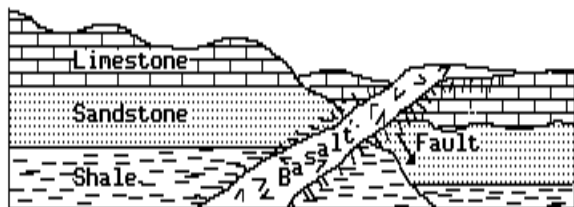


Name: _____

- 1) Trilobite fossils from different time periods show small changes in appearance. These observations suggest that the changes may be the result of
 - A) the gradual disintegration of radioactive substances
 - B) evolutionary development
 - C) a variety of geological processes
 - D) periods of destruction of the geological record
- 2) From the study of fossils, what can be inferred about most species of plants and animals that have lived on Earth?
 - A) They are unrelated to modern life forms.
 - B) They have become extinct.
 - C) They are still living today.
 - D) They existed during the Cambrian Period.
- 3) The changes observed in the fossil record from the Precambrian Era to the Cenozoic Era best provide evidence of
 - A) planetary motion
 - B) evolution
 - C) radioactive decay
 - D) sublimation
- 4) Which two forms of life existed together on the Earth during the same time period? [Refer to the *Earth Science Reference Tables*.]
 - A) flowering plants and trilobites
 - B) dinosaurs and mastodons
 - C) trilobites and birds
 - D) mastodons and flowering plants
- 5) According to the *Earth Science Reference Tables*, which event occurred at the time of the Alleghenyan Orogeny?
 - A) the extinction of many kinds of land animals
 - B) the development of birds and mammals
 - C) the development of primitive aquatic plants
 - D) the extinction of many kinds of marine animals
- 6) According to the *Earth Science Reference Tables*, the rocks 50 kilometers east of Buffalo contain many fossils of
 - A) mammals
 - B) birds
 - C) fish
 - D) reptiles
- 7) The diagram below represents a cross section of the Earth's crust showing rock units and a fault. The rock layers are not overturned.



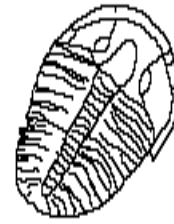
If the sandstone was formed during the Early Devonian epoch, the shale layer below it could contain fossils of

- A) eurypterids
- B) mammals
- C) early reptiles
- D) flowering plants

- 8) Which statement about dinosaurs is supported by information provided in the *Earth Science Reference Tables*?
 - A) The number of dinosaurs increased before dinosaurs became extinct.
 - B) Dinosaur fossils and trilobite fossils may be found in the same rocks.
 - C) Dinosaurs only lived on land.
 - D) Dinosaur fossils first appeared in rocks of the Paleozoic Era.
- 9) According to the *Earth Science Reference Tables*, when did armored fishes become extinct?
 - A) before the appearance of terrestrial plants
 - B) after the appearance of reptiles
 - C) before the appearance of dinosaurs
 - D) after the appearance of birds
- 10) According to the *Earth Science Reference Tables*, rocks containing fossils of earliest terrestrial plants could most likely be found in New York State bedrock near
 - A) Ithaca
 - B) Syracuse
 - C) Old Forge
 - D) Oswego
- 11) According to the *Earth Science Reference Tables*, studies of the rock record suggest that
 - A) the period during which humans have existed is very brief compared to geologic time
 - B) the earliest humans lived at the same time as the dinosaurs
 - C) evidence of the existence of humans is present over much of the geologic past
 - D) humans first appeared at the time of the intrusion of the Palisades sill
- 12) The fossil record indicates that most of the plants and animals that lived on Earth in the past
 - A) lived on land
 - B) became index fossils
 - C) have become extinct
 - D) appeared during the Cambrian Period
- 13) Earth scientists studied fossils of a certain type of plant. They noted slight differences in the plant throughout geologic time. What inference is best made from this evidence?
 - A) When uplifting occurred, the fossils of this type of plant were deformed.
 - B) When the environment changed, this type of plant also changed, allowing it to survive.
 - C) The fossils have changed as a result of weathering and erosion.
 - D) The processes which form fossils today differ from those of the past.

- 14) According to the *Earth Science Reference Tables*, which event occurred most recently in New York State?
- A) Taconian orogeny
 - B) extinction of dinosaurs
 - C) formation of the ancestral Adirondacks
 - D) intrusion of the Palisades Sill

- 15) Fossils of two trilobite species from different geologic periods are illustrated below.



Middle Cambrian Trilobite



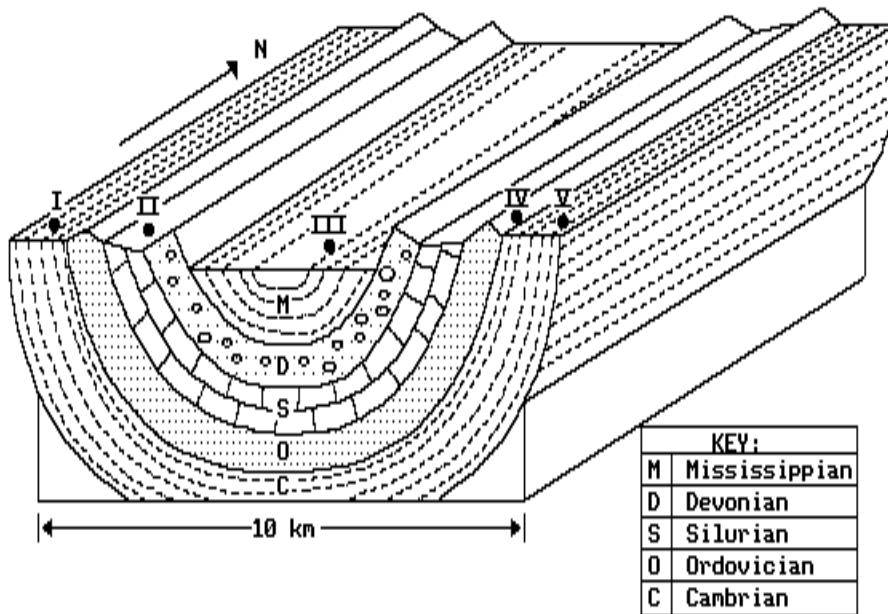
Silurian Trilobite

A comparison of these fossils provides evidence that these species may have

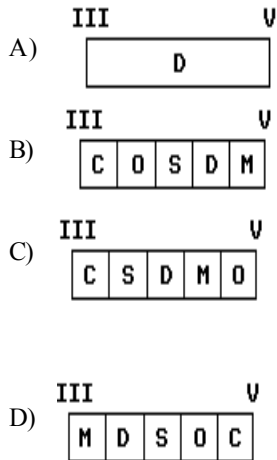
- A) undergone metamorphism
- B) experienced weathering and erosion
- C) experienced identical lifespans
- D) undergone evolutionary development

Questions 16 through 18 refer to the following:

The block diagram below shows a section of the Earth's crust. The rock layers have not been overturned. I, II, III, IV, and V are locations on the Earth's surface.



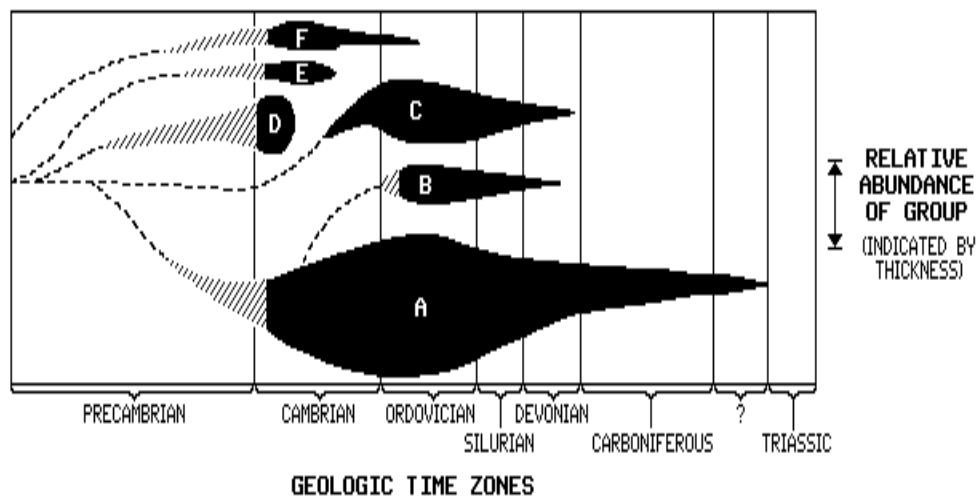
- 16) Which diagram best represents the rocks crossed when traveling across the surface from location III to location V?





- 17) According to the *Earth Science Reference Tables*, near which location in New York State would rocks similar in age to those at location III in the diagram be found?
- A) 44° N. lat., 75° W. long.
 B) 41° N. lat., 72° W. long.
 C) 44° N. lat., 74° W. long.
 D) 42° N. lat., 79° W. long.
- 18) According to the *Earth Science Reference Tables*, fossils of the earliest fishes could be found in the bedrock at location
- A) IV
 B) III
 C) II
 D) I

Questions 19 through 22 refer to the following:

The graph below shows the development, growth in population, and extinction of the six major groups of trilobites, labeled A through F.

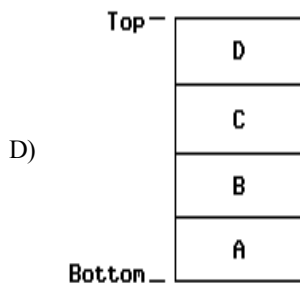
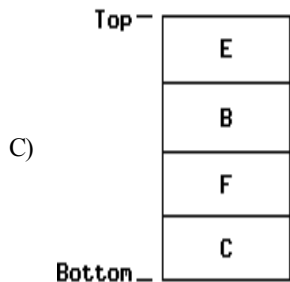
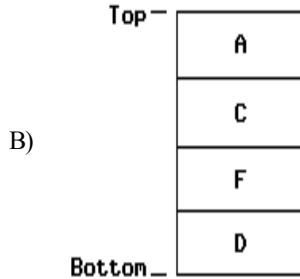
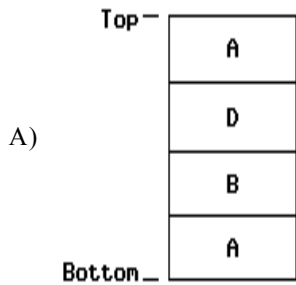


Key to Symbols:

-  Population based on fossil record
-  Population presumed: fossil evidence rare
- Assumed evolutionary relationship

- 19) Which inference is best supported by the graph?
- A) Trilobites could exist in present-day marine climates.
 B) The trilobite groups became most abundant during the Devonian Period.
 C) All trilobites evolved from group A trilobites.
 D) Precambrian trilobite fossils are very rare.

- 20) The diagrams below represent rock outcrops in which the rock layers have not been overturned. Which rock outcrop shows a possible sequence of the trilobite fossils?



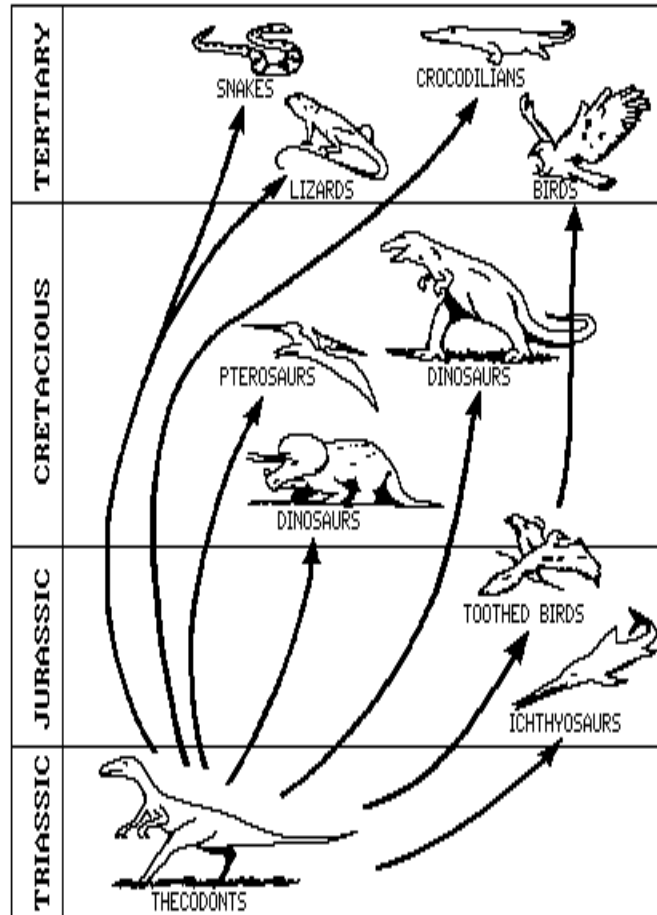
- 21) During which period did the last of these trilobite groups become extinct? [Refer to the *Earth Science Reference Tables*.]

A) Cretaceous C) Carboniferous
B) Permian D) Triassic

- 22) Which group of trilobites became the most abundant?

A) C B) B C) D D) A

23) The diagram below shows a possible sequence of evolutionary development of some vertebrates.



Which statement can best be inferred from the diagram?

- A) The pterosaurs and the ichthyosaurs became extinct at the same time.
- B) The lizard and the bird are both reptiles.
- C) The pterosaurs evolved into modern birds.
- D) The thecodont is the ancestor of several different types of animals.