

# Environmental Engineering Assessment



### Marking Instructions

• Use a No. 2 pencil or a blue or black pen.

**CORRECT:** ●

**INCORRECT:** ○ ⊗ ⊖ ⊙

Name: \_\_\_\_\_

Date: \_\_\_\_\_

1. **Chemicals spill onto the ground near a lake and sink into the dirt. The chemicals do not fall into the lake. Could chemicals get into the lake water anyway? Choose the BEST answer.**

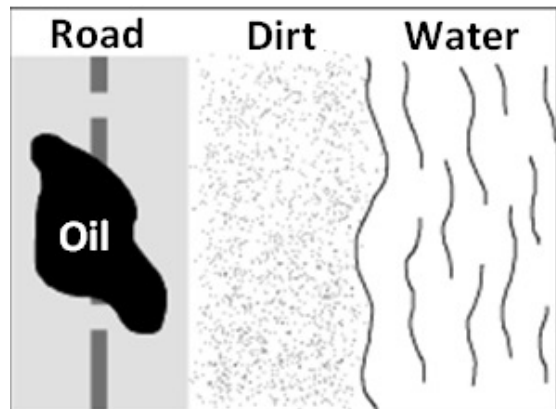
- Ⓐ No, because chemicals didn't fall in the lake.
- Ⓑ No, because the chemicals will sink down into the dirt, not sideways into the lake.
- Ⓒ Yes, because animals can move the chemicals into the water.
- Ⓓ Yes, because water moving under the ground can move the chemicals into the lake.

2. **A truck crashes and spills oil into a pond. Could plants growing in the soil near the pond get sick from the pollution?**

- Ⓐ No, plants don't get sick from pollution.
- Ⓑ No, pollution can't move from water to soil.
- Ⓒ Yes, water can move pollution through the soil and hurt the plants.
- Ⓓ Yes, but only if the water from the pond splashes onto the plants.

3. **Oil spilled on a road as shown in the diagram. Will the oil reach the water?**

- Ⓐ No, the oil will stay on the road.
- Ⓑ No, the dirt will soak up the oil and hold it.
- Ⓒ Yes, the oil will slide over the dirt.
- Ⓓ Yes, the rain will move the oil through the dirt and into the water.



4. **Dangerous chemicals spill into a garden. Is it a good idea to pour water on the area?**

- Ⓐ No, because the water will spread the chemicals to more places.
- Ⓑ No, because the water will go into the plants before it touches the chemicals.
- Ⓒ Yes, because the water will collect the chemicals in one area.
- Ⓓ Yes, because the water will clean the chemicals out of the garden.

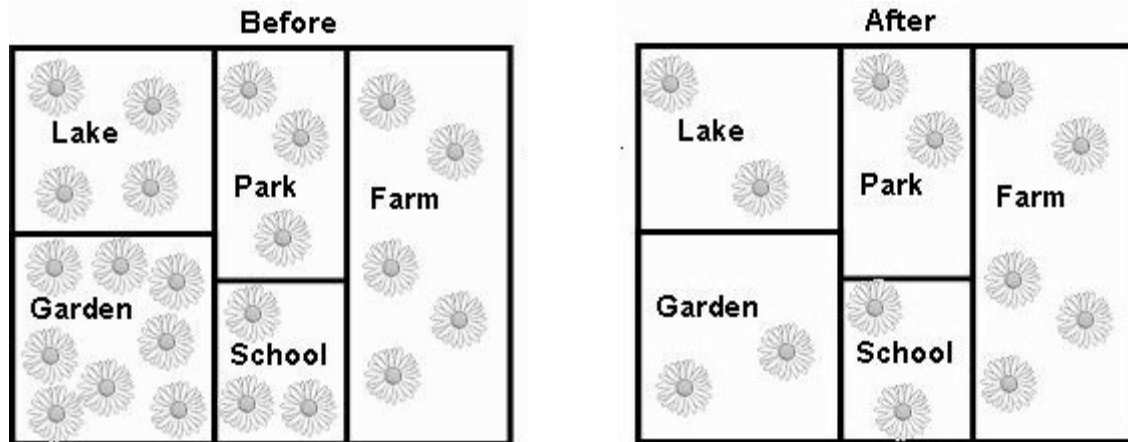
PLEASE DO NOT WRITE IN THIS AREA



[SERIAL]

A harmful chemical that kills flowers was spilled somewhere in a town. The maps below show the numbers of flowers in different parts of the town before and after the spill.

Use this information to answer questions 5 - 6.



5. Did the chemical kill the flowers in places where it was not spilled?

- A No, the chemical cannot move.
- B No, the chemical cannot move that far.
- C Yes, people must have moved the chemical.
- D Yes, chemicals can move through the ground.

6. The chemical was spilled last year. Do people at the farm need to worry about the chemical killing their flowers in the future?

- A No, the chemical is done moving.
- B No, the chemical can't move from the place it was spilled.
- C Yes, water can move the chemical through the ground.
- D Yes, but only if animals walk through the chemical and move it.

7. A tank outside of a factory leaks pollution into the soil.

Could the pollution spread to areas that are a mile away from the factory?

- A No, because pollution can't spread that far through the ground.
- B Yes, because factories are very big.
- C Yes, because water can spread pollution through the ground.
- D Yes, but it only spreads if people or animals walk on the polluted dirt and move it.