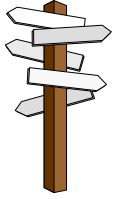


# Certification Boulevard



## *Test Your Knowledge of Miscellaneous Topics*

1. What typically happens to the ORP of final effluent when the ammonia concentration in the effluent increases?
  - a. The ORP increases
  - b. The ORP decreases
  - c. The ORP remains the same
  - d. Ammonia concentration has nothing to do with ORP values
  
2. Given the following data, what is the pressure equivalent expressed in psi delivered by this pump?
  - Pump discharges 432,000 gpd
  - Total dynamic head (TDH) of 185 feet
  - a. 235 psi
  - b. 185 psi
  - c. 80 psi
  - d. 550 psi
  
3. What percentage of settleable is typically removed through primary clarification?
  - a. 25%
  - b. 100%
  - c. 50%
  - d. 85%
  
4. Which group of bacteria can be aerobic or anoxic and use carbon as their food source?
  - a. Heterotrophic
  - b. Anaerobic
  - c. Autotrophic
  - d. Facultative
  
5. What is the liquid effluent called in a dewatering centrifuge?
  - a. Filtrate
  - b. Centrate
  - c. Supernatant
  - d. Subnatant
  
6. Which factors affect the operation of an aerobic digester?
  - a. Detention time
  - b. Temperature
  - c. Oxygen transfer efficiency

- d. Dissolved oxygen level  
e. All of the above
7. What are the two (2) major zones of a belt filter press called?
- Drainage and evaporation
  - Gravity drainage and pressure filtration
  - Pressure shearing and transpiration
  - Liquefaction and expansion
8. Which factors generally affect the amount of sludge that can be applied to a land application site?
- Nitrogen and heavy metals
  - Carbon and chlorides
  - Phosphorus and alkalinity
  - pH and CBOD<sub>5</sub>
9. Given the following data, how many total gals/day of sludge are removed from a primary clarifier using a double piston pump?
- Piston diameter is 10 inches
  - Piston length is 13 inches
  - Piston speed is 45 spm
  - Total run time is 358 mins/day
- 71,158 gpd
  - 65,670 gpd
  - 284,632 gpd
  - 142,330 gpd
10. Given the following data, how many gpd of WAS are removed from this activated sludge facility?
- Aeration volume is 1.25 MG
  - MLVSS is 2,750 mg/L
  - Mixed liquor is 75% volatile
  - WAS TSS is 7,250 mg/L
  - Desired SRT is 8 days
- 0.125 mgd
  - 59,267 gpd
  - 79,023 gpd
  - 25,981 gpd