Certified Engineering Geologist (CEG) Examination Sample Questions

Example No. 1

Gravel and cobbles up to 10 inches in diameter are present at a site. Which of the following drilling methods should be used to install monitoring wells?

A. Downhole hammer, advancing casing behind the bit
B. Dual casing rotary, using air and drilling mud
C. Standard mud rotary, using carbide tips
D. Hollow-stem auger, using carbide tips

Example No. 2

To yield useful information from a seismic refraction survey, which of the following conditions should be met?

A. The seismic wave velocity increases with depth
B. The seismic wave velocity decreases with depth
C. The depth to the water table is less than the length of the seismic refraction line
D. The depth to the water table is greater than the length of the seismic refraction line

Example No. 3

An ore seam at a depth of 1,000 feet has a total stress of approximately 70 tons per square foot. The uniaxial compressive strength of the ore body is measured at 4,000 pounds per square inch. What percentage of this ore body can be extracted by room-and-pillar method at a depth of 1,000 feet before the pillars will begin to fail?

A. 51%
B. 76%
C. 82%
D. 100%

Example No. 4

Which of the following methods should be used to remove water in an open excavation in saturated soft alluvium?

A. French drain with permeable aggregate
B. Horizontal drains
C. Wick drains
D. Well points