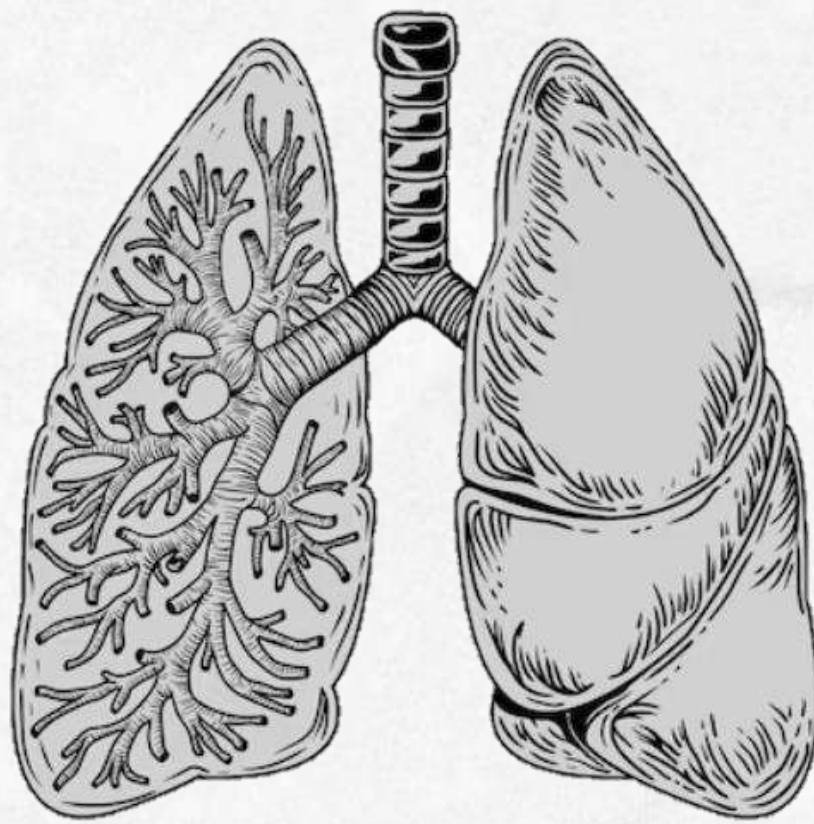


Respiratory system



Past papers – Mid

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Anatomy

Lecture 1

1. After suffering from sinusitis, an oral fistula is formed with :

- A) Maxillary sinuses
- B) Frontal sinuses
- C) Ethmoidal sinuses
- D) Sphenoidal sinuses

ANSWER : A

2. wrong about nose:

ANSWER : The lateral wall is mainly supplied by long sphenopalatine nerve.

3. paranasal sinuses are supplied by all of the following except:

ANSWER : Inferior alveolar nerve.

4. wrong about The lateral wall of the nose:

- A) Blood supply comes from branches of both the internal and external carotid artery
- B) Innervation through the ophthalmic and maxillary nerves
- C) Venous drainage mainly to the cavernous sinus through a large emissary vein
- D) Lymphatic drainage through the submandibular lymph nodes and retropharyngeal (upper deep cervical) lymph nodes.
- E) All sinuses drain in the middle meatus or infundibulum except the sphenoidal and post ethmoidal sinuses

ANSWER : C

Anatomy

Lecture 1

5. All of the following regarding the maxillary air sinuses are correct EXCEPT:

- A) They open into the middle meatus of the nasal cavity
- B) Located posteriorly to the pterygopalatine fossa
- C) Innervated by branches of the maxillary nerve
- D) Extraction of an upper molar tooth can result in formation of a fistula
- E) Has a bad drainage especially in chronic sinusitis

ANSWER : B

6. Which is wrong about arytenoid cartilage:

- A) It articulates with other 3 cartilages
- B) its mucosa supply by internal laryngeal nerve
- C) it gives an attachment to true vocal cords

ANSWER : A

7. one of the paranasal sinuses is supplied by the superior alveolar nerve:

ANSWER : maxillary air sinus

8. Not associated with the lateral wall of nasal cavity:

ANSWER : horizontal part of palatine bone

Anatomy

Lecture 1

9. Nose bleeding (epistaxis in the Kiesselbach's area) happen because of rupture of:

ANSWER : Nasopalatine artery (Long sphenopalatine)

10. Which of the following isn't a bony support to the lateral wall of the nose:

ANSWER : medial pterygoid plate of ethmoid bone

11. Main artery in Kiesselbach's area:

ANSWER : superior labial of facial artery

12. Wrong about sphenoid air sinus:

ANSWER : drains into superior meatus

Anatomy

Lecture 2

13. The post ganglionic parasympathetic innervation to lacrimal gland is through:

- A) Greater palatine nerve
- B) Zygomaticotemporal nerve
- C) Long sphenopalatine nerve

ANSWER : B

14. Greater palatine artery is a branch of:

- A) Maxillary artery in pterygopalatine fossa
- B) Anterior ethmoidal artery
- C) Facial artery
- D) Maxillary artery in lateral nasal wall

ANSWER : A

15. Which of the following arteries crossing the sphenopalatine foramen to supply the lateral wall of the nose?

- A) Greater palatine A
- B) Long sphenopalatine A.
- C) Short sphenopalatine A.
- D) Lesser palatine A.
- E) Superior labial A.

ANSWER : C

16. Which of the following paranasal sinuses causing oral fistula as a complication of infection?

- A) Sphenoid
- B) Anterior ethmoidal
- C) Frontal
- D) Maxillary
- E) Posterior Ethmoidal

ANSWER : D

Anatomy

Lecture 2

17. not from the branches of third part of maxillary artery:

ANSWER : Buccal artery.

18. Regarding pterygopalatine fossa; Maxillary artery and nerve passing in different directions through

- A) pterygomaxillary fissure
- B) Infratemporal fossa
- C) middle cranial fossa
- D) infraorbital canal

ANSWER : A

19. The pterygopalatine ganglion, all the following statements are correct except :

- A) It receives postganglionic sympathetic fibers through the lesser petrosal nerve .
- B) The postganglionic parasympathetic fibers reach the lacrimal gland through the zygomaticotemporal nerve .
- C) It is parasympathetic ganglion lies between the sphenoid and palatine bones .
- D) The postganglionic parasympathetic and sympathetic fibers reach the nasal cavity through the sphenopalatine foramen .
- E) It receives sensory nerves from the maxillary nerve .

ANSWER : D LEC 2

20. All of the following regarding the pterygopalatine fossa are correct

EXCEPT:

- A) The maxillary artery enters it through the pterygomaxillary fissure
- B) The maxillary nerve enters it through foramen rotundum
- C) The parasympathetic ganglia receive preganglionic parasympathetic nerve fibers from the facial nerve
- D) The parasympathetic ganglia receive postganglionic sympathetic nerve fibers through the lesser petrosal nerve
- E) It communicates with the oral cavity below through the palatine canal

ANSWER : D

Anatomy

Lecture 2

21. Wrong about pterygopalatine ganglion:

- A) it receives preganglionic sympathetic through deep petrosal nerve
- B) it located between sphenoid and palatine bones

ANSWER : A

22. Wrong about bone support lateral nasal wall:

- A) ethmoid
- B) lacrimal
- C) maxilla
- D) lateral pterygoid plate of sphenoid

ANSWER : D

23. Wrong about pterygopalatine ganglion:

- A) Is parasympathetic and receives preganglionic fibers from the trigeminal nerve
- B) Receives postganglionic sympathetic from carotid plexus
- C) Send pharyngeal nerve through palatovaginal canal to supply glands in the mucosa of nasopharynx

ANSWER : A

24. Which of the following isn't found in pterygopalatine fossa

- A) Maxillary nerve
- B) Pterygopalatine ganglia
- C) Sphenopalatine nerve
- D) First part of the maxillary artery

ANSWER : D

Anatomy

Lecture 2

25. nerve to pterygoid canal is made of:

ANSWER : greater and deep petrosal nerve

26. Wrong about pterygopalatine ganglion:

ANSWER : parasympathetic postganglionic fibers go to the lacrimal glands through orbital nerves

27. A trauma leads to damage to the pterygoid canal, which nerves are injured?

ANSWER : Greater and deep petrosal nerves

Anatomy

Lecture 3

28. wrong about true vocal cords:

ANSWER : They are thickening of the lower free border of quadrangular membrane.

29. About arytenoid cartilages, all are true except:

- A) it has a facet that articulates with the inferior horn of thyroid cartilage
- B) pyramidal shape and has 3 surfaces
- C) attach to corniculate cartilage at its apex

ANSWER : A

30. All of the following regarding the quadrangular membrane are correct EXCEPT:

- A) Its upper free margin thickens to form the aryepiglottic folds
- B) It's an intrinsic membrane
- C) Is innervated by the recurrent laryngeal nerve
- D) Its lower free margin thickens to form the false vocal cords
- E) Attaches posteriorly to the arytenoid cartilage

ANSWER : C

31. Which of the following passes through the opening in thyrohyoid membrane:

- A) Inferior laryngeal artery
- B) External laryngeal nerve
- C) Internal laryngeal nerve
- D) Superior thyroid artery

ANSWER : C

Anatomy

Lecture 3

32. Wrong:

ANSWER : cricoid mucosa innervated by internal laryngeal nerve

33. Vocal ligament formed by:

- A) Cricothyroid ligament
- B) Quadrangular membrane
- C) Conus elasticus
- D) Thyrohyoid membrane

ANSWER : C

Anatomy

Lecture 4

34. Which of these muscles causes closure of rima glottidis in case of recurrent laryngeal nerve injury ?

- A) Lateral crico-arytenoid muscle
- B) Transverse arytenoid muscle
- C) Posterior crico-arytenoid muscle
- D) Vocalis muscle

ANSWER : A

35. wrong about arytenoid cartilage:

ANSWER : The mucosa covering it is supplied by recurrent laryngeal nerve.

36. wrong association between artery and nerve:

ANSWER : Inferior laryngeal artery with recurrent laryngeal nerve.

37. Following a thyroidectomy of a 30-year-old man, the surgeon noticed that he had a weak voice and that the right vocal cord was slack. What possibly could the surgeon have tied together:

- A) Internal laryngeal nerve with the superior laryngeal artery
- B) Internal laryngeal nerve with the inferior laryngeal artery
- C) External laryngeal nerve with the superior thyroid artery
- D) Recurrent laryngeal nerve with the inferior thyroid artery
- E) Recurrent laryngeal nerve with the inferior laryngeal artery

ANSWER : C

Anatomy

Lecture 4

38. The muscle that forms part of the true vocal cord is:

- A) Thyroarytenoid
- B) Cricothyroid
- C) Thyrohyoid
- D) Transverse arytenoid
- E) Oblique arytenoid

ANSWER : A

39. Wrong about true vocal cords:

- A) has smooth muscle
- B) no blood vessels
- C) no lymph drainage
- D) lined by oral epithelium

ANSWER : A

40. All the following have opposing actions except:

- A) cricothyroid and thyroarytenoid muscles.
- B) Oblique arytenoid and aryepiglotticus muscles.
- C) transverse arytenoid and posterior cricoarytenoid muscles

ANSWER : C

41. Wrong about cricothyroid muscle:

ANSWER : It is innervated by nerve that accompanies superior laryngeal artery

Anatomy

Lecture 4

42. Wrong:

ANSWER : right recurrent laryngeal behind trachea in superior mediastinum

43. Innervated by recurrent laryngeal nerve and relaxes vocal cords:

ANSWER : Thyroarytenoid

44. Wrong about conus elasticus:

ANSWER : innervated by internal laryngeal nerve

45. What nerve supplies cricothyroid muscle:

ANSWER : external laryngeal nerve

Anatomy

Lecture 4

46. Which of the following is incorrect?

ANSWER : Recurrent laryngeal nerve is injured after ligation of the superior thyroid artery

Anatomy

Lecture 5

47. wrong about trachea:

ANSWER : Posteriorly covered by striated trachealis muscle.

48. bleeding during low tracheostomy is most likely due to injury to:

ANSWER : Inferior thyroid vein.

49. A 75 years old patient has been suffering from lung cancer located near the cardiac notch, a deep indentation on the lung. Which of the following lobes is most likely lobe resected ?

- A) Inferior lobe of the left lung
- B) Superior lobe of the left lung
- C) Inferior lobe of the right lung
- D) Superior lobe of the right lung
- E) Middle lobe of the right lung

ANSWER : B

50. 57 years old patient, heavy smoker with lung cancer. A thoracic surgeon removed the right middle lobar bronchus. Which of the following bronchopulmonary segment must contain cancerous tissues ?

- A) Medial and lateral
- B) Anterior basal and posterior basal
- C) Lateral basal and medial basal
- D) Anterior basal and medial basal
- E) Anterior and posterior

ANSWER : A

Anatomy

Lecture 5

51. During lower tracheostomy the most vessel liable to injury is :

- A) superior thyroid artery
- B) inferior thyroid artery
- C) inferior thyroid vein
- D) internal jugular vein

ANSWER : C

52. all of the following are present in the bronchopulmonary segment except :

- A) segmental bronchus
- B) segmental pulmonary vein
- C) nerves
- D) lymphatics
- E) segmental pulmonary artery

ANSWER : B

53. A dentist accidentally dropped a tooth and it fell down the respiratory tract. Which of the following is the most possible final destination of the tooth:

- A) Left lung, upper lobe, anterior segment
- B) Left lung, lower lobe, posterior segment
- C) Right lung, middle lobe, medial segment
- D) Right lung, lower lobe, apicobasal segment
- E) Right lung, lower lobe, posterior segment

ANSWER : D

54. all of the following related left to trachea except:

ANSWER : azygous arch

Anatomy

Lecture 5

55. Regarding the trachea, which of the following statement is incorrect?

- A) The trachea is held open by 'C-shaped' hyaline cartilage rings (16-20) embedded in its wall.
- B) The right main bronchus is wider and takes a more vertical course
- C) Aortic arch is anterior to the trachea
- D) The trachea goes up during inspiration
- E) The left recurrent laryngeal nerve is posterior to the trachea

ANSWER : D

Anatomy

Lecture 6

56. Which of the following is incorrect about the right pulmonary artery?

- A) It originates from pulmonary trunk at sternal angle level
- B) It is longer than the left one
- C) It is related anteriorly to the SVC and ascending aorta

ANSWER : A

57. A 75 years old woman was admitted to a local hospital because a chest radiograph revealed a left lung mass and bronchoscopy revealed lung carcinoma.

Which of the following structures does the cancerous lung contain ?

- A) Lobe above the horizontal fissure
- B) Groove for superior vena cava
- C) Lobe below the horizontal fissure
- D) Lingual
- E) Middle lobe

ANSWER : D

58. A 46 years old man comes to his doctors with CT scan reveal a tumor located just superior to the root of the right lung. Which of the following veins is mostly blocked by the tumor ?

- A) Arch of azygos vein
- B) Hemiazygos vein
- C) Left brachiocephalic vein
- D) Right brachiocephalic vein
- E) Right subclavian vein

ANSWER : A

59. Which of the following structures is least likely to be damaged during the removal of a tumor in the root of the right lung:

- A) Phrenic nerve
- B) Pulmonary artery
- C) Azygous arch
- D) Vagus nerve
- E) Recurrent laryngeal nerve

ANSWER : E

Anatomy

Lecture 6

60. Impression of what structure is at the left lung medial surface:

ANSWER : Esophagus

61. Wrong about pulmonary arteries:

ANSWER : bronchial arteries are branches of them

62. No symmetry in the superficial anatomy of the lungs in:

ANSWER : the anterior border below sternal angle

63. Tumor just superior to the hilum of the left lung, which vessel is occluded?

- A) Aortic arch
- B) Descending thoracic aorta
- C) Azygous vein
- D) Superior vena cava
- E) Left brachiocephalic vein

ANSWER : A

Anatomy

Lecture 6

64. Which of the following is seen when vagus nerve proximal to recurrent laryngeal nerve is slacked:

- A) Bronchoconstriction
- B) Bronchodilation
- C) Decreased heart rate

ANSWER : B

Anatomy

Lecture 7

65. A needle in the left ninth intercostal space at mid-axillary line wouldn't affect:

- A) Diaphragm
- B) Spleen
- C) Lung
- D) Pleura
- E) Peritoneum

ANSWER : C

66. The Best Site for drainage the pleural effusion is one of the following:

- A) Fifth intercostal space med axillary line
- B) Seventh intercostal space med axillary line
- C) Ninth intercostal space med axillary line
- D) Fifth intercostal space med clavicular
- E) Tenth intercostal space posteriorly

ANSWER : C

67. The nerve supply of the mediastinal pleura is one of the following:

- A) Cervical spinal nerve
- B) Intercostal nerve
- C) Phrenic nerve
- D) Vagus narve
- E) Axillary nerve

ANSWER : C

68. would not cause lung pneumothorax:

ANSWER : A wound stab in 9th intercostal space in midclavicular line.

Anatomy

Lecture 7

69. wrong statement:

ANSWER : When you insert a canula in pneumothorax , it must be inserted at the upper border of intercostal space.

70. A 37 years old patient with pleural effusion. A needle should be inserted at the midaxillary line between. Which of the following two ribs to avoid puncturing the lung ?

- A) Ribs 6 and 8
- B) Ribs 9 and 11
- C) Ribs 8 and 10
- D) Ribs 3 and 5
- E) Ribs 1 and 3

ANSWER : C

71. The diaphragmatic pleura is supplied by which nerve

- A) Intercostal nerves
- B) Phrenic nerve
- C) pulmonary plexus

ANSWER : B

72. Stab in the neck affects:

ANSWER : Suprapleural membrane

Anatomy

Lecture 7

73. what is wrong about costodiaphragmatic recess:

ANSWER : longest at midclavicular line

74. A patient had pleural effusion & a nurse did aspiration to suck the fluid at the midaxillary line at the upper part of his 9th intercostal space, the second day, he complained of tickling skin sensation that reached the skin of his abdomen (pain sensation from the site of injection to the umbilical region), which is correct:

ANSWER : the needle inserted for aspiration caused injury to his 9th ntercostal nerve

75. Wrong about suprapleural membrane:

ANSWER : attaches to transverse process of first thoracic vertebra

76. Regarding the parietal pleura, which of the following is incorrect?

- A) The apex is 1 inch above the medial third of the clavicle
- B) The anterior border is close to the midline
- C) The anterior border is half an inch away from the midline between 4th and 6th costal cartilage
- D) The posterior border is in midclavicular line crossing the 8th rib
- E) The base is at 10th vertebrae crossing mid scapular line

ANSWER : E

Anatomy

Lecture 7

77. The main blood supply of the lung a visceral pleura is

- A) Bronchial arteries
- B) Pulmonary arteries
- C) Internal thoracic arteries

ANSWER : A

Histology

Lecture 1

78. Which of the following is false regarding secondary bronchi?

- A) They have complete muscular layer
- B) Cartilage plates gradually disappear
- C) Goblet cells are rarely seen

ANSWER : C

79. All of the following are present in the olfactory region EXCEPT:

- A) Bipolar cells
- B) Bowman serous gland
- C) Von Ebner gland
- D) Basal cells

ANSWER : C

80. All of the following are lined with by pseudostratified columnar epithelium with goblet cells except:

- A) Olfactory region
- B) Terminal bronchioles
- C) Posterior surface of epiglottis
- D) False vocal cord

ANSWER : B

81. wrong about clara cells:

ANSWER : Is part of diffuse neuro-endothelial system.

Histology

Lecture 1

82. pseudostratified ciliated columnar epithelium lining all the following except:

- A) infraepiglottis
- B) vestibular fold
- C) conducting bronchiole
- D) superior part of nasal cavity (or olfactory part)
- E) nasopharynx

ANSWER : C

83. Region that has columnar epithelium with muscle but without cartilage:

ANSWER : bronchioles

84. The lack of the development of cartilage in the bronchus causes:

ANSWER : bronchial stenosis

85. We can see only 1 or 2 pieces of cartilage in which of the following:

- A) main bronchi.
- B) secondary bronchi.
- C) bronchopulmonary segments.
- D) large bronchioles.
- W) small bronchioles.

ANSWER : C

Histology

Lecture 1

86. Which of the following components increase as a proportion of the respiratory tract wall from trachea to alveoli:

- A) Cilia.
- B) Elastic fibers.
- C) Smooth muscle.
- D) Cartilage.
- E) Goblet cells.

ANSWER : B

87. Most of the cells in the terminal bronchioles are:

- A) Clara cells.
- B) Goblet cells.
- C) Brush cells.
- D) Columnar ciliated cells.
- E) Alveolar type I cells.

ANSWER : A

88. Trachea: choose the **INCORRECT** statement:

- A) Trachealis muscle relaxes during swallowing.
- B) Hyaline cartilage forms the tracheal rings.
- C) Submucosa contains seromucous glands.
- D) Trachealis muscle controls air flow into alveoli.
- E) Cartilage rings are deficient posteriorly.

ANSWER : D

89. Which of the following features distinguishes a bronchus within a lung from the primary bronchi:

- A) Glands in the submucosa.
- B) Pseudostratified ciliated columnar epithelium.
- C) Smooth muscle in the wall.
- D) Irregular plates of cartilage.
- E) Goblet cells in the epithelium.

ANSWER : D

Histology

Lecture 2

90. the respiratory membrane composed of all of the following except:

- A) Type 1 Alveolar cells
- B) Endothelial cells
- C) Fused Basal lamina
- D) Surfactant layer
- E) Dust Cell

ANSWER : E

91. Which of the following is not found in the respiratory membrane?

- A) Surfactant layer
- B) Type I pneumocyte
- C) Type II pneumocyte
- D) Endothelial cell
- E) Fused basal lamina

ANSWER : C

92. Bronchioles, all the following statements are correct except :

- A) In terminal bronchioles the lymphocytes are aggregated as lymphatic nodules
- B) The connective tissue and smooth muscle in terminal bronchioles are greatly reduced
- C) Bronchioles which are less than 1mm in diameter have neither cartilage nor submucosal glands
- D) In the distal part of respiratory bronchioles the Clara cells are replaced by simple squamous epithelial cells .
- E) In respiratory bronchioles the goblet cells are entirely absent .

ANSWER : A

93. Dust cells in respiratory system, all the following statements are correct except :

- A) They are transported from the bronchioles into the pharynx via the ciliary action of the respiratory epithelium
- B) They are the most numerous of all cell types, and eliminated from the lungs at a rate 50 million per day
- C) Often noted in the respiratory membrane
- D) They are derived from monocytes, enters the lungs via the blood stream
- E) They are found also in the connective tissue around the blood vessels and in the pleura

ANSWER : C

Histology

Lecture 2

94. Type II alveolar cells are associated with all of the following EXCEPT:

- A) They form 16% of the interalveolar septum
- B) They form 8% of the alveolar wall
- C) They contain in their cytoplasm lamellar bodies
- D) They have the ability to regenerate their own type as well as type I cells
- E) They are connected to type I alveolar cells by occluding junctions and desmosomes

ANSWER : B

95. which is not present in the blood-air barrier?

- A) cytoplasm of endothelial cells
- B) cytoplasm of alveolar cells
- C) fused basal lamina
- D) surfactant
- E) thickness of 0.1 - 1.5 millimeter

ANSWER : E

96. Cell found in the septum and is called septal cell:

- A) Type 1 pneumocyte.
- B) Type 2 pneumocyte.
- C) Dust cell.
- D) fibroblast.
- E) mast cell.

ANSWER : B

97. Functionally the important microscopic anatomy of the lung consist of what is called a respiratory membrane, which consist of?

- A) The epithelium of the alveolus
- B) An alveolar basement membrane
- C) A capillary basement membrane
- D) The Endothelium of the capillary
- E) All of the above

ANSWER : E

Histology

Lecture 2

98. Wrong about Lung:

ANSWER : Type I alveolar cells are most abundant

99. Most numerous cells in the lungs:

ANSWER : dust cells

100. wrong about clara cells:

ANSWER : they exist rarely in the respiratory bronchioles

101. what is wrong about dust cell/macrophages:

ANSWER : present in respiratory membrane

Histology

Lecture 2

102. Type I alveolar cells Choose the INCORRECT statement:

- A) They cover most of the alveolar surface.
- B) Organelles are arranged around the nucleus.
- C) Pinocytotic vesicles are commonly seen inside them.
- D) There are no junctions between the cells.
- E) They participate in the blood-air-barrier.

ANSWER : D

103. Respiratory bronchioles: choose the CORRECT statement:

- A) Few cartilage plates can be seen in their middle.
- B) Gas exchange may occur through them.
- C) Their epithelium has goblet cells in.
- D) They are part of the conducting portion.
- E) Their walls appear continuous.

ANSWER : B

104. Type II alveolar cells: choose the INCORRECT statement:

- A) They are usually widely separated from each other.
- B) Secrete pulmonary surfactant.
- C) Contains lamellar bodies.
- D) They can divide and replace type I cells.
- E) Cuboidal cells that bulge into alveolus.

ANSWER : A

105. The interalveolar septum contains type-1 alveolar cells, In which of the following percentages:

- A) 16%.
- B) 8%.
- C) 97%.
- D) 3%.
- E) 36%.

ANSWER : B

Pathology

Lecture 1

106. A 58-year-old man with ischemic heart disease undergoes coronary artery bypass graft surgery under general anesthesia. Two days postoperatively, he experiences increasing respiratory difficulty with decreasing arterial oxygen saturation. On physical examination, his heart rate is regular at 78/min, respirations are 25/min, and blood pressure is 135/85 mmHg. The hemoglobin concentration has remained unchanged, at 13.7 g/dL, since surgery. After he coughs up a large amount of mucoid sputum, his condition improves. Which of the following types of atelectasis does he most likely have?

- A) Compression B) Contraction C) Resorption

ANSWER : C

107. A 7-year-old boy accidentally inhales a small peanut, which lodges in one of his bronchi. A chest x-ray reveals the mediastinum to be shifted toward the side of the obstruction. The best description for the lung changes that result from this obstruction is:

- A) Absorptive atelectasis
B) Compression atelectasis
C) Contraction atelectasis
D) Patchy atelectasis
E) Hyaline membrane disease

ANSWER : A

108. Regarding atelectasis:

- A) In resorption atelectasis, the mediastinum shifts toward the atelectatic lung.
B) Accumulation of mucus in bronchi is the most common cause of atelectasis in kids.
C) Air in the parietal cavity causes contraction atelectasis.
D) All forms of atelectasis are reversible and curable.

ANSWER : A

109. Histologic sections of lung tissue from an individual with adult respiratory distress syndrome (ARDS) are most likely to reveal:

- A) Angio invasive infiltrates of pleomorphic lymphoid cells
B) Deposits of needle-like crystals from the membranes of eosinophils
C) Infiltrating groups of malignant cells having intercellular bridges
D) Irregular membranes composed of edema, fibrin, and dead cells lining alveoli
E) Plexiform lesions within pulmonary arterioles

ANSWER : D

Pathology

Lecture 1

110. Regarding ARDS, which of the following is correct?

- A) It is the milder form of acute lung injury.
- B) The most common cause is pancreatitis
- C) It is characterized by the presence of hyaline membrane in the organizing stage.
- D) Sepsis is indicative for poor prognosis
- E) It is related to cardiac causes

ANSWER : D

111. which of the following is true regarding ARDS?

ANSWER : Poor prognosis in case of bacteraemia

112. most common cause of ARDS:

ANSWER : Sepsis.

113. 70 year old in ICU complaining shortness of breath, it was shown fibrin-rich membrane:

ANSWER : ARDS.

Pathology

Lecture 1

114. wrong about atelectasis:

ANSWER : air in Pneumothorax (compression atelectasis) is irreversible.

115. ARDS feature:

- A) Hyaline membrane in organizing stage
- B) Sepsis is predictor of poor prognosis

ANSWER : B

Pathology

Lecture 2

116. A 20-year-old, previously healthy gentleman is jogging one morning when he falls to the ground. He suddenly becomes markedly short of breath. In ER no breath sounds audible over the Rt side of the chest. A CXR shows shift of the mediastinum from right to left. A chest tube is inserted on the right side, and air rushes out. Which of the following underlying diseases is most likely to have produced this complication?

- A) Centriacinar emphysema
- B) Chronic bronchitis
- C) Distal acinar emphysema
- D) Panlobular emphysema

ANSWER : C

117. Which one of the following is a correct association concerning the pathogenesis of smoking- induced emphysema?

- A) Destruction of distal acinus - centrilobular emphysema
- B) Destruction of distal acinus - paraseptal emphysema
- C) Destruction of entire acinus - panlobular emphysema
- D) Destruction of proximal acinus - centrilobular emphysema
- E) Destruction of proximal acinus - paraseptal emphysema

ANSWER : D

118. which of the following is true about atelectasis?

ANSWER : Chronic bronchitis cause resorption atelectasis

119. wrong about emphysema:

ANSWER : Inflammation with associated fibrosis.

Pathology

Lecture 2

120. airway obstruction in chronic bronchitis is due to:

ANSWER : Bronchiolitis.

121. true about COPD:

ANSWER: Inflammation is involved in the pathogenesis of both emphysema and chronic bronchitis.

122. Not correct about Chronic bronchitis:

ANSWER : bacterial infection has a role

123. According to pathogenesis of emphysema occurs because:

ANSWER : protease - anti protease imbalance

Microbiology

Lecture 1+2

124. the live attenuated vaccine of influenza virus is administered:

- A) Orally
- B) Deep Intramuscular
- C) Intravenous
- D) Intranasal (Ans)
- E) Subcutaneous

ANSWER : D

125. Which of the following statements regarding the prevention and treatment of influenza is correct?

- A) Booster doses of vaccine are not recommended.
- B) Drugs that inhibit neuraminidase are active only against influenza A.
- C) As with some other live vaccines, the attenuated influenza vaccine should not be given to pregnant women.
- D) The influenza vaccine contains several serotypes of virus.
- E) The virus strains in the influenza vaccine do not vary from year to year.

ANSWER : D

126. Which of the following symptoms is not typical of influenza?

- A) Fever
- B) Muscular aches
- C) Malaise
- D) Dry cough
- E) Rash

ANSWER : E

127. Which of the following infectious agents is most likely to cause a pandemic?

- A) Influenza A virus
- B) Streptococcus pyogenes
- C) Influenza B virus
- D) Respiratory syncytial virus
- E) Influenza C virus

ANSWER : A

Microbiology

Lecture 1+2

128. which of the following about influenza is incorrect

- A) The antigenic variations occur only in type A due to its wide host range.
- B) Worldwide epidemics is caused by type A influenza.
- C) Antigenic drift is caused from a mutation in ribonucleoprotein.
- D) Antigenic shift, a major change that result from reassortment of viral genome.
- E) Antigenic drift happens in both hemagglutinin and neuraminidase.

ANSWER : C

129. Which of the following statements concerning antigenic drift in influenza viruses is Correct?

- A) It results in major antigenic change
- B) It is exhibited only by influenza A viruses
- C) It is caused by frameshift mutations in viral genes
- D) It results in new subtypes over time
- E) It affects predominantly the matrix protein

ANSWER : D

130. Highly pathogenic H5N1 avian influenza HPAI can infect humans with a high mortality rate, but it has not yet resulted in pandemic. The following are characteristics of HPAI, except for one. Which one is not?

- A) Efficient human-to-human transmission
- B) Presence of avian influenza genes
- C) Efficient infection of domestic poultry
- D) Contains segmented RNA genome
- E) Both high pathogenicity and low pathogenicity avian influenza viruses can cause disease in human being

ANSWER : A

131. A patient with egg allergy and should not be given influenza vaccine, to protect them from Influenza A and B you can use:

ANSWER : Oseltamivir or zanamivir

Microbiology

Lecture 1+2

132. Outbreak of pneumonia takes place in nursing home, and can be treated with zanamivir and adamantanes effectively, the most likely pathogen is...

- A) Influenza A
- B) Influenza B
- C) Legionella pneumophelia
- D) Metapneumo

ANSWER : A

133. Wrong about genetic reassortment :

- A) It is happened in Influenza A virus .
- B) Leads to Antigenic drift

ANSWER : B

135. Which of the following statements about the neuraminidase of Influenza virus is not correct ?

- A) Is embedded in the outer surface of the viral envelope
- B) Forms a spike structure composed of four identical monomers, each with enzyme activity
- C) Facilitates release of virus particles from infected cells
- D) Lowers the viscosity of the mucous film in the respiratory tract
- E) Is antigenically similar among all mammalian influenza viruses

ANSWER : E

Microbiology

Lecture 3

136. Which of the following toxins can cause scarlet fever?

- A) DNase
- B) Streptolysin S
- C) Hyalinas.
- D) C5a protease
- E) Erythrogenic toxin

ANSWER : E

137. All the following are true about *S. pyogenes* except:

- A) Can't be diagnosed by smear
- B) Available vaccine against its capsule
- C) Treated by penicillin with no resistance
- D) The capsule is an important virulence factor

ANSWER : B

138. Which of the following sentences is wrong:

- A) Antibiotics prevent glomerulonephritis and rheumatic fever .
- B) *Strep. pyogenes* is Bacitracin sensitive.
- C) Untreated pharyngitis may results in otitis media.
- D) People who are infected by GAS and develop later on AGN ,will not develop this again If they're reinfected again by GAS

ANSWER : A

139. All of the following are associated with Group A streptococci EXCEPT:

- A) Necrotizing fasciitis.
- B) Impetigo
- C) Neonatal sepsis.
- D) Erysipelas
- E) Cellulitis.

ANSWER : C

Microbiology

Lecture 3

140. 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 ??

- A) Strep. agalactiae
- B) Strep. pyogenes
- C) Strep. Bovis

ANSWER : B

141. A patient with AGN, the primary mechanism for the pathogenesis of the disease is:

- A) Action of enterotoxin A
- B) M protein
- C) Teichoic acid
- D) Hemagglutinin

ANSWER : B

142. a male patient presents with skin rash and red tongue, which describes the causative agent?

- A) Gram-positive coccus, alpha hemolytic, catalase negative
- B) Gram-positive coccus, beta hemolytic, catalase negative
- C) Gram-positive coccus, alpha hemolytic, catalase positive
- D) Gram-positive coccus, beta hemolytic, catalase positive
- E) Gram-positive coccus, gamma hemolytic, catalase negative

ANSWER : B

143. G+ve, Catalase -ve, Bile esculin +ve

ANSWER : Enterococcus faecalis

Microbiology

Lecture 4

144. A homeless, malnourished chronic alcoholic presents with severe headache and dyspnea. Physical examination reveals a disheveled man with poor hygiene. His temperature is 41.0 C (105.8 F), blood pressure is 110/78 mm Hg, and pulse is 96/minute and regular. Auscultation of the chest reveals absence of breath sounds over the left middle lung fields. A chest x- ray confirms left lobar pneumonia. Sputum stain reveals partially acid-fast bacilli with branching rods. Which of the following agents is the most likely cause?

- A) Mycobacterium avium-intracellulare
- B) Mycobacterium kansasii
- C) Mycobacterium leprae
- d) Mycobacterium tuberculosis
- E) Nocardia asteroides

ANSWER : E

145. what is the role of the trehalose dimycolate (cord factor) in mycobacterial cell wall?

- A) Responsible for inhibiting phagolysosome formation
- B) Serpentine growth

ANSWER : B

146. Which of the following statements regarding interferon- release assays (IGRAs) is correct?

- A) They are useful for evaluating immunocompromised patients for active Tuberculosis.
- B) they detect antigens present in all Mycobacterium species.
- C) They are not available yet for testing in the hospitals.
- D) They are performed using molecular probes that detect organism DNA.
- E) They are used as alternatives to the tuberculin skin test to evaluate for latent tuberculosis.

ANSWER : E

Microbiology

Lecture 4

147. The definition of extensively drug-resistant (XDR) tuberculosis includes?

- A) Resistance to isoniazid
- B) Resistance to a fluoroquinolone
- C) Resistance to capreomycin, amikacin or kanamycin
- D) Resistance to rifampin
- E) All the above

ANSWER : E

148. Everyone exposed to *Mycobacterium tuberculosis* develops Pulmonary tuberculosis.

- A) True
- B) False

ANSWER : B

149. *Mycobacterium tuberculosis* is a gram negative bacilli

- A) True
- B) False

ANSWER : B

Microbiology

Lecture 5

150. Pathogen endemic in Ohio (North America) and found in bird seeds is?

- A) *Histoplasma capsulatum*
- B) *Paracoccidioides Brasiliense*'s
- C) *Blastomyces dermatitis*'s
- D) *Coccidioides imcites*
- E) *Trichomonas*

ANSWER : A

151. which of the following about chlamydia pneumonia is most accurate?

- A) It transmitted by person to person by respiratory droplets
- B) It has glycogen-rich intracytoplasmic stained by iodine stain.
- C) It is composed of three strains, two that can cause systemic manifestation..

ANSWER : A

152. Humans become infected with *Legionella pneumophila* by one of the following?

- A) Kissing a person who is a legionella carrier
- B) Breathing aerosols from environmental water sources
- C) Receiving a mosquito bite
- D) Consuming undercooked pork e- All the above

ANSWER : B

153. A 13-year-old boy develops infection with *Mycoplasma pneumoniae*. What is the risk for infection in other members of his household?

- A) None; it is sexually transmitted
- B) 1-3%
- C) 10-15%
- D) 20-40%
- E) 50-90%

ANSWER : E

Microbiology

Lecture 5

154. *Mycoplasma pneumoniae* is considered. All of the following are methods to confirm the clinical suspicion except?

- A) PCR amplification of *Mycoplasma pneumoniae* DNA in sputum
- B) Culture of sputum for *Mycoplasma pneumoniae*
- C) Gram stain of sputum smear
- D) Culture of a lung aspirate for *Mycoplasma pneumoniae*
- E) Enzyme immunoassay test of acute and convalescent sera

ANSWER : C

155. A patient presents with paranasal swelling and bloody exudate from both his eyes and nares, and he is nearly comatose. Necrotic tissue in the nasal turbinate's show no septate hyphae consistent with *Rhizopus*, *Mucor*, or *Absidia*. What is the most likely compromising condition underlying this infection?

- A) Chronic sinusitis
- B) Ketoacidotic diabetes
- C) Neutropenia
- D) B-cell defects
- E) AIDS

ANSWER : B

156. The main route of transmission for *Legionella pneumophila* is the respiratory droplets from infected persons.

- A) True
- B) False

ANSWER : B

157. The primary site of infection with *Histoplasma* is usually pulmonary.

- A) True
- B) False

ANSWER : A

Microbiology

Lecture 6

158. one of the most serious upper RTI is:

ANSWER : Epiglottitis.

159. Lobar pneumonia with epiglottitis (patient leaning forward raising his head up), which of the following is component of vaccine used against the causative agent?

- A) Polyribitol phosphate plus toxoid
- B) Capsular polysaccharide
- C) Live-attenuated

ANSWER : A

160. The microorganism which is catalase Negative and sensitive to Optochin is:

- A) Beta hemolytic streptococcus group A
- B) Streptococcus Pneumoniae
- C) Enterococcus group D
- D) Staphylococcus aureus
- E) Neisseria Spp

ANSWER : B

161. A 13-valent capsular polysaccharide protein conjugate vaccine for pneumococcal infections is recommended for:

- A) For children up to age 18 years and for selected adults
- B) Only on exposure to a patient with disease caused by the organism
- C) For all children ages 2-60 months plus selected older children and adults with immunocompromising conditions
- D) For children ages 24-72 months
- E) For all age groups older than age 2 months

ANSWER : C

Microbiology

Lecture 6

162. An 18-month-old boy has been playing with a child who develops Haemophilus influenzae meningitis. The boy's parents consult his pediatrician, who says she is comfortable that the child will be fine because he has been fully immunized with the polyribitol ribose phosphate (PRP)-protein conjugate vaccine. For what reason is it necessary to immunize infants of 2 months to 2 years of age with polysaccharide-protein conjugate vaccines?

- A) The conjugate protein is diphtheria toxoid, and the goal is for the infant to develop simultaneous immunity to diphtheria.
- B) Infants 2 months to 2 years of age do not immunologically respond to polysaccharide vaccines that are not conjugated to a protein.
- C) The conjugate vaccine is designed for older children and adults as well as infants.
- D) Maternal (transplacental) antibodies against Haemophilus influenzae are gone from the infant's circulation by 2 months of age.
- E) None of the above

ANSWER : B

163. A 3-year-old child develops Haemophilus influenzae meningitis. Therapy is begun with cefotaxime. Why is this third-generation cephalosporin used rather than ampicillin?

- A) About 80% of Haemophilus influenzae organisms have modified penicillin-binding proteins that confer resistance to ampicillin.
- B) The drug of choice, trimethoprim-sulfamethoxazole, cannot be used because the child is allergic to sulfonamides.
- C) It is easier to administer intravenous cefotaxime than intravenous ampicillin.
- D) There is concern that the child will rapidly develop a penicillin (ampicillin) allergy.
- E) About 20% of Haemophilus influenzae organisms have a plasmid that encodes for β -lactamase

ANSWER : E

164. A bacterium which is alpha hemolytic, optochin sensitive, bile soluble, which of the following is considered of its virulence factors?

- A) Capsule and pneumolysin
- B) M protein
- C) Filamentous hemagglutinin and pertactin
- D) Adenylate cyclase

ANSWER : A

Microbiology

Lecture 6

165. Which of the following is optochin sensitive?

- A) Strep. Pneumonia
- B) Strep. Pyogenes
- C) Strep. Viridans
- D) Staph. Aureus
- E) Strep. Agalactiae

ANSWER : A

Microbiology

Lecture 7

166. A 10-year-old girl with an incomplete vaccination history presents to her pediatrician with a fever of 38.6 C (101.5 F), sore throat, malaise, and difficulty breathing. Physical examination reveals cervical lymphadenopathy and a gray, leathery exudate in the rear of the oropharynx. The area bleeds profusely when disturbed with a tongue depressor. Which of the following correctly describes the causal agent?

- A) Gram-negative rod; toxin that inhibits protein synthesis
- B) Gram-negative rod; toxin that increases cAMP
- C) Gram-positive aerobic rod; toxin that inhibits protein synthesis
- D) Gram-positive anaerobic rod; toxin that inhibits protein synthesis
- E) Gram-positive aerobic rod; toxin that increases cAMP

ANSWER : C

167. how diphtheria becomes toxigenic:

ANSWER : by a Beta bacteriophage (lysogenic conversion)

168. In which stage of pertussis is the characteristic whooping sound made?

- A) convalescence
- B) catarrhal
- C) Paroxysmal
- D) Prodromal
- E) None of the above

ANSWER : C

Microbiology

Lecture 7

169. An 8-year-old boy, who recently arrived in the United States, develops a severe sore throat. On examination, a greyish exudate is seen over the tonsils and pharynx with oral membrane that bleeds profusely when touching it, he also has lymphadenopathy. The cause of the boy's pharyngitis is most likely:

- A) Gram negative aerobic non encapsulated bacteria
- B) Gram positive anaerobic encapsulated bacteria
- C) Gram negative anaerobic encapsulated bacteria
- D) Gram positive aerobic non encapsulated bacteria

ANSWER : D

170. Mechanism of action of toxin for bacteria grown in Bordet-Gengou medium is?

- A) ADP ribosylation of GTP binding protein
- B) ADP ribosylation of Gi
- C) inhibition of acetylcholine
- D) inactivation of elongation factor 2

ANSWER : B

171. All of the following statements regarding acellular pertussis vaccines are correct except?

- A) All formulations of the vaccine contain at least two antigens.
- B) the acellular vaccine has replaced the whole cell vaccine in the childhood vaccine series.
- C) All children should receive five doses of the vaccine before school entry.
- D) The vaccine is approved only for young children and adolescents.
- E) The vaccine is safer than and as immunogenic as whole cell vaccines.

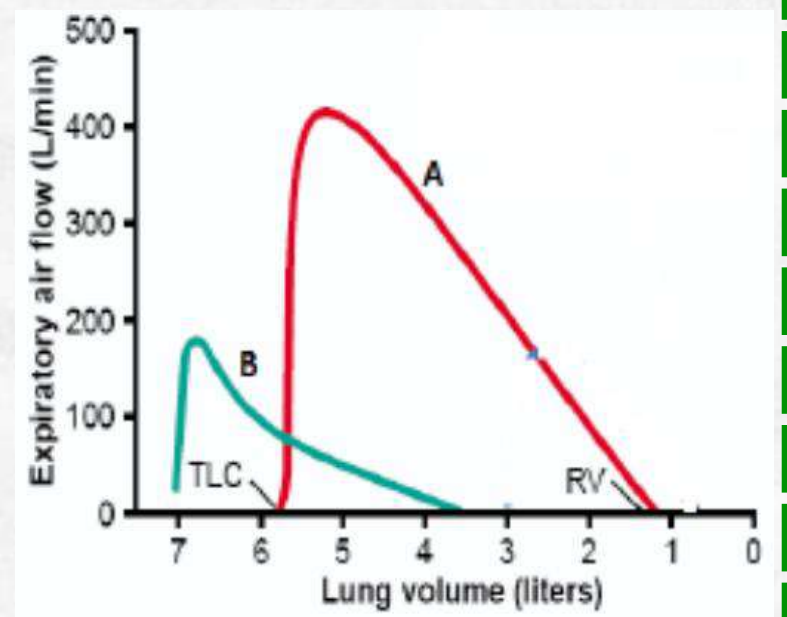
ANSWER : D

Physiology

Lecture 1+2

172. The maximum expiratory flow-volume curves in the diagram above were obtained from a healthy individual (curve A) and a 57 year old man who complains of shortness of breath (curve B). Which of the following disorders does the man most likely have?

- A) Asbestosis
- B) Emphysema
- C) Fibrosis
- D) Acute asthmatic attack
- E) ARDS



ANSWER : B

173. the least important factor in gas diffusion:

- A) molecular weight
- B) concentration gradient
- C) solubility
- D) surface area

ANSWER : A

174. When you climb the top of Everest, what changes will happen :

- A) respiratory minute ventilation is less.
- B) percent of O₂ in the outside air is more.
- C) percent of O₂ in the outside air is less.
- D) percent of O₂ in the outside air remains the same

ANSWER : D

175. Which statement is FALSE about anatomical dead space?

- A) Anatomical dead space varies with age
- B) No gas exchange occurs at the level of anatomical dead space
- C) has no physiological importance.
- D) its measurement needs special instrument (not spirometer)
- E) Estimated at around 150 ml in a 75kg man with TV 500ml

ANSWER : C

Physiology

Lecture 1+2

176. In the lung, when O₂ diffuses from the alveoli to the capillaries, most of it:

- A) Remains in solution as O₂
- B) Converted to oxyhemoglobin
- C) Converted to bicarbonate ions in RBC
- D) Combines with plasma proteins
- E) Combines with H₂O in plasma to form carbonic acid

ANSWER : B

177. Compared to sea level area, in Dead Sea area?

- A) Respiratory minute ventilation is less
- B) Percent of O₂ in the outside air is more
- C) Percent of O₂ in outside air is less
- D) Percent of O₂ in the outside air remains the same.

ANSWER : D

178. Regarding an anatomic Dead Space one of the following is true?

- A) Cannot be measured in normal human being
- B) Its P_{O₂} is less than outside P_{O₂}.

ANSWER : B

179. Which statement is FALSE about anatomical dead space?

- A) Anatomical dead space varies with age
- B) No gas exchange occurs at the level of anatomical dead space
- C) has no physiological importance.
- D) its measurement needs special instrument (not spirometer)
- E) Estimated at around 150 ml in a 75kg man with TV 500ml

ANSWER : C

Physiology

Lecture 1+2

180. The forces governing the diffusion of a gas through a biological membrane are listed below. Which of the following changes increase the diffusion of a gas through a biological membrane?

↓=decrease, and ↑=increase.

Abbreviations: (ΔP): difference across the membrane, (A): the cross sectional area of the membrane, (S) the solubility of the gas, (d) the distance of diffusion and (MW) the molecular weight of the gas

	ΔP	A	S	d	MW
A.	↓	↓	↓	↓	↓
B.	↓	↓	↓	↑	↑
C.	↓	↓	↑	↓	↓
D.	↑	↑	↑	↓	↓
E.	↑	↑	↑	↑	↑

ANSWER : D

181. In a normal person, what is the PO_2 (in mm Hg) of moist inspired air (humidified atmospheric air) in the anatomic dead space in a person breathing room air at sea level?

- A) 100
- B) 150
- C) 160
- D) 760
- E) cannot be predicted from the above data

ANSWER : B

182. At the end of inspiration at rest in normal individual at sea level:

- A) Intrapleural pressure becomes subatmospheric (below atmospheric) and intrapulmonary pressure becomes above atmospheric
- B) Intrapleural pressure becomes equal to intrapulmonary pressure
- C) Intrapleural pressure remains subatmospheric and intrapulmonary pressure becomes atmospheric
- D) Intrapleural pressure becomes above pressure atmospheric and intrapulmonary pressure becomes above atmospheric
- E) Intrapleural pressure becomes above atmospheric and intrapulmonary pressure becomes subatmospheric

ANSWER : C

183. Compared to sea level, at the top of Mount Everest :

- A) percent of O_2 % in the outside air remains the same.
- B) atmospheric pressure is more.
- C) PO_2 of outside air is higher.
- D) PO_2 of outside air remains the same.
- E) respiratory minute ventilation is less.

ANSWER : A

Physiology

Lecture 1+2

184. Which of the following statements is false?

- A) In the tissues, PO₂ drops as blood passes from the arteries to the veins, while PCO₂ increases .
- B) Blood travels from the lungs to the heart to body tissues, then back to the heart, then the lungs.
- C) Blood travels from the lungs to the heart to body tissues, then back to the lungs, then the heart .
- D) PO₂ is higher in air than in the lungs

ANSWER : C

185. Of the following, which does not explain why the partial pressure of oxygen is lower in the lung than in the external air?

- A) Air in the lung is humidified; therefore, water vapor pressure alters the pressure.
- B) Carbon dioxide mixes with oxygen.
- C) Oxygen is moved into the blood and is headed to the tissues
- D) . Lungs exert a pressure on the air to reduce the oxygen pressure

ANSWER : D

186. In normal individual, regarding gas exchange across pulmonary capillaries during mild exercise, which of the following statements is TRUE?

- A) CO₂ crosses the membrane easier than O₂.
- B) Diffusing capacity of the lung for O₂ is more than for CO₂, the most important factor to play role is the molecular weight of both gases.
- C) The length of capillary required for gas equilibrium is shorter during exercise.
- D) ABGs become grossly abnormal.
- E) Equilibrium across the respiratory membrane is never achieved.

ANSWER : A

187. Hypoventilation causes one of the following changes in arterial blood gases:

- A) Increase in arterial PO₂, increase in arterial PCO₂, and decrease pH
- B) Increase in arterial PO₂, decrease in arterial PCO₂, and increase pH
- C) Decrease in arterial PO₂, decrease in arterial PCO₂, and increase pH
- D) Increase arterial PO₂, no change in arterial PCO₂, and increase pH
- E) Decrease in arterial PO₂, increase in arterial PCO₂, and decrease pH

ANSWER : E

Physiology

Lecture 1+2

188. The work of breathing is:

- A) More in pulmonary fibrosis.
- B) Directly proportional to lung compliance.
- C) Is less in emphysema.
- D) Remain constant during exercise.
- E) Not affected by airway resistance

ANSWER : A

189. Which of the following structures contains blood with the highest PCO₂?

- A) Carotid bodies.
- B) Pulmonary veins
- C) Superior vena cava
- D) The midportion of pulmonary capillaries.
- E) Systemic arterioles

ANSWER : C

Physiology

Lecture 3+4

190. Regarding surfactant all of the following statements are true except?

- A) It's made by alveolar type 2 cells
- B) it reduces the work of breathing
- C) its deficiency can cause pulmonary edema
- D) Increase surface tension forces.

ANSWER : D

191. Spirometry can be used to measure one of the following:

- A) RV (Residual volume)
- B) FRC (functional residual capacity)
- C) TLC (total lung capacity)
- D) VC (Vital capacity)
- E) physiologic dead space volume

ANSWER : C

192. Which of the following concerning average lung volumes and capacities of a person at rest is TRUE ? (TLC=total lung capacity; VC=vital capacity; FRC=functional residual capacity VT=Tidal volume)

- A) $TLC > VC > VT > FRC$
- B) $TLC > FRC > VC > VT$
- C) $TLC > VC > FRC > VT$
- D) $TLC > FRC > VT > VC$
- E) $VC = TLC > FRC > VT$

ANSWER : C

193. The work of breathing is:

- A) directly proportional to lung compliance.
- B) Remain constant during exercise.
- C) is directly proportional to the airway resistance.
- D) Is less in pulmonary fibrosis.
- E) Is less in IRDS.

ANSWER : C

Physiology

Lecture 3+4

194. Increase ventilation during exercise, which of the following changes occur? "A=stands for alveolar"

- A) increase PAO₂, increase PAH₂O, increase arterial PCO₂.
- B) increase PAO₂, unchanged PAH₂O, increase arterial PCO₂.
- C) unchanged PAO₂, unchanged PAH₂O, unchanged arterial PCO₂.
- D) decrease PAO₂, unchanged PAH₂O, decrease arterial PCO₂.
- E) decrease PAO₂, unchanged PAH₂O, increase arterial PCO₂

ANSWER : C

195. The inspiratory reserve volume measures the _____.

- A) amount of air remaining in the lung after a maximal exhalation.
- B) amount of air that the lung holds
- C) amount of air the can be further exhaled after a normal breath
- D) amount of air that can be further inhaled after a normal breath

ANSWER : D

196. The total lung capacity is calculated using which of the following formulas?

- A) residual volume + tidal volume + inspiratory reserve volume
- B) residual volume + expiratory reserve volume + inspiratory reserve volume
- C) expiratory reserve volume + tidal volume + inspiratory reserve volume
- D) residual volume + expiratory reserve volume + tidal volume + inspiratory reserve volume

ANSWER : D

197. Place the following steps for normal inhalation in order. (1) decrease in intrapleural pressure to 754 mmHg (from -4 mmHg to -6 mmHg). (2) flow of air from higher to lower pressure (inhalation). (3) lung size increases.(4) decrease in intra-alveolar pressure to 759 mmHg (-1 mmHg).(5). contraction of the diaphragm + external intercostals muscles.

- A) 5, 2, 3, 4, 1
- B) 1, 3, 4, 5, 2
- C) 5, 4, 3, 2, 1
- D) 5, 1, 3, 4, 2
- E) 1, 2, 3, 4, 5

ANSWER : D

Physiology

Lecture 3+4

198. inspiratory reserve volume

ANSWER : amount of air that can be further inhaled after a normal breath

199. why the partial pressure of oxygen is lower in the lung than in the external air?

ANSWER : Air in the lung is humidified

200. FALSE about anatomical dead space

ANSWER : has no physiological importance.

201. In a normal person breathing room air at sea level, first part of the expired air, when compared to room dry air, normally contains ___ PO₂ values, ___ PCO₂ values, and ___ PH₂O values. (H, higher; L lower; E, equal)

- A) L,L,L
- B) L,E,H
- C) H,L,E
- D) E,E,H
- E) E,E,E

ANSWER : B

Physiology

Lecture 3+4

202. The region which has the highest PO₂ of the following is?

- A) Aorta
- B) Pulmonary vein
- C) Pulmonary artery
- D) Mixed expired air
- E) systemic venous blood

ANSWER : D

203. Which of the following is not correct about FRC?

- A) It is about 75% TLC.
- B) The elastic recoil of the chest wall is outward.
- C) The elastic recoil of the lung is inward.
- D) The lung-thorax system is at rest.
- E) pulmonary vascular resistance is the lowest

ANSWER : A

204 How do we calculate alveolar minute ventilation?

- A) subtract the alveolar and anatomical dead space from VT
- B) multiply the VT with the respiratory rate
- C) subtract anatomical dead space from VT and then multiply with respiratory rate
- D) subtract the anatomical dead space from VT

ANSWER : C

205. Maximum volume in the lung after forced inspiration is called?

- A) RV
- B) TLC
- C) FRC
- D) IRV
- E) ERV

ANSWER : B

Physiology

Lecture 3+4

206. Which of the following isn't normal finding with aging?

- A) Increase in RV
- B) Increase in FRC
- C) Increase in ERV
- D) Increase in closing volume

ANSWER : C

207. Which of the following is NOT true concerning respiratory distress syndrome in premature infants?

- A) Their ability to synthesize surfactant is limited.
- B) Higher pressures are required to ventilate the lungs.
- C) Lung compliance is low.
- D) Positive pressure respirators are often used to assist them in breathing.
- E) Alveoli tend to over expand and sometimes burst at the end of inspiration

ANSWER : E

208. which of the following decrease during emphysema?

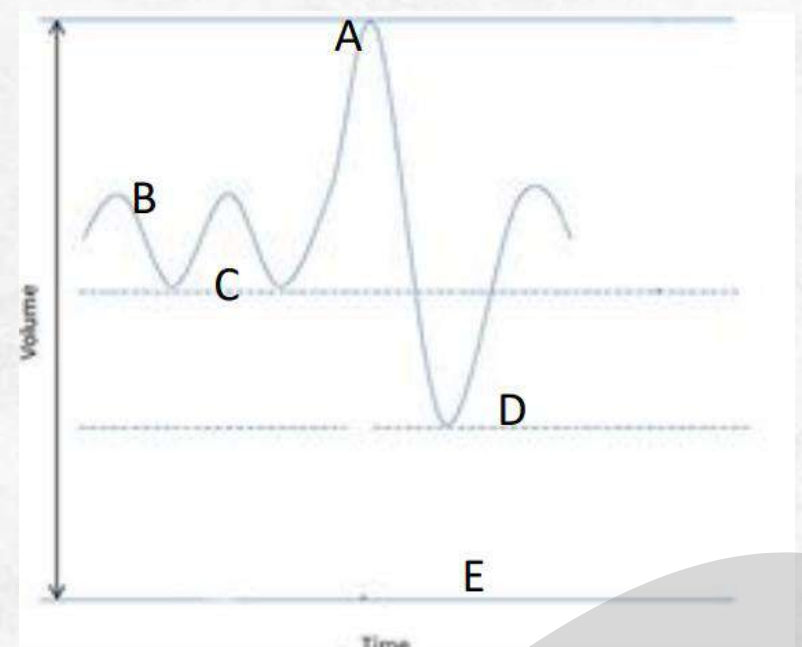
- A) Available area for diffusion
- B) TLC
- C) closing volume
- D) Pulmonary resistance

ANSWER : A

209. In the following figure which point represent the highest compliance?

- A) A
- B) B
- C) C
- D) D
- E) E

ANSWER : C



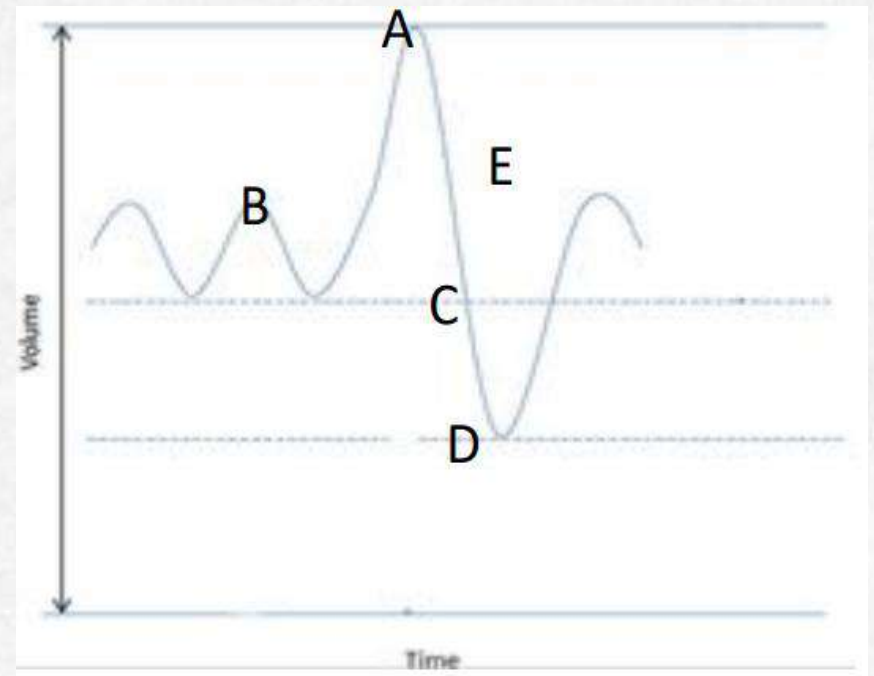
Physiology

Lecture 3+4

210. In the following figure which point represent the area with the highest resistance?

- A) A
- B) B
- C) C
- D) D
- E) E

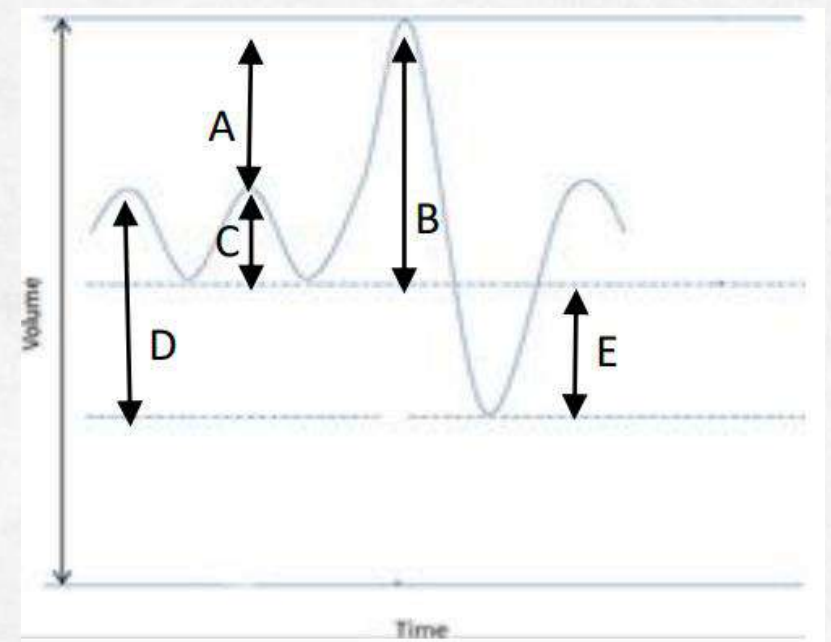
ANSWER : D



211. In the following figure which point represent the Inspired reserve volume and which represent the expired reserve volume?

- A) IRV-A // ERV-E
- B) IRV-B // ERV-D
- C) IRV-A // ERV-D
- D) IRV-E // ERV-A
- E) IRV-E // ERV-D

ANSWER : A



212. In the present of surfactant all the following are expected to decrease EXCEPT :

- A) lung tendency to collapse
- B) lung compliance
- C) surface tension forces in the alveoli
- D) lymph flow in the lung
- E) work of breathing

ANSWER : B

اللهم سلم غزاة وأهلها من كل سوء وشر، اللهم انصرهم وثبت أقدامهم وكن لهم ناصرًا ومعينًا

لا تنسوني من صالح دعائكم

Malek Abu Rahma

The End
Good Luck シ