Aquatics Station Sample Test Questions

Written Test

1. True or False – While providing many other benefits, riparian zones do not function as a temperature regulator along aquatic ecosystems.

2. Which of the following watersheds would you expect to find elevated levels of coliform bacteria? _____

   Watershed "A" – is densely populated, tall skyscrapers dominate the landscape, has little wildlife and domestic animals, and has many factories producing plastics and metal alloys.

   Watershed "B" – is sparsely populated, farms and ranches dominate the landscape, wildlife flourishes and domesticated animals are commonplace.

3. The Clean Water Act of 1972

   A. Was passed by the United States Federal Government that forms the basis today for water quality protection for surface water in streams, rivers, and lakes as well as for groundwater.
   B. Protects animal and plant species that the U.S. Fish and Wildlife Service have designated as threatened or endangered.
   C. Enables dredging in water bodies that sedimentation and erosion occur.
   D. Focusing on increasing the funding of water treatment plants.

4. A watershed is best described as:

   A. an area where water is stored for future transport.
   B. an area of land that drains to a common body of water.
   C. a type of aquatic biome.
   D. a natural area that contains surface waterways.

5. Oxygen in a lake is a product of:

   A. photosynthesis
   B. wind and wave action
   C. the atmosphere
   D. A & B
   E. All of the above

6. True or False – In the Eastern US where rainfall is plentiful, most rivers are "gaining streams" or those whose flow is primarily supported by groundwater.

7. True or False – Ground water drawn at the Jersey shore is always saline.

8. What contributes almost NO fecal coliform to surface waters in New Jersey?

   A. geese and deer
   B. failed septic systems
   C. wastewater treatment plants
   D. pet waste

9. Impervious areas should be minimized as they have a significant impact on

   A. water quality
   B. invasive species
   C. stream channel shape
   D. A & C
   E. A & B

Hands-On Test

Using the macroinvertebrate samples and key provided to answer question 10.

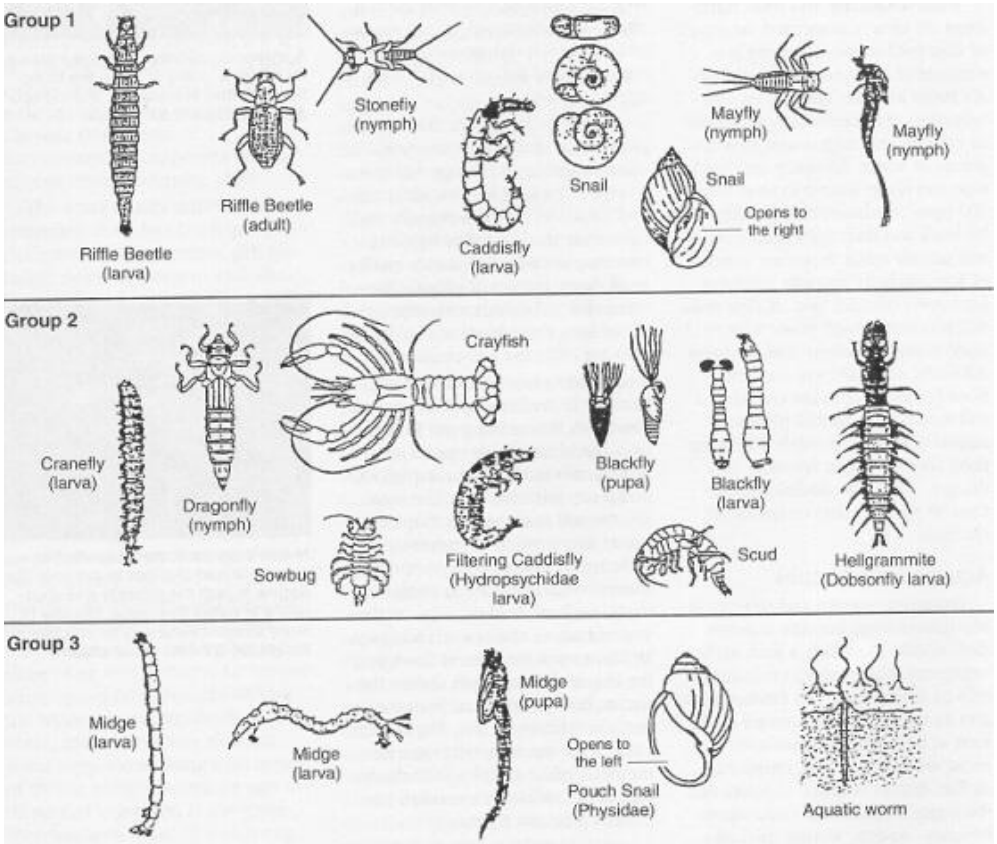


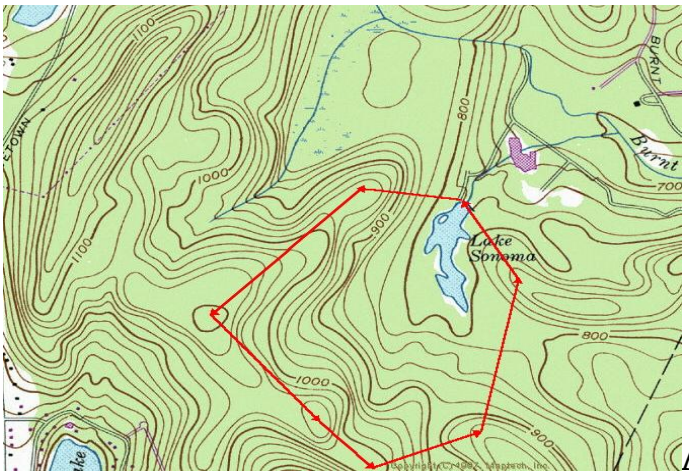
Figure 5. Macroinvertebrate groups picture key. **Group 1** organisms are generally pollution intolerant. Their dominance generally signifies excellent to good water quality. **Group 2** organisms exist in a wide range of water quality conditions. **Group 3** organisms are generally tolerant of pollution. Their dominance usually signifies fair to poor water quality. Courtesy Bio-Assess, Auburn University.

10. Name two macroinvertebrates that you would most likely find in an urban stream.

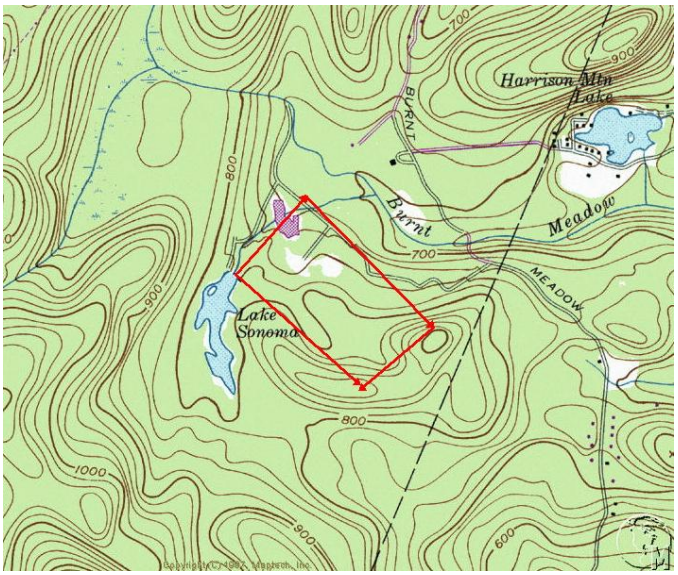
_____

_____

Using the topography maps below answer questions 11 and 12.



A

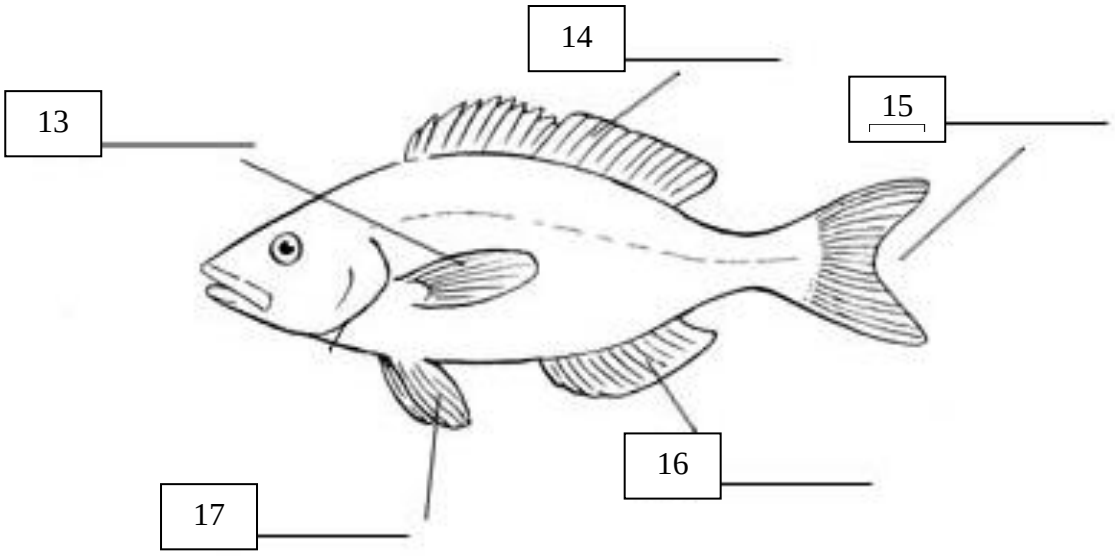


B

11. Which of the watershed delineations above most accurately reflects the drainage area to Lake Sonoma _____(A or B)

12. The lines (contour intervals) on the map above indicate an elevation change of _____feet.

Using the diagram below to correctly label the parts for questions 13-17.



18. What is the relationship between the stream and the unconfined aquifer in figure 2?
    A. water is moving from the stream into the aquifer
    B. water is moving from the aquifer into the stream
    C. there is no relationship between the stream and the unconfined aquifer
    D. None of these answers are possible based upon information provided