1. The Moai Of Easter Island

[1] In the southeastern Pacific Ocean, on the piece of land known as Easter Island (now a territory of Chile), stand several hundred massive stone monoliths. These carvings, called “moai,” are recognizable by their oversized heads, with their heavy brows, long noses, elongated ears, and protruding lips. While they average four meters in height and 12.5 tonnes, the largest is almost 10 meters tall and the heaviest weighs a full 86 tons. The upright sculptures are scattered around Easter Island, many installed on platforms called “ahu” along the coast, while others are more inland and several stand near the main volcanic quarry of Rano Raraku. The Rapa Nui people of the island built a total of 887 of these impressive statues between the 12th and 16th centuries. They were, it is said, symbols of religious and political authority, embodiments of powerful chiefs or ancestors which faced inland toward the island’s villages, perhaps watching over their creators, keeping them safe.

[2] While the very creation of such monoliths – most out of volcanic ash with stone hand chisels – is an impressive feat, what is more remarkable (not to mention mysterious) is how they were transported to their resting places. In the past, most researchers associated the building and transportation of the moai with widespread deforestation on the island and eventual collapse of the Rapa Nui civilization. This hypothesis is based, in part, on the fact that the pollen record suddenly disappears at the same time as the Rapa Nui people stopped constructing the moai and transporting them with the help of wooden logs. How exactly would logs facilitate the movement of the statues? Most proponents of this method believe that the people created “rollers” by arranging parallel logs on which the prone statues were pulled, or pushed. They would not have required an entire roadway of logs, since logs from the back could be placed at the front, creating a moving platform of sorts. To make it easier to roll, and keep in position, the statue would be placed on two logs arranged in a V shape.

[3] One proponent of this idea of rolling the statues in a prone position is Jo Anne Van Tilburg, of UCLA. Van Tilburg created sophisticated computer models that took into account available materials, routes, rock, and manpower, even factoring in how much the workers would have to have eaten. Her models supported the idea that rolling prone statues was the most efficient method. As further evidence, Van Tilburg oversaw the movement of a moai replica by the method she had proposed. They were successful, but evidence that it was possible is not necessarily evidence that it actually happened.
Van Tilburg was not the only one to have experimented with rolling the statues. In the 1980s, archaeologist Charles Love experimented with rolling the moai in an upright position, rather than prone, on two wooden runners. Indeed, a team of just 25 men was able to move the statue a distance of 150 feet in a mere two minutes. However, the route from the stone quarries where the statues were built to the coast where they were installed was often uneven, and Love’s experiments were hampered by the tendency of the statues to tip over. While Love’s ideas were dismissed by many, the idea of the statues tipping over along the route was consistent with the many moai found on their sides or faces beside the island’s ancient roads. And local legend held that the statues “walked” to their destinations, which would seem to support an upright mode of transportation. In fact, rolling was not the only possible way of transporting the moai in an upright position.

In the 1980s, Pavel Pavel and Thor Heyerdahl had experimented with swiveling the statues forward. With one rope tied around the head and another around the base, they were able to move a five-ton moai with only eight people, and a nine-ton statue with 16. However, they abandoned their efforts when their technique proved too damaging; as they shuffled the statues forward, the bases were chipped away. This confounding factor led most to believe that an upright, rope-assisted walking method was incorrect.

But many now believe that they were, in fact, transported upright. In 2012, Carl Lipo of California State University Long Beach and Terry Hunt of the University of Hawaii teamed up with archaeologist Sergio Rapu to refine the upright walking idea. They found that the statues that appeared to be abandoned in transit had bases with a curved front edge. This meant they would naturally topple forward and would need to be modified once they reached their destinations. But that curved edge also meant that they could easily be rocked forward using a small team of people and three ropes attached to the head. Indeed, their experiments demonstrated the feasibility of this method, and their theory has gained traction.

**QUESTION: 1**

Which of the following best expresses the essential information in the highlighted sentence?  
Incorrect answer choices change the meaning in important ways or leave out essential information.  
**While the very creation of such monoliths – most out of volcanic ash with stone hand chisels – is an impressive feat, what is more remarkable (not to mention mysterious) is how they were transported to their resting places.**
• The transportation of the moai is both remarkable and mysterious, but not as impressive as the actual creation of the statutes.
• The moai were carved with stone hand chisels, which is an impressive accomplishment, but it is still unknown whether the people actually transported them.
• The creation of the moai is amazing, but not as amazing as how they were transported.
• The transportation of the moai is remarkable, mysterious, and as impressive as their creation with simple hand tools.

Q: 2

In paragraph 2, what does the author say about past theories of how the moai were transported from quarries to their resting places?
• The theories claimed that use of natural resources for transporting moai had devastating effects on the land and society.
• The theories relied on evidence of log roadways that remained long after the Rapa Nui people had disappeared.
• The theories were supported by oral accounts of the use of wood by the Rapa Nui peoples at the time the moai were constructed and transported.
• The theories were based on inaccurate estimates of the amount of wood required to transport moai over long distances.

Q: 3

The word ‘they’ in paragraph 2 refers to:
• Proponents.
• The people.
• Rollers.
• Statues.

Q: 4

Why does the author mention “sophisticated computer models” developed by Jo Anne Van Tilburg in paragraph 3?
• To emphasize the difficulty of theorizing about the activities of people in the remote past
• To demonstrate that Van Tilburg’s hypothesis appeared to be supported by evidence
• To cast doubt on theories that relied more on experimentation than on effective digital modelling
• To show how archaeology can apply modern tools to ancient mysteries
Q: 5

Examine the four □ in the selection below and indicate at which block the following sentence could be inserted into the passage:

**Her data appeared to demonstrate that an average-sized moai could be moved approximately 10 kilometers in 4.7 days with a team of 70 people.**

One proponent of this idea of rolling the statues in a prone position is Jo Anne Van Tilburg, of UCLA.  
[A] Van Tilburg created sophisticated computer models that took into account available materials, routes, rock, and manpower, even factoring in how much the workers would have to have eaten. Her models supported the idea that rolling the statues was the most efficient method.  
[B] As further evidence, Van Tilburg oversaw the movement of a moai replica by the method she had proposed.  
[C] They were successful, but evidence that it was possible is not necessarily evidence that it actually happened.  
[D]

- [A]
- [B]
- [C]
- [D]

Q: 6

In paragraph 3, what does the author NOT suggest about Jo Anne Van Tilburg’s hypothesis concerning the method of transporting the moai?

- The use of computer modelling provides evidence that rolling statues on logs would have been a very efficient method of transportation.
- It was supported by successful attempts at replicating how the Rapa Nui people may have rolled the statues on logs.
- It provides conclusive evidence that the Rapa Nui people used log-rolling techniques to move the moai.
- With all the variables taken into account, there still wasn't enough to provide reasonable justification for the log-rolling method.

Q: 7

What can be inferred from paragraph 6 about the statues found at their eventual resting places?

- They showed signs of having been tipped over on their sides at some point in transit.
- The people intended for them to be located elsewhere but were constrained by their transportation methods.
- Many were, in fact, created where they were installed rather than at the quarries that were originally assumed to be the place of creation.
- They did not have curved front edges.
Q: 8

The word ‘abandoned’ in paragraph 6 is closest in meaning to:
- Damaged
- Tipped
- Left
- Altered

Q: 9

Which of the following methods of transportation does the author say is supported by the most compelling evidence?
- The rolling of moai in an upright position on logs.
- The shuffling of moai with ropes tied to the head and base.
- The rolling of moai in a prone position.
- The rocking of moai with ropes tied to the head.

Q: 10

Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. This question is worth 2 points.

Drag your answer choices to the spaces where they belong. To remove an answer choice, drag it back. To review the passage, click VIEW TEXT.

There are several competing theories that attempt to explain how the large moai statues of Easter Island were transported to various locations on the island.

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- Answer Choices
A. Jo Anne Van Tilburg experimented with moving moai replicas using a V-shaped log structure.

B. Experiments with moving the moai using ropes have demonstrated the likelihood that they were transported in an upright position.

C. The statues that were located around the island were created in the stone quarries in the interior of the island.

D. Many theories suggest the use of logs to roll the statues, which may be connected to the eventual collapse of the civilization.

E. The condition of the road, the availability of materials, and the construction of the statues are all important variables in determining how they were transported.

F. Some statues were not, in fact, transported very far from the quarries where they were constructed.

2. Stone Age Agriculture

[1] While the use of stone tools began 2.5 million years ago, it wasn’t until about 10,000 BCE that Homo sapiens applied these tools to the deliberate cultivation of plants and animals. The adoption of sustained agriculture – what anthropologists call the “Neolithic revolution” – signifies an important turning point in the development of human societies, as it led directly to population growth, permanent or semi-permanent settlement, as well as technological and social development.

[2] Neolithic agriculture developed at different times in different parts of the world, beginning with the Levant and Mesopotamia, followed by Northern Africa, Southeast Asia, and Europe. But while we often call it a “revolution,” it would be a mistake to believe that agriculture was a sudden and complete development, an all or nothing proposition that societies adopted wholesale at the first opportunity. Instead, it developed slowly, beginning as a supplement to more traditional hunting and gathering lifestyles in which people relied on plants and animals gathered or hunted in their natural environment. Over time, as people learned more about and relied more greatly on domesticated plants and animals, they settled more permanently and cultivated the land more intensively.

[3] Neolithic farmers collected and planted seeds that they learned would produce palatable grains, selectively breeding plants that were deemed healthy and delicious, and avoiding those that were not. Early agriculture was restricted to a limited number of plants, namely Emmer wheat, Einkorn wheat, and barley. Later, people learned to cultivate pulses, including lentils, peas, chickpeas, and bitter vetch, as well as the multi-purpose flax plant. Together, these eight plant
species are known as the Neolithic founder crops or primary domesticates.

[4] People’s success in planting, cultivating, and harvesting these plants came about as a result not only of their increased knowledge of the plants themselves but also of the conditions for growth. They explored innovative irrigation techniques, which enabled even greater production and, eventually, food surpluses. Of course, food surpluses are useless unless people have the ability and facilities to store them, which people did in granaries. And food surpluses, in turn, enabled a host of other social developments, like occupational specialization (since not everyone had to be involved in food production), trade, and social stratification.

[5] These advances in agriculture went hand in hand with technological development. People fashioned stone tools such as hoes for working soil, sickle blades for harvesting the crops, and grinding stones for processing the grains. More important than such agricultural implements, however, was the polished stone axe, which allowed the Neolithic farmers to clear forests on a large scale and open up new lands for cultivation. Along with the adze, the axe also enabled them to work the trees they felled into wood that was usable for building shelter and other structures.

[6] Besides cultivating plants, these stone age farmers also domesticated animals. At first, it was sheep, goats, and dogs whose temperament, diet, and mating patterns made them good candidates for domestication. Later, cows and pigs were added to the mix. Besides meat, these animals provided people with milk (a renewable source of protein), leather, wool, and fertilizer. Cows became valued for their labor, as they assisted with plowing and towing, and dogs provided protection (not only to humans but also to their crops and livestock) as well as companionship.

[7] That agriculture enabled hitherto unknown population growth is undeniable. Food surpluses and an agricultural lifestyle brought a security and safety that nomadic hunter-gatherers did not enjoy. And it may be argued that the subsequent advances in all realms of society – not only the aforementioned technology but also knowledge, art, writing, astronomy – would not have emerged without a sedentary lifestyle. But the impact of the Neolithic revolution, often heralded as a giant step forward for humankind, was not all positive.

[8] Sedentary agriculture narrowed the diet of Neolithic peoples: they consumed greater amounts of starch and plant protein and fewer types of food overall. An increasing number of researchers are claiming that human nutrition became worse with the Neolithic revolution. In addition, disease increased, as humans lived in closer contact with each other and with domesticated animals; sanitation didn’t advance quite as quickly as agricultural methods. It also
turns out that agriculture required significantly more labor than hunting and gathering. The combined result of these facts was a life expectancy that was most likely shorter than that of the apparently more primitive hunter-gatherers.

Q: 11

Which of the following best expresses the essential information in the highlighted sentence? Incorrect answer choices change the meaning in important ways or leave out essential information.

But while we often call it a “revolution,” it would be a mistake to believe that agriculture was a sudden and complete development, an all or nothing proposition that societies adopted wholesale at the first opportunity.

- The word “revolution” is somewhat misleading because agriculture was not adopted all at once.
- Agriculture was an opportunity for sudden and rapid development, which is why we call it a “revolution.”
- Although agriculture is called a “revolution,” it turned out to be a mistake for those societies that adopted it quickly and completely.
- Traditional beliefs about the adoption of agriculture have been recently transformed in what is known as a “revolution.”

Q: 12

Examine the four blocks in the selection below and indicate at which block the following sentence could be inserted into the passage:

Early farming came about as people observed and experimented with plant reproduction.

Neolithic farmers collected and planted seeds that they learned would produce palatable grains, selectively breeding plants that were deemed healthy and delicious, and avoiding those that were not. [A] Early agriculture was restricted to a limited number of plants, namely Emmer wheat, Einkorn wheat, and barley. [B] Later, people learned to cultivate pulses, including lentils, peas, chickpeas, and bitter vetch, as well as the multi-purpose flax plant. [C] Together, these eight plant species are known as the Neolithic founder crops or primary domesticates. [D].

- [A]
- [B]
- [C]
- [D]
Q: 13

The word ‘them’ in paragraph 4 refers to:
- People.
- Facilities.
- Food surpluses.
- Techniques.

Q: 14

Which of the following can be inferred from the information in paragraph 4?
- Pre-agricultural societies tended to have less division of labor than farming peoples.
- Food surpluses led to considerable conflict both within and between agricultural societies.
- Success in farming was dependent on materials and knowledge obtained from outside one’s own region.
- Granaries were owned and controlled by the farmers themselves, despite social stratification.

Q: 15

According to the author, which of the following was most critical in the development of intensive agriculture?
- The adze
- The axe
- The sickle
- The hoe

Q: 16

According to paragraph 6, which of the following is true about domesticated animals?
- They served a variety of purposes for Neolithic farmers.
- They were limited to animals which could produce milk, leather, wool, or fertilizer.
- Their domestication predates the domestication of plant species.
- They consumed much of the food surpluses generated through the cultivation of plants.

Q: 17
The primary purpose of paragraph 7 is to
- Summarize previously mentioned benefits of the Neolithic revolution.
- Introduce the negative impacts of the advent of agriculture.
- Provide examples of other important developments that rivalled the Neolithic revolution in importance.
- Outline the necessary preconditions for the development of agriculture.

Q: 18

The word 'heralded' in paragraph 7 is closest in meaning to:
- Criticized.
- Dismissed.
- Celebrated.
- Defined.

Q: 19

All of the following are mentioned as negative impacts of the Neolithic revolution EXCEPT that
- People suffered from more illness as a result of poor sanitation.
- Farming required harder work than previous modes of food production.
- There was more competition in society for certain types of resources.
- People lacked diversity in the foods they ate.

Q: 20

Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. This question is worth 2 points.

In the Neolithic period of the stone age, agriculture was an important development for human societies.

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A. People learned to cultivate a number of different plants, using innovative tools and techniques.

B. Agriculture appeared in different parts of the world at different times, beginning with the Levant and finally in Europe.

C. The food surpluses that agriculture enabled other developments but had an overall negative impact on human health.

D. Not all hunter-gatherer groups in the Neolithic period adopted an agricultural lifestyle, as some peoples found it advantageous to maintain their traditional ways.

E. Neolithic farmers domesticated a variety of animals, which provided additional food sources as well as labor and protection.

F. Besides agricultural tools, people devised implements that helped them build a variety of structures.