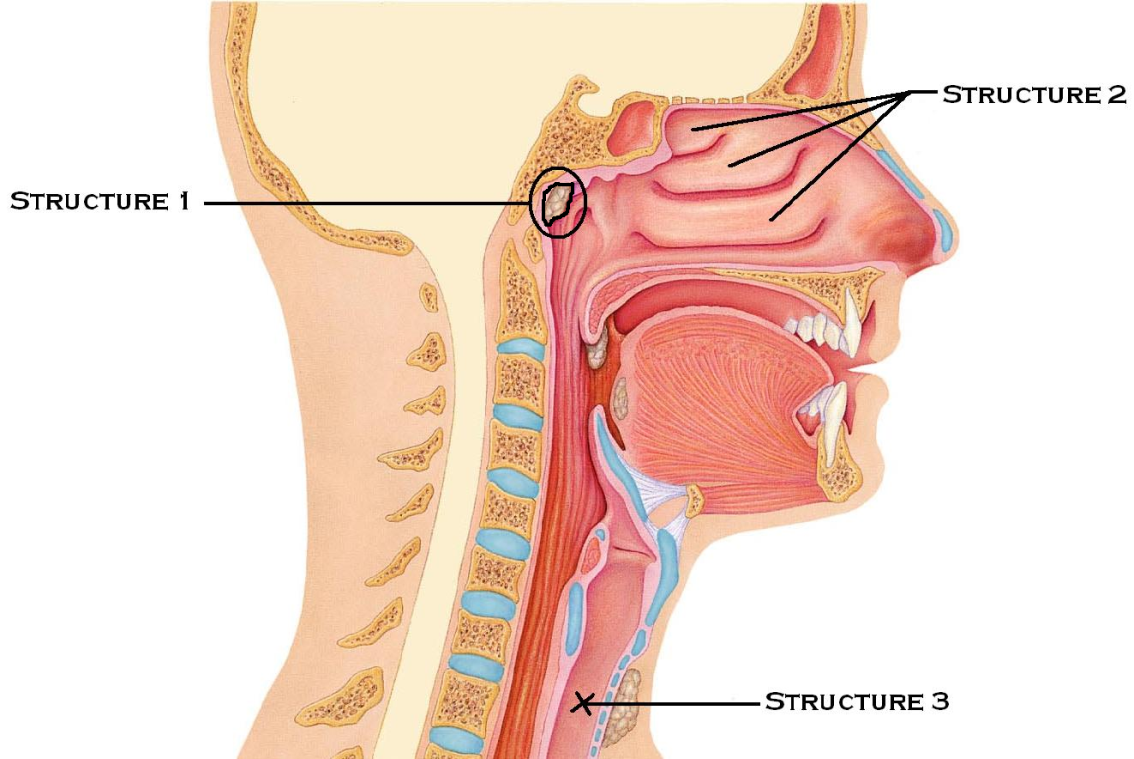
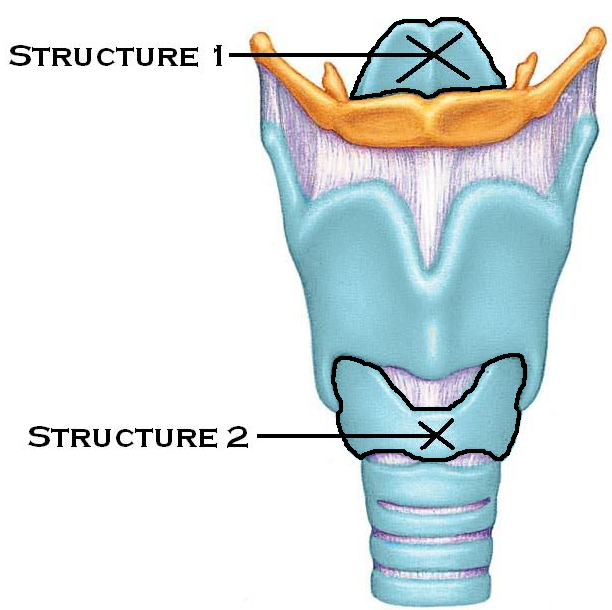
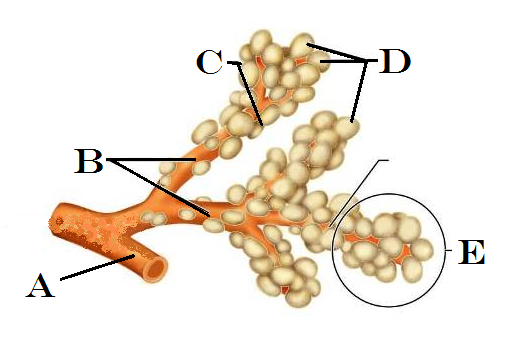
**BSC 182**

**Exam Four**

1. The only *external visible* part of the respiratory system is the
   1. Glottis
   2. True vocal folds
   3. Oropharynx
   4. Nose
   5. Thyroid cartilage
2. **Dyspnea** means \_\_\_\_, and **apnea** means \_\_\_\_\_
   1. fast breathing; slow breathing
   2. slow breathing; fast breathing
   3. no breathing; difficulty breathing
   4. controlled breathing; uneven breathing
   5. difficulty breathing; no breathing
3. Which of the following are **true**
4. External respiration takes place at a body cell
5. Internal respiration takes place at the alveoli
6. External respiration takes place at the alveoli
7. Internal respiration takes place at a body cell
8. External respiration is the movement of air in to and out of the lungs
   1. 1 and 4
   2. 2 and 3
   3. 3 and 5
   4. 1 and 2
   5. 3 and 4
9. This **tube of skeletal muscle** runs from the base of the skull to the sixth cervical vertebra. It connects to the nasal cavity and mouth superiorly and to the esophagus and larynx inferiorly
   1. Pharynx
   2. Hyoid
   3. Trachea
   4. Strap muscles
   5. Paranasal sinuses
10. Which the following is **not** a paired laryngeal cartilage?
    1. Corniculate cartilage
    2. Arytenoids cartilage
    3. Epiglottic cartilage
    4. Cuneiform cartilage
11. The **left lung** is separated into \_\_\_\_\_\_\_\_\_\_ by the \_\_\_\_\_\_\_\_.
    1. Superior, Middle, and Inferior lobes; horizontal and oblique fissures
    2. Superior and Inferior lobes; oblique fissure
    3. Medial and Lateral lobes; corniculate fissure
    4. Medial, Intermediate, and Lateral lobes; corniculate and arytenoid fissures
    5. Superior and Inferior lobes; horizontal fissure
12. The medial opening between the true vocal cords is called
    1. Glottis
    2. Tracheal foramen
    3. Epiglottis
    4. Fauces
    5. Laryngeal vestibule
13. “**Structure 1**” indicates which of the following features?
    1. Supralingual salivary gland
    2. Palatine tonsil
    3. Lingual tonsil
    4. Carina
    5. Pharyngeal tonsil
14. “**Structure 2**” indicates which of the following?
    1. Paranasal sinuses
    2. Nasal conchae
    3. Nasal vestibule
    4. Nasopharynx
    5. Nasolabial fold
15. “**Structure 3**” is
    1. Oropharynx
    2. Esophagus
    3. Trachea
    4. Nasopharynx
    5. Laryngopharynx
16. \_\_\_\_\_\_\_\_ is determined by the length and tension of the vocal folds, whereas \_\_\_\_\_ is determined by the force of the air passing across them.
    1. Projection; loudness
    2. Pitch; loudness
    3. Volume; frequency
    4. Speech; pitch
    5. Loudness; pitch
17. Which of the following is true with regards to the **bronchioles** within the conducting zone?
    1. Produces large amounts of mucus
    2. Composed of stratified columnar epithelium
    3. Composed of cuboidal epithelium
    4. Lacks smooth muscle
    5. Composed mainly of cartilage
18. Within the **alveolar walls**, one would expect to find
    1. Stratified squamous epithelium
    2. An osmosis-driven exchange of gasses
    3. Transitional epithelium
    4. Surfactant-secreting cuboidal cells
    5. Basophils
19. “Structure 1” is
    1. Glottis
    2. Cricoid cartilage
    3. Hyoid bone
    4. Epiglottis
    5. Thyroid cartilage
20. “Structure 2” is
    1. Cricoid cartilage
    2. Epiglottis
    3. Thyroid cartilage
    4. Hyoid bone
    5. Glottis
21. **Emphysema** results in
22. improved alveolar gas exchange
23. decreased surface area for gas exchange
24. blockage of bronchioles
25. increase lung flexibility
26. increased lung compliance
27. Which two factors encourage the lungs to collapse/recoil?
28. A negative intrapulmonary pressure
29. The elastic nature of the lungs
30. Surfactant
31. Surface tension at the alveoli
32. The rigidity of the thoracic wall
    1. 2 and 4
    2. 1 and 5
    3. 3 and 5
    4. 1 and 3
    5. 4 and 5
33. What is **atelectasis**?
    1. The ability for the lung to remain inflated due to its Residual Volume
    2. Lung collapse due to collapsed bronchioles or plugged alveoli
    3. The entrance/exit site for large blood vessels, lymphatics, and bronchi
    4. Low CO2 levels due to hyperventilation
    5. The superior-most region of the lung
34. \_\_\_\_\_\_\_\_\_ describes the pressure within the alveoli
    1. Intrapleural pressure
    2. Interpleural pressure
    3. Intrapulmonary pressure
    4. Intracostal pressure
    5. Interpulmonary pressure
35. \_\_\_\_\_\_\_ is always a negative pressure which helps to \_\_\_\_\_\_
    1. Intrapulmonary pressure; promote lymphatic drainage
    2. Intracostal pressure; build lung volume
    3. Interpulmonary pressure; prevent lung collapse
    4. Intrapleural pressure; prevent lung collapse
    5. Interpleural pressure; encourage lung elasticity
36. Which muscles are responsible for the elevation of the rib cage?
    1. Internal intercostal muscles
    2. Pulmonary muscles
    3. External intercostal muscles
    4. Digastric muscle
    5. Diaphragm
37. An inhalant such as Primatine or Albuterol can be used during an asthma attack to promote \_\_\_\_\_\_ in order to \_\_\_\_\_\_
    1. Bronchospasm: increase bronchial airway resistance
    2. Vasodilation; increase peripheral resistance
    3. Bronchodilation; reduce bronchial airway resistance
    4. Bronchodilation: reduce lung compliance
    5. Vasoconstriction; reduce peripheral resistance
38. Which of the following factors would **increase** **lung compliance**? (make it easier for the lung to expand)
    1. Ossification of costal cartilage
    2. Decreased surfactant
    3. Scar tissue
    4. Increased surfactant
    5. Increased mucus production
39. \_\_\_\_\_\_\_\_\_\_ is the amount of air able to be forced out **following the deepest inspiration possible**.
40. residual volume
41. tidal volume
42. vital capacity
43. inspiratory reserve volume
44. inspiratory capacity
45. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the amount of air taken into the lungs with a **normal inspiration** and blown out during a **normal expiration**
46. residual volume
47. inspiratory reserve volume
48. vital capacity
49. inspiratory capacity
50. tidal volume
51. After **a resting exhalation**, what is the term for the air remaining in the lungs?
    1. Residual capacity
    2. Residual Volume
    3. Functional Residual Volume
    4. Functional Residual Capacity
    5. Anatomic dead space volume
52. Healthy alveolar dead space and anatomic dead space have this in common
    1. Type II cells producing angiotensin
    2. No gas exchange taking place
    3. Filled with mucus
    4. Efficient gas exchange
    5. Flexible compliance
53. What parameters would be best for **increasing** hemoglobin’s affinity to oxygen.
54. Other O2 molecules attaching to hemoglobin
55. Other O2 molecules detaching from hemoglobin
56. Elevated C02 levels
57. Decreased temperature
58. Low BPG
    1. 1 and 5
    2. 2 and 3
    3. 1, 4, and 5
    4. 3 and 5
    5. 2, 4, and 5
59. This enzyme helps to convert carbon dioxide and water into carbonic acid. The enzyme \_\_\_\_\_\_\_\_\_ is present in \_\_\_\_\_\_\_\_\_.
    1. Carbonic anhydrase: cytoplasm of RBCs
    2. Cholinesterase: plasma
    3. Oxyhemoglobinase; hemoglobin
    4. Plasmic hydrolase: cytoplasm of WBCs
    5. Acetylhydrase; liver cells
60. Hering-Bruer (The Inflation Reflex) works by
    1. Sensing the ratio of oxygen to carbon dioxide within the lungs
    2. Sensing tissue temperature to prevent lung damage
    3. Sensing lung irritants and coughing to remove them
    4. Sensing tissue stretch to prevent over-inflation of the lungs
    5. Initiating tissue damage to control oxygen pressure
61. In the higher brain centers, which region can alter breathing rates based on emotions
    1. Limbic region
    2. Prefrontal cortex
    3. Thalamus
    4. Wernicke’s area
    5. Insula of Reil
62. Indicate the letter in the image to the right that is a **conducting pathway only**. No gas exchange.
    1. A
    2. B
    3. C
    4. D
    5. E
63. This type of lung cancer arises in the bronchi and easily metastasizes
    1. Bronchosarcoma
    2. Type II cell lymphoma
    3. Small cell carcinoma
    4. Adenocarcinoma
    5. Squamous cell carcinoma
64. Within the respiratory system, the conducting zone
    1. Contains the alveoli
    2. Provides the route for ventilation, but no gas exchange
    3. Houses the respiratory bronchioles
    4. Is the location for gas exchange
    5. All of the above
65. The inflammatory response in asthma is stimulated by the release of which materials?
    1. IgA and IgD
    2. Interleukins and Cytokines
    3. Substance P and Substance I
    4. IgE and Histamines
    5. ATP and Ca2+
66. Consider ventilation/perfusion coupling. If there is increased ventilation and decreased perfusion, what steps will be taken to restore an efficient exchange?
    1. Bronchodilation
    2. Dilation of pulmonary arterioles
    3. Constriction of pulmonary arterioles
    4. Dilation of pulmonary venules
    5. Constriction of pulmonary venules
67. The shallow vertical groove located inferior to the apex of the nose is the
    1. Nares
    2. Nasolabial fold
    3. Phloem
    4. Philbert
    5. Philtrum
68. Bronchial arteries carry \_\_\_\_, while pulmonary arteries carry \_\_\_\_
    1. oxygenated blood; oxygenated blood
    2. deoxygenated blood; deoxygenated blood
    3. deoxygenated blood; oxygenated blood
    4. oxygenated blood; deoxygenated blood
69. What is the common name for “vibrissae?”
    1. Vocal cords
    2. Nose hairs
    3. Nostrils
    4. Alveoli
    5. surfactant
70. Explain how resting exhalation is a passive process where no muscles are activated to contract.
    1. The low abdominal pressure causes air to be removed from the thoracic region
    2. As the inspiratory muscle relax, they begin to recoil and increase the pressure in the thoracic cavity
    3. The expiratory muscles are activated during a resting exhalation, but need no ATP (energy) to function
    4. The diaphragm contracts upward into the thoracic cavity, pushing the air out of the lungs. Skeletal muscle involvement is minimal.
    5. The intrapleural pressure becomes positive: higher than the intrapulmonary pressure, and it forces the air out of the lungs because of the pressure difference.
71. The purpose of the chloride shift is
72. to balance negative ions moving into and out of the alveoli
73. to balance positive ions moving into and out of the RBC
74. to balance negative ions moving into and out of the capillaries
75. to balance positive ions moving into and out of the terminal bronchioles
76. to counteract the influx of sodium ions during respiration
77. Which of the following are true with regards to Carbon Dioxide?
78. It attaches to the same binding site on hemoglobin as oxygen does
79. It can undergo a rapid transition into a bicarbonate ion inside the RBC
80. As C02 increases, the pH increases
81. C02 stimulates the peripheral osmoreceptors as a primary stimulus for breathing
82. C02 will diffuse out of body cells and into blood based on its concentration (partial pressure)
    1. 1, 2, 3, 5
    2. 1, 2, 5
    3. 2, 3, 4
    4. 2, 4, 5
    5. 2, 5
83. Which of the following would be considered **non-respiratory** air movements?

a. sneezing

b. coughing

c. crying

d. hiccupping

e. all of these are non-respiratory air movements

1. Which statement is **true** regarding hemoglobin?

a. found within white blood cells

b. carries oxygen and carbon dioxide at the same location

c. delivers about 25% of its oxygen during one circulatory event

d. creates a strong and stable bond with oxygen

e. degrades into two heme groups and biliverden

1. What is the **carina**?
   1. The midpoint of the nasal septum
   2. The term for the largest of the conchae
   3. The location where nerves and large blood vessels enter the lungs
   4. The site where conduction pathways transition to respiratory pathways
   5. The point at which the trachea splits into bronchi
2. This type of lung cancer originates in the peripheral lung tissues at the glandular areas of the bronchioles as well as the alveoli. It makes up about 40% of lung cancer cases.
   1. Small cell carcinoma
   2. Basal cell carcinoma
   3. Adenocarcinoma
   4. Bronchocarcinoma
   5. Lobar carcinoma
3. Which of the following symptoms are associated with **Tuberculosis**?
   * + 1. Frequent nosebleeds
       2. Jaundice
       3. Hacking cough
       4. Night Sweats
       5. Muscle spasms
4. 1, 3, 5
5. 2 & 3
6. 2, 4, 5
7. 3 & 4
8. 1 & 5
9. Which of the following hypoxias is due to **impaired or blocked circulation**?
   1. Anemic hypoxia
   2. Ischemic hypoxia
   3. Histotoxic hypoxia
   4. Hyperplastic hypoxia
   5. Venous hypoxia
10. What structures compose the **Respiratory Membrane**?
    1. alveolar squamous cell and alveolar cuboidal cell
    2. capillary squamous cell and capillary cuboidal cell
    3. alveolar cuboidal cell and capillary cuboidal cell
    4. alveolar squamous cell and capillary squamous cell
    5. terminal bronchial epithelium and capillary cuboidal cell
11. Reggie and Regina are having a breath-holding competition. As they prepare, Reggie takes several deep breaths in and out, but Regina does not. What do you predict about Reggie’s chances? Will he be able to hold his breath for longer and why?
    1. Reggie will win because the increased oxygen will inhibit the central chemoreceptor response
    2. Reggie will win because the decreased carbon dioxide levels will not trigger his central chemoreceptors, making it longer before he has an urge to breathe
    3. Reggie will lose because taking several deep breaths will cause his blood vessels to dilate, causing him to pass out and resume his breathing automatically
    4. Reggie will lose because his excessive exhaling will have depleted his system of oxygen and he will reflexively breath sooner
    5. Reggie will lose because the increased oxygen in his system will trigger the activation of the peripheral chemoreceptors, restoring a normal breathing rate