

THE GOOFY ANATOMIST QUIZZES

7. LUNGS

Q1. Fill in the blanks: the _____ lung has _____ lobes and _____ fissures.

- A. Right, three, two.
- B. Right, two, one.
- C. Left, three, two.
- D. Left, two, three.

Q2. The base of the lung faces...

- A. An inferior direction.
- B. A superior direction.
- C. A posterior direction.
- D. An anterior direction.

Q3. The left lung...

- A. Has an indent called the cardiac notch, where the heart lies.
- B. Has a superior tip called 'the base' of the lung.
- C. Has a superior, middle and inferior lobe.
- D. Has two clear fissures: an oblique fissure and a transverse fissure.

Q4. The hila of the lungs don't contain which of the following vessels?

- A. The azygous vein.
- B. The pulmonary arteries.
- C. The pulmonary veins.
- D. The primary bronchi.

Q5. The carina...

- A. Lies at the level of T6.
- B. Is the anatomical landmark for an emergency airway.
- C. Is present at the bifurcation of the primary bronchi on each side.
- D. Is made of hyaline cartilage.

Q6. A tertiary bronchus could also be called a...

- A. Segmental bronchus.
- B. Main bronchus.
- C. Lobar bronchus.
- D. Principal bronchus.

Q7. Which of the following statements concerning the trachea is true?

- A. It is deficient of cartilage anteriorly, although the trachealis muscle is present here.
- B. It is deficient of cartilage posteriorly, although the trachealis muscle is present here.
- C. The trachea bifurcates at T6.
- D. The trachea lies posterior to the oesophagus.

Q8. The left bronchial arteries...

- A. Arise from the descending aorta.
- B. Arise from the pulmonary arteries.
- C. Arise from the descending vertebral arteries.
- D. Arise from the intercostal arteries.

Q9. The superficial bronchial vein on the left...

- A. Drains into the superior hemiazygous vein.
- B. Drains into the inferior hemiazygous vein.
- C. Drains into the azygous vein.
- D. Drains into the pulmonary veins.

Q10. Where does the right bronchial artery arise from?

- A. The descending aorta, or sometimes the right fifth or sixth posterior intercostal artery.
- B. The right bronchial tree.
- C. The right fifth or sixth anterior intercostal artery.
- D. The right internal thoracic artery.

Q11. Which of the following statements regarding the bronchopulmonary segments is true?

- A. There are lingular segments on the right lung.
- B. There are more segments of the left lung than on the right lung.
- C. The superior lobe of the right lung is made up of three segments: the apical, posterior and anterior segments.
- D. The inferior lobe of the left lung is made up of two segments: the anterior basal and posterior basal segments.

Q12. Which of the following tertiary bronchial arrangements is incorrect?

- A. Middle lobe of right lung: supplied by medial and lateral tertiary bronchi.
- B. Inferior lobe of right lung: supplied by anterior basal, posterior basal, lateral basal, medial basal and superior tertiary bronchi.
- C. Superior lobe of left lung: supplied by apico-posterior, anterior, superior lingular and inferior lingular tertiary bronchi.
- D. Inferior lobe of left lung: supplied by anterior basal, lateral basal and posterior basal tertiary bronchi.

Q13. The respiratory airways...

- A. Are composed of the trachea and primary bronchi.
- B. Are composed of the alveoli, alveolar ducts and respiratory bronchioles.
- C. Are composed of the primary, secondary and tertiary bronchi.
- D. Make up most of the respiratory system (but not the lungs).

Q14. At the alveoli...

- A. Carbon dioxide diffuses into the pulmonary capillaries, down its concentration gradient.
- B. Carbon dioxide diffuses into the alveolar sac (air space), down its concentration gradient.
- C. Massive dilation occurs during exercise.
- D. Cartilage plates ensure the alveoli do not collapse under ventilatory pressures.

Q15. Which of the following statements concerning a tension pneumothorax is true?

- A. It can be defined as a build-up of air between the pleural cavity and thoracic cavity.
- B. Involves the mediastinum shifting to the opposite side of the injury.
- C. Involves serious damage to the elastin fibres in the alveolar walls.
- D. Involves the mediastinum shifting towards the side of the injury.

Q16. Which of the following are all part of the conducting airways?

- A. Trachea, primary bronchi, secondary bronchi, tertiary bronchi and terminal bronchioles.
- B. Respiratory bronchioles, terminal bronchioles and alveoli.
- C. Tertiary bronchi, terminal bronchioles, respiratory bronchioles and alveolar ducts.
- D. Secondary bronchi, tertiary bronchi, terminal bronchioles and respiratory bronchioles.

Answers

Q1. Fill in the blanks: the _____ lung has _____ lobes and _____ fissures.

A. Right, three, two.

B. Right, two, one.

C. Left, three, two.

D. Left, two, three.

The right lung has 3 lobes and 2 fissures. The left lung has 2 lobes and 1 fissure.

Q2. The base of the lung faces...

A. An inferior direction.

B. A superior direction.

C. A posterior direction.

D. An anterior direction.

Q3. The left lung...

A. Has an indent called the cardiac notch, where the heart lies.

B. Has a superior tip called 'the base' of the lung.

C. Has a superior, middle and inferior lobe.

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Q4. The hila of the lungs don't contain which of the following vessels?

A. The azygous vein.

B. The pulmonary arteries.

C. The pulmonary veins.

D. The primary bronchi.

The azygous vein runs up the right anterolateral aspect of the vertebral column, and it does not directly remove blood from the lungs (this is largely the job of the pulmonary veins).

Q5. The carina...

- A. Lies at the level of T6.
- B. Is the anatomical landmark for an emergency airway.
- C. Is present at the bifurcation of the primary bronchi on each side.
- D. Is made of hyaline cartilage.**

Can't be A, because the carina lies at the level of the sternal plane. Note that during deep inspiration the carina can descend to C6. Can't be B, because the major anatomical landmark for an emergency 'cricothyroidotomy' airway is the cricothyroid ligament in the neck. Can't be C, because the carina is present at the bifurcation of the trachea, NOT at the bifurcation of the primary bronchi.

Q6. A tertiary bronchus could also be called a...

- A. Segmental bronchus.**
- B. Main bronchus.
- C. Lobar bronchus.
- D. Principal bronchus.

Each tertiary bronchus supplies a bronchopulmonary segment.

Q7. Which of the following statements concerning the trachea is true?

- A. It is deficient of cartilage anteriorly, although the trachealis muscle is present here.
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Q8. The left bronchial arteries...

- A. Arise from the descending aorta.**
- B. Arise from the pulmonary arteries.
- C. Arise from the descending vertebral arteries.
- D. Arise from the intercostal arteries.

The two left bronchial arteries arise directly from the descending aorta. The single right bronchial artery arises from the 5th or 6th posterior intercostal artery.

Q9. The superficial bronchial vein on the left...

- A. Drains into the superior hemiazygous vein.**
- B. Drains into the inferior hemiazygous vein.
- C. Drains into the azygous vein.
- D. Drains into the pulmonary veins.

The superficial bronchial vein on the left drains into the superior hemiazygous vein. The superficial bronchial vein on the right drains into the azygous vein.

Q10. Where does the right bronchial artery arise from?

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- C. Superior lobe of left lung: supplied by apico-posterior, anterior, superior lingular and inferior lingular tertiary bronchi.
- D. Inferior lobe of left lung: supplied by anterior basal, lateral basal and posterior basal tertiary bronchi.**

The inferior lobe of the left lung is supplied by: superior, anteromedial basal, lateral basal, posterior basal bronchi.

Q13. The respiratory airways...

- A. Are composed of the trachea and primary bronchi.
- B. Are composed of the alveoli, alveolar ducts and respiratory bronchioles.**
- C. Are composed of the primary, secondary and tertiary bronchi.
- D. Make up most of the respiratory system (but not the lungs).

B is the correct answer for 'respiratory airways'. The 'conducting airways' are made up of the trachea, primary, secondary and tertiary bronchi and terminal bronchioles.

Q14. At the alveoli...

- A. Carbon dioxide diffuses into the pulmonary capillaries, down its concentration gradient.
- B. Carbon dioxide diffuses into the alveolar sac (air space), down its concentration gradient.**
- C. Massive dilation occurs during exercise.
- D. Cartilage plates ensure the alveoli do not collapse under ventilatory pressures.

Q15. Which of the following statements concerning a tension pneumothorax is true?

- A. It can be defined as a build-up of air between the pleural cavity and thoracic cavity.
- B. Involves the mediastinum shifting to the opposite side of the injury.**
- C. Involves serious damage to the elastin fibres in the alveolar walls.
- D. Involves the mediastinum shifting towards the side of the injury.

The pleural cavity fills with atmospheric air and pushes the mediastinum to the opposite side.

Q16. Which of the following are all part of the conducting airways?

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- B. Respiratory bronchioles, terminal bronchioles and alveoli.
- C. Tertiary bronchi, terminal bronchioles, respiratory bronchioles and alveolar ducts.
- D. Secondary bronchi, tertiary bronchi, terminal bronchioles and respiratory bronchioles.