Continuing Education Course #437
Activated Carbon Odor Control Systems

1. What software can help determine the amount of odor removal required?
- a. Dispersion model
- b. Hydraulic model
- c. CFD model

2. Dry adsorption is considered what type of treatment system?
- a. Physical
- b. Chemical
- c. Biological

3. Which is NOT an advantage of an activated carbon system?
- a. Reliability
- b. Simplicity
- c. Media replacement frequency

4. Does activated carbon utilize adsorption or absorption?
- a. Absorption
- b. Adsorption
- c. Both

5. Do water molecules normally attach to activated carbon?
- a. Yes
- b. No
- c. Only at high pressure

6. What can improve adsorption performance?
- a. Increasing the odor concentration
- b. Increasing the air temperature
- c. Increasing surface area

7. What is the recommended maximum relative humidity for an activated carbon system?
- a. 50%
- b. 75%
- c. 100%

8. Which can be added to decrease humidity?
- a. Mist eliminator
- b. Humidifier
- c. Chemicals

9. What happens to the odor removal performance of activated carbon as temperatures increase?
- a. Increases
- b. Decreases
- c. No change

10. What does GAC stand for?
- a. Granular activated carbon
- b. Genuine activated carbon
- c. Galvanized activated carbon

11. What is a common term for removal capacity?
- a. Media strength
- b. Bulk removal
- c. Breakthrough capacity

12. Which is NOT an option for restoring the removal capacity of activated carbon?
- a. Reactivation
- b. Rejuvenation
- c. Regeneration

13. Which are criteria for media bed sizing?
- a. Face velocity, contact time, media life, and pressure drop
- b. Redundancy, contact time, media life, and pressure drop
- c. Face velocity, contact time, media life, and temperature drop

14. What is the formula for contact time?
- a. Bed volume / air flow rate
- b. Bed void space / air flow rate
- c. Bed volume / air velocity

15. Which is a typical contact time when the hydrogen sulfide concentration is less than 100 ppm?
- a. 1 seconds
- b. 3 seconds
- c. 10 seconds

16. Which is a typical face velocity for an activated carbon system?
- a. 5 fpm
- b. 15 fpm
- c. 50 fpm

17. Which is the most difficult to calculate?
- a. Face velocity
- b. Contact time
- c. Media life

18. Which is the most common bed configuration?
- a. Vertical
- b. Horizontal
- c. Radial

19. Which is an advantage to a radial bed configuration?

- ○ a. Auto regeneration
- ○ b. Small footprint
- ○ c. Change media by hand

20. What is the formula for calculating lifecycle cost?
- ○ a. Lifecycle Cost = Capital Cost + Annual Maintenance * Years
- ○ b. Lifecycle Cost = Capital Cost + Annual Maintenance * PWF - Salvage Value
- ○ c. Lifecycle Cost = Capital Cost + Annual Maintenance - Salvage Value