

# 2013 Aquatics Test

1. Which of the following will increase the dissolved oxygen (D.O.) of this pond on a sunny day in May?

- a. Sandbar Willow
- b. Phytoplankton
- c. Zooplankton
- d. Weeping Willow
- e. Damselfly Nymph

2. The ODNR Division of Wildlife uses instruments like this one to sample the dissolved oxygen (D.O.) of Ohio lakes and streams. During summer months, many Ohio lakes and ponds will have a layer of water depleted of oxygen.

Which of the following terms means “depleted of oxygen”?

- a. Hyperaerobic
- b. Toxic
- c. Hypobaric
- d. Aerobic
- e. Anoxic

3. The sampling equipment shown here is used to measure which of the following water characteristics?

- a. Turbidity
- b. Temperature
- c. pH
- d. Conductivity
- e. Dissolved oxygen

4. What is the greatest pollution threat to Ohio’s waterways?

- a. Acid Rain
- b. Insecticides/Herbicides
- c. Sedimentation/Siltation
- d. Flooding
- e. Boats/Jet Skis

5. As spring becomes summer, the water in this Pond will stratify as a result of temperature differences. By the end of summer, which water layer will contain most of the aquatic wildlife?

- a. Benthic
- b. Hypolimneon
- c. Epilimneon
- d. Pelagic
- e. Riparian

6. The fish pictured here can be found in this pond and may benefit from management practices.

- a. Bluegill
- b. Shovelhead Catfish
- c. White Bass
- d. Walleye
- e. Brown Trout

7. When managing this pond, what species combination would be ideal for stocking?

- a. Catfish/Bluegill
- b. Bluegill/Largemouth Bass
- c. Channel Catfish/Bass
- d. Walleye/Channel Catfish
- e. Bass/Crappie

8. What would the recommended stocking rate per acre be for the species combination in question#7?

- a. 100/500
- b. 10/50
- c. 500/1000
- d. 50/100
- e. 100/1000

9. Acid rain caused by the burning of fossil fuels could harm plants and animals in a place such as this lake. Which of the following types of rock buffer the pH of water flowing into the lake and help protect its inhabitants?

- a. Igneous
- b. Limestone
- c. Shale
- d. Granite

10. In order to prevent seepage when constructing this Wetland Pond, what material should make up at least 20% (by weight) of the soils on the pond bottom?

- a. Ash
- b. Clay
- c. Gravel
- d. Loam
- e. Sand

11. Fish have evolved to occupy many types of habitats including wetlands, ponds, and rivers. Of the 4 fish species present, which would you typically NOT find in the type of environment in front of you?

- a. Fish A
- b. Fish B
- c. Fish C
- d. Fish D

12. An increase in the amount of impervious surfaces on this pond/watershed could lead to all of the following except:

- a. increased total dissolved solids (TDS)
- b. increased species diversity
- c. increased nutrient loading
- d. increased storm water runoff

13. The leading cause of non-point source aquatic pollutants are:

- a. agricultural and urban runoff
- b. wastewater treatment plants
- c. industrial runoff
- d. none of the above

14. Which of the following management practices would be best to decrease sediment and nutrient loading in this pond?

- a. installation of a wetland upstream of the pond
- b. removal of all vegetation surrounding the pond
- c. installation of more aerators
- d. nothing can be done to help with sediment and nutrient loading here

15. This aquatic insect belongs to what order?

- a. Diptera
- b. Crustacea
- c. Hemiptera
- d. Odonata

16. Many people don't realize that nonpoint source pollution causes the majority of water contamination. Which of the following is NOT an example of nonpoint pollution?

- a. Industrial plant pipe discharge
- b. Parking lot runoff
- c. Lawn fertilizers
- d. Washing car oil and/or fluids down storm drains.

17. Aquashade, the shading product that makes this water appear blue, is used for the following purpose:

- a. Makes the water appearance better
- b. Kills non-desirable fish species
- c. Kills non-desirable aquatic insects
- d. Restricts plant growth by reducing the amount of light available to them

18. What type of invasive mussel is attached to this native mussel?

- a. Ohio Pigtoe
- b. Ebonyshell
- c. Zebra
- d. Purple Catspaw

19. Blue-Green Algae is also called

- a. Dermatotoxins
- b. Cyanobacteria
- c. Neurotoxins
- d. Spermatophors

20. With the addition of nesting structures, landowners can often attract this most abundant nesting waterfowl in Ohio.

- a. Wood Ducks
- b. Canada Geese
- c. Mallards
- d. Black Ducks

21. There are three major causes for fish kills in a pond, lake or river. They include suffocation due to lack of oxygen, poisoning or \_\_\_\_\_.

- a. too much oxygen
- b. low water temperatures
- c. disease outbreak
- d. high water temperatures

22. What four elements are needed for Blue-green algae to reproduce?

- a. warm temperatures, sunlight, phosphorus and nitrogen
- b. sunlight, phosphorus, nitrogen and nutrient rich soil
- c. warm temperatures, sunlight, phosphorus and low dissolved oxygen
- d. sunlight, phosphorus, nitrogen and wind

23. What is the most common method of vegetation control in a pond?

- a. Mechanical control
- b. Biological control
- c. Chemical control
- d. Passive control

24. Name this common pond plant:

- a. Cattail
- b. Bulrush
- c. Iris
- d. Pickerelweed

25. The four choices in question #24 are considered what type of aquatic vegetation?

- a. Floating
- b. Emergent
- c. Submerged
- d. Perennial