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Final Exam

Septic System Design

1. What is the regulatory code used to regulate the installation and use of septic systems?
- a. 10D-6.
- b. 64E-6.
- c. 290-5-26.
- d. Each state has its own code.

2. A typical gravity septic system includes all of the following except what?
- a. A pump.
- b. A drainfield.
- c. A header pipe or distribution box.
- d. A filter.

3. Which of the three layers of waste found in a septic tank consist of the digested waste?
- a. Scum layer.
- b. Effluent layer.
- c. Sludge layer.
- d. None of the above.

4. Some states require that access into the tanks must be provided with manhole covers brought to the surface.
- a. True
- b. False

5. Which type of tank is more susceptible to popping out of the ground during periods of high water tables?
- a. Concrete
- b. Plastic
- c. Both
- d. Neither

6. The primary purpose of the septic tank filter is to protect what?
- a. The pump.
- b. The drainfield.
- c. The pipes.
- d. None of the above

7. Some state health departments will also allow what if drainfield chambers are used?
- a. A reduced septic tank size
- b. A reduced pump tank size
- c. A reduced drainfield size
- d. All of the above

8. Most septic dosing pumps require what power?

- a. 24 v DC
- b. 120 v DC
- c. 120 v AC
- d. 240 v DC

9. Which statement is true concerning header pipes?

- a. Must be placed level
- b. Must maintain a constant slope
- c. Must maintain a constant effluent velocity
- d. Must be used only with trench drainfields

10. Using the chart on Page 12, what would be the estimated flow in Texas for a 20-child day care center with a kitchen and water saving devices?

- a. 250 gpd
- b. 300 gpd
- c. 400 gpd
- d. 500 gpd

11. How is the estimated daily flow determined when no flow is identified for that use in a state provided chart?

- a. Obtaining the best available data
- b. Working with the local health official
- c. Obtaining data from the local water utility provider
- d. All of the above

12. Using the chart on Page 16, what would be the minimum septic tank size for an average sewage flow of 628 gpd?

- a. 450 gal
- b. 500 gal
- c. 1350 gal
- d. 1500 gal

13. Using the chart on Page 16, what would be the minimum pump tank size for a store with an average sewage flow of 826 gpd?

- a. 750 gal
- b. 900 gal
- c. 1050 gal
- d. 1200 gal

14. The Sewage Loading Rate is the adjustment factor applied to the Estimated Daily Flow to determine the drainfield size.

- a. True
- b. False

15. From the chart on Page 19, what would be the sewage loading rate for a Coarse Sandy Loam soil used in a trench drainfield application?

- a. 1.20
- b. 0.90
- c. 0.80
- d. 0.65

16. From the sewage loading rate chart on Page 19, what would be the minimum drainfield size required for a business with an estimated sewage flow rate of 750 gpd using a bed type drainfield with a Sandy Loam soil type?

- a. 1071 sf
- b. 937 sf
- c. 833 sf
- d. 625 sf

17. The preferred drainfield shape is what?
- a. Circular.
- b. Rectangular.
- c. Square.
- d. None of the above.

18. What is the preferred method for a drainfield installation?
- a. Absorption bed
- b. Trench
- c. Either

19. Why is a gravity system the preferred septic system?
- a. No pumps
- b. No controls
- c. No mechanical parts
- d. All of the above

20. Some of the more common site constraints for septic drainfields include which of the following?
- a. Property lines.
- b. Wells.
- c. Lakes.
- d. All of the above.

21. Which of the following is not a constraint when choosing a drainfield location?
- a. Plants
- b. A swimming pool
- c. Sandy soil
- d. A property line

22. Where are the effluent filters placed in a septic system?
- a. Just prior to the first septic tank.
- b. Just after the first septic tank or chamber.
- c. Just after the last septic tank or chamber.
- d. Just after the pump tank.

23. Using the chart on page 33, what is the loading rate for a mounded drainfield using Coarse Sand in an absorption bed?
- a. 1.00
- b. 0.75
- c. 0.65
- d. 0.40

24. Which of the septic systems provide the most efficient means of distributing the effluent evenly across the entire drainfield. ?
- a. Absorption bed
- b. Trench system

○ c. Mounded system
○ d. Low pressure system

25. Some states will allow the size of the drainfield to be reduced when the use of an aerobic system is included as part of the septic system design.
○ a. True.
○ b. False.