

Question 1

Within which of the following airway structures does the transition point between conducting and respiratory zones occur?

Answer Choices:

Alveoli

Bronchi

Trachea

Bronchioles (Correct)

Question 2

A young adult woman develops episodes of shortness of breath and bilateral expiratory wheezing whenever she is around cats. Which of the following pathophysiological changes is most consistent with her presentation?

Answer Choices:

Thickening of the interstitial space causing restricted lung expansion

Alveolar destruction leading to large air spaces and decreased surface area for gas exchange

Chronic bronchial inflammation causing bronchospasm and mucus production (Correct)

Loss of elastic recoil in the lungs leading to airway collapse

Question 3

A patient with silicosis undergoes spirometry, which shows a restrictive pattern. Which pathophysiological mechanism primarily contributes to their symptoms?

Answer Choices:

Thickening of the interstitial space

(Correct) Excessive mucus production

Hyperreactivity of the airways

Destruction of alveolar walls

Question 4

A patient with asthma experiences a sudden, severe exacerbation. Which of the following pathophysiological processes is most likely responsible for the acute presentation?

Answer Choices:

Decreased lung compliance due to fibrosis

Reduced mucus production and decreased airway resistance

Fluid accumulation in the alveoli secondary to heart failure

Hyperinflation of alveoli due to air trapping and bronchospasm (Correct)

Question 5

During a sleep study, an older adult woman with a history of stroke exhibits periodic cessation of both