

DIRECTIONS: There are seven passages in this test. Each passage is followed by several questions. After reading a passage, choose the best answer to each question and mark the corresponding oval on the answer sheet. You may refer to the passage as often as necessary.

Passage I

Marsh system	Average soil concentrations of heavy metals (parts per million)					Dominant vegetation type	Number of different invertebrate species in marsh system	Number of specimens for invertebrate species in marsh system (per square meter)
	Cu	Cr	Ni	Pb	Cd			
Sawmill Creek (SC)	164.5	253.5	63.3	151.5	2.4	<i>Phragmites australis</i> <i>Spartina alterniflora</i>	12	5,912.5
Mill Creek—Site 1 (MC1)	79.5	174.7	53.9	247.0	1.7	<i>Phragmites australis</i> <i>Spartina alterniflora</i>	9	5,568.5
Mill Creek—Site 2 (MC2)	717.8	1,092.7	64.8	503.5	1.0	<i>Phragmites australis</i>	4	107.5

Three different marsh systems were compared with respect to concentrations of various pollutants (heavy metals) present in the soil, dominant vegetation type, the total number of invertebrate species present, and the total number of individuals of all invertebrate species present. The table shows the results of this study for the three different marshes.

- According to the table, which of the following heavy metals occurs in the highest concentration at Mill Creek—Site 2 (MC2)?

 - Cu
 - Cr
 - Ni
 - Pb
- It was hypothesized that Sawmill Creek (SC) had better overall water quality than Mill Creek—Site 2 (MC2) and, therefore, that SC should have lower levels of heavy metals than MC2. According to the table, the data for which of the following heavy metal concentrations does NOT support this hypothesis?

 - Cu
 - Cr
 - Ni
 - Cd
- It was also hypothesized that, since heavy metals are in highest concentrations at the surface of the soil, artificial removal of top soil layers at Mill Creek—Site 1 (MC1) had caused the heavy metal concentrations at this site to be less than the other two marshes. According to the table, which data for the following heavy metals supports this hypothesis?

 - Cu, Cr, Ni
 - Cr, Ni, Pb
 - Ni, Pb, Cd
 - Cu, Ni, Pb