Atmosphere of Venus

Data from the Pioneer spacecraft of NASA apparently prove the theory that the high surface temperature of Venus is due to an atmospheric greenhouse effect caused mainly by a blanket of carbon dioxide. Such a greenhouse effect is created when energy in the form of sunlight easily passes through a planet's atmosphere, warms its surface, and is converted to heat radiation that is then held in by the atmosphere from top to bottom. Venus has a relatively thin atmosphere like the Earth's, but Venus' atmosphere consists of more than ninety percent carbon dioxide, compared to less than four percent in that of the Earth. Because of its higher percentage of carbon dioxide, Venus' atmosphere traps much more heat radiation than does the Earth's. Thus, the Venus studies are believed to be important to the understanding of possible adverse effects on the Earth's agriculture that could result from the long-term use of fossil fuels, which add carbon dioxide to the atmosphere.

1. According to the passage, data from the Venus study can be used to ----.

- A) measure the amount of carbon dioxide in the atmosphere accurately
- B) increase the emission of carbon dioxide into the atmosphere
- C) test the efficiency of the spacecraft sent to Venus by NASA
- D) predict future agricultural problems on Earth
- E) determine the topography and the surface characteristics of the Earth

2. We understand from the passage that the atmosphere of Venus ----.

- A) is thinner than the atmosphere of the Earth
- B) contains much more carbon dioxide than that of the Earth
- C) traps less heat radiation compared to the atmosphere of the Earth
- D) blocks out dangerous rays from the sun
- E) is far colder than the atmospheres of other planets in our solar system

3. One can infer from the passage that ----.

- A) there is no difference between the atmospheres of Venus and the Earth
- B) the atmosphere of the Earth consists of mainly carbon dioxide
- C) the more carbon dioxide in the atmosphere, the warmer the world will tend to get
- D) lack of atmosphere causes a very high surface temperature on Venus
- E) Venus had once enjoyed a climate of the sort hospitable to life

How Does Brain Work?

Theories about how brain works remain a topic of debate. It is agreed, though, that the hippocampus, a part of the brain, is undeniably important for memory. When we experience something, the information is sent via our senses to the hippocampus, where it is processed. Scientists believe that brain cells called neurons first transform the sensory stimuli we experience into images in our immediate memory. Then, these images are sent to the hippocampus and

stored temporarily in short term memory. In the hippocampus information is organized, and it is during this process that parts of the image of our experience fade away. Finally, certain information is then transferred to long term memory in a section in the frontal lobe of the brain known as the cerebral cortex. Scientists think this process may happen while we are sleeping, but exactly how the information is transferred from one area of the brain to another is a mystery.

4. This reading is mainly concerned with ----.

- A) how to improve our memory
- B) why some of the information in short term memory fades away
- C) illness that results in severe memory loss
- D) how human brain processes and stores information
- E) the importance of neurons in transferring sensory stimuli

5. According to the passage scientists ----.

- A) know that information is sent from the long term memory to the hippocampus
- B) have found out why some of the information is lost in the hippocampus
- C) don't know exactly how the information is transferred from one area of the brain to another
- D) agree on how the brain works
- E) still debate whether the hippocampus is important for memory

6. It is pointed out in the reading that ----.

- A) the brain was not considered as a highly complex organ in the past
- B) damage to hippocampus doesn't cause memory loss
- C) all of the information stored in the short term is transferred to long time memory
- D) hippocampus is in the frontal lobe of he brain
- E) scientists agree that the hippocampus is important in processing information

People With Extraordinary Abilities

Fictional stories about people who have extraordinary abilities have always attracted people's attention. One of them is the story of Vera Petrova, who is able to perceive things with different parts of her skin, and through solid walls. One day she comes into his father's office and puts her hands on the door of a locked safe. Suddenly she asks her father why he keeps so many old newspapers locked away there. Vera's curious talent is brought to the notice of a scientific research institute and she is given a series of tests by a special commission. During these tests she manages to read a newspaper through an opaque screen and then she describes the figures and colors of a picture hidden under a carpet. During all these tests Vera is blindfolded; and, indeed, except when blindfolded she lacks the ability to perceive things with her skin. It was also found that although she could perceive things with her fingers, this ability ceased the moment her hands were wet.

7. As we understand from the reading, Vera Petrova ----.

- A) can only perceive things with her fingers
- B) is a curious child
- C) is not the only fictional character who has extraordinary abilities
- D) fails most of the tests administered by a special commission
- E) perceives the objects only when her fingers are wet

8. It is pointed out in the reading that Vera Petrova loses the ability to perceive objects with her fingers ----.

- A) when her father first notices this ability
- B) when she is asked to read a newspaper through an opaque screen
- C) after she is given a series of tests
- D) as soon as her hands get wet
- E) when the object is hidden under a carpet

9. According to the reading, ----.

- A) Vera Petrova's father asks her why she keeps the old newspapers in the locked safe
- B) the scientific research institute is not interested in Vera Petrova's talent
- C) Vera can't perceive objects with her skin unless she is blindfold
- D) there are several scientific research institutes which examine people like Vera
- E) the special commission is made up by people who can also perceive objects with their skin

The Bermuda Triangle

The Bermuda Triangle occupies a disturbing and almost unbelievable place in the world's catalog of unexplained mysteries. More than a hundred planes and ships have vanished in this area into the air since 1945, and more than a thousand lives have been lost, without a single body or even a piece wreckage from the vanishing planes or ships having been found. Many of the planes concerned have vanished while in normal radio contact with their base until the very moment of their disappearance, while others have radioed the most extraordinary messages, implying that they could not get their instruments to function, that their compasses were spinning, that the sky had turned yellow and hazy on a clear day, and the ocean, which was calm nearby, didn't look right without further clarification of what was wrong.

10. One can infer from the reading that ----.

- A) the wreckages of some ships and planes have been found in the Bermuda Triangle
- B) the number of incidents involving lost ships is no larger than that of any other heavily traveled region of the world
- C) the ships. and the planes couldn't contact with their base due to the lack of equipment.
- D) the weather in Bermuda Triangle is always stormy

E) the first mention of disappearances in the area was made in 1945

11. It is pointed out in the passage that ----.

A) thousands of people lost their lives in the Bermuda Triangle in 1945
B) all of the disappearances happened during the day time
C) the Bermuda Triangle mystery was solved in 1945
D) most of the missing planes could contact with their base by their own special means until the very moment of disappearing
E) the ocean floor near Bermuda, highly unexplored, is host to many strange phenomena

12. The reading mainly deals with ----.

A) why so many ships and planes disappear in the Bermuda Triangle
B) the mysterious disappearances of ships and planes in the Bermuda Triangle
C) the location of the Bermuda Triangle
D) the frequency of the disappearances in the Bermuda Triangle
E) the unpredictable weather conditions in the Bermuda Triangle