

## Week 9 - Respiratory system

1. (4 points) Define respiration
  
2. (4 points) Events of respiration involve:
  - a) breathing or pulmonary ventilation
  - b) exchange of gases between the air and the blood
  - c) transport of gases by the blood
  - d) exchange of gases between the blood and body cells
  - e) All of the above
  - f) a and d

3. (8 points) Name parts of upper respiratory tract:

Name parts of lower respiratory tract:

4. (8 points) Describe functions of nose as respiratory organ:

5. (4 points each) True or False:

\_\_\_\_\_ Left lung is larger than right lung

\_\_\_\_\_ Alveoli are air sacs

\_\_\_\_\_ Smoking paralyzes hair cilia in bronchial tree resulting in mucus accumulation

\_\_\_\_\_ During inhalation rib cage expands

\_\_\_\_\_ Parietal pleura is the primary muscle of respiration

6. (4 points) During exhalation:
  - a) Ribs rotate anteriorly and superiorly increasing the dimension of the thoracic cavity
  - b) Diaphragm relaxes and thoracic cavity returns to the lowered position
  - c) Diaphragm contracts and pulls the floor of the thoracic cavity downwards.
  
7. (4 points) Muscles of quiet inspiration:
  - a) Sternocleidomastoid
  - b) Diaphragm

- c) Scalenes
  - d) External intercostals
  - e) b & c
  - f) b & d
8. (4 points each) True or false:
- \_\_\_\_\_ Inhalation occurs when intrathoracic pressure increases
  - \_\_\_\_\_ Exhalation occurs when intrathoracic pressure increases
  - \_\_\_\_\_ During quiet exhalation lung tissue recoils.
  - \_\_\_\_\_ Upper chest breathing is more efficient than diaphragmatic breathing.
  - \_\_\_\_\_ Upper chest breathing can lead to myofascial pain syndrome.
9. (8 points) List at least 4 benefits of diaphragmatic breathing.
10. (4 points) Symptoms of hyperventilation include:
- a) lesions on the upper chest
  - b) deeper than required breathing
  - c) violent behavior
  - d) elevated blood sugar
11. (8 points) Describe how to normalize breathing in cases of hyperventilation.
12. (4 points) Breathing is controlled by:
- a) brain stem
  - b) sympathetic nervous system
  - c) stretch receptors in pleura and chemo receptors in blood vessels
  - d) heart
  - e) b & c
  - f) a & c
  - g) all of the above
13. (10 points) Briefly (2-3 sentences) describe the potential benefits of massage therapy on respiratory system.