Matching: Choose the correct answer for each question.

1. _____The main passageway that leads to the lungs from the throat is the _____.
   a. pharynx       b. epiglottis       c. esophagus       d. trachea

2. _____The FIRST branches off the trachea are called
   a. bronchioles    b. bronchi       c. arterioles       d. alveoli

3. _____What helps keep the alveoli inflated at the perfect size
   a. surfactant (soap-like molecules)   b. cilia       c. mucus       d. hemoglobin

4. _____The dome shaped muscle below the chest cavity is called the
   a. intercostals       b. rib muscle       c. diaphragm       d. coles

5. _____During swallowing, the air passage of the pharynx is covered by the
   a. larynx       b. epiglottis       c. trachea       d. bronchi

6. _____Alveoli in the lungs are connected to the bronchi by a network of tiny tubes called
   a. arterioles       b. venules       c. capillaries       d. bronchioles

7. _____The ______ is a long straight tube that carries air from the back of the throat to
   the lungs.
   a. larynx       b. trachea       c. epiglottis       d. pharynx

8. _____Inside the alveoli, carbon dioxide and oxygen
   a. are exchanged       c. are transported along microscopic
   b. are produced inside cells       d. are exchanged for other gases
   tubules

9. _____The term Least closely related to the others is
   a. inspiration       b. expiration       c. internal respiration       d. breathing

10. _____The diaphragm is located along the bottom of the
    a. stomach       b. liver       c. abdominal cavity       d. rib cage

11. _____Cilia that line the walls of air passageways
    a. move the inspired air to the alveoli       c. moisten the expired air
    b. move the expired air to the nasal cavity       d. clean the inspired air

12. _____plays a role in holding one's breath
    a. true vocal cords   b. false vocal cords   c. Pharynx   d. epiglottis

13. _____Internal respiration is at the level of the
    a. organism       b. cell       c. lungs       d. pharynx

14. _____Which of the following occurs as air rushes into the lungs to equalize air pressure?
    a. inhalation       b. contraction       c. exhalation       d. None of the above.

15. _____The actual exchange of gases occurs at the site of the
    a. larynx       b. nasal passage       c. trachea       d. alveoli
16. ____ Each alveolus  
   a. contains many air sacs  b. is surrounded by capillaries  c. attaches to the larynx  d. is a large air sac 
17. ____ Gas exchange occurs when  
   a. oxygen in the alveoli diffuses into the blood in the capillaries  
   b. oxygen binds with hemoglobin in the red blood cells  
   c. the red blood cells give up oxygen to the cells of the body tissues  
   d. All of the above. 
18. ____ When the diaphragm and rib cage muscles relax  
   a. the chest cavity enlarges  b. expiration occurs  c. inspiration occurs  d. It is impossible to breathe 
19. ____ Which is the correct sequence for the path of oxygen through the respiratory system?  
   a. nasal passages, bronchi, trachea, bronchioles, cells, blood, alveoli  
   b. cells, blood, alveoli, bronchioles, bronchi, trachea, nasal passages  
   c. nasal passages, blood, alveoli, bronchi, cells, trachea, bronchioles  
   d. nasal passages, trachea, bronchi, bronchioles, alveoli, blood, cells 
20. ____ The elastic tissue that forms a flap over the top of the larynx is the  
   a. bronchi  b. alveoli  c. epiglottis  d. trachea 
21. ____ Inspiration occurs when  
   a. blood pressure increases  b. the diaphragm pushes upward  
   c. thoracic pressure increases  d. thoracic volume increases 
22. ____ The tubes that branch from the trachea are the  
   a. bronchi  b. larynx  c. bronchioles  d. pharynx 
23. ____ Chamber where passages from the nose and mouth come together  
   a. larynx  b. pharynx  c. trachea  d. bronchi 
24. ____ Breathing is controlled by the chemistry of your blood as it interacts with the  
   a. cerebrum  b. cerebellum  c. hypothalamus  d. medulla oblongata 
25. ____ Where are the vocal cords located in the body?  
   a. pharynx  b. epiglottis  c. larynx  d. trachea 
26. ____ Air in the alveoli following inhalation has the highest concentration of which gas?  
   a. hydrogen  b. carbon monoxide  c. carbon dioxide  d. oxygen 
27. ____ Immediately before entering the alveoli, inspired air passes through  
   a. veins  b. the trachea  c. bronchioles  d. bronchi 
28. ____ What determines whether carbon dioxide is absorbed or released by blood?  
   a. phagocytes  b. relative amounts of hemoglobin  c. air pressure within alveoli  
   d. concentration gradients 
29. ____ Breathing is an involuntary process controlled by the amount of ____ in your blood.  
   a. oxygen  b. sodium ions  c. carbon dioxide  d. air 
30. ____ The ____ are sacs of the lungs where oxygen and carbon dioxide are exchanged by diffusion between air and blood.  
   a. epiglottis  b. alveoli  c. bronchioles  d. larynx 
31. ____ Sound is produced by vibrations of the  
   a. epiglottis  b. bronchi  c. vocal cords  d. trachea
32. During inhalation
   a. the rib muscles relax       c. the diaphragm moves upward
   b. air pressure decreases in the chest cavity   d. the rib cage moves downward
33. The actual exchange of gases occurs at the
   a. trachea   b. bronchi   c. larynx   d. alveoli
34. Breathing is an involuntary action under the control of the
   a. cerebrum   b. pons   c. medulla oblongata   d. cerebellum
35. As air passes through the nasal passages, the mucus and hairs Do Not filter out
   a. moisture   b. dust   c. smoke   d. bacteria
36. What prevents the trachea from collapsing?
   a. circular bones   b. bronchi   c. C-rings of cartilage   d. alveoli
37. The bronchioles open onto bunches of air sacs called
   a. pharynx   b. alveoli   c. capillaries   d. bronchi
38. Air is forced into the lungs by the contraction of the
   a. diaphragm   b. alveoli   c. bronchioles   d. heart
39. The driving force behind gas exchange in the body is
   a. fusion   b. air pressure   c. diffusion   d. blood pressure
40. When a(n) contracts, the chest cavity gets larger and air rushes to your lungs.
   a. lung   b. alveolus   c. diaphragm   d. trachea
41. The passageway that leads to the lungs is called the
   a. alveolus   b. trachea   c. epiglottis   d. diaphragm
42. What structures trap foreign particles and bacteria in the nose and trachea?
   a. pharynx   b. epiglottis   c. cilia   d. trachea
43. The exchange of oxygen and carbon dioxide within the alveoli is called
   a. external respiration   b. cellular respiration   c. breathing   d. internal respiration
44. The order of air movement with in the lungs is Best described as
   a. bronchioles to bronchi to alveoli   c. bronchi to bronchioles to alveoli
   b. trachea to bronchi to alveoli   d. bronchi to alveoli to bronchioles
45. During inhalation, the contraction of the diaphragm and intercostals muscles
   causes the chest cavity’s
   a. volume to increase and pressure to increase
   b. volume to decrease and pressure to decrease
   c. volume to decrease and pressure to increase
   d. volume to increase and pressure to decrease
46. The cilia that line your trachea and bronchi
   a. move mucus and dirt upward   c. produce dirt trapping mucus
   b. only beat when you inhale   d. help in the exchange of oxygen and carbon dioxide
FILL IN THE BLANKS

1. The lungs are covered by the __________________________ __________________________.

2. What three things happen to air as it passes through the nose?
   a. ____________________________________________________________
   b. ____________________________________________________________
   c. ____________________________________________________________

3. The grape-like clusters of air sacs within the lungs are the __________________________.

4. The chest cavity is separated from the abdominal cavity by the __________________________.

5. The part of the throat located behind the mouth is the __________________________.

MATCHING

1. ____ Muscle spasms or irritation of the diaphragm
   A. Respiratory Zone
   B. Conducting Zone
   C. Cough
   D. Sneeze
   E. Hiccup
   AB. Yawn
   AC. Anatomical Dead Space
   AD. Lower Respiratory Tract
   AE. Upper Respiratory Tract

2. ____ Area in the respiratory system where air NEVER reaches the lungs.

3. ____ Irritation of the nasal cavity

4. ____ Irritation of the trachea or bronchi

5. ____ When the brain thinks you don’t have enough oxygen

6. ____ Area where exchange of gases occur in the respiratory tract

7. ____ Area that carries air in the respiratory tract

8. ____ Region of respiratory tract that starts with the larynx

9. ____ Region of respiratory tract that ends at the pharynx

More MATCHING...

1. General process of moving air into and out of the lungs. Aka breathing
   A. Residual Volume
   B. Exhale
   C. Ventilation
   D. External Respiration
   E. Spirometer
   F. Respiratory Membrane
   G. Inspiratory Reserve Volume
   H. Inhale
   I. Expiratory Reserve Volume
   J. Tidal Volume

2. Movement of air into the lungs.

3. Movement of air out of the lungs.

4. Volume of air inspired or expired during quiet/normal breathing

5. Volume of air that can be inspired after normal tidal volume inspiration.

6. Amount of air in the respiratory system after maximum expiration

7. Exchange of gasses between lungs and blood

8. Measurement device used to measure lung capacity.

9. Actual site of gas exchange

10. The amount of air that never leaves the lungs.
**Short Answer:** Answer the questions below as completely and as thoroughly as possible.

1. List the main functions of the respiratory system.

2. Describe how air is inspired and exhaled. Refer to the changes in the thoracic cavity, movement of the diaphragm, and changes in volume/pressure.

3. In the Correct Order in which air passes through the Respiratory System, identify the Parts of the Respiratory System and their Function(s) of each part.

4. Find the total lung capacity if given a vital capacity of 6.7 L and a residual volume of 1.2 L.