

## Clark County Health Department Installer Exam

Name: \_\_\_\_\_ Company: \_\_\_\_\_

**Circle only one answer**

**1. What is the definition of residential on-site sewage system failure?**

- a. The soil surface has ponding of effluent.
- b. The system will not accept sewage at the designed rate.
- c. There is effluent contamination of potable water supply, ground water, or surface water.
- d. All of the above.

**2. Effluent pumps must be:**

- a. Suitable for use in a corrosive atmosphere.
- b. Sized to deliver the total design flow rate while meeting the total dynamic head requirements.
- c. Installed in such a manner as to allow for removal without entering or dewatering the dosing tank.
- d. All of the above.

**3. Can a residential on-site sewage system with a pre-treatment unit discharge effluent into a stream, ditch or to the soil surface?**

- a. Yes
- b. No

**4. The pump and high-water alarm must be wired on separate circuits.**

- a. True
- b. False

**5. The best reason for not installing septic systems during periods of wet weather when the ground is muddy is because...**

- a. Your equipment will sink into the ground and you will not be able to finish the system.
- b. The septic tank might float.
- c. Excessive smearing of the usable absorption trench sidewalls and bottom during construction can result in irreversible damage to the soil infiltrative surface. Also, wet weather can create a condition in which severe compaction can occur on the site.

**6. The final soil cover over the absorption field shall be graded so that the area is crowned to shed water.**

- a. True
- b. False

**7. A subsurface drain, when required, shall be at least thirty-six inches below adjacent soil absorption trench bottom or at least two inches into a soil limiting layer.**

- a. True
- b. False

**8. Effluent sewer piping has to have what minimum grade?**

- a. 4" in 25 feet
- b. 2%
- c. Positive slope of two and four tenths (2.4) inches per 100 feet or a grade of two tenths percent (0.2%).
- d. Almost level with just a tiny bit of fall.

**9. Pumps or siphons can be used to move the water away from the perimeter drain on new construction.**

- a. True
- b. False

**10. A field drainage tile shall be located at least 25 feet away from the tanks or soil absorption field of the residential on-site sewage system.**

- a. True
- b. False

**11. In order to avoid a positive slope greater than allowed in a residential sewer, what must be done to complete the installation?**

- a. Apply to health department for special permission to install at greater slope.
- b. Install two (2) 45-degree elbows to obtain more drops.
- c. Install two (2) 90-degree elbows to create a vertical drop.
- d. Install a vertical drop with a cleanout located immediately upslope.

**12. All burrs must be removed from the holes in the pressure distribution laterals of an elevated sand mound.**

- a. True
- b. False

**13. A subsurface drain, when required, shall be at least thirty-six inches below adjacent soil absorption trench bottom or at least two inches into a limiting layer.**

- a. True
- b. False

**14. The tanks and the soil absorption field of the residential on-site sewage system shall be located at least 50 feet away from any private pond or proposed pond.**

- a. True
- b. False

**15. The minimum diameter of an effluent force main in a mound is:**

- a. 1 inch
- b. 2 inches
- c. 3 inches
- d. 4 inches
- e. 1 ½ inches

**16. Water lines and sewers can be laid in the same trench.**

- a. True
- b. False

**17. The effluent force main for a sand mound must be installed:**

- a. Prior to tilling the site
- b. After the sand is added to the site.
- c. Whenever possible except during wet conditions
- d. By hand digging into the mound area.

**18. On a sloping site, the trench bottoms must be:**

- a. All at the same elevation.
- b. All at the trench depth specified in the approved plan submittal.
- c. No deeper than 36", if they are not placed on contour.
- d. None of the above.

**19. Water lines can cross sewer lines if eighteen (18) inches of vertical clearance separation is maintained.**

- a. True
- b. False

**20. What is the minimum length of non-perforated pipe that must extend away from the distribution box?**

- a. 10 feet
- b. 5 feet
- c. 15 feet
- d. 3 feet

**21. When the slope of a site exceeds this percentage, a subsurface drain may be constructed only on the upslope of the on-site system.**

- a. 0.5%
- b. 2%
- c. 6%
- d. 15%

**22. What is the required depth of tilling when preparing the basal area of an elevated sand mound system?**

- a. 24 inches
- b. 12 inches
- c. 7-14 inches
- d. 4 inches

**23. Vegetation on the soil absorption field site that would interfere with the soils evaluation, system layout or system construction, shall be cut and removed prior to installation without compacted soil material.**

- a. True
- b. False

**24. What is the minimum depth of sand under the aggregate bed in an elevated sand mound?**

- a. 6 inches
- b. 10 inches
- c. 12 inches
- d. 20 inches

**25. The soil scientist has stated there is a seasonal water table located at 30 inches. You are going to place the trenches at a maximum depth of 15 inches. Which of the following is true?**

- a. The water table is not important in this case.
- b. The water table is below the trenches so no drain is required.
- c. Not possible to install a septic system at this site.
- d. Subsurface drainage is required.

**26. Before any construction may begin on replacing a residential on-site sewage system, the following must be obtained.**

- a. Soils profile
- b. Construction permit
- c. Any other information deemed necessary by local Health Department
- d. All of the above

**27. The maximum site slope allowed for an elevated sand mound installation is:**

- a. 15%
- b. 10%
- c. 6%
- d. 2%

**28. How close can an absorption field be to a stream, a ditch or drainage tile?**

- a. 10 feet
- b. 25 feet
- c. 50 feet
- d. 100 feet

**29. An on-site soil evaluation is required for:**

- a. New construction of a soil absorption field
- b. Replacement or alteration of an existing soil absorption field
- c. Replacing a leaking septic tank
- d. a. and b.
- e. All of the above

**30. If the residential on-site sewage system site has been altered (cutting, scraping, compaction, removal of soil) after an on-site evaluation has been conducted, a new evaluation is required before construction may take place.**

- a. True
- b. False

**31. If the ground falls 3 inches in 25 feet, the slope is 12%.**

- a. True
- b. False

**32. Trees located within the construction site for soil absorption trenches:**

- a. Must be cut off at the ground level and the stumps left in place
- b. Must be left standing
- c. Stumps and root balls may be removed provided the resulting excavating will not exceed the permit requirements for width or depth of the soil absorption trench.

**33. Soil absorption trenches are to be installed with a maximum slope of \_\_\_\_\_ from beginning to end.**

- a. 1/2%
- b. 2%
- c. Some fall, but not too much.
- d. They are to be installed level from end to end and side to side.

**34. When differential venting is required for sand lined bed systems high vent and low vent openings shall be separated vertically by a minimum of:**

- a. 2 feet
- b. 5 feet
- c. 10 feet
- d. 15 feet

**35. Soil cover is to be tapered at what ratio?**

- a. 4:1
- b. 3:1
- c. 2:1
- d. 1:1

**36. In what area of the sand lined bed system shall the pipe rows be located for a sloping system?**

- a. Separated evenly over the entire basal area
- b. Centered in the middle of the basal area
- c. Grouped at the high side of the basal area
- d. Grouped at the low side of the basal area