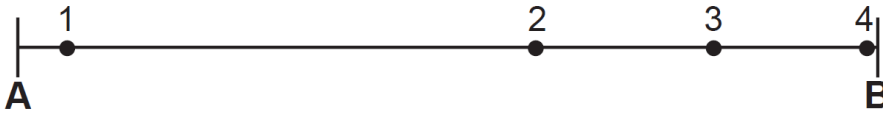


- 
1. The timeline below represents time on Earth from the beginning of the Paleozoic Era (*A*) to the present (*B*)

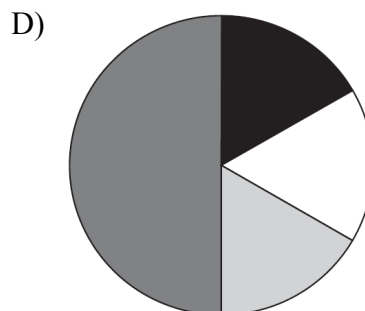
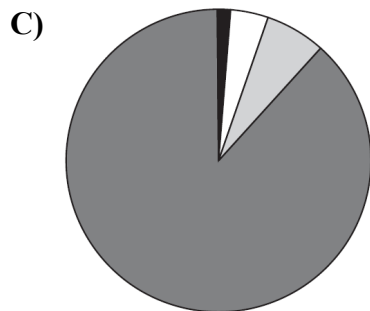
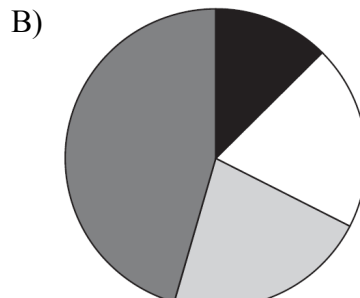
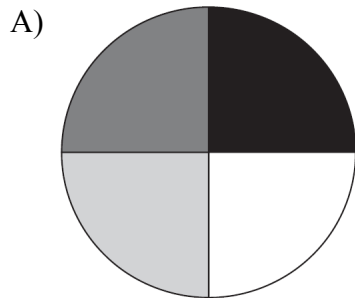
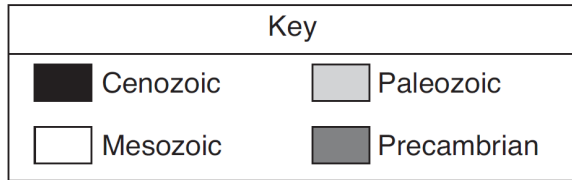


Which numbered position best represents the time when humans first appeared in the fossil record?

- A) 1                      B) 2                      C) 3                      D) 4
- 
2. What percentage of Earth's history represents human existence?
- A) **less than 1.0%**      B) 1.8%  
C) 23.5%                D) more than 98.6%
3. Approximately 2.2 billion years ago, which gas was first added in large amounts to Earth's atmosphere from life-forms that evolved in the oceans?
- A) carbon dioxide      B) water vapor  
C) **oxygen**                D) nitrogen
4. Antarctica's location and climate changed over the last 200 million years because Antarctica moved
- A) southward, resulting in a warmer climate  
B) **southward, resulting in a colder climate**  
C) northward, resulting in a warmer climate  
D) northward, resulting in a colder climate
5. The division of Earth's geologic history into units of time called eons, eras, periods, and epochs is based on
- A) absolute dating techniques  
B) **fossil evidence**  
C) climatic changes  
D) seismic data
-

## Geo History Practice Test

6. Which pie graph best represents the percentage of total time for the four major divisions of geologic time?



7. Which sequence shows the correct order of Earth's geologic time intervals from oldest to youngest?

- A) Archean → Mesozoic → Cenozoic → Paleozoic → Proterozoic
- B) Archean → Proterozoic → Paleozoic → Mesozoic → Cenozoic**
- C) Cenozoic → Mesozoic → Paleozoic → Proterozoic → Archean
- D) Cenozoic → Paleozoic → Archean → Mesozoic → Proterozoic

8. Which event occurred earliest in geologic history?

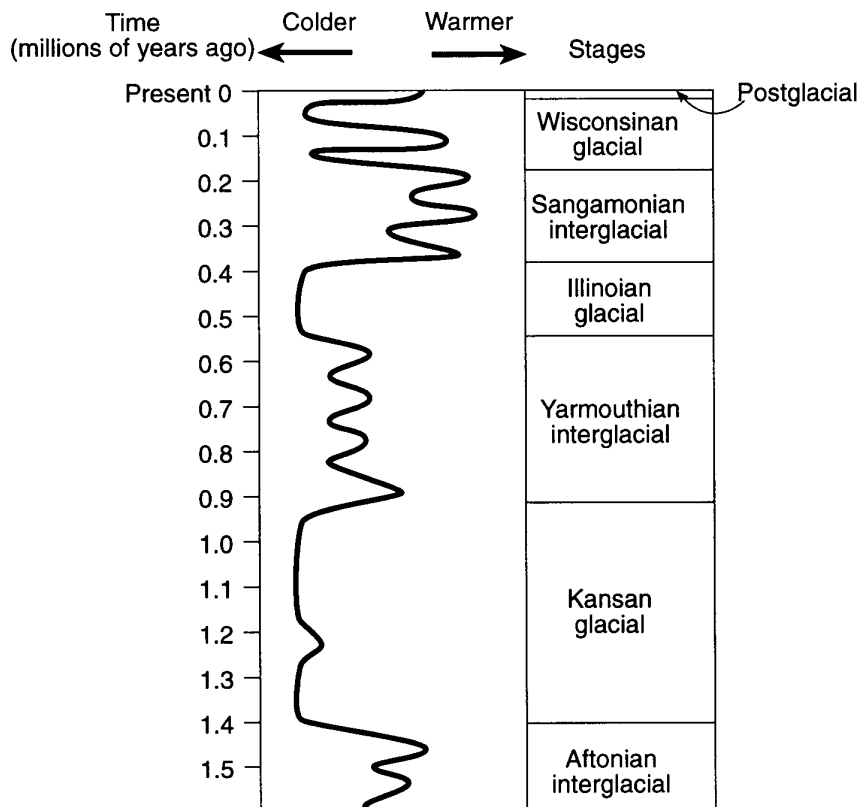
- A) appearance of the earliest grasses
- B) appearance of the earliest birds
- C) the Grenville Orogeny**
- D) the intrusion of the Palisades Sill

9. The largest meteorite impact crater in North America formed approximately 1,850 million years ago, which was during the

- A) Middle Archean Era
- B) Early Proterozoic Era**
- C) Early Jurassic Period
- D) Late Cretaceous Period

## Geo History Practice Test

10. Base your answer to the following question on the chart below, which shows the changing climatic conditions that led to alternating glacial and interglacial periods.

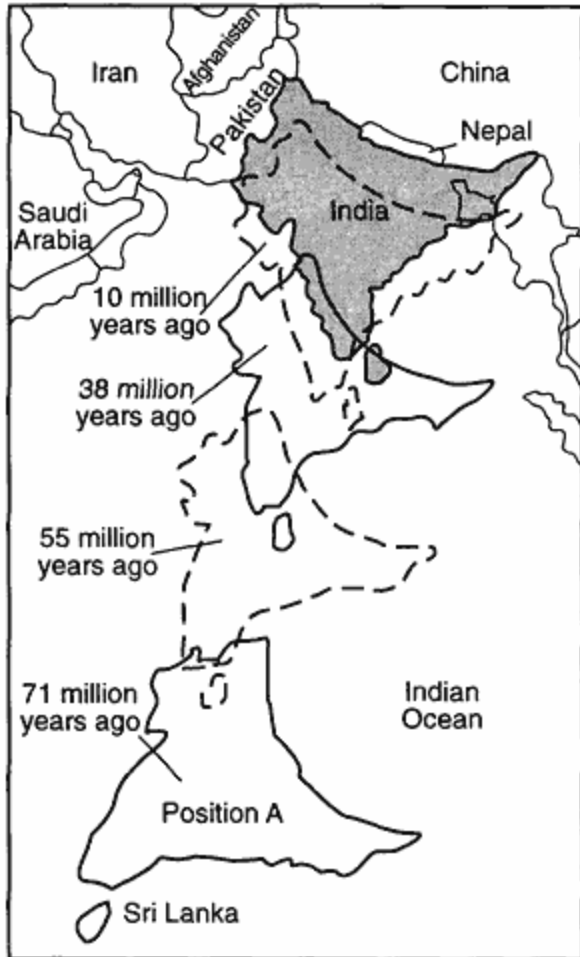


The chart represents climatic conditions that occurred mostly during which geological time period?

- A) Triassic Period  
B) Ordovician Period  
C) **Quaternary Period**  
D) Cretaceous Period
11. Trilobite fossils were recently discovered in Himalayan Mountain bedrock. During which geologic period could these organisms have lived?
- A) Neogene  
B) Cretaceous  
C) Triassic  
D) **Cambrian**
12. When did the Jurassic Period end?
- A) 66 million years ago  
B) **144 million years ago**  
C) 163 million years ago  
D) 190 million years ago
13. What is the estimated age of Earth?
- A)  $4.6 \times 10^6$  years  
B)  $4.6 \times 10^7$  years  
C)  $4.6 \times 10^8$  years  
D)  **$4.6 \times 10^9$  years**

## Geo History Practice Test

14. Base your answer to the following question on the map below. The map represents the movement of tectonic plates that resulted in the collision of India with Asia. Scientists believe that 71 million years ago, India was at position *A*.



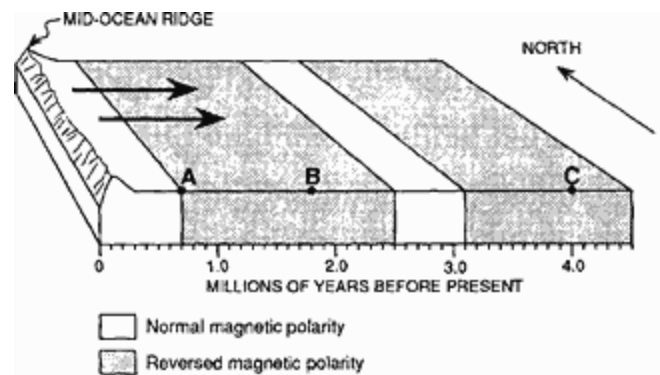
Which life-forms were living on Earth when India was at position *A*?

- A) humans                      **B) dinosaurs**  
 C) trilobites                  D) armored fishes
15. Studies of the rock record suggest that
- A) the period during which humans have existed is very brief compared to geologic time**  
 B) evidence of the existence of humans is present over much of the geologic past  
 C) humans first appeared at the time of the intrusion of the Palisades sill  
 D) the earliest humans lived at the same time as the dinosaurs

16. Base your answer to the following question on the information and diagram below.

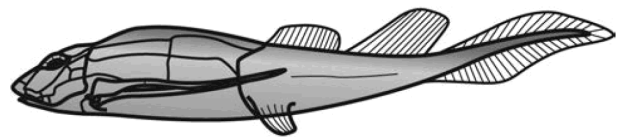
At intervals in the past, the Earth's magnetic field has reversed. The present North magnetic pole was once the South magnetic pole, and the present South magnetic pole was once the North magnetic pole. A record of these changes is preserved in the igneous rocks that formed at mid-ocean ridges and moved away from the ridges.

The diagram below represents the pattern of normal and reversed magnetic polarity in the igneous rocks composing the ocean crust on the east side of a mid-ocean ridge.



During which geological epoch were the rocks at letter *C* formed?

- A) Eocene                      B) Oligocene  
 C) Paleocene                **D) Pliocene**
17. Approximately how many years ago did the solar system originate?
- A) 570,000,000              B) 1,000,000,000  
**C) 4,500,000,000**            D) 10,000,000,000
18. The diagram below represents the placoderm fish *Bothriolepis*, an index fossil found in New York State.



The surface bedrock at which location is most likely to contain this fossil?

- A) Ithaca**                      B) Old Forge  
 C) Albany                      D) New York City

## Geo History Practice Test

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19. Which geologic event occurred in New York State at approximately the same time as the extinction of dinosaurs and ammonoids?

- A) formation of the Queenston Delta
- B) deposition of the sands and clays underlying Long Island**
- C) initial opening of the Atlantic Ocean
- D) advance and retreat of the last continental ice sheet

20. Fossils of which type of animal would most likely be found in the surface bedrock of the Catskills?

- A) reptiles
- B) brachiopods**
- C) mammals
- D) birds

21. *Valcouroceras* is a New York State index fossil. Which mountain-building event occurred in New York State during the time when *Valcouroceras* was living in oceans covering parts of New York State?

- A) Alleghenian orogeny
- B) Acadian orogeny
- C) Taconian orogeny**
- D) Grenville orogen

Base your answers to questions **22** and **23** on the passage below and on your knowledge of Earth science.

### Ice Ages

Earth has undergone many ice ages, each lasting millions of years. Some scientists infer that most ice ages were caused by landmasses blocking the ocean currents between equatorial regions and the poles. Ice ages usually ended when the positions of continents allowed ocean currents to resume transporting equatorial heat to the poles.

During each ice age there were advances and retreats of glaciers. These cool glacial and warm interglacial climate intervals were caused mostly by changes in Earth's orbit and tilt. Earth is presently in a warm interglacial interval.

22. Approximately 359 million years ago, the average intensity of insolation received in a year by the land area that is now eastern North America was likely

- A) greater, because eastern North America was at a lower latitude**
- B) greater, because eastern North America was at a higher latitude
- C) less, because eastern North America was at a lower latitude
- D) less, because eastern North America was at a higher latitude

23. Evidence that glaciers covered large areas of New York State is best provided by

- A) long-term temperature measurements
  - B) folded layers of bedrock
  - C) kettle lakes and drumlins**
  - D) the presence of streams and rivers
-

## Geo History Practice Test

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24. During which period in geologic history did the uplifting of the Adirondack Mountains begin?

- A) Quaternary            **B) Cretaceous**  
C) Triassic              D) Cambrian

25. Base your answer to the following question on the passage below.

### **Fossils and the History of Earth's Rotation**

Data from coral fossils support the hypothesis that Earth's rotation rate has been slowing down by about 2.5 seconds per 100,000 years. Scientists believe this is due to the frictional effects of ocean tides. This slowing rotation rate decreases the number of days in the year.

Scientists have discovered that corals produce a thin layer of shell every day, resulting in growth rings. These daily layers are separated by yearly ridges.

The Devonian coral fossil, *Pleurodictyum*, has approximately 400 growth rings between each yearly ridge, which suggests that there were about 400 days in a year during the Devonian Period.

Supporting this hypothesis, scientists have found coral from the Pennsylvanian Period that have about 390 growth rings per year, while present-day corals have about 365 growth rings per year.

The evidence of the fossil *Pleurodictyum* found in surface bedrock in the Finger Lakes region of New York State suggests that this region was once

- A) covered by a glacial ice sheet            **B) covered by a warm, shallow sea**  
C) located in a desert area                  D) located in a tropical rain forest
-

**Answer Key**  
**Geo History Practice Test**

1. **D**
  2. **A**
  3. **C**
  4. **B**
  5. **B**
  6. **C**
  7. **B**
  8. **C**
  9. **B**
  10. **C**
  11. **D**
  12. **B**
  13. **D**
  14. **B**
  15. **A**
  16. **D**
  17. **C**
  18. **A**
  19. **B**
  20. **B**
  21. **C**
  22. **A**
  23. **C**
  24. **B**
  25. **B**
-