Terminated Dinosaur Era

A. A huge meteor impact 65 million years ago may have been the end of the age of dinosaurs. But it may also have been the beginning. Researchers recently found what they think is the first direct geological evidence of a meteor impact 200 million years ago. This event happened at the same time as a mass extinction that killed off half of the major groups of life and opened the way for dinosaurs to evolve.

B. Many people have different ideas about why and when dinosaurs became more common. We don't know much about the time between when dinosaurs first appeared and when they became the most common animals on Earth, so we can't say for sure what happened. Dr. Paul E. Olsen, a researcher of earth and environmental sciences at Columbia University's Lamont-Doherty Earth Observatory in Palisades, N.Y., said, "There is a geochemical characteristic of something important happening, probably an asteroid impact, just before the time when familiar dinosaur-dominated communities appear."

C. Olsen and his colleagues looked at fossils of vertebrates from 80 sites in four different ancient rift basins. These basins are part of a chain of rifts that formed as North America began to break away from the supercontinent that existed between 230 and 190 million years ago. Scientists found a lot of the rare element iridium in the layer of rock that was around at the time of the extinction. Iridium is a precious metal that is in the same group as platinum. It is more common in meteorites than in rocks.

D. At home, In the 1970s, a similar rise in iridium levels in rocks that were 65 million years old led to the idea that a meteor killed the dinosaurs. For years, people disagreed about that theory, even after it was backed up by other evidence and the impact site was found off the coast of the Yucatan Peninsula. Scientists will have to do the same thing with the new iridium anomaly. The levels are only about 10% as high as they were during the next extinction. That could mean that the meteor was smaller or had less iridium in it, or that it wasn't a meteor at all. Iridium can also come from inside the Earth, when volcanoes erupt. Dr. Michael J. Benton, a senior lecturer of vertebrate palaeontology at the Bristol University in England, said that the data are "the first reasonably compelling proof of an iridium spike."

E. In a database of 10,000 fossilized footprints found in old lake basins from Virginia to Nova Scotia, the scientists found more proof of a rapid extinction. The tracks of a house cat, for example, look like those of a baby tiger. However, footprints are much more common than fossil bones and can give a more complete picture of the types of animals walking around. Dr. Olsen said, "It makes it very easy for us to see the very clear signs of big changes in wildlife." Since sediment builds up quickly in lake basins, scientists were able to date each footprint by looking at the rock layer where it was found. They found that about 200 million years ago, the animals that walked along what is now the East Coast of North America changed all at once.

F. Several large groups of reptiles left tracks that go almost all the way up to the layer of rock that marks the end of the Triassic geologic period, which ended 202 million years ago. After that, the tracks of these reptiles disappear in younger layers from the Jurassic period. Geology professor at the University of Washington, Dr. Peter D. Ward, said, "I think the footprint method is very new and very exciting." He said that the information was "very interesting," but that it needed more research. Scientists led by Dr. Ward reported last year that the types of carbon in rocks changed quickly at this time, which suggests that plants died all at once in less than 50,000 years. The footprint research backs up the idea that the extinction happened all at once.

G. Several groups of dinosaurs lived on after the extinction, and their footprints show that new groups appeared soon after. Before the extinction, dinosaurs left about one-fifth of the footprints. After the extinction, they left more than half of the footprints. Researchers said that the changes happened in less than 30,000 years, which is a very short time in geological terms. Scientists think that the asteroid or comet impact and the deaths of Triassic competitors made it possible for a few groups of meat-eating dinosaurs to grow very quickly and take over the top of the food chain on land around the world.

H. At the time of the extinction, rauisuchians, which were 15 feet long and had teeth like knives, and phytosaurs, which looked like big crocodiles, were the most dangerous predators. Dinosaurs first appeared about 230 million years ago, but they were small and had to compete in an ecological niche that was already full. Before the end of the dinosaurs 200 million years ago, the biggest ones that ate meat were about the size of large dogs. Not very interesting." Dr. Olsen said. The dinosaurs grew up very quickly. The length of a Jurassic meat eater's foot from toe to heel was on average 20% longer than that of its Triassic ancestor. Scientists think that the dinosaurs got twice as big because their feet got twice as big. This led to the terrifying Velociraptors, Tyrannosaurus rex, and other large meat-eating dinosaurs.

I. The speed up in evolution is like how mammals became more common after the dinosaurs died out. During the time of the dinosaurs, mammals were no bigger than small dogs. After the dinosaurs died out, they changed into tigers, elephants, whales, and even humans. Dinosaurs may not have made it through the second extinction because they were so successful after the Triassic-Jurassic extinction. "When disasters

happen, small animals always do better. Dr. Olsen said this is because they can live on less food. He also said that scientists now think that the small dinosaurs did make it. He said, "We call them birds."

Terminated Dinosaur Era reading questions

Questions 1-5

Using the information in the passage, candidates have to match the list of people (below) with the list of opinions or deeds (**questions 1-5**). Write the appropriate answer (**A-C**) in boxes **1-5** on the answer sheet.

List of people

A. Paul Olsen
B. Michael Benton
C. Peter Ward

1. Large animals have a loss when disasters happen
2. Changes in the type of carbon are linked to the death of a lot of plants.
3. Adding footprint investigation makes it easier to see how animal species change over time.
4. The geochemical data point to an asteroid collision before the emergence of dinosaurs.
5. The first convincing signs of an iridium surge were found.

Questions 5-11

Do the following statements agree with the information given in the reading passage?
In boxes 5-11 on your answer sheet, write

***TRUE** if the statement is true*
***FALSE** if the statement is false*
***NOT GIVEN** if the information is not given in the passage.*

6. Iridium, a rare element, was detected in meteorites and on Earth.
7. Before the impact site as well as other corroborating evidence were found, the meteor impact theory was already widely believed.
8. Compared to fossil bones, which can identify particular species, footprints are of minimal value in conveying information.
9. The body size of Tyrannosaurus rex was bigger than that of other predatory dinosaurs.
10. Small dinosaurs emerged and struggled with mammals and birds after the large dinosaurs died out.

Questions 11-12

Choose the correct option **A-D**.

11. When did the dinosaurs first appear?
    A. 1000 years ago
    B. 230 million years ago
    C. 250 million years ago
    D. 500 years ago

12. Which animals looked like big crocodiles?
    A. Rauisuchians
    B. Dinosaurs
    C. Phytosaurs
    D. Archaeopteryx

Terminated Dinosaur Era reading answers with explanation

Terminated Dinosaur Era reading answers with explanations will assist you in correcting errors and identifying the required information for your answer.

(Note: The text in italics is from the reading passage and shows the location from where the answer is taken or inferred. The text in regular font explains the answer in detail.)

1. A

Keyword Location: Paragraph I 5th line
Explanation: Dr. Olsen, the scientist, says that in the event of a disaster, the smaller animals are better able to survive. This proves that it is harder for larger animals to survive when there isn't enough food.

2. C

Keyword Location: Paragraph F 6th line
Explanation: Changes in the type of carbon were found to be the cause of changes in the plants and the death of many plant species, which led to the death of many dinosaurs. This can be shown by the fact that there is no food for animals that eat plants or by the sudden change in the food chain.

3. A

Keyword Location: Paragraph E 5th line
Explanation: Dr. Olsen says that we can't just use footprint data to figure out how species change over time, but it is a very helpful analysis that makes it easier to understand how animals evolve.

4. A

Keyword Location: Paragraph B last line
Explanation: Dr. Olsen claims that the asteroid impact idea, which was thought to be a highly likely explanation for the supremacy of the dinosaur community, has been confirmed to be accurate. This notion is supported by geochemical analysis.

5. B

Keyword Location: Paragraph C 4th line
Explanation: Dr. Benton thus affirms the evidence for the existence of iridium and its potential to demonstrate how the extinction occurred so suddenly. However, as implied by the sentence, it is regarded as "...convincing proof of iridium spike."

6. TRUE

Keyword Location: Paragraph C 4th line
Explanation: The presence of iridium in the rock and the known presence of iridium on the planet's surface provide proof that iridium occurs on both earth and in meteors.

7. TRUE

Keyword Location: Paragraph A
Explanation: According to the accompanying statement, scientists have discovered that the Earth was shaken by an even more powerful explosion 200 million years ago. The majority of the living species were destroyed by this explosion, leaving only the "relatively tiny group" of animals that we now refer to as dinosaurs. Therefore, the chosen response is true.

8. FALSE

Keyword Location: Paragraph E 3rd line
Explanation: The footprint data has greatly aided in both the identification of species and the comprehension of species evolution. It is a valuable technique that has been demonstrated and endorsed by reputable paleontologists and geologists.

9. NOT GIVEN

Explanation: The passage has no reference to whether Tyrannosaurus Rex had a greater mass than carnivorous dinosaurs. As a result, the chosen response is Not Given.

10. NOT GIVEN

Explanation: There is no mention of the demise of huge dinosaurs, only the evolution of lesser dinosaurs and their competition with "birds and mammals."

11. B

Keyword Location: Paragraph H 3rd line
Explanation: According to the passage, Dinosaurs first appeared about 230 million years ago.

12. C

Keyword Location: Paragraph H 2nd line
Explanation: According to the passage, phytosaurs looked like big crocodiles.