

***** EXAMINATION *****

RESERVOIR WATER QUALITY ANALYSIS

1. **A process where internal waves become unstable and break is**
 - a) Kelvin-Helmholtz instability
 - b) convection instability
 - c) outflow mixing instability
 - d) wind mixing instability

2. **An essential component of diatom frustules or cell walls is**
 - a) phosphorus
 - b) nitrogen
 - c) silica
 - d) manganese

3. **An assessment that evaluates several alternative engineering**
 - a) designs is pre-impoundment
 - b) designs is study
 - c) designs is program
 - d) None of the above

4. **The ratio of inertial to buoyancy forces in a stratified**
 - a) system is the dimensionless number
 - b) system is the densimetric Froude number
 - c) system is the dimensional analysis
 - d) system is the detritus analysis

5. **Layering of water bodies due to temperature-induced**
 - a) density is eutrophication
 - b) density is thermal stratification
 - c) density is denitrification
 - d) density is autotropication

6. **Located high in the upstream area of the reservoir below**
 - a) the headwater is the water column demand
 - b) the headwater is the benthic oxygen demand
 - c) the headwater is the sediment oxygen demand
 - d) the headwater is the dissolved oxygen demand

7. **A system developed by the US Army Engineer Division**
 - a) at the Ohio River office was NAWDEX
 - b) at the Ohio River office was WATSTORE
 - c) at the Ohio River office was SIR
 - d) at the Ohio River office was AURAS

8. **A non-government-sponsored water database management**
 - a) system is WATSTORE
 - b) system is SIR
 - c) system is AURAS
 - d) system is NAWDEX

9. **A plant that is emergent, floating leaved, or free floating**
 - a) is a macrophyte
 - b) is a periphyton
 - c) is a zooplankton
 - d) is a benthic

10. **A component of food for macroinvertebrates in the**
 - a) natural stream is dissolved oxygen
 - b) natural stream is nitrogen supersaturation
 - c) natural stream is phosphorus and ammonia nitrogen
 - d) natural stream is Particulate Organic Carbon (POC)

11. **A system with the same characters as bioassays and**
 - a) field studies is microcosmic
 - b) field studies is a microcosms
 - c) field studies is macrocosmic
 - d) field studies is microbiology

12. **Multiple variables combined into single measurement is**
 - a) remote sensing
 - b) regression analysis
 - c) comparative analysis
 - d) water quality indices

13. **A type of low level of primary production lake is the**
 - a) Holomotic Lake
 - b) Oligotrophic Lake
 - c) Mesotrophic Lake
 - d) Meromitic Lake

14. **A dimensionless ratio of inertial forces to**
 - a) to viscous forces is Specific gravity
 - b) to viscous forces is Viscosity
 - c) to viscous forces is Reynolds number
 - d) to viscous forces is Densimetric Froude number

15. **A middle zone that represents the transition is**
- a) metalimnion
 - b) epilimnion
 - c) hypolimnion
 - d) None of the above
16. **A design that typically modifies the natural stream**
- a) discharge is the thermal regime
 - b) discharge is the hydrologic regime
 - c) discharge is the turbidity
 - d) discharge is the zone of influence
17. **The bottom zone of cold water, relatively quiescent**
- a) in lakes is the epilimnion
 - b) in lakes is the metalimnion
 - c) in lakes is the ultralimnion
 - d) in lakes is the hypolimnion
18. **Soil-water reaction chambers are:**
- a) 215-liter Plexiglass columns
 - b) 220-liter Plexiglass columns
 - c) 250-liter Plexiglass columns
 - d) 205-liter Plexiglass columns
19. **A statistic that usually summarizes or characterizes**
- a) a data set is a population statistic
 - b) a data set is a descriptive statistic
 - c) a data set is a parametric statistic
 - d) a data set is a chart statistic
20. **A mathematical model that produce long term predictions**
- a) is an unsteady-state model
 - b) is a hydraulic model
 - c) is an empirical model
 - d) is a simulation model

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