

***** EXAMINATION *****

GROUNDWATER SAMPLING AND MONITORING

1. **Poor sampling of water quality can result from**
 - a) inappropriate sample collection
 - b) poor sample transport
 - c) poor sample storage
 - d) All of the above

2. **Water samples are tested for**
 - a) nitrate concentration
 - b) pH
 - c) salinity
 - d) All of the above

3. **Proper sampling containers can be obtained**
 - a) from analytical laboratories
 - b) from garbage dumps
 - c) both a and b
 - d) None of the above

4. **Which type of well should be sampled more frequently?**
 - a) Monitoring well
 - b) Domestic well
 - c) Production well
 - d) All of the above have equal testing requirements

5. **Which step in the sampling procedure is first?**
 - a) Purging the well
 - b) Collecting and delivering the water sample
 - c) Sampling preparations
 - d) Accessing the well before sampling

6. **Before taking a water sample, the field**
 - a) equipment should be cleaned
 - b) equipment should be calibrated
 - c) both a and b
 - d) None of the above

7. **Field sampling equipment includes**
 - a) pumping or bailing equipment
 - b) a water level meter
 - c) field sample labels
 - d) All of the above

8. **The easiest access to irrigation wells is**
 - a) a valve
 - b) at the flood gates
 - c) either a or b
 - d) Neither a nor b

9. **Piping or filtration can affect**
 - a) mineral salt content
 - b) pH
 - c) nitrate content
 - d) All of the above

10. **Groundwater levels are measured to the**
 - a) nearest 0.01 foot
 - b) nearest 0.10 foot
 - c) nearest 0.20 foot
 - d) nearest 0.30 foot

11. **The reference point for measuring the depth of water**
 - a) should be at the top of the well
 - b) should be within one foot of the top of the well
 - c) should be within two feet of the top of the well
 - d) should be within three feet of the top of the well

12. **Purging the well should involve**
 - a) purging one to two volumes of water
 - b) purging one to three volumes of water
 - c) purging three to five volumes of water
 - d) Any of the above

13. **Purging should continue until**
 - a) the temperature stabilizes
 - b) the electric conductivity stabilizes
 - c) the pH level readings stabilizes
 - d) All of the above

14. **In production wells, the purging is carried out**
 - a) by a water bucket
 - b) by a production pump
 - c) by electrolysis
 - d) Any of the above

15. **In a domestic well system, purging**
- a) should take a few minutes
 - b) should take several minutes
 - c) should take an hour
 - d) may take several hours
16. **Using a bailer for a well pumping system**
- a) may lose trace constituents
 - b) may coagulate trace constituents
 - c) may limit the well diameter
 - d) All of the above
17. **The water sample must be collected within**
- a) two hours of purging
 - b) six hours of purging
 - c) ten hours of purging
 - d) twenty hours of purging
18. **The water sample is collected from**
- a) the bailer
 - b) the pump discharge
 - c) the faucet
 - d) Any of the above
19. **Poor preservation may be the result of**
- a) degassing
 - b) exposure to heat and light
 - c) both a and b
 - d) None of the above
20. **Preservation of the water sample includes**
- a) cooling to 30 degrees Fahrenheit
 - b) cooling to 40 degrees Fahrenheit
 - c) cooling to 50 degrees Fahrenheit
 - d) cooling to 60 degrees Fahrenheit

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