



Certification Boulevard

Test Your Knowledge of Collections & Distribution – answer key

1. Which may be the most appropriate chemical to use in a wet scrubber treating high levels of hydrogen sulfide?
 - A. **Sodium hydroxide**
 - B. Sulfuric acid
 - C. Unchlorinated water
 - D. Polymer

2. Which best describes the natural slope of a pipe?
 - A. Inversion of stability
 - B. **Angle of repose**
 - C. Uphill travel
 - D. Coefficient friction

3. What device is used in a wastewater pipeline to prevent flow from traveling in both directions?
 - A. Plug valve
 - B. Siphon inducer
 - C. **Flap gate**
 - D. Pinch valve

4. Given the following data, how many cubic yards of backfill are needed to fill a trench?
 - 9.25 feet wide
 - 28 yards long
 - 6.5 feet deep
 - A. 62 yd³
 - B. 257 yd³
 - C. 959 yd³
 - D. **187 yd³**

Cu. Yards = 9.25 feet wide x (28 yards long x 3 feet/yard) x 6.5 feet deep / 27 ft³ per yd³
= 187.06 yd³

5. Waste leaking out of a collection system pipe, and into the environment, is called infiltration. *True or **False***

Waste leaking out of a collection system pipe is called exfiltration

6. What type of machine is used to construct collection system pipelines when they are too difficult for trench excavations?

- A. Pig
- B. TV Device
- C. Boring Machine**
- D. Backhoe Machine

7. Which type of sewer system contains both sanitary wastewater and storm water?

- A. Domestic wastewater system
- B. Combined sewer system**
- C. Separate collection system
- D. Sewer system evaluation survey

8. Given the following data, what is the capacity of this wet well?

- wet well diameter is 20 feet
- bottom elevation of wet well is 72.5 feet
- top elevation of wet well is 91.4 feet

- A. 177,563 gallons
- B. 23,738 ft³
- C. 332,043 ft³
- D. 44,391 gallons**

Liquid depth in wet well = 91.4 feet - 72.5 feet = 18.9 feet

Gallons Capacity = .785 x diameter² x depth x 7.48 gal per ft³

.785 x 20 feet x 20 feet x 18.9 feet x 7.48 gal per ft³ = 44,390.8 gallons

9. What is the minimum velocity in a sanitary sewer pipeline necessary to prevent settling of solids and debris?

- A. 1 fps
- B. 0.5 fps
- C. 2 fps**
- D. 2 fpm

10. Which gases may be found in sewer collection systems?

- A. Explosive gases
- B. Hydrogen sulfide
- C. Methane
- D. All of the above**