

1. Which set of surface soil conditions on a hillside would result in the most infiltration of rainfall? *↓ into ground*
- (1) ~~gentle slope, saturated soil, no~~ *vegetation*
 - (2) gentle slope, unsaturated soil, vegetation
 - (3) ~~steep slope, saturated soil, vegetation~~
 - (4) ~~steep slope, unsaturated soil, no~~ *vegetation*

2. Which surface soil conditions allow the most infiltration of rainwater?
- (1) steep slope and permeable soil
 - (2) steep slope and impermeable soil
 - (3) gentle slope and permeable soil
 - (4) gentle slope and impermeable soil

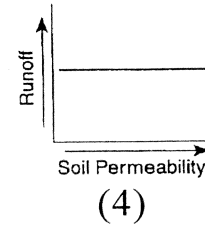
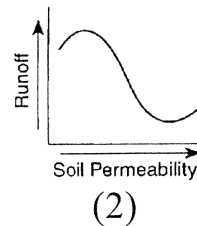
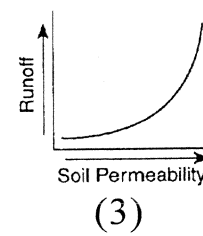
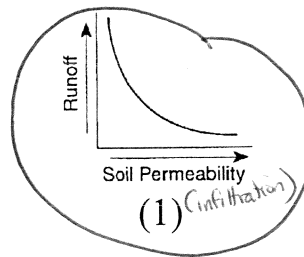
3. When rainfall occurs, the rainwater will most likely become surface runoff if the land surface is *over surface*
- (1) ~~sandy~~
 - (2) impermeable
 - (3) covered with grass
 - (4) nearly flat

4. Which set of conditions would produce the most runoff of precipitation?
- (1) gentle slope and permeable surface
 - (2) gentle slope and impermeable surface
 - (3) steep slope and permeable surface
 - (4) steep slope and impermeable surface

5. Which condition would cause surface runoff to increase in a particular location?

- (1) covering a dirt road with pavement
- (2) reducing the gradient of a steep hill
- (3) planting grasses and shrubs on a hillside
- (4) having a decrease in the annual rainfall

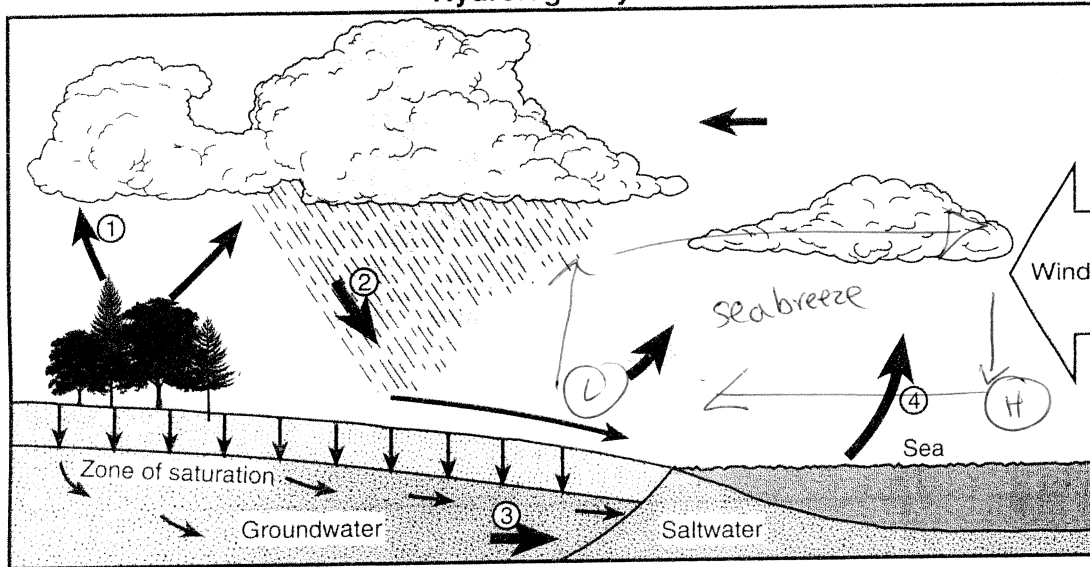
6. Which graph shows the effect of soil permeability on the amount of runoff in an area?



Water Cycle

Base your answers to questions 7 through 10 on the water cycle diagram shown below. Some arrows are numbered 1 through 4 and represent various processes.

Hydrologic Cycle



7. For infiltration to occur, the ground must be
- (1) permeable and saturated (3) impermeable and saturated
(2) permeable and not saturated (4) impermeable and not saturated
8. Which numbered arrow best represents the process of transpiration? ^{Trees}
- (1) 1 (2) 2 (3) 3 (4) 4
9. The clouds have formed primarily because moist air
- (1) rises, expands, and cools (3) sinks, compresses, and cools
(2) rises, expands, and warms (4) sinks, compresses, and warms
10. Which atmospheric condition is most likely responsible for the wind blowing the clouds from the sea toward the land? ^{(H) → (L) pressure}
- (1) high air temperature over the sea and low air temperature over the land
(2) high air pressure over the sea and low air pressure over the land
(3) low air density over the sea and high air density over the land
(4) low visibility over the sea and high visibility over the land