

Environment and Natural Resources Contest – Water Quality Factors

Spring 2022

1. Oxygen can enter a water sample in a variety of ways EXCEPT for:
 - a) diffusion from the air
 - b) pollutants from the soil
 - c) photosynthesis of plants
 - d) aeration (rapid movement) of water along its path

2. Ammonia concentrations in freshwater increase
 - a) when pH increases
 - b) when temperature increases
 - c) when temperature decreases
 - d) both a and b
 - e) both a and c

3. What is eutrophication?
 - a) The process in which water levels heat up, lowering dissolved oxygen
 - b) The process in which dissolved oxygen levels are lowered due to the overgrowth of algae
 - c) The process in which mutagenic compounds lower the levels of dissolved oxygen in the water
 - d) The process in which the population of fish increases too quickly, lowering dissolved oxygen

4. How are dissolved oxygen and water temperature related?
 - a) The colder the water, the lower the dissolved oxygen
 - b) The warmer the water, the lower the dissolved oxygen
 - c) Oxygen levels peak at room temperature but are lower at higher or lower temperatures
 - d) Dissolved oxygen and water temperature are unrelated

5. pH is the measure of...
 - a) Hydroxide ion concentrations
 - b) The acidity of a substances
 - c) How basic a substance is
 - d) All of the above are true

5. Which of the following pollutants have an affinity for soil as opposed to water?
- a) Phosphorus
 - b) Nitrate
 - c) Ammonia
 - d) pH
6. The movement of soluble nutrients out of the root zone by water percolating down through the soil is called:
- a) weathering
 - b) leaching
 - c) degradation
 - d) aggradation
7. Nitrogen fixation is the term to describe:
- a) Gaseous nitrogen to ammonia
 - b) Nitrate to ammonia
 - c) Ammonia to nitrate
 - d) Nitrate to gaseous nitrogen
9. Which of the following would be an example of **Point-source** pollution?
- a) Fertilizer applications on cropped fields
 - b) Discharge from an overwhelmed sewage treatment plant.
 - c) Urban runoff after a heavy storm
 - d) Topsoil erosion from farm fields into a river
10. The pH of your sample is
- a) Acidic
 - b) Neutral
 - c) Alkaline