

Name:

Date:

Class:

Lesson 15.2: Soil Formation and Properties

Know and Understand

Answer the following questions using the information provided in this lesson.

1. Approximately how many years are required to form one inch of topsoil? (15.2.1)

- A. 50
- B. 100
- C. 500
- D. 1,000

Answer:

2. Which of the following is not one of the five factors that affect weathering of rock? (15.2.1)

- A. Parent material
- B. Organisms
- C. Topography
- D. Temperature

3. *True or False?* The particles in mud are primarily sand. (15.2.1)

Answer:

4. Why are plant roots significant to soil formation? (15.2.1)

- A. Roots break rocks into usable minerals.
- B. Roots absorb soil contaminants and purify soil.
- C. Roots find small cracks in rocks and force them to expand.
- D. Roots take up water, therefore drying out the soil and preventing soil from forming.

Answer:

5. Is organic decay faster or slower in warmer climates? (15.2.1)

- A. Faster
- B. Slower

Answer:

6. Which of the following is the top layer of the soil horizon? (15.2.1)

- A. A
- B. B
- C. C
- D. O

Answer:

7. What is the significance of the B horizon? (15.2.1)

- A. Holds most of the soil's fertility
- B. Responsible for drainage and aeration
- C. Barrier to prevent plant roots from penetrating
- D. All are correct.

Answer:

8. Which of the soil particles is the largest? (15.2.2)

- A. Sand
- B. Silt
- C. Clay

Answer:

9. Which of the soil particles is the smallest? (15.2.2)

- A. Sand
- B. Silt
- C. Clay

Answer:

10. Which soil component has the most significant effect on soil fertility? (15.2.2)
- A. Sand
 - B. Silt
 - C. Clay

Answer:

11. *True or False?* Humus is usually about 40% to 50% of the total volume of soil. (15.2.2)

Answer:

12. Why are pore spaces crucial to soil composition? (15.2.2)
- A. Pore spaces allow places for worms to live.
 - B. They hold fertilizer.
 - C. They are made of clay and increase pH.
 - D. Pore spaces provide room for water and air in the soil.

Answer:

13. What is one organism that affects the development of soil most? (15.2.1)
- A. Bears
 - B. Hawks
 - C. Worms
 - D. All are correct.

Answer:

14. *True or False?* Loamy soils contain approximately 40% sand, 40% silt, and 20% clay. (15.2.2)

Answer:

15. Why is it necessary to maintain biodiversity in soil? (15.2.3)
- A. When they die, organisms return minerals and nutrients to the soil.
 - B. Organisms break down rocks into soil.

- C. Biodiversity encourages water uptake by plant roots.
- D. Biodiversity makes soil darker and more fertile.

Answer:

16. Which natural forces may erode soil? (15.2.3)

- A. Wind
- B. Water
- C. Fire
- D. Both A and B.

Answer:

17. What happens to a highly eroded field? (15.2.3)

- A. Farmers cannot plow or plant the field.
- B. It becomes barren and cannot support crops.
- C. Farmers must apply extra fertilizer to make up for the lost fertility.
- D. All are correct.

Answer:

18. Which of the following is an erosion control measure? (15.2.3)

- A. Cover crops
- B. Tillage systems
- C. Windbreaks
- D. All are correct.

Answer:

19. Which land capability classes are suited for crop production? (15.2.4)

- A. 1, 2, and 3
- B. 1, 2, 3, and 4
- C. 6, 7, and 8
- D. All land capability classes should be used for crop production

Answer:

20. What happens to the restrictions on cropping systems as land capability classes increase in number? (15.2.4)
- A. Increased diversity of crops may be grown.
 - B. The land has more restrictions on use.
 - C. The land has fewer restrictions on use.
 - D. Crops must be grown in rotation.

Answer: