

## Passage 2

The temperature of the Sun is over 5,000 degrees Fahrenheit at the surface. but it rises to perhaps more than 16 million degrees at the center. The Sun is so much hotter than the Earth that matter can exist only as a gas, except at the core. In the core of the Sun, the pressures are so great against the gases that, despite the high temperature. there may be a small solidvcore. However, no one really knows, since the center of the Sun can never be directly observed.

Solar astronomers do know that the Sun is divided into five layers or zones. Starting at the outside and going down into the Sun, the zones are the corona, chromosphere, photosphere, convection zone, and finally the core. The first three zones are the regarded as the Sun's atmosphere. But since the Sun has no solid surface, it is hard to tell where the atmosphere ends and the main body of the Sun begins.

The Sun's outermost layer begins about 10,000 miles above the visible surface and can be seen during an eclipse such as the one in February 1979. At any goes outward for millions of miles. This is the only part of the Sun that other time, the corona can be seen only when special instruments are used on cameras and telescopes to shut out the glare of the Sun's rays.

The corona is a brilliant, pearly white, filmy light about as bright as the full Moon. Its beautiful rays are a sensational sight during an eclipse. The corona's rays flash out in a brilliant fan that has wispy spike-like rays near the Sun's north and south poles. The corona is thickest at the sun's equator.

The corona rays are made up of gases streaming outward at tremendous speeds and reaching a temperature of more than 2 million degrees Fahrenheit. The rays of gas thin out as they reach the space around the planets. By the time the Sun's corona rays reach the Earth, they are weak and invisible.

1. Matter on the Sun can exist only in the form of gas because of the Sun' S  
(A) size (B) age (C) location (D) temperature
2. With what topic is the second paragraph mainly concerned?  
(A) How the Sun evolved (B) The structure of the Sun  
(C) Why scientists study the Sun (D) The distance of the Sun from the planets
3. All of the following are parts of the Sun's atmosphere EXCEPT the  
(A) corona (B) chromosphere (C) photosphere (D) core
4. According to the passage as the corona rays reach the planets, they become  
(A) hotter (B) clearer (C) thinner (D) stronger
5. The paragraphs following the passage most likely discuss which of the following?  
(A) The remaining layers of the Sun (B) The evolution of the Sun to its present form  
(C) The eclipse of February 1979 (D) The scientists who study astronomy
6. Where in the passage does the author compare the light of the Sun's outermost layer to that of another astronomical body?  
(A) Lines 2-3 (B) Lines 9-10  
(C) Line 16 (D) Lines 22-23

## Passage 3

The agricultural revolution in the nineteenth century involved two things: the invention of labor-saving machinery and. the development of scientific agriculture. Labor

- saying machinery, naturally appeared, first where labor was scarce. "In Europe," said, Thomas Jefferson, the object is to make the most of: their land, labor being abundant; here it, is to make the most of our labor, land being abundant. It was in America, therefore, that the great advances in nineteenth - century agricultural machinery first came.

At the opening of the century, with the exception of a crude plow farmers could have carried practically all of the existing agricultural implement on their backs; by 1860, most of the machinery in use today had been designed in an early form. The most important of the early inventions was the iron plow. As early as 1790 Charles Newbold of New Jersey had been working on the of a cast – iron plow and spent his entire fortune in introducing his invention. The farmers, however, would have none of it, claiming that the iron poisoned the soil and made the weeds grow. Nevertheless, many people devoted their attention to the plow, until in 1869 James Oliver of South Bend, Indiana, turned out the first chilled-steel plow.

1. What is the main topic of the passage?  
(A) The need for agricultural advances to help feed a growing population  
(B) The development of safer machines demanded by the labor movement  
(C) Machinery that contributed to the agricultural revolution  
(D) New Jersey as a leader in the agricultural revolution
2. The word "naturally" as used in line 3 is closest in meaning to which of the following?  
(A) Gradually                      (B) Unsurprisingly                      (C) Apparently                      (D) Safely
3. The expression "make the most of" in line 4 is closest in meaning to which of the following?  
(A) Get the best yield from                      (B) Raise the price of  
(C) Exaggerate the worth of                      (D) Earn a living on
4. Which of the following can be inferred from what Thomas Jefferson said?  
(A) Europe was changing more quickly than America.  
(B) Europe had greater need of farm machinery than America did.  
(C) America was finally running out of good farmland.  
(D) There was a shortage of workers on American farms.
5. It can be inferred that the word "here" in line 4 refers to  
(A) Europe                      (B) America                      (C) New Jersey                      (D) Indiana
6. What point is the author making by stating that farmers could carry nearly all their tools On their backs?  
(A) Farmers had few tools before the agricultural revolution.  
(B) Americans were traditionally self - reliant.  
(C) Life on the farm was extremely difficult.  
(D) New tools were designed to be portable.
7. Why did farmers reject Newbold's plow?  
(A) Their horses were frightened by it.                      (B) They preferred lighter tools.  
(C) It was too expensive.                      (D) They thought it would ruin the land.