

***** EXAMINATION *****

RUNOFF FROM SNOWMELT

1. **The computation for snow hydrology modeling include:**
 - a) collection of competent spatial and temporal data for model input.
 - b) formulation of the structure of the snow melt model
 - c) application of the model in either analysis or forecasting
 - d) All of the above

2. **Snow melt is a form of:**
 - a) ice
 - b) water
 - c) a glacier
 - d) None of the above

3. **The physical structure of snow pack is a:**
 - a) lattice
 - b) framed matrix
 - c) porous matrix
 - d) complex lattice

4. **Estimates of snow melt amounts are derived by:**
 - a) temporal snow melt equations
 - b) energy balance equations
 - c) heat transformation equations
 - d) None of the above

5. **Transfer of heat in snow melt involves:**
 - a) radiation
 - b) reduction
 - c) expansion
 - d) contribution

6. **The most important source of energy to the snow pack is:**
 - a) short wave radiation
 - b) convection
 - c) expansion
 - d) condensation

7. **Albedo is:**
- a) the solar radiation due to atmospheric conditions
 - b) the intensity of the snow melt
 - c) reflectivity of the snow
 - d) the decrease in heat transfer due to forest cover
8. **The value of the latent heat of fusion of ice is:**
- a) 256 kJ/kg
 - b) 334.9 kJ/kg
 - c) 453 kJ/kg
 - d) 589 kJ/kg
9. **The solar energy that reaches the snow surface varies with the:**
- a) tree type
 - b) tree density
 - c) tree condition
 - d) All of the above
10. **Snow emits the maximum possible radiation according to:**
- a) the Stefan-Boltzman law
 - b) the Gray and Prowse equation
 - c) the Male and Gray law
 - d) the Dozier formula
11. **The snow pack and atmosphere exchange energy by:**
- a) radiation and convection
 - b) conduction and convection
 - c) convection and condensation
 - d) radiation and condensation
12. **A ripe snow pack is 'primed' when it becomes isothermal at:**
- a) -5 degrees centigrade
 - b) 0 degrees centigrade
 - c) 5 degrees centigrade
 - d) 10 degrees centigrade
13. **The drainage within and below the glacier is:**
- a) empirical
 - b) constant
 - c) variable
 - d) complex
14. **Effective use of snow melt runoff models involves knowledge of:**
- a) the amount of snow cover
 - b) the temperature
 - c) their thermal distribution throughout the watershed
 - d) previous models in the area

15. **The basic analysis of snow involves:**
- a) snow density
 - b) real extent of snow cover
 - c) snow depth
 - d) All of the above
16. **Remotely sensed data may be obtained using:**
- a) four-wheel drive vehicles
 - b) seismic equipment
 - c) satellites
 - d) weirs
17. **Simulation of snow accumulation may be accomplished by:**
- a) hydrologic modeling
 - b) continuous simulation modeling
 - c) glacial modeling
 - d) snow melt modeling
18. **The melt-rate coefficient is also known as:**
- a) the degree-day factor
 - b) temperature-rate index
 - c) the physical melt factor
 - d) the temperature index
19. **Factors affecting long-term forecasting include:**
- a) model formulation
 - b) time increment
 - c) snow melt method
 - d) All of the above
20. **The appropriate modeling methodology for snow melts include:**
- a) operation and calibration data availability
 - b) expected physiographic and climatic conditions
 - c) detail and type of results required
 - d) All of the above

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