

- A. Increased O<sub>2</sub> tissue utilization.
- B. Physiological dead space.
- C. Decreased V/Q ratio.
- D. Alveolar hypoxia.
- E. Alveolar hypocapnia (Decreased alveolar PCO<sub>2</sub>).

**Answer: E**

**71. A baby girl was born at only 27 weeks of gestation. Shortly following birth, the baby develops increasing difficulty with breathing and hypoxemia, and requires mechanical ventilation. Which of the following factors is likely responsible for respiratory failure in this case?**

- A. Decreased alveolar surfactant concentration.
- B. Increased airway smooth muscle contraction.
- C. Increased airway mucus production.
- D. Increased edema of the airway walls.
- E. Decreased alveolar macrophage activity.

**Answer: A**

**72. Which of the following increases airway resistance?**

- A. Lung volume at TLC.
- B. Acetylcholine.
- C. Sympathetic Stimulation.
- D. Hypoxia.
- E. Nitric Oxide.

**Answer: B**

**73. The similarity between obstructive and restrictive lung diseases?**

- A. Decreased residual volume.
- B. Decreased FEV1.
- C. Decreased FEV1/FVC ratio.
- D. Decreased lung compliance.
- E. Increased total lung capacity.

**Answer: B**

**74. A 68-year-old man comes to the clinic complaining of difficulty breathing. The patient suffered a myocardial infarction involving the anterior wall of the left ventricle 6 months earlier. Inspiratory crackles are present, particularly at the base of the lungs. Chest radiograph: fluid buildup in the lung space. The primary cause of pulmonary edema in the above patient is?**

- A. Decreased Pulmonary artery pressure.
- B. Increased pulmonary venous pressure.
- C. Decreased pulmonary wedge pressure.
- D. Decreased transpulmonary pressure.
- E. Increased alveolar pressure.

**Answer: B**

**75. Doubling alveolar ventilation will cause ?**

- A. Alveolar hypercapnia.
- B. Alveolar hypoxemia.
- C. Increased tissue  $O_2$  utilization.
- D. Alveolar hypocapnia.

**Answer: D**

**76. The amount of air a person can inhale forcefully?**

**Answer: Inspiratory reserve volume.**

**Yaqeen batch's questions**

**77. A pulmonary physiologist notes that the lung characteristics of individuals who lack surfactant and those with pulmonary fibrosis are similar. Which of the following occurs in patients who lack surfactant but not in patients with pulmonary fibrosis?**

- A. Collapse of small alveoli and expansion of large alveoli
- B. Decreased lung compliance.
- C. Decreased total lung capacity.
- D. Increased work of breathing.
- E. Decreased vital capacity.

**Answer: A**

**78. Which of the following would likely increase pulmonary vascular resistance?**

- A. Decreasing lung volume from the total lung capacity (TLC) to Functional residual capacity (FRC).
- B. Alveolar hypoxia.
- C. Increased release of nitric oxide (NO) by endothelial cells.
- D. Increasing cardiac output.
- E. Increasing parasympathetic stimulation.

**Answer: B**

**79. Which of the following would be expected to cause increased static lung compliance (i.e., shift the pulmonary pressure-volume curve upward and to the left)?**

- A. A relative lack of functional pulmonary surfactant.
- B. Interstitial alveolar fibrosis.
- C. Pulmonary vascular congestion.
- D. Emphysema.
- E. Atelectasis.

**Answer: D**

**80. Which of the following would likely increase pulmonary vascular resistance?**

- A. Decreasing lung volume from the total lung capacity (TLC) to Functional residual capacity (FRC).
- B. Alveolar hypoxia.
- C. Increased release of nitric oxide (NO) by endothelial cells.
- D. Increasing cardiac output.
- E. Increasing parasympathetic stimulation.

**Answer: B**

**81. Which of the following would be expected to cause increased static lung compliance (i.e., shift the pulmonary pressure-volume curve upward and to the left)?**

- A. A relative lack of functional pulmonary surfactant.
- B. Interstitial alveolar fibrosis.
- C. Pulmonary vascular congestion.
- D. Emphysema.
- E. Atelectasis.

**Answer: D**

**82. People living at high altitudes have increased levels of 2,3-bisphosphoglycerate (BPG) in their red blood cells. This high level of BPG will?**

- A. increase the Bohr effect and make oxygen more available to the tissue.
- B. bind to hemoglobin and reduce the amount of oxygen available to the tissue.
- C. bind to hemoglobin and increase the amount of oxygen available to the tissue.
- D. shift the oxygen-hemoglobin dissociation curve to the left and reduce the amount of oxygen available to the tissue.
- E. shift the oxygen-hemoglobin dissociation curve to the right and reduce the amount of oxygen available to the tissue.

**Answer: C**

**83. Which of the following is true during normal tidal inspiration?**

- A. Intracellular pressure is equal to the elastic recoil pressure.
- B. The volume in the lungs is less than the functional residual capacity (FRC).
- C. Alveolar pressure equals atmospheric pressure.
- D. Transpulmonary pressure is decreased.
- E. Intrapleural pressure is more negative than it is during expiration.

**Answer: E**

**84. A 150-lb (68Kg) patient, scheduled for abdominal surgery is sent for preoperative evaluation and testing. His chest x-ray is normal, and pulmonary function results on room air show the following: Tidal volume = 600 mL Respiratory rate = 12/min Vital capacity = 5000 mL PaO<sub>2</sub> = 90 mm Hg PaCO<sub>2</sub> = 40 mm Hg PECO<sub>2</sub> = 28 mm Hg. The alveolar ventilation of this patient is approximately?**

- A. 5000 ml/min.
- B. 6200 ml/min.
- C. 6500 ml/min.
- D. 7200 ml/min.
- E. 7500 ml/min.

**Answer: A**

**85. Compared to the systemic circulation, the pulmonary circulation has?**

- A. Higher arterial pressure.
- B. less distensible vessels.
- C. Higher capillary plasma protein osmotic pressure [zh 1].
- D. Greater control of vascular resistance by the autonomic nervous system.
- E. Lower vascular resistance.

**Answer: E**

**86. Choose the incorrect phrase for smoking?**

- A. It damages the lungs' natural defenses against disease.
- B. Smoking cessation limiting exposure to air pollutants.
- C. Smoking damages the cilia of the bronchus.
- D. Smoking associated with lung cancer.
- E. It increases the permeability of the respiratory system.

**Answer: E**

**87. A 50-year-old man is admitted emergently to the hospital because of severe chest pain. A Swan-Ganz catheter floated into the pulmonary artery, the balloon is inflated, and the pulmonary wedge pressure is measured. The pulmonary wedge pressure is used clinically to monitor which pressure?**

- A. Left atrial pressure.
- B. Left ventricular pressure.
- C. pulmonary artery diastolic pressure.
- D. Pulmonary artery systolic pressure.
- E. Mean pulmonary capillary pressure.

**Answer: A**

**88. A 68-year-old man comes to the clinic complaining of difficulty breathing. The patient suffered a myocardial infarction involving the anterior wall of the left ventricle 6 months earlier. Inspiratory crackles are present, particularly at the base of the lungs. Chest radiograph: fluid buildup in the lung space. The primary cause of pulmonary edema in the above patient is?**

- A. Decreased Pulmonary artery pressure.
- B. Increased pulmonary venous pressure.
- C. Decreased pulmonary wedge pressure.
- D. Decreased transpulmonary pressure.
- E. Increased alveolar pressure.

**Answer: B**

**89. A 20-year-old woman has a pulmonary compliance of 0.2 L/cm H<sub>2</sub>O and a pleural pressure of 5 cm H<sub>2</sub>O. What is the pleural pressure (in cm H<sub>2</sub>O) when the woman inhales 1.0 liter of air?**

- A. -6.
- B. -7.
- C. -8.
- D. -9.
- E. -10.

**Answer: D**

**90. A 66 years old patient presented with dyspnea with intermittent bouts of coughing. Auscultation of the lungs reveals significant rales. There is localized wheezing and a pleural friction rub. Spiral CT imagining is positive for medium-sized pulmonary embolism. The ventilation/perfusion mismatch is characterized as?**

- A. Physiologic dead space.
- B. Intrapulmonary shunt.
- C. Extrapulmonary shunt.
- D. Hypoxic pulmonary vasoconstriction.
- E. Right to left shunt.

**Answer: A**

**91. Which of the following would be expected to increase the ventilatory response to carbon dioxide, shifting CO<sub>2</sub> Ventilatory response curve to the left?**

- A. Metabolic alkalosis.
- B. Hypoxia.
- C. Deep anesthesia.
- D. Barbiturates.
- E. Slow-wave sleep.

**Answer: B**

**92. Which of the following conditions or circumstances is expected to increase the diffusing capacity (DL) of the lungs?**

- A. Changing from the supine to the upright position.
- B. Increased cardiac output during exercise.
- C. Emphysema.
- D. Anemia.
- E. Diffuse interstitial fibrosis of the lungs.

**Answer: B**

**93. A 16-year-old boy is found unconscious in the street. He has no visible injuries and is taking shallow breaths of 6-8/min. An arterial blood gas shows a pO<sub>2</sub> of 55 mmHg and her pCO<sub>2</sub> is 60 mmHg. Which of the is the cause of the hypoxemia in this patient?**

- A. Decrease binding capacity of Hb.
- B. Intrapulmonary shunt.
- C. Increased dead space ventilation.
- D. Alveolar hypoventilation.
- E. Elevated V/Q ratio.

**Answer: D**

**94. Most of the carbon dioxide transported in the arterial blood is in the form of?**

- A. Dissolved.
- B. Bicarbonate.
- C. Attached to hemoglobin.
- D. Carbamino compounds.
- E. Carboxyhemoglobin.

**Answer: B**

**95. A healthy adult female lies down on her right side and breathes normally. Her right lung, in comparison to her left lung, will be expected to have:**

- A. Lower alveolar PO<sub>2</sub> and a higher alveolar PCO<sub>2</sub>.
- B. Lower blood flow per unit volume.
- C. Less ventilation per unit volume.
- D. Higher ventilation-perfusion ratio.
- E. Larger distended alveoli.

**Answer: A**

**96. A 45-year-old man is admitted with severe right lower lobe pneumonia and is placed on mechanical ventilation. On the 2nd hospital day, his hypoxemia worsens and a repeat chest radiograph shows increased opacities in both lungs. A blood gas reveals a pH of 7.47 and an arterial PO<sub>2</sub> of 55 mm Hg while an echocardiogram demonstrates normal left ventricular function and left atrial size but significantly increased systolic pulmonary artery pressure. Which of the following factor likely accounts for the findings on his echocardiogram?**

- A. Decreased alveolar PO<sub>2</sub>.
- B. Decreased arterial PO<sub>2</sub>.
- C. Decreased sympathetic nervous system activity.
- D. Increased blood pH.
- E. Increased pulmonary venous pressure.



**Answer: A**

**97. If the ventilation-perfusion ratio of a lung unit is decreased by partial bronchial obstruction while the rest of the lung is unaltered, the affected lung unit will show which of the following?**

- A. Increased alveolar PO<sub>2</sub>.
- B. Decreased alveolar PCO<sub>2</sub>.
- C. No change in alveolar PO<sub>2</sub>.
- D. A rise in pH of end-capillary blood.
- E. Increase shunt fraction.

**Answer: E**

### Previous batch's questions

**98. As regard Apex of the lung?**

- A. IPP more negative- 10cm H<sub>2</sub>O.
- B. IPP-3cm H<sub>2</sub>O.
- C. Small resting volume.
- D. Less expanded alveoli.
- E. Only Third and Fourth.

**Answer: A**

**99. Normal V/Q ratio?**

- A. 3.3.
- B. 0.6.
- C. 0.8.
- D. Unity.
- E. None of the above.

**Answer: C**

**100. The pressure of CO<sub>2</sub> in the blood entering the pulmonary capillaries?**

- A. 46mm Hg.
- B. 40mmHg.
- C. 100mm Hg.
- D. 46 ml min .Hg.
- E. 400ml min .mmHg.

**Answer: A**

**101. Diffusion coefficient for CO<sub>2</sub> through the tissue sheet is?**

- A. 20 times slower than O<sub>2</sub>.
- B. 20 times faster than O<sub>2</sub>.
- C. as equal as O<sub>2</sub>.
- D. 400 ml min mmHg.
- E. 1200ml min mmHg.

**Answer: B**

**102. The pressure gradient driving CO<sub>2</sub> from blood to alveolus is?**

- A. 6 mmHg.
- B. 60 mmHg.
- C. 46mmHg.
- D. 40mmHg.
- E. 100mmHg.

**Answer: A**

**103. The pulmonary capillary pressure is about?**

- A. 25mmHg.
- B. 15mmHg.
- C. 8mmHg.
- D. 5 mmHg.
- E. 20mmHg.

**Answer: C**

**104. During rest, the amount of O<sub>2</sub> given to the tissues?**

- A. 5ml.
- B. 250ml O<sub>2</sub>/min.
- C. 4ml.
- D. 200ml/min.
- E. None of the above.

**Answer: B**

**105. Factors that increase 2,3DPG?**

- A. Acidosis.
- B. Anemia C-Chronic hypoxia.
- C. High altitude.
- D. B & C.

**Answer: D**

**106. HbCO is named?**

- A. Met hemoglobin.
- B. Carboxyhemoglobin.
- C. Fetal hemoglobin.
- D. Saturated hemoglobin.
- E. None of the above.

**Answer: B**

**107. The main form of carriage of CO<sub>2</sub> in blood?**

- A. Dissolved.
- B. Bicarbonate.
- C. Carbamino compounds.
- D. Tidal CO<sub>2</sub>.
- E. HbCO.

**Answer: B**

**108. Which of the following will decrease Hb saturation?**

- A. Low PH.
- B. Increase CO<sub>2</sub>.
- C. ncrease 2.3DPG.
- D. All of the above.
- E. None of the above.

**Answer: D**

**109. Which of the following values is above normal in a patient suffering from severe respiratory muscle weakness?**

- A. Tidal Volume.
- B. Oxyhemoglobin Saturation.
- C. Vital Capacity
- D. Arterial PH.
- E. Arterial PCO<sub>2</sub>.

**Answer: E**

**110. A patient suffering from chronic respiratory failure?**

- A. Shows an increased respiratory sensitivity to CO<sub>2</sub>.
- B. His ventilation doesn't increase in response to decreased O<sub>2</sub>.
- C. Should be given 100% O<sub>2</sub> on admission to hospital.
- D. Must have been given O<sub>2</sub> if his pCO<sub>2</sub> greatly increased.
- E. Shows an increased blood pH.

**Answer: D**

**111. Oxygen therapy is of great benefit in which of the following types of hypoxia?**

- A. Hypoxia caused my anemia.
- B. Hypoxia caused by circulatory deficiency.
- C. Shunting of un-oxygenated venous blood past the lungs.
- D. Tissue metabolic enzyme system is incapable of using O<sub>2</sub>.
- E. Hypoxia caused by impaired alveolar membrane diffusion.

**Answer: E**

**112. All of the following parameters are decreased on ascending to high altitude except?**

- A. Arterial pO<sub>2</sub>.
- B. Alveolar air pCO<sub>2</sub>.
- C. Hb % saturation.
- D. Systemic arterial pH.
- E. Arterial O<sub>2</sub> content.

**Answer: D**

**113. Which of the following statements about the transport of O<sub>2</sub> & CO<sub>2</sub> by the blood is true?**

- A. Most CO<sub>2</sub> is transported in the dissolved form.
- B. The % saturation of hemoglobin with O<sub>2</sub> will increase if the arterial pCO<sub>2</sub> is increased.
- C. A decrease in the % saturation of hemoglobin with O<sub>2</sub> WHEN increases CO<sub>2</sub> transport.
- D. In anemia both arterial pO<sub>2</sub> and O<sub>2</sub> content are decreased.
- E. The reduced arterial pO<sub>2</sub> in an individual living at high altitude is due to impairment in O<sub>2</sub> diffusion.

**Answer: C**

**114. In a standing person which of the following is higher at the apex of the lung than at the base?**

- A. Blood flow.
- B. Ventilation.
- C. Alveolar pCO<sub>2</sub>.
- D. Lung compliance.
- E. Physiological dead space.

**Answer: E**

**115. At the end of normal quiet expiration before the start of inspiration the lungs are in?**

- A. Residual volume (RV).
- B. Expiratory reserve volume (ERV).
- C. Functional residual capacity (FRC).
- D. Inspiratory reserve volume (IRV).
- E. Total lung capacity (TLC).

**Answer: C**

**116. When patient inhales 500ml above FRC, what happens to lung, chest, lung chest system?**

- A. Chest expand.
- B. Lung collapse.
- C. System collapse.
- D. All the above.
- E. None of the above.

**Answer: A**

**117. Surfactants prevent lung collapse by?**

- A. Decreasing the surface tension within alveoli.
- B. Increasing surface tension within alveoli.
- C. Decreasing pulmonary circulation.
- D. Second and first.
- E. None of the above.

**Answer: A**

**118. Oxygen's percentage in the atmosphere is \_\_\_\_ than CO<sub>2</sub>'s percentage. And its solubility in water is \_\_\_\_ than CO<sub>2</sub>'s solubility?**

- A. Lower, higher.
- B. Higher, lower.
- C. Lower, lower.
- D. Higher, higher.
- E. None of the above.

**Answer: B**

**119. which of the following is the most factor that can increase the volume of the air that enters into the lung?**

- A. Increase gradient partial pressure.
- B. Increase in action potential.
- C. Both A & B.
- D. None of the above.
- E. All of the above.

**Answer: A**

**120. Which of the following is true when PO<sub>2</sub> is decreased?**

- A. Pulmonary arteries constrict while systemic arteries dilate.
- B. Pulmonary arteries dilate while systemic arteries constrict.
- C. Both pulmonary arteries and systemic arteries constrict.
- D. Both pulmonary arteries and systemic arteries dilate.
- E. All of the above.

**Answer: A**

**121. Intrapleural pressure is all except:**

- A. Always less than alveolar pressure.
- B. At normal quiet expiration = - 5cm H<sub>2</sub>O.
- C. Always negative pressure.
- D. Prevent the venous return.
- E. None of the above.

**Answer: D**

**122. Which of the following does not play a role in inspiration?**

- A. Relaxation of diaphragmatic muscle.
- B. Relaxation of external intercostal muscle.
- C. Contraction of internal intercostal muscle.
- D. Abdominal muscle.
- E. All of the above.

**Answer: E**

**123. Fick's law depends on multiple factors. Which one of them will have the most prominent effect?**

- A. Distance.
- B. Molecular size.
- C. Partial p gradient.
- D. Temperature.
- E. Humidity.

**Answer: C**

**124. Which of the following is correct about surfactant?**

- A. Decrease surface tension in distal area during inspiration.
- B. Decrease surface tension during expiration in proximal area.
- C. It is produced by type 2 cell.
- D. It is increase the amount of air during inspiration.
- E. None of the above.

**Answer: C**

**125. Which of the following decreases diffusion?**

- A. Decrease in surface area.
- B. Increased fluid in lung.
- C. Decreased pressure coefficient.
- D. All of the above.
- E. None of the above.

**Answer: D**

**126. The Primary force responsible for air moving into the lungs during inhalation is?**

- A. Atmospheric pressure.
- B. Muscular spasm?
- C. Reduced surface tension inside the lung.
- D. Pressure difference atmospheric-intrapulmonary.
- E. Muscular relaxation.

**Answer: D**

**127. Even after forceful exhalation, a certain volume of air remains in the lung. This volume is called?**

- A. Tidal volume.
- B. Expiratory reserve volume.
- C. Vital capacity.
- D. Residual volume.
- E. Expiratory reserve volume.

**Answer: D**

**128. Intraplural pressure:**

- A. Is less than atmospheric pressure ONLY during inspiration.
- B. Becomes equal to the external environmental air pressure by the action of respiratory muscle.
- C. Is the difference between the pressure in the plural cavity and that within the lung alveoli.
- D. Is always less than atmospheric pressure.
- E. Increase when the diaphragm and external intercostal muscle contract.

**Answer: D**

**129. Physiology defines the term "pulmonary ventilation" as:**

- A. Breathing due to movement of ribs.
- B. The expansion of the alveoli due to pressure difference.
- C. The movement of the atmospheric air to the lung.
- D. Breathing using the diaphragm only.
- E. Gas exchange between the atmosphere and lung alveoli.

**Answer: E**

**130. In the adult human, total lung capacity(TLC) is approximately:**

- A. Equals to 15 liters.
- B. Equals to 9 liters.
- C. Equals to 11 liters.
- D. Equals to 2 liters.
- E. Equals to 6 liters.

**Answer: E**

**131. Vital capacity is:**

- A. The sum of all lung volumes.
- B. Sum of tidal volume plus residual volume.
- C. The inspiratory reserve plus expiratory reserve volume.
- D. The sum of inspiratory reserve volume, tidal volume, and expiratory reserve volume.
- E. The sum Inspiratory capacity to expiratory capacity.

**Answer: D**

**132. Which of the following contains the highest percentage of carbon dioxide:**

- A. Alveolar air.
- B. Pulmonary artery.
- C. Pulmonary veins.
- D. Interstitial fluid.
- E. Systemic arteries.

**Answer: B**

**133. Rapid forced breathing:**

- A. Is called hyperventilation.
- B. Induced a state of alkalosis.
- C. Induces a state of acidosis.
- D. A and B are correct.
- E. A and C are correct.

**Answer: D**

**134. End of quiet expiration, muscle relaxed and lungs contents are at:**

- A. Residual volume (RV).
- B. Expiratory reserve volume (ERV).
- C. Functional residual capacity (FRC).
- D. Inspiratory reserve volume (IRV).
- E. Total lung capacity (TLC).

**Answer: C**

**135. Surfactant:**

- A. Increases pleural pressure.
- B. Reduces surface tension of the fluid lining the alveoli.
- C. Decreases alveolar pressure.
- D. Makes inspiration more difficult.
- E. Can cause a pneumothorax.

**Answer: B**

**136. Hypoxic hypoxia mainly attributed to?**

- A. Respiratory membrane thickness.
- B. Increased distance between alveolar and capillary distance.
- C. Decrease partial pressure of O<sub>2</sub> in atmosphere.
- D. Increase red blood cells in pulmonary arterioles.
- E. Increase PO<sub>2</sub> in inspired air.

**Answer: C**

**137. A baby girl was born at only 27 weeks of gestation. Shortly following birth, the baby develops increasing difficulty with breathing and hypoxemia, and requires mechanical ventilation. Which of the following factors is likely responsible for respiratory failure in this case?**

- A. Decreased alveolar surfactant concentration.
- B. Increased airway smooth muscle contraction.
- C. Increased airway mucus production.
- D. Increased edema of the airway walls.
- E. Decreased alveolar macrophage activity.

**Answer: A**



**138. The only variable in the following list that cannot be measured with a simple spirometer and stopwatch is?**

- A. Tidal volume.
- B. Respiratory frequency.
- C. Vital capacity.
- D. Functional residual capacity.
- E. Total ventilation.

**Answer: D**

**139. If the blood supply to a lung segment is blocked, which of the following statements is FALSE?**

- A. The alveolar  $P_{O_2}$  in that segment would be almost zero.
- B. The dead space would be increased.
- C. The alveolar  $P_{O_2}$  in that segment would be greater than normal.
- D. The arterial pulmonary pressure would rise.
- E. The ventilation perfusion ratio ( $V_A/Q$ ) in that segment would be zero.

**Answer: E**

**140. Regarding surfactant, all of the following are true except?**

- A. Increases alveolus stability.
- B. Lipid is 80% of the content.
- C. Increases compliance of the lung.
- D. Increase surface tension.

**Answer: D**

**141. Ventilation is:**

- A. Movement of air in and out of the lung and distribution of air within the lung.
- B. Exchange of  $O_2$  between the pulmonary alveolar gas and the blood.
- C. Distribution of blood through the lungs.
- D. Transport of gases from the lungs to the tissues.
- E. All of the above.

**Answer : A**

**142. Local factors causing bronchiolar constriction:**

- A. Histamine.
- B. Leukotrienes.
- C. Adrenaline.
- D. First and second.
- E. Sympathomimetics.

**Answer: D**

**143. All these processes are active except:**

- A. Normal quiet Expiration.
- B. Normal quiet Inspiration.
- C. Forced Inspiration.
- D. Forced Expiration.
- E. Abdominal and Thoracic breathing.

**Answer: A**

**144. Intra-alveolar pressure during normal quiet inspiration is:**

- A. -2.5 cm H<sub>2</sub>O.
- B. -1 cm H<sub>2</sub>O.
- C. +1 cm H<sub>2</sub>O.
- D. -10 cm H<sub>2</sub>O.
- E. +10 cm H<sub>2</sub>O.

**Answer: B**

**145. All these are factors that decrease formation of surfactant except:**

- A. Smoking.
- B. Insulin hormone.
- C. Long term inhalation of pure O<sub>2</sub>.
- D. Glucocorticoid hormones.
- E. Cessation of pulmonary circulation for long time.

**Answer: D**

**146. The surface area of the respiratory membrane:**

- A. 20 sq meter.
- B. 150 sq meter.
- C. 80 - 100 sq meter.
- D. 120 -140 sq meter.
- E. 40 - 60 sq meter.

**Answer: C**

**147. Diffusion through respiratory membrane is directly proportional to?**

- A. Thickness.
- B. Surface area.
- C. Pressure gradient.
- D. Solubility.
- E. Only the second, third and fourth.

**Answer: E**

**148. Which of the following values is above normal in a patient suffering from severe respiratory muscle weakness?**

- A. Tidal Volume.
- B. Oxyhemoglobin Saturation.
- C. Vital Capacity.
- D. Arterial PH.
- E. Arterial PCO<sub>2</sub>.

**Answer: E**

**149. In a standing person which of the following is higher at the apex of the lung than at the base?**

- A. Blood flow.
- B. Ventilation.
- C. Alveolar pCO<sub>2</sub>.
- D. Lung compliance.
- E. Physiological dead space.

**Answer: E**

**150. At the end of normal quiet expiration before the start of inspiration the lungs are in?**

- A. Residual volume (RV).
- B. Expiratory reserve volume (ERV).
- C. Functional residual capacity (FRC).
- D. Inspiratory reserve volume (IRV).
- E. Total lung capacity (TLC).

**Answer: C**

**151. If a person suffered a stab injury and air entered the intrapleural space (pneumothorax), the most likely response would be for the?**

- A. Lung to expand outward and the chest wall to spring inward.
- B. Lung to expand outward and the chest wall to spring outward.
- C. Lung to collapse inward and the chest wall to collapse inward.
- D. Lung to collapse inward and the chest wall to spring outward.
- E. Lung volume to be unaffected and chest wall to spring outward.

**Answer: D**

**152. A person with a tidal volume (TV) of 450 ml has a breathing frequency of 20 breath/min his arterial pCO<sub>2</sub> is 40 mmHg and the pCO<sub>2</sub> of this expired air is 32 mmHg what is the alveolar ventilation?**

- A. 0.090 L/min.
- B. 0.3L/min.
- C. 9.0 L/min.
- D. 7.2 L/min.
- E. 6.4 L/min.

**Answer: D**

**153. The cell that secretes surfactant is?**

- A. Type I pneumocyte.
- B. Pulmonary alveolar macrophage.
- C. Type II pneumocyte.
- D. Lymphocytes.
- E. Mast cells.

**Answer: C**

**154. The work of breathing can be divided into?**

- A. Compliance work.
- B. Airway resistance work.
- C. Tissue resistance work.
- D. All of the above.
- E. Only First and Second.

**Answer: D**

**155. Diffusion depends proportionally on?**

- A. Pressure gradient.
- B. Surface area.
- C. All of the above.

**Answer: C**

**156. The surfactant is secreted by:**

- A. Type II pneumocyte.
- B. Type I pneumocyte.

**Answer: A**

**157. The major muscle for inspiration is?**

- A. Diaphragm.
- B. Scalene.
- C. External intercostal.

**Answer: A**

**158. Surfactant synthesis is decreased by?**

- A. Glucocorticoid.
- B. Smoking.
- C. Inhalation pure oxy.
- D. B & C.

**Answer: D**

**159. Deficiency in surfactant causes:**

- A. Prevent collapse.
- B. Increase interstitial fluid in lung parenchyma.
- C. Make alveolar pressure equal in all alveoli.

**Answer: B (It will cause edema.)**

**160. Which of the following remains in the lung after quiet expiration?**

- A. Tidal volume.
- B. Vital capacity.
- C. ERV.
- D. RV.
- E. FRC.

**Answer: E**

**161. The events during inspiration in order:**

- A. Contraction of diaphragm.
- B. Decrease pleural pressure.
- C. Decrease alveolar pressure.
- D. Air enter into the alveoli.

**The events are written above in order.**

**162. Which of the following can't be measured via spirometer?**

- A. Inspiratory reserve volume.
- B. Expiratory reserve volume.
- C. Residual volume.
- D. Tidal volume.

**Answer: C**

**163. The ODD muscle in respiration?**

- A. Diaphragm.
- B. Internal intercostal Ms.
- C. External intercostal Ms.

**Answer: A**

**164. The value which cannot be measured by spirometry is?**

**Answer: RV.**

**165. The compliance of the lung is?**

**Answer: the change in lung volume per unit change in pressure.**

**166. Comparing with systemic circulation, the pulmonary circulation has?**

**Answer: lower resistant.**

**167. In comparison with alveolar air, mixed expired  $PCO_2$ ,  $PO_2$ ,  $PH_2O$  is?**

**Answer :  $PCO_2$  decrease ,  $PO_2$  increase , same  $H_2O$ .**

**168. Muscle that increase vertical diameter?**

**Answer: Contraction of diaphragm.**

**169. Perfusion is?**

**Answer: blood through lungs.**

**170.  $N_2$  measurements after one pure  $O_2$  breathe used to measure which of the following ?**

**Answer: Anatomical Dead space.**

**171.The role of surfactants?**

**Answer: decrease surface tension in alveoli**



# لجنة الطب البشري

رؤية تُنير دُرُوبَ تميِّزكم

**Second Year - Second Semester**

Hashemite University

## Anatomy

**Dr. Mohammad Fathi**

Hashemite University

H • U • M

Medical School Committee

## Vein batch's questions

**172. Whats the location of SVC?**

- A. Right lung
- B. Left lung

**Answer: A**

**173. What is the Sensory supply for mucosa below vocal cords.**

**Answer: Recurrent laryngeal nerve**

## Athar batch's questions

**174. Which of the following is correct?**

- A. Trachea bifurcates opposite to vertebrae at level of T4-T5.
- B. SVC is related to the left side of trachea.
- C. Recurrent laryngeal is in groove between the middle constrictor and inferior constrictor.
- D. Right bronchus divides intrapulmonary.
- E. Right bronchial artery receives from 3rd posterior right intercostal artery.

**Answer: A and E**

**175. 2-year-old child suffering from unilateral wheezy chest and repetitive cough, after examination his doctor recommended chest X-ray. The X-ray revealed foreign body. The foreign body most likely lodged in which one of the followings?**

- A. Left lower lobar bronchus.
- B. Left superior segmental bronchus.
- C. Right superior segmental bronchus.
- D. Left main bronchus.
- E. Right lower lobar bronchus.

**Answer: E**

**176. Regarding the Bronchopulmonary segments of the superior lobe of right lung, which one of the following is correct?**

- A. Anterior lingular and posterior lingular.
- B. Apical, anterior and posterior.
- C. Medial basal, lateral basal and posterior basal.
- D. Medial, anterior and posterior.
- E. Medial, lateral and anterior.

**Answer: B**



**177. A doctor decides to perform a surgery where the middle lobe of the right lung will be incised. Which of the following bronchopulmonary segments are removed?**

- A. Anterior lingular and posterior lingular.
- B. Apical, anterior and posterior.
- C. Medial basal, lateral basal and posterior basal.
- D. Medial, anterior and posterior.
- E. Medial and lateral.

**Answer: E**

**178. 2-year-old child suffering from unilateral wheezy chest and repetitive cough, after examination his doctor recommended chest X-ray. The X-ray revealed foreign body. The foreign body most likely lodged in which one of the followings?**

- A. Left lower lobar bronchus.
- B. Left superior segmental bronchus.
- C. Right superior segmental bronchus.
- D. Left main bronchus.
- E. Right lower lobar bronchus.

**Answer: E**

**179. The roof of nasal cavity is formed by which one of the following bones?**

- A. Ethmoid.
- B. Maxillary.
- C. Palatine.
- D. Vomer.
- E. Zygomatic.

**Answer: A**

**180. The bulla ethmoidalis receives opening of which one of the following paranasal sinuses?**

- A. Anterior ethmoid.
- B. Frontal
- C. Middle ethmoid.
- D. Posterior ethmoid.
- E. Sphenoid.

**Answer: C**

**181. The laryngeal mucosa below vocal cords supplied by which one of the following nerves?**

- A. Cranial accessory.
- B. Glossopharyngeal.
- C. Internal laryngeal.
- D. Recurrent laryngeal.
- E. Superior laryngeal.

**Answer: D**

**182.Regarding the Bronchopulmonary segments of the superior lobe of right lung, which one of the following is correct?**

- A. Anterior lingular and posterior lingular.
- B. Apical, anterior and posterior.
- C. Medial basal, lateral basal and posterior basal.
- D. Medial, Anterior and posterior.
- E. Medial, lateral and Anterior.

**Answer: B**

### Yaqeen batch's questions

**183.Regarding the right lung, which one of the following is correct?**

- A. Arch of the aorta related above its hilum.
- B. Has cardiac notch.
- C. Has eparterial bronchus.
- D. Has lingula.
- E. Is smaller than the left.

**Answer: C**

**184.Which one of the following structures passing through the sinus of Morgagni of the pharynx?**

- A. Ascending pharyngeal artery.
- B. Glossopharyngeal nerve.
- C. Internal laryngeal nerve.
- D. Recurrent laryngeal nerve.
- E. Stylopharyngeus muscle.

**Answer: A**

**185.Regarding trachea, which one of the following is correct?**

- A. Divides into right and left bronchi at level between 3rd and 4th thoracic vertebrae.
- B. Direct continuation of the larynx at the level of C4 vertebra.
- C. Posterior relation is the esophagus.
- D. Left internal laryngeal nerve pass in groove between it and esophagus.
- E. Left bronchus is in line with it.

**Answer: C**

**186.Which of the following is false about the olfactory epithelium?**

- A. It's a pseudostratified epithelium.
- B. The olfactory neurons are bipolar.
- C. Damage to the epithelium will lead to permanent loss of smell.
- D. Serous glands are found in the lamina propria.
- E. It could be found in the roof of the nasal cavity.

**Answer: C**

**187.Regarding surface anatomy of pleura, The inferior margin crossing the midclavicular line at which one of the following ribs?**

- A. 6th.
- B. 7th.
- C. 8th.
- D. 9th.
- E. 10th.

**Answer: C**

**188.Which of the following cells of the respiratory epithelium is incorrectly matched to its feature/function?**

- A. Columnar cells — Cilia and microvilli.
- B. Goblet cells — Thin rim of microvilli surrounds the apical part.
- C. Granule cells — Processes reach the basal lamina.
- D. Brush cells — Associated with nerve endings.
- E. Basal cells — Act as stem cells.

**Answer: C**

**189.Which of the following is true about the histology of the larynx?**

- A. The thyroid cartilage of the larynx is elastic.
- B. The elastic vocal ligament is found within the vestibular folds.
- C. The lingual surface of the epiglottis is covered by respiratory epithelium.
- D. Several glands are found in the lamina propria of the vocal folds.
- E. Vocal folds appear white through a laryngoscope due to absence of blood vessels.

**Answer: E**

**190. Which one of the following laryngeal muscle developed from 4th pharyngeal arch?**

- A. Aryepiglottic.
- B. Cricothyroid.
- C. Thyroarytenoid.
- D. Thyroepiglottic.
- E. Transverse arytenoid.

**Answer: B**

### **Hope batch's questions**

**191.Which of the following is false about the histology of the trachea?**

- A. The gaps of the tracheal cartilages are bridged by skeletal muscles.
- B. The epithelium contains goblet cells.
- C. The cartilages of the trachea are hyaline.
- D. Elastic fibers separate the lamina propria from the submucosa.
- E. The outermost layer of the wall is formed of connective tissue.

**Answer: A**

**192. Which of the following muscles act active abductor of the vocal cords?**

- A. Cricothyroid.
- B. Posterior cricoarytenoid.
- C. Thyroepiglottic muscle.
- D. Oblique arytenoid.
- E. Transverse arytenoid.

**Answer: B**

**193. Functions of dead space include All, except?**

- A. Conduction of air to and from alveoli.
- B. Gas exchange between Lungs and atmosphere.
- C. Filtration of inspired air.
- D. Phonation.
- E. Secretion of Antibodies.

**Answer: B**

**194. The cardiac impression on the mediastinal surface of the left lung is related to the?**

- A. Right atrium.
- B. Right ventricle.
- C. Left atrium.
- D. Left ventricle.
- E. The 2nd and 4th above.

**Answer: D**

**195. Bronchioles are?**

- A. Cartilage.
- B. Cilia.
- C. Smooth muscles.
- D. Goblet cells.
- E. Glands.

**Answer: C**

**196. The middle (horizontal) part of the roof of the nose is formed by the?**

- A. Frontal bone.
- B. Nasal bone.
- C. Cribriform plate of the ethmoid bone.
- D. Sphenoid bone.

**Answer: C**

**197. The lingula is?**

- A. A thin projection of the left upper lobe above the cardiac notch.
- B. A thin projection of the left upper lobe below the cardiac notch.
- C. A thin projection of the right upper lobe above the cardiac notch.
- D. A thin projection of the right upper lobe below the cardiac notch.
- E. An occasional extra lobe in the left lung.

**Answer: B**

### Previous batch's questions

**198. The cardiac impression on the right lung is related to the?**

- A. Right atrium.
- B. Right ventricle.
- C. Left atrium.
- D. Left ventricle.
- E. Aorta.

**Answer: A**

**199. The thyrohyoid membrane is pierced by the?**

- A. Vagus nerve and superior thyroid artery.
- B. Recurrent laryngeal nerve and inferior thyroid artery.
- C. Superior laryngeal nerve and superior laryngeal artery.
- D. External branch of superior laryngeal nerve and superior laryngeal artery.
- E. Internal branch of superior laryngeal nerve and superior laryngeal artery.

**Answer: E**

**200. The inferior meatus of the nose contains the opening of the?**

- A. Anterior ethmoidal air sinus.
- B. Nasolacrimal canal.
- C. Posterior ethmoidal air sinus.
- D. Maxillary sinus.
- E. Frontal sinus.

**Answer: B**

**201. The constrictor muscle of the larynx receive their motor nerve supply from?**

- A. Glossopharyngeal nerve.
- B. Hypoglossal nerve.
- C. Cranial accessory nerve.
- D. Sympathetic trunk.
- E. Vagus nerve.

**Answer: C**

**202. All of the following concerning the lung is correct EXCEPT?**

- A. Inhaled foreign bodies most frequently enter the right lung.
- B. The left lung is in direct contact with the arch of the aorta and the descending aorta.
- C. There are no lymph nodes within the lung.
- D. The structures of the lung receives its blood supply from the bronchial arteries.
- E. The costodiaphragmatic recesses are lined with parietal pleura.

**Answer: C**

**203. Which is the correct order, from superficial to deep, of the following five structures?**

- A. Parietal pleura.
- B. Visceral pleura.
- C. Pleural cavity.
- D. Lung.
- E. All of thoracic Cavity.

**Answer: E > A > C > B > D**

**204. Most Inspired particles such as dust fail to reach the Lung because of the?**

- A. Ciliated mucous lining in the nose.
- B. Pores structure of the nasal conchae.
- C. Abundant blood supply to nasal mucosa.
- D. Action of the epiglottis.
- E. None of the above.

**Answer: A**

**205. All intrinsic muscles of the larynx are supplied by the recurrent laryngeal nerve except the?**

- A. Interarytenoid muscle.
- B. Posterior cricoarytenoid muscle.
- C. Thyroarytenoid muscle.
- D. Cricothyroid muscle.
- E. Lateral Cricothyroid.

**Answer: D**

**206. Which is correct about Trachea?**

- A. It has C shaped cartilage rings.
- B. It is 18 cm long and it is covered by complete cartilage rings.
- C. It is empty anteriorly because of the presence of the Esophagus.

**Answer: A**

**207. Stab wound to the back from right lung to the diaphragmatic muscle, part that will be mostly affected?**

- A. Superior lobe.
- B. Medial lobe.
- C. Inferior lobe.
- D. Cardiac notch.

**Answer: C**

**208. Which of the following structures is posteriorly related to the root of the right lung?**

- A. Esophagus.
- B. Trachea.
- C. Descending thoracic aorta.
- D. Phrenic nerve.
- E. Vagus nerve.

**Answer: A**

**209. Which of the following is seen above the root of the left lung?**

- A. Arch of the azygos vein.
- B. Pulmonary trunk.
- C. Aortic arch.
- D. Superior vena cava.
- E. Brachiocephalic vein.

**Answer: C**

**210. Which of the following nerves pierces the gap below the inferior constrictor piercing the pharyngeal wall to enter the larynx?**

- A. Internal laryngeal.
- B. External laryngeal.
- C. Recurrent laryngeal.
- D. Superior laryngeal.
- E. Vagus.

**Answer: C**

**211. The following structures pass through the gap between superior and middle constrictor EXCEPT the?**

- A. Stylohyoid.
- B. Stylopharyngeus muscle.
- C. Glossopharyngeal nerve.
- D. Above vocal nerve.

**Answer: D**

**212. The main blood supply of the cervical part of the trachea is from the?**

- A. Superior thyroid artery.
- B. Inferior thyroid artery.
- C. Bronchial arteries.
- D. Esophageal arteries.
- E. Aorta.

**Answer: B**

**213. Cartilage disappears from respiratory passages at the level of the?**

- A. Primary bronchus.
- B. Secondary bronchi.
- C. Tertiary bronchi.
- D. Terminal bronchiole.
- E. Respiratory bronchiole.

**Answer: D**

**214. The mucous membrane of the larynx below the level of the vocal cord is supplied by?**

- A. External branch of the superior pharyngeal nerve.
- B. Hypoglossal nerve.
- C. Internal branch of the superior laryngeal nerve.
- D. Lingual nerve.
- E. Recurrent laryngeal nerve.

**Answer: E**

**215. A patient with fluid in his pleural cavity stands up, this fluid tends to pass down to obliterate" which one of the followings?**

- A. Costomediastinal recess.
- B. Costodiaphragmatic recess.
- C. epiarterial bronchus.
- D. Transverse fissure.
- E. Cardiomediastinal angle.

**Answer: B**

**216. 2 years old child suffering from unilateral wheezy chest and repetitive cough, after examination his doctor recommended chest X-ray. The X-ray revealed foreign body. The foreign body most likely lodged in which one of the followings?**

- A. Left main bronchus.
- B. Right superior segmental bronchus.
- C. Left superior segmental bronchus.
- D. Right lower lobar bronchus.
- E. Left lower lobar bronchus.

**Answer : D**

**217. Which one of the following structures passing through the sinus of Morgagni of the pharynx?**

- A. Internal laryngeal nerve.
- B. Recurrent laryngeal nerve.
- C. Stylopharyngess muscle.
- D. Ascending pharyngeal artery.
- E. Glossopharyngeal nerve.

**Answer: D**

**218. Which of the following opens into the inferior nasal meatus?**

**Answer: The nasolacrimal duct.**

**219. All the following true except?**

**Answer: Parietal pleura covers the outer surface of the lung.**

**220. Which is the bony part of nasal septum?**

**Answer: Vomer.**



**221. Which of these doesn't have cartilage?**

**Answer: Bronchiole.**

**222. Above vocal cord, nerve supply is?**

**Answer: Internal laryngeal nerve.**

**223. The muscle responsible for abduction of vocal cord is?**

**Answer: Posterior cricoarytenoid.**

**224. The median part of the roof of the nasal cavity?**

**Answer: Cribriform plate of the ethmoid bone.**

**225. The opening in inferior meatus?**

**Answer: Nasolacrimal.**

**226. Incorrect about the lung?**

**Answer: No lymph nodes within the lung.**

**227. The structure that closes the larynx during food swallowing?**

**Answer: Epiglottis.**

**228. The muscle that relaxes the vocal cords?**

**Answer: Thyroarytenoid.**

**229. The middle roof of the nose is formed by?**

**Answer: Cribriform plate of the ethmoid bone.**

**230. Pharyngeal tonsil is?**

**Answer: Located in the roof of nasopharynx.**

**231. Motor innervation of the pharynx?**

**Answer: Cranial accessory nerve.**

**232. All muscles of the larynx except one are innervated by?**

**Answer: Recurrent laryngeal nerve.**

**233. Tumor of posterior mediastinum will compress which of the following structures?**

**Answer: Esophagus.**

**234. Thoracic wall is lined by?**

**Answer: Costal pleura.**

**235. A person was tapped from the back, left lung, half-way (apex + diaphragmatic surface) which structure of the lung is supposed to be injured?**

**Answer: Inferior lobe.**

**236. Border of palatine tonsils?**

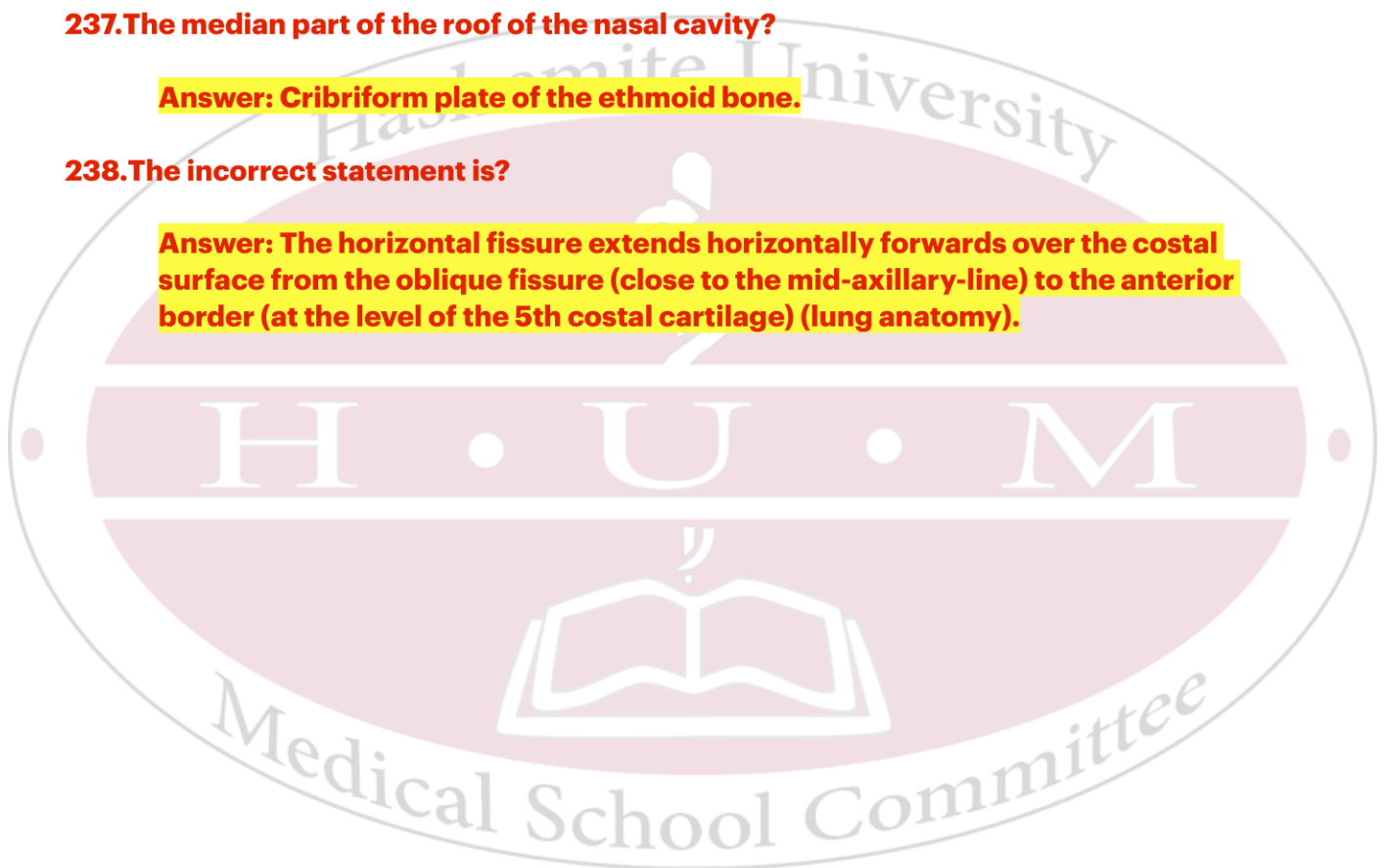
**Answer: Palatopharyngeal fold.**

**237. The median part of the roof of the nasal cavity?**

**Answer: Cribriform plate of the ethmoid bone.**

**238. The incorrect statement is?**

**Answer: The horizontal fissure extends horizontally forwards over the costal surface from the oblique fissure (close to the mid-axillary-line) to the anterior border (at the level of the 5th costal cartilage) (lung anatomy).**



# لجنة الطب البشري

رؤية تُنير دُرُوبَ تميِّزكم

**Second Year - Second Semester**

## **Biochemistry**

**Dr. Walaa Bayoumie**



## Vein batch's questions

**239. In cystic fibrosis the amino acid residue is ?**

**Answer: Phenylalanine**

**240. What is the absent amino acid in the protein associated with CF?**

**Answer : Phenylalanine**

## Athar batch's questions

**241. Cystic fibrosis is an inherited disease. How is Cystic fibrosis passed down through families?**

- A. One parent is a carrier of the Cystic fibrosis gene.
- B. One grandparent is a carrier of the Cystic fibrosis gene.
- C. Both parents are carriers of the Cystic fibrosis gene.
- D. X- linked recessive.
- E. One parent has the disease, and one is normal.

**Answer: C**

**242. Surfactant is rich in which of the following?**

- A. Sphingomyelins.
- B. Dipalmitoyl-phosphatidylcholine.
- C. Phosphatidic acid.
- D. Serine.
- E.  $\alpha$ 1-Antitrypsin.

**Answer: B**

**243. Quantitatively, the most significant buffer system in plasma is?**

- A. Phosphate buffer system.
- B. Carbonic acid-bicarbonate buffer system.
- C. Lactic acid-lactate buffer system.
- D. Protein buffer system.
- E. Hb buffer system.

**Answer: B**

## Yaqeen batch's questions

**244. Quantitatively, the most significant buffer system in plasma is?**

- A. Phosphate buffer system.
- B. Carbonic acid-bicarbonate buffer system.
- C. Lactic acid-lactate buffer system.
- D. Protein buffer system.
- E. Hb buffer system.

**Answer: B**

**245. At pH 7.4, the ratio of bicarbonate: dissolved CO<sub>2</sub> is?**

- A. 1:1.
- B. 10:1.
- C. 20:1.
- D. 40:1.
- E. 50:1.

**Answer: C**

**246. The medical student next to you, realizing that there is an examination question on acid base balance, begins nervously hyperventilating and then faints. You make him breathe into a paper bag and he recovers. If you had drawn and analyzed his blood when he fainted you would have expected to see?**

- A. Decreased pH, decreased pCO<sub>2</sub>
- B. Decreased pH, increased pCO<sub>2</sub>
- C. Elevated pH, decreased pCO<sub>2</sub>
- D. Elevated pH, elevated pCO<sub>2</sub>
- E. Decreased pH, elevated pO<sub>2</sub>.

**Answer: C**

**247. Regarding alpha 1 antitrypsin, which of the following statements is false?**

- A. It is the chief alpha 1 – globulin.
- B. It is an acute phase protein.
- C. It is produced by the hepatocytes and macrophages.
- D. Smoking inactivates alpha 1- antiproteinase.
- E. Deficiency of this protein causes cystic fibrosis.

**Answer: E**

## Previous batch's questions

**248. Quantitatively, the most significant buffer system in plasma is?**

- A. Lactic acid-lactate buffer system.
- B. Protein buffer system.
- C. Phosphate buffer system.
- D. Carbonic acid-bicarbonate buffer system.
- E. pyretic acid-pyruvate buffer system.

**Answer: D**

**249. Which has the highest concentration in surfactant ?**

- A. Phosphatidylglycine.
- B. Neutral lipids.
- C. Phosphatidylethanolamine.
- D. Dipalmitoyl phosphatidyl choline.
- E. Sphingomyelin

**Answer: D**

**250. Cystic fibrosis is inherited as?**

- A. autosomal dominant.
- B. X -linked dominant.
- C. Complex disorder ( multifactorial disorder).
- D. X-linked recessive.
- E. Autosomal recessive

**Answer: E**

**251. The normal concentration of bicarbonate in blood is?**

- A. 34 mmol/L.
- B. 30 mmol/L.
- C. 22 mmol/L.
- D. 20 mmol/L.
- E. 24 mmol/L.

**Answer :E**

**252. Regarding surfactant , all of the following are true except?**

- A. Increases alveolus stability.
- B. lipid is 80% of the content.
- C. Increases compliance of the lung.
- D. None of the above.

**Answer: D**

**253. Which acid doesn't participate in acid-base balance?**

- A. Carbonic acid.
- B. Fatty acid.

**Answer: B**

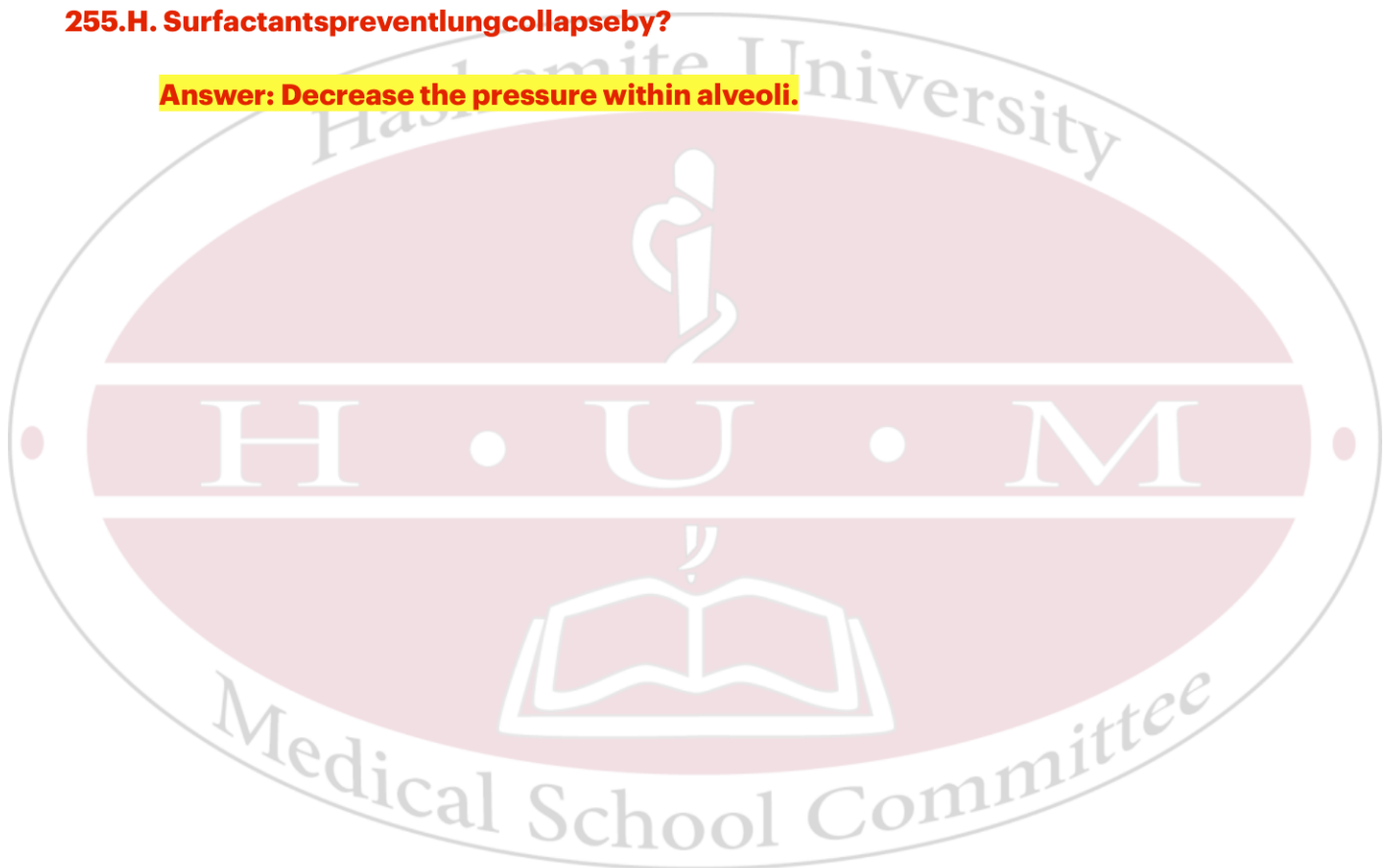
**254. At pH 7.4, the ratio of bicarbonate: dissolved CO<sub>2</sub> is?**

- A. 1 : 1.
- B. 10 : 1.
- C. 20 : 1.
- D. 40 : 1.

**Answer: C**

**255. H. Surfactants prevent lung collapse by?**

**Answer: Decrease the pressure within alveoli.**



# لجنة الطب البشري

رؤية تُنير دُرُوب تميِّزكم

**Second Year - Second Semester**

**pathology**





## Vein batch's questions- Dr. Ola AlKarasneh

**256. What is the fate of primary tuberculosis :**

- A. Progressive to other parts of body
- B. Transforms to miliary tuberculosis
- C. Transforms to systemic miliary TB
- D. Fibrotic formation and late reactivation in few patients

**Answer: D**

## Athar batch's questions - Dr. Ola AlKarasneh

**257. Regarding  $\alpha$ 1-Antitrypsin ( $\alpha$ 1-Antiprotease), which of the following is INCORRECT?**

- A. Its deficiency causes Cystic Fibrosis.
- B. It is the chief  $\alpha$ 1-globulin.
- C. It is an acute-phase protein.
- D. It is produced by hepatocytes and macrophages.
- E. Smoking inactivates  $\alpha$ 1-antiprotease.

**Answer: A**

**258. One of the following is NOT a common direct cause of ARDS?**

- A. Pneumonia.
- B. Sepsis.
- C. Drug overdose.
- D. Aspiration of gastric content.
- E. Severe trauma with shock.

**Answer: C**

**259. 60-Year-Old Female Presenting with Shortness of Breath, barrel-chest, and prolonged expiration. The patient was hyperventilating and suffered from difficulty in expiration. Her FEV1 results decreased, and a chest X-ray shows hyperinflated lung without obvious fibrosis. Regarding the information above, the disease is characterized by?**

- A. Histologically characterized by thinning and destruction of alveolar walls with deformed bronchioles.
- B. The most striking histological feature is the presence of mucus glands hypertrophy.
- C. Alveoli are affected in all types.
- D. The centriacinar type is more common and severe in the lower lobes.
- E. The centriacinar type is mostly related to  $\alpha$ 1- antitrypsin deficiency.

**Answer: A**

**260. Which of the following characteristics best describes bronchiectasis?**

- A. Microbial infection happens after obstruction in most cases.
- B. It happens in the upper lobe of the lung unilaterally.
- C. Microbial infection happens before obstruction in most cases.
- D. Fibrosis of the bronchial and bronchiolar walls in chronic cases.
- E. It is a transient dilatation of bronchi & bronchioles.

**Answer: D**

**261. Which of the following is a feature of airway remodeling?**

- A. Decrease in the size of the submucosal glands.
- B. Decreased submucosal vascularity.
- C. Hypertrophy of the bronchial smooth muscle.
- D. Destruction of the alveoli.
- E. All of the above usually occur.

**Answer: C**

**262. A 50-year-old man, with a history of heavy smoking, presented to the emergency department complaining of a productive cough that had been progressive and continuous for more than 3 months in the last two years. A physical examination revealed an obese man with a slight bluish skin discoloration. PFT showed a decreased FEV1. Choose the correct statement about the patient's disease?**

- A. Reid index is expected to be normal.
- B. It is basically defined based on the morphological features.
- C. The smaller bronchi and bronchioles are never involved.
- D. The airflow obstruction is caused primarily by small airway disease and co-existing emphysema.
- E. Microbial infection has a primary role in the pathogenesis.

**Answer: D**

**Yaqeen batch's questions- Dr. Ghada AlJussaini**

**263. Regarding Pulmonary hypertension, which one of the following is CORRECT?**

- A. Always occurs in patient who has underlying acquired pulmonary disease.
- B. 80% of the cases are familial due to autosomal dominant mode of mutation.
- C. Secondary pulmonary hypertension is idiopathic.
- D. Death can result from right sided heart failure or cor pulmonale.
- E. No pathological changes are seen in pulmonary vasculature.

**Answer: D**

**264. Earliest feature of chronic bronchitis is?**

- A. hypersecretion of mucus to large airways.
- B. Goblet cells increase in small airway.
- C. Obstruction of small bronchi and bronchioles.
- D. hypertrophy of bronchial smooth muscle.
- E. Infiltration of large number of eosinophils.

**Answer: A**

**265. Which of the following statement regarding pneumoconiosis is FALSE?**

- A. Coal worker's pneumoconiosis does not progress to lung cancer.
- B. Coal worker's pneumoconiosis sufferers also have increased incidence of COPD.
- C. Silica is cytotoxic to lung parenchyma.
- D. Asbestos worker only has increased risk of bronchogenic carcinoma if they smoke.
- E. All of the above.

**Answer: D**

**266. The histological findings in asthma include?**

- A. A thinning of the basement membrane of bronchial epithelium.
- B. Edema and an inflammatory infiltrate in bronchial walls with a predominance of neutrophils.
- C. Hypertrophy of bronchial smooth muscles.
- D. Atrophy of bronchial wall muscle.
- E. Metaplasia of ciliated respiratory epithelium.

**Answer: C**

**267. Regarding bronchiectasis choose the Correct answer?**

- A. Is manifested by copious amounts of sterile sputum.
- B. Is due to reversible bronchial dilation.
- C. Is not associated with tubercle bacillus.
- D. Is always associated with abnormal structure of cilia.
- E. is mostly due to obstruction and infection.

**Answer: D**

**268. Good pasture's syndrome is characterized by?**

- A. Necrotizing hemorrhagic interstitial pneumonitis.
- B. Alveolitis.
- C. Patchy consolidation.
- D. Pulmonary edema.
- E. Non-caseating granuloma and hilar lymphadenopathy.

**Answer: A**

**269. The lesion that is commonly associated with HPV 6 and 11 is?**

- A. Laryngeal squamous cell carcinoma.
- B. Laryngeal nodule.
- C. Laryngeal squamous papilloma.
- D. Vocal cord nodule.
- E. Nasopharyngeal carcinoma.

**Answer: C**

**270. All the followings about Idiopathic pulmonary fibrosis are correct EXCEPT?**

- A. Interstitial lung disease can be associated with autoimmune or inflammatory disease as inflammatory bowel disease.
- B. Chemotherapy as (methotrexate toxicity) might associated with chronic interstitial pneumonia and non-specific interstitial pneumonia (NSIP).
- C. Scleroderma cause pulmonary hypertension and lung involvement with pulmonary fibrosis that is among primary cause of mortality.
- D. The term UIP is often used interchangeably with idiopathic pulmonary fibrosis (IPF), but other clinical conditions might also associated with UIP , including collagen vascular disease, drug toxicity, chronic hypersensitivity pneumonitis, asbestosis, familial IPF, and Hermansky-Pudlak syndrome.
- E. Idiopathic pulmonary fibrosis of unknown etiology considered to be good responsive to Oxygen therapy and steroid treatment with good prognostic outcome.

**Answer: E**

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**Previous batch's questions**

**271. Increased Reid index is a feature of which of the following?**

- A. Bronchiectasis.
- B. Chronic bronchitis.
- C. Emphysema.
- D. Bronchial asthma.

**Answer: B**

**272. Which of the following is a characteristic feature of adult respiratory distress syndrome?**

- A. Interstitial tissue inflammation.
- B. Alveolar septal fibrosis.
- C. Alveolar exudates.
- D. Alveolar damage.
- E. Granulomas formation.

**Answer: D.**

**273. Which one of the following is the Most Correct answer regarding sarcoidosis?**

- A. Is associated with elevated IgM levels.
- B. Is always symptomatic and patient presented with cough and chest pain.
- C. Has classical macroscopic and microscopic features and readily can be diagnosed.
- D. Can be definitively diagnosed clinically.
- E. Is characterized by non caseating granulomas most commonly involving the lung however other organs lymph node, skin and eyes might affected as well.

**Answer: E**

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**274. Most common clinical presentation of sarcoidosis is:**

- A. Respiratory symptoms.
- B. Iridocyclitis.
- C. Generalized Lymphadenopathy.
- D. Diagnosed on chest -X-ray accidentally.
- E. Splenomegaly.

**Answer: D**

**275. Which one of the following is INCORRECT regarding emphysema?**

- A. The first symptom of emphysema is cough with productive mucoid thick sputum.
- B. Centrilobular type is most commonly associated with smoking.
- C. Irregular type although clinically asymptomatic, it is the most common form of emphysema and is associated with scarring in a healed inflammatory diseases.
- D. In bullous emphysema, rupture of large sub pleural blebs or bullae cause pneumothorax.
- E. More than 80% of patients with congenital alpha 1 antitrypsin deficiency develop symptomatic emphysema of panacinar type.

**Answer: A**

**276. A 7-years-old boy accidentally inhales a small peanut, which lodges in one of his bronchi. A chest 32 x-ray reveals the mediastinum to be shifted toward the side of the obstruction. Which of the following pulmonary abnormalities is most likely present in this boy?**

- A. Contraction atelectasis.
- B. Emphysematous buliae.
- C. Interstitial fibrosis.
- D. Compression atelectasis.
- E. Absorptive atelectasis.

**Answer:**

**277. A 27 years old man present with a chronic productive cough ,pertinent medical history is that he has recurrent respiratory tract infection and sinusitis since childhood .He has been married since 6 years with no children. His Seminal analysis show immotile spermatozoa. According to this history and clinical findings which of the following changes is most likely to be found in his lung?**

- A. Abnormal permanent dilation of bronchi in the lung.
- B. Hyaline membrane lining the alveoli in the lung.
- C. Destruction of the alveoli in the base of the lung.
- D. His lung is loaded with carbon laden macrophages.
- E. Hyperplasia of smooth muscle in the bronchioles in the lung.

**Answer: A**

**278. All The following statements are True about asthma EXCEPT?**

- A. Curshmann's spirals and Charcot -Leyden crystals are the characteristic content in the sputum of asthmatic patient.
- B. Aspirin may cause urticaria with bronchospasm and can cause asthma in aspirin sensitive patients.
- C. Hypertrophy of bronchial muscle wall and thickened basement membrane and eosinophilic are found in bronchial asthma.
- D. High serum level of IgE is seen in atopic asthmatic patients.
- E. Bronchiolitis obliterans is a complication of atopic asthma.

**Answer: E**

**279. Not correct about Chronic bronchitis?**

**Answer: Bacterial infection has role in etiology.**

**280. Not complication of bronchiectasis?**

**Answer: Plaques.**

**281. According to pathogenesis of emphysema, it occurs because?**

**Answer: Protease - anti protease imbalance.**

**282. Sarcoidosis:**

**Answer: Multisystem disease of unknown etiology characterized by non-caseating granuloma.**

**283. Occupational exposure to asbestos can cause all the following except?**

**Answer: Lung abscess.**

**284. All the following are correct characteristics of Bronchiectasis except?**

**Answer: Presence of hyaline membrane..**

**285. Heavy smokers with chronic bronchitis, most commonly have?**

**Answer: Centriacinar emphysema.**

**286. The type of emphysema in A-1 Antitrypsin deficiency is?**

**Answer: Panacinar emphysema.**