

# THE GOOFY ANATOMIST QUIZZES

## 3. PLEURAE

Q1. The parietal pleura...

- A. Extends anteriorly to rib 8, laterally to rib 10 and posteriorly to the T12 vertebra.
- B. Extends anteriorly to rib 6, laterally to rib 8 and posteriorly to the T10 vertebra.
- C. Extends anteriorly to rib 6, laterally to rib 10 and posteriorly to the T8 vertebra.
- D. Extends anteriorly to rib 8, laterally to rib 8 and posteriorly to the T10 vertebra.

Q2. Which of the following statements concerning the parietal pleural layers is most accurate?

- A. The cervical pleura runs inferior to the first rib and clavicle.
- B. The costal pleura is located only on the anterior aspect of the lungs.
- C. The mediastinal pleura runs more medially than the costal pleura.
- D. The costal pleura is the most superior of the parietal pleural layers.

Q3. What is the nerve supply of the visceral pleura?

- A. General visceral sensory nerves from the pulmonary plexus (sympathetic trunk and vagus nerve)
- B. The intercostal nerves T1 – T11.
- C. The sensory component of the phrenic nerve.
- D. General visceral motor nerves from the pulmonary plexus.

Q4. Concerning embryonic development of the thoracic cavity...

- A. The visceral and parietal pleura arise from different sources.
- B. The laryngotracheal tube arises from a hollowed-out area of the thoracic aorta.
- C. The lung buds invaginate the intraembryonic coelomic cavity.
- D. The lungs end up lying within the pleural cavity after pushing the intraembryonic coelom flat against the thoracic walls.

Q5. A chest drain is best inserted...

- A. Directly into the lung tissue to remove excess air.
- B. Through the bony ribs to avoid damaging respiratory muscles.
- C. Through the intercostal space but close to the superior border of the rib below.
- D. Through the intercostal space but close to the inferior border of the rib above.

Q6. The parietal pleura...

- A. Is adhered to the internal aspect of the ribs and the innermost intercostal muscles proper.
- B. Is adhered to the substance of the lung.
- C. Is sensitive to stretch only.
- D. Has no sensory nerve supply.

Q7. What is the nerve supply of the parietal pleura?

- A. Intercostal nerves T1 – T11 and the phrenic nerve.
- B. Intercostal nerves T1 – T12.
- C. Anterior rami of thoracic spinal nerves.
- D. General visceral sensory nerves.

Q8. Concerning the nerve supply of the pleurae, which statement is true?

- A. The cervical pleura receives no sensory nerve supply.
- B. Intercostal nerves supply the mediastinal pleura.
- C. Intercostal nerves supply the central part of the diaphragmatic pleura.
- D. The phrenic nerve supplies the central part of the diaphragmatic pleura.

Q9. Which of the following statements concerning the pleurae is false?

- A. Pleural fluid reduces friction during inspiration and expiration.
- B. Pleural fluid increases the surface tension between the parietal and visceral pleural layers.
- C. The costodiaphragmatic recess is a potential space that is sometimes occupied during forced inspiration.
- D. The visceral pleural layer is adhered to the internal aspect of the rib cage.

## Answers

Q1. The parietal pleura...

- A. Extends anteriorly to rib 8, laterally to rib 10 and posteriorly to the T12 vertebra.**
- B. Extends anteriorly to rib 6, laterally to rib 8 and posteriorly to the T10 vertebra.
- C. Extends anteriorly to rib 6, laterally to rib 10 and posteriorly to the T8 vertebra.
- D. Extends anteriorly to rib 8, laterally to rib 8 and posteriorly to the T10 vertebra.

**The parietal pleura extends anteriorly to rib 8, laterally to rib 10 and posteriorly to the T12 vertebra. The visceral pleura extends anteriorly to rib 6, laterally to rib 8 and posteriorly to the T10 vertebra.**

Q2. Which of the following statements concerning the parietal pleural layers is most accurate?

- A. The cervical pleura runs inferior to the first rib and clavicle.
- B. The costal pleura is located only on the anterior aspect of the lungs.
- C. The mediastinal pleura runs more medially than the costal pleura.**
- D. The costal pleura is the most superior of the parietal pleural layers.

**Can't be A, because the cervical pleura extends above the first rib and medial third of the clavicle. Can't be B, because the costal pleura is located on the anterior, lateral and posterior aspects of the ribcage – technically it is not adhered to the lungs at all. Can't be D, because the cervical pleura lies much more superiorly than the costal pleura.**

Q3. What is the nerve supply of the visceral pleura?

- A. General visceral sensory nerves from the pulmonary plexus.**
- B. The intercostal nerves T1 – T11.
- C. The sensory component of the phrenic nerve.
- D. General visceral motor nerves from the pulmonary plexus.

**The visceral pleura is always less sensitive than the parietal pleura, and is only associated with sensory nerves. Also...Can't be B, because the intercostal nerves supply the costal and peripheral diaphragmatic pleurae and the intercostal muscles. Can't be C, because the phrenic nerve supplies the mediastinal and diaphragmatic pleurae and the muscular diaphragm. Can't be D, because the visceral pleura has no motor function at all.**

Q4. Concerning embryonic development of the thoracic cavity...

- A. The visceral and parietal pleura arise from different sources.
- B. The laryngotracheal tube arises from a hollowed-out area of the thoracic aorta.
- C. The lung buds invaginate the intraembryonic coelomic cavity.**

D. The lungs end up lying within the pleural cavity after pushing the intraembryonic coelom flat against the thoracic walls.

**Can't be A, because the visceral and parietal pleural layers both arise from the compression of the walls of the intraembryonic coelom. Can't be B, because the laryngotracheal tube arises from an out-pouching of the pharynx. Can't be D, because the lungs do not end up lying in the pleural cavity – the lungs are surrounded by both pleural layers but they are said to lie in the thoracic cavity only.**

Q5. A chest drain is best inserted...

- A. Directly into the lung tissue to remove excess air.
- B. Through the bony ribs to avoid damaging respiratory muscles.
- C. Through the intercostal space but close to the superior border of the rib below.**
- D. Through the intercostal space but close to the inferior border of the rib above.

**By inserting the drain close to the superior border of the rib below, you are avoiding damaging the intercostal vessels and nerves (which are running in the costal groove of the rib above).**

Q6. The parietal pleura...

- A. Is adhered to the internal aspect of the ribs and the innermost intercostal muscles proper.**
- B. Is adhered to the substance of the lung.
- C. Is sensitive to stretch only.
- D. Has no sensory nerve supply.

**Can't be B, because the visceral pleura, not the parietal pleura, is adhered to the substance of the lung. Can't be C, because it is the visceral pleura, not the parietal pleura, that is sensitive to stretch only. Can't be D, because the parietal pleura receives a sensory nerve supply from both the phrenic nerve and intercostal nerves.**

Q7. What is the nerve supply of the parietal pleura?

- A. Intercostal nerves T1 – T11 and the phrenic nerve.**
- B. Intercostal nerves T1 – T12.
- C. Anterior rami of thoracic spinal nerves.
- D. General visceral sensory nerves.

**Both the phrenic nerve and intercostal nerves (T1 – T11) innervate the parietal pleura. The visceral pleura is innervated by general visceral sensory nerves.**

Q8. Concerning the pleurae, which statement is true?

- A. The cervical pleura receives no sensory nerve supply.
- B. Intercostal nerves supply the mediastinal pleura.
- C. Intercostal nerves supply the central part of the diaphragmatic pleura.
- D. The phrenic nerve supplies the central part of the diaphragmatic pleura.**

**The phrenic nerve supplies the central part of the diaphragmatic pleura while the intercostal nerves supply the peripheral parts of the diaphragmatic pleura.**

Q9. Which of the following statements concerning the pleurae is false?

- A. Pleural fluid reduces friction during inspiration and expiration.
- B. Pleural fluid increases the surface tension between the parietal and visceral pleural layers.
- C. The costodiaphragmatic recess is a potential space that is sometimes occupied during forced inspiration.
- D. The visceral pleural layer is adhered to the internal aspect of the rib cage.**

**The visceral pleural layer is adhered to the substance of the lung, while the parietal pleural is adhered to the internal aspect of the rib cage.**