1. You are using a colorimetric tube to determine ammonia concentration. The number of strokes used is
   a. Five.
   b. Ten.
   c. As many as needed to get color change.
   d. Found in the manufacturer instructions.

2. All the following combinations of a hand signal and its meaning are correct except one. Which combination is not correct?
   a. Both arms down at sides => need another tool
   b. Hands clutching throat => out of air, cannot breathe
   c. Hands raised above head => need assistance
   d. One arm horizontal, other hand thumb down => task cannot be completed with current air

3. For ammonia, the expansion ratio (the volume of a gas compared with the liquid) is
   a. 90 to 1.
   b. 850 to 1.
   c. MW/29 to 1.
   d. 760 to 1.

4. Of the locations shown below, responders with the highest level of protection work
a. Between G and C  
b. Between A and E  
**c. Between F and D**  
d. Between B and G.

____  5. What information must be known to wear an air-purifying respirator in an ammonia emergency?

   a. **All the following must be known.**  
   b. All airborne contaminants have been identified.  
   c. Concentration of each airborne contaminant is known.  
   d. Oxygen concentration in the area is measured equal to or greater than 19.5%.

____  6. The type of health effect of ammonia of primary concern to responders is  

   a. Systemic, chronic.  
   b. Local, chronic.  
   **c. Local, acute.**  
   d. Systemic, acute.

____  7. Head and eye/face protective equipment is tested according to methods designed by  

   a. **ANSI (American National Standards Institute).**  
   b. ACGIH (formerly known as the American Conference of Governmental Industrial Hygienists).  
   c. NIOSH (National Institute for Occupational Safety and Health).  
   d. ASSP (American Society of Safety Professionals).

____  8. Slips, trips and falls are a recognized hazard during a response. All the following may increase the risk of injury from a slip, trip or fall, **except:**  

   a. Slick or wet surfaces.  
   b. Uneven surfaces or debris in your pathway.  
   **c. Probing ahead with walking stick.**  
   d. Reduced visibility due to darkness or vapor.

____  9. Activities during a termination include  

   a. Reports from participating responders.  
   b. Inspecting equipment and tagging for repair if needed.  
   c. Documenting response actions.  
   **d. All the above.**
10. During an on-site ammonia emergency, a safe location to evacuate to is
   a. Upwind, just outside of the exclusion zone.
   b. Upwind, just outside of the hot line.
   c. Downwind, just outside the support zone.
   d. Determined based on several factors.

11. In the figure below, the LTRS section identified by the number 4, is completed with the
   a. PEL value.
   b. Process code.
   c. OSHA pictogram.
   d. Company name abbreviation.

12. You are to monitor the environment in an ammonia release. Which statement is most correct?
   a. It is an emergency--assume the instrument was calibrated recently.
   b. Do not take the time to "warm up" the instrument; results needed immediately.
   c. Follow the procedures in the ERP, as you have been trained.
   d. Monitor as close as possible to the spill or release point, then back away toward the perimeter.

13. The vapor density of ammonia is 0.6. In a release inside a building, the vapors are most likely to
   a. Lay close to the floor.
   b. Be trapped by the ceiling.
   c. Evenly spread throughout a room.
   d. Be neutralized by nitrogen in the air.

14. One of the following statements about training for anyone required to use respirators is not correct.
   a. Must be provided annually by the employer
   b. Must be in English
   c. Must include knowledge documentation
   d. Must include use in emergencies
15. The most common location of an ammonia leak is
   a. Tow-motor collision with a cylinder.
   b. Evaporator.
   c. System on/off valve.
   d. Compressor.

16. Which of the following should a member of the Emergency Response team do when responding to an ammonia release?
   a. According to the Plan, all the following should be.
   b. Check if workers in the area have any symptoms from the release.
   c. Check if the plant ventilation system is spreading the vapors.
   d. Leak check the colorimetric tube pump prior to use.

17. A lockout tag on a machine or equipment may be removed by
   a. Any employee who understands the operation of the machine or equipment.
   b. The employer, when operation of the machine or equipment is necessary.
   c. The person who placed it.
   d. Any of the above, depending on the SOP.

18. If a worker discovers an unsafe or unhealthful condition in the workplace, the worker has the right/responsibility to
   a. Do any of the following.
   b. Inform the supervisor.
   c. Request an OSHA inspection.
   d. Speak to a compliance officer inspecting the workplace.

19. A half-face APR is not allowed to prevent ammonia exposure because it
   a. Is more difficult to fit-test.
   b. Requires frequent cartridge change.
   c. Does not cover the eyes.
   d. Is only reliable up to the PEL.

20. CPC inspection is the responsibility of many people, including
   a. The user, prior to donning.
   b. The receiver, when shipment arrives from the supplier.
   c. The CPC clerk/administrator, after use and before storage.
   d. All the above are involved in inspection.