1. What is the significance of the “C-shaped” cartilages that reinforce the tracheal rings?
   a. These cartilages hold the trachea rigidly open at the same diameter at all times.
   b. The incomplete portion of the C-shaped cartilages are located at the posterior of the tracheal cartilages, to permit the esophagus to bulge anteriorly into the tracheal lumen in transient fashion to permit a large bite of food to pass.
   c. They form a solid cartilaginous tube
   d. The open region permits passage of the nerves that stimulate the muscles of the laryngeal region.
   e. None of the above.

2. The respiratory filtering mechanism
   a. includes cilia, which occur throughout the system except in the nasal cavity.
   b. removes virtually all particles larger than approximately 10 um from the inspired air.
   c. Traps particles with sticky mucus as well as cilia
   d. Only operates when the air conditions are particularly dirty.
   e. B and C from above are correct.

3. The structures of the conducting pathway occur in the following order from external air to the lungs:
   (1) bronchioles
   (2) trachea
   (3) bronchi
   (4) pharynx
   (5) alveoli
   a. 2,4,3,1,5  b. 4,2,1,3,5  c. 3,4,2,1,5  d. 4,2,3,1,5  e. none of the above

4. The walls of bronchioles differ from those of the other conducting passageways because
   a. they have larger lumens
   b. the luminal diameter is regulated by smooth muscle
   c. they have a larger amount of cartilage per cross sectional area for support
   d. none of the above

5. The function of surfactant is to
   a. reduce the surface tension in the fluid coating alveolar surfaces to prevent alveolar collapse.
   b. phagocytize particulate matter that has eluded the respiratory defenses and reached the alveoli
   c. cause capillaries to adhere closely to the alveolar surfaces to promote gas exchange.
   d. cause diffusion.
   e. none of the above
6. The structures that form the respiratory membrane include:
   (1) elastic fibers
   (2) secondary bronchioles
   (3) the alveolar epithelium
   (4) the pulmonary nerve plexus
   (5) capillary walls
   a. all of the above
   b. none of the above
   c. 3, 5
   d. 2, 4
   e. 2, 4, 5

7. What is the effect of the turbulence of air passing over the nasal conchae?
   a. it promotes air filtration
   b. it decreases the volume of air entering, to prevent possible damage to delicate respiratory surfaces by too rapid a rate of airflow.
   c. it allows extra time for warming and moistening incoming air.
   d. the effect is negligible
   e. a and c are correct

8. The passageway posterior to the mouth cavity that transports both food and air is the
   a. esophagus
   b. larynx
   c. trachea
   d. pharynx

9. Alveolar Type I cells
   a. are simple squamous epithelium
   b. are the cells through which gases diffuse
   c. are phagocytic cells that engulf foreign materials in the lungs
   d. all of the above
   e. a & b

10. Changes that occur in the tissues of the respiratory tree as the bronchi divide include
    a. cartilage rings become fragmented
    b. smooth muscle decreases
    c. cuboidal epithelium becomes columnar
    d. both “a” and “b”
    e. none of the above

Answers:
1. a  6. c
2. c  7. c
3. d  8. d
4. b  9. e
5. a  10. a