Passage 4

It was not "the comet of the century experts predicted it might be. Nevertheless, Kohoutek had provided a bonanza of scientific information. It was first spotted 370 million miles from Earth, by an astronomer who was searching the sky for asteroids, and after whom the comet was named. Scientists who tracked Kohoutek the ten months before it passed the Earth predicted the comet would be a brilliant spectacle. But Kohoutek fell short of these predictions, disappointing millions of amateur sky watchers, when it proved too pale to be seen with the unaided eye. Researchers were delighted nonetheless with the nevi information they were able to glean from their investigation of the comet. Perhaps the most significant discovery was the identification of two important chemical compounds-methyl cyanide and hydrogen cyanide-never before seen in comets, but found in the far reaches of interstellar space. This discovery revealed new clues about the origin of comets. Most astronomers agree that comets are primordial remnants from the formation of the solar system, but whether they were born between Jupiter and Neptune or much farther out toward interstellar space has been the subject of much debate. If compounds no more complex than ammonia and methane, key components of Jupiter, were seen in comets, it would suggest that comets form within the planetary orbits. But more complex compounds such as the methyl cyanide found in Kohoutek, point to formation far beyond the planets there the deep freeze of space has kept them unchanged.

- 1. What is the subject of the passage?
 - (A) What was learned from Kohoutek
- (B) What was disappointing about Kohoutek
- (C) Where Kohoutek was spotted
- (D) How Kohoutek was tracked
- 2. Why was Kohoutek referred to as "the comet of the century"?
 - (A) It was thought to be extremely old.
 - (B) It passes the Earth once a century.
 - (C) Scientists predicted it would be very bright.
 - (D) Scientists have been tracking it for a century.
- 3. In what respect was Kohoutek a disappointment?
 - (A) It could be seen only through special equipment.
 - (B) It did not approach the Earth.
 - (C) It did not provide valuable scientific information.
 - (D) It was moving too rapidly for scientists to photograph.
- 4. Before the investigation of Kohoutek, where had methyl cyanide been known to exist?
 - (A) In comets

(B) On asteroids

(C) Between Jupiter and Neptune

- (D) Beyond the Earth's solar system
- 5. According to the passage, what is one major component of Jupiter?
 - (A) Hydrogen cyanide

(B) Methyl cyanide

(C) Hydrogen

(D) Ammonia

- 6. What aspect of Kohoutek did scientists find most interesting?
 - (A) Its shape

(B) Its composition

(C) Its orbit

(D) Its size

- 7. Which of the following questions is best answered by information gained from Kohoutek?
 - (A) Where were comets formed?

(B) When were comets formed?

(C) When was the solar system formed?

(D) How was the solar system formed?

Passage 5

George Washington Carver showed that plant life was more than just food for animals and humans. Carver's first step was to analyze plant parts to fine out what they were made of. He then combined these' simpler isolated substances with other substances to create new products.

The branch of chemistry that studies and finds ways to use raw materials from farm products to make industrial products is called chemurgy. Carver was one of the first and greatest chemurgists of all time. Today the science of chemurgy is better known as the science of synthetics. Each day people depend on and use synthetic materials made from raw materials. All his life Carver battled against the disposal of waste materials and warned of the growing need to develop substitutes for the natural substances being used up by humans.

Carver never cared about getting credit for the new products he created. He never tried to patent his discoveries or get wealthy from them. He turned down many offers to leave Tuskegee Institute to become a rich scientist in private industry. Thomas Edison, inventor of the electric light, offered him a laboratory in Detroit to carry out food research. When the United States government made him a collaborator in the Mycology and Plant Disease Survey of the Department of Agriculture, he accepted the position with the understanding that he wouldn't have to leave Tuskegee. An authority on plant diseases-especially of the fungus variety- sent hundreds of specimens to the United States Department of Agriculture. At the peak of his career. Carver's fame and influence were known on every continent.

- 1. With what topic is the passage mainly concerned?
 - (A) The work and career of George Washington Carver
 - (B) The research conducted at Tuskegee Institute
 - (C) The progress of the science of synthetics
 - (D) The use of plants as a source of nutrition
- 2. In line 2, the word "step" could best be replaced by
 - (A) footprint
- (B) action
- (C) scale
- (D) stair

- 3. According to the passage, chemurgy can be defined as the
 - (A) combination of chemistry and metallurgy
 - (B) research on chemistry of the soil
 - (C) study of the relationship between sunlight and energy
 - (D) development of industrial products from farm products
- 4. Why does the author mention Thomas Edison S offer to Carver?
 - (A) To illustrate one of Carver's many opportunities
 - (B) To portray the wealth of one of Carver's competitors
 - (C) To contrast Edison's contribution with that of Carver
 - (D) To describe Carver's dependence on industrial support
- 5. Which of the following is NOT discussed in the passage as work done by Carver?
 - (A) Research on electricity

(B) Analysis of plant parts

(C) Invention of new products

(D) Research on plant diseases