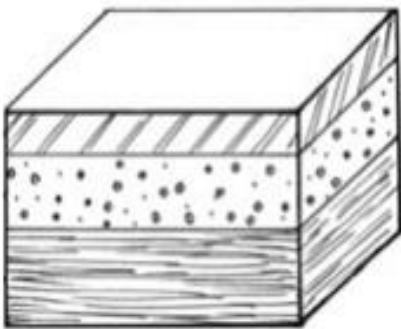


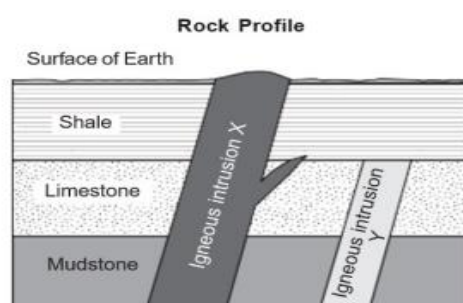
M1 L1 Analyzing rocks and fossil records

1. The principle of uniformitarianism states that sedimentary rocks are deposited in horizontal layers. A. True B. False
2. The oldest rock layer in an undisturbed rock sequence occurs _____.
A) at the bottom of the sequence B) below the sedimentary rock layer
C) below the unconformity D) at the top of the sequence
3. The principle of _____ states that, in an undisturbed sequence, the oldest rocks are at the bottom of the sequence and successive layers are younger than those below them.
A. inclusion B. Superposition C. Uniformitarianism D. Horizontality
4. The remains of living plants or animals are called fossils. A. True B. False
5. Determining the order of events and the relative age of rocks by examining the position of rocks in a sequence is called _____.
A) absolute dating B) radiometric dating C) relative dating D) radiocarbon dating
6. The principle of superposition can be used to determine.



- A) the actual age of these rock layers
- B) the relative densities of these rock layers
- C) the actual temperatures of these rock layers
- D) the relative age of these rock layers

7. The diagram shows a rock profile containing layers of different types of rock and igneous intrusions. Which sequence lists the correct order of events in the area represented in the diagram?



A	B
1. Igneous intrusion Y formed. 2. The shale layer was deposited. 3. Igneous intrusion X formed. 4. The limestone layer was deposited. 5. The mudstone layer was deposited.	1. The mudstone layer was deposited. 2. The limestone layer was deposited. 3. The shale layer was deposited. 4. Igneous intrusion Y cut into the mudstone, limestone, and shale. 5. Igneous intrusion X cut into the mudstone, limestone, and shale.
C	D
1. Igneous intrusion X formed. 2. Igneous intrusion Y formed. 3. The shale layer was deposited. 4. The limestone layer was deposited. 5. The mudstone layer was deposited.	1. The layer of mudstone was deposited. 2. The layer of limestone was deposited. 3. Igneous intrusion Y cut into the mudstone and limestone. 4. The shale layer was deposited. 5. Igneous intrusion X cut into the mudstone, limestone, and shale.

8. Who is considered one of the first scientists to propose that Earth is very old?

- A. Charles Darwin **B. James Hutton** C. Isaac Newton D. Albert Einstein

9. What principle did James Hutton's ideas lead to?

- A. Catastrophism B. Gradualism **C. Uniformitarianism** D. Punctuated Equilibrium

10. What does the principle of uniformitarianism state?

- A. Geologic processes have changed significantly over time.
B. Geologic processes that occur today are similar to those in the past.
 C. Earth is only a few thousand years old.
 D. Geologic processes are unpredictable.

11. What method do scientists use to determine the order of geologic events?

- A. Radiometric dating B. Carbon dating
C. Relative-age dating D. Fossil correlation

12. Which principle states that in undisturbed rock layers, the oldest rocks are on the bottom?

- A. Original Horizontality B. Cross-cutting Relationships
C. Superposition D. Inclusions

13. According to the principle of original horizontality, how are most rock-forming materials deposited?



- A. Vertically
- B. In large chunks
- C. Horizontally**
- D. In circular patterns

14. What does the principle of lateral continuity state?

- A. Rocks are deposited in vertical columns.
- B. Rocks are deposited in large, continuous sheets in all lateral directions.**
- C. Older rocks are always found on top of younger rocks.
- D. Geological features form in isolation.

15. What does the principle of inclusions state?

- A. Younger rocks contain pieces of older rocks.**
- B. Older rocks contain pieces of younger rocks.
- C. Inclusions are always found in the oldest rocks.
- D. Inclusions are formed during volcanic eruptions.

16. According to the principle of cross-cutting relationships, which feature is older?

- A. The feature that cuts across another feature**
- B. The feature that is cut across
- C. Both features are the same age
- D. Neither feature is older

17. What does relative-age dating allow scientists to determine?

- A. The absolute age of rocks
- B. The exact date when rocks were formed
- C. The order in which geologic events occurred**
- D. The chemical composition of rocks

18. What process did Hutton believe could wear down mountains or carve deep canyons?

- A. Volcanic eruptions
- B. Erosion caused by streams**
- C. Earthquakes
- D. Glacial movements

19. Why is the principle of uniformitarianism important for understanding Earth's past?

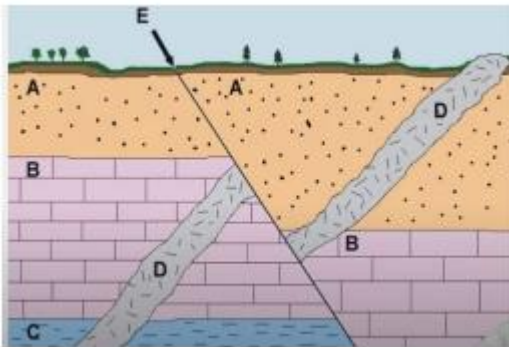
A. It suggests that Earth is flat

B. It implies that current geologic processes have always been the same

C. It denies the existence of fossils

D. It promotes the idea of rapid, catastrophic events

20. Order the following from the oldest to the youngest:



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C, B, D, A, E

21. What do fossils primarily provide clues about?

A) The chemical composition of rocks

B) The relative ages of rocks

C) The atmospheric composition of the past

D) The magnetic properties of minerals

22. What are microfossils?

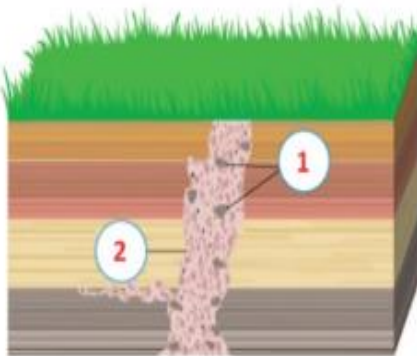
A) Fossils that can only be seen with a microscope

B) Fossils of dinosaurs

C) Fossils found exclusively in sedimentary rocks

D) Fossils of ancient plants

23. Using the following diagram which is the oldest feature and why?



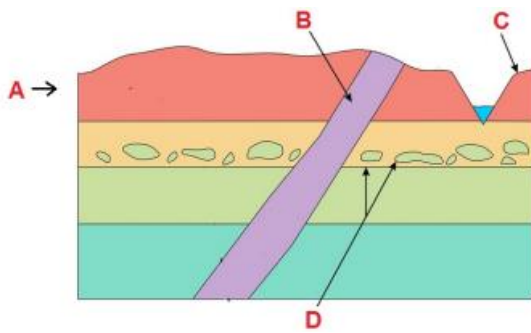
A- 1 is the oldest because of superposition principle

B- 2 is the oldest because of superposition principle

C- 1 is the oldest because of inclusion principle

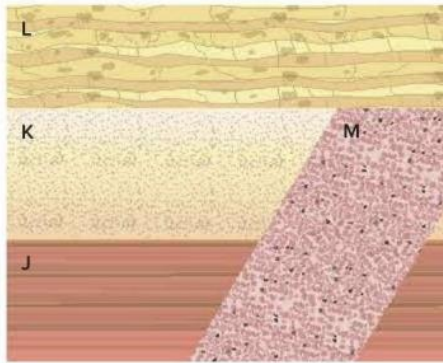
D- 2 is the oldest because of inclusion principle

24. Which letter represents the youngest layer?



A
B
C
D

25.



Order the features in the illustration from oldest to youngest.

- A JKLM
- B MJKL
- C JKML**
- D MLKJ

Which geologic principle must be assumed to determine the relative age of M?

- A cross-cutting relationships**
- B superposition
- C original horizontality
- D inclusions

26.