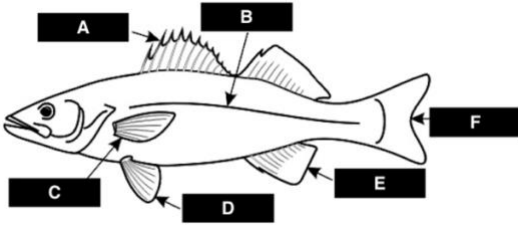


## 2026 Iowa Regional Envirothon Aquatics Test (25 points) KEY

1. What University of Iowa organization leads the Iowa Watershed Approach (IWA) to improve water quality and reduce flood risks?
  - A. Iowa Board of Water
  - B. Iowa Flood Center\*
  - C. Iowa Environmental Protection Center
  - D. State Hygienic Laboratory
2. In Iowa, annual rainfall averages anywhere from \_\_\_\_\_ inches per year.
  - A. 8-16
  - B. 18-26
  - C. 28-36\*
  - D. 38-46
3. Bioretention cells, bioswales, green roofs, permeable pavers, planting native grasses and turf, rain gardens, rain water harvesting, Stormwater wetlands, and stream corridor stabilization are recommended practices to use in urban areas for the purpose of \_\_\_\_\_.
  - A. improving and protecting water quality\*
  - B. moving the water away as quickly as possible
  - C. decreasing water infiltration and increasing runoff
  - D. all of these are correct
4. Benthic macroinvertebrates including the water scavenger beetle, pouch snail, midge fly, leech, rat-tailed maggot, flatworm, black fly, aquatic worm, and mosquito are all classified into the "Low Quality Group" which indicates that they are:
  - A. endangered species
  - B. pollution intolerant
  - C. pollution tolerant\*
  - D. somewhat pollution tolerant
  - E. none of these
5. Which fish family includes bluegill and largemouth bass?
  - A. catfish family
  - B. minnow family
  - C. perch family
  - D. sunfish family\*
6. The Iowa \_\_\_\_\_ functions as a science-based framework designed to reduce nutrient loading from both point and nonpoint sources into Iowa waters and the Gulf of Mexico.
  - A. Nutrient Reduction Strategy (NRS)\*
  - B. Resource Enhancement and Protection (REAP)
  - C. Quality Water Council (QWC)
  - D. Water Rocks Program (WRP)

7. Letter "A (on the fish picture) is identified as what type of fin?
- A. Anal
  - B. Caudal
  - C. Dorsal\*
  - D. Pectoral
  - E. Pelvic



8. Which land management practice would most likely help reduce nonpoint source pollution?
- A. Increasing fertilizer application
  - B. Implementing conservation practices on farmland\*
  - C. Removing vegetation near streams
  - D. Reducing conservation tillage methods

9. Why is nitrate contamination in drinking water considered dangerous?
- A. It changes the color of water
  - B. It can be linked to cancer and birth defects\*
  - C. It makes water taste salty
  - D. It increases oxygen levels

10. A \_\_\_\_\_ is the land area that drains to a body of water, be it a lake, a stream, or a pond.
- A. waterblanket
  - B. waterpath
  - C. waterbarn
  - D. watershed\*

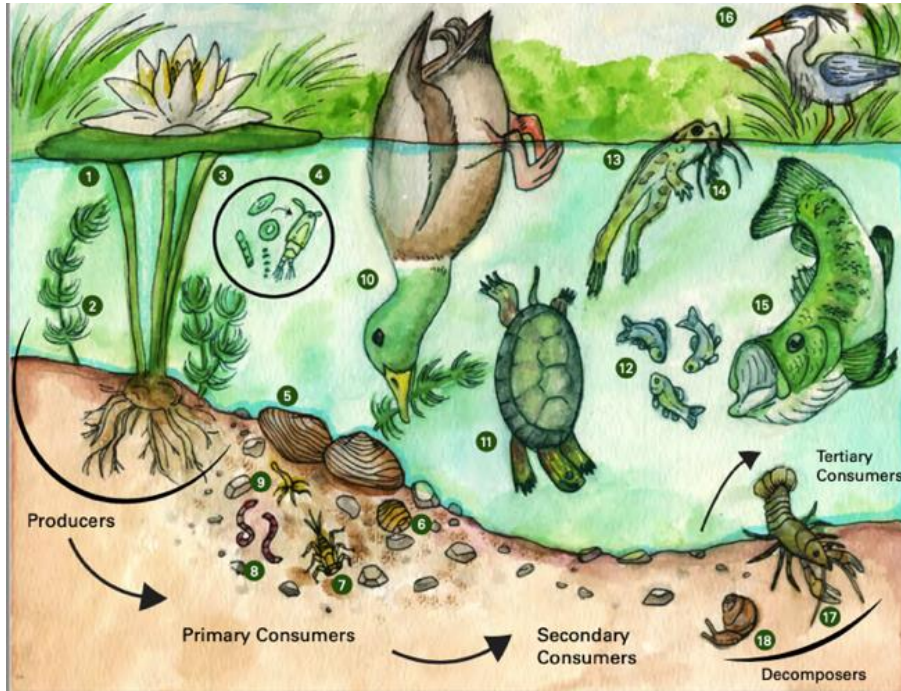
11. The watershed that drains all of Iowa as well as 40% of the United States, is the \_\_\_\_\_ watershed.
- A. Des Moines River
  - B. Iowa River
  - C. Mississippi River\*
  - D. Missouri River

12. Which term describes aquatic ecosystems with flowing water found in rivers and streams?
- A. Lentic
  - B. Lotic\*
  - C. Lacustrine
  - D. Palustrine

13. Spring-fed streams in northeast Iowa are important for area fisheries because the spring water is typically \_\_\_\_\_.
- A. Warm and turbid
  - B. Alkaline and shallow
  - C. Cold and clear\*
  - D. Saline and stagnant
14. Most lakes and ponds found in Iowa today \_\_\_\_\_.
- A. were created by nature
  - B. were created by humans damming rivers, streams, and valleys\*
  - C. are mostly temporary bodies of water that dry up during the summer months
  - D. are not impacted by human activities
15. Fen wetlands are distinct because they are typically \_\_\_\_\_.
- A. Permanently flooded and highly acidic
  - B. Fed by groundwater, alkaline, and often on hillsides\*
  - C. Created by river oxbows and dominated by cattails
  - D. Man-made treatment wetlands for agricultural runoff
16. Wetland succession typically is a process where \_\_\_\_\_.
- A. silt fills a basin over many years and can convert a wetland to terrestrial habitat\*
  - B. wetlands gradually become lakes after many heavy rainfall events
  - C. wetlands never change and remain static ecosystems
  - D. wetlands gradually become ponds or pot holes as subsidence occurs on the land surface
17. What are Phytoplankton?
- A. animals that eat zooplankton
  - B. photosynthetic primary producers\*
  - C. detritivores
  - D. large multicellular fish
18. Beavers are called “ecosystem engineers” primarily because their dam-building \_\_\_\_\_.
- A. reduces floodplain connectivity and lowers water tables
  - B. helps to convert wetlands to terrestrial forests
  - C. slows water, creates pools, increases plant and wildlife diversity, and raises water tables\*
  - D. eliminates invasive fish and mussel populations
19. The goal of the Iowa Nutrient Reduction Strategy (NRS) is to provide a framework to achieve a 45 percent \_\_\_\_\_ through collaborative efforts between point and nonpoint sources and public and private partners.
- A. increase in nitrogen and phosphorus losses to Iowa waters
  - B. reduction in nitrogen and phosphorus losses to Iowa waters\*
  - C. reduction in nitrogen and calcium losses to Iowa waters
  - D. reduction in potassium and phosphorus losses to Iowa waters

20. Northern crayfish and pond snail are examples of \_\_\_\_\_ in an aquatic ecosystem.  
(see picture)

- A. detritivores/decomposers\*
- B. primary consumers
- C. producers
- D. secondary consumers
- E. tertiary consumers



**MATCHING: Match the definition with the appropriate term.**

- |                       |                     |
|-----------------------|---------------------|
| A. Aquifer            | F. Infiltration     |
| B. Algal Bloom        | G. Pervious Surface |
| C. Dead Zone          | H. Runoff           |
| D. Groundwater        | I. Surface Water    |
| E. Impervious Surface | J. Watershed        |

- |  |          |
|--|----------|
| _____ 21. Area of land that drains water to a common body of water | <b>J</b> |
| _____ 22. Process where water soaks into the ground                | <b>F</b> |
| _____ 23. Rainwater that flows across land instead of soaking in   | <b>H</b> |
| _____ 24. Water found in rivers, lakes, and streams                | <b>I</b> |
| _____ 25. Underground layer of rock or sediment that stores water  | <b>A</b> |