

In developing your answer to Part III, be sure to keep these general definitions in mind:

- (a) **discuss** means “to make observations about something using facts, reasoning, and argument; to present in some detail”
- (b) **explain** means “to make plain or understandable; to give reasons for or causes of; to show the logical development or relationships of”

Part III

DOCUMENT-BASED QUESTION

This question is based on the accompanying documents (1–9). The question is designed to test your ability to work with historical documents. Some of the documents have been edited for the purposes of the question. As you analyze the documents, take into account the source of each document and any point of view that may be presented in the document.

Historical Context:

The term *revolution* refers to change that has a significant impact on history. Although the term is most often used to describe political revolutions, it can also describe social, intellectual, and/or economic change, as in the Neolithic, Scientific, and Green Revolutions.

Task: Using information from the documents and your knowledge of global history, answer the questions that follow each document in Part A. Your answers to the questions will help you write the Part B essay in which you will be asked to:

- Discuss **two** of these revolutions: the Neolithic Revolution, the Scientific Revolution, the Green Revolution
- Explain the significant social, intellectual, **and/or** economic changes resulting from **each** of the **two** revolutions

Part A

Short-Answer Questions

Directions: Analyze the documents and answer the short-answer questions that follow each document in the space provided.

Document 1

Before the Neolithic Revolution

. . . Man survived the fierce test of the Ice Ages because he had the flexibility of mind to recognise inventions and to turn them into community property. Evidently the Ice Ages worked a profound change in the way man could live. They forced him to depend less on plants and more on animals. The rigours of hunting on the edge of the ice also changed the strategy of hunting. It became less attractive to stalk single animals, however large. The better alternative was to follow herds and not to lose them — to learn to anticipate and in the end to adopt their habits, including their wandering migrations. This is a peculiar adaptation — the trans-humance [nomadic] mode of life on the move. It has some of the earlier qualities of hunting, because it is a pursuit; the place and the pace are set by the food animal. And it has some of the later qualities of herding, because the animal is tended and, as it were, stored as a mobile reservoir of food. . . .

Source: Jacob Bronowski, *The Ascent of Man*, Little, Brown and Company

1 Based on this document, identify **two** characteristics of life before the Neolithic Revolution. [2]

(1) _____

Score

(2) _____

Score

Document 2

. . . The Neolithic Revolution also changed the way people lived. In place of scattered hunting communities, the farmers lived in villages. Near groups of villages, small towns grew up, and later cities too. Thus the Neolithic Revolution made civilization itself possible. (The Ancient Near East)

Within the villages, towns and cities, it was possible for people to specialize in the sort of work they could do best. Many stopped producing food at all, making instead tools and other goods that farmers needed, and for which they gave them food in exchange. This process of exchange led to trade and traders, and the growth of trade made it possible for people to specialize even more. . . .

Source: D. M. Knox, *The Neolithic Revolution*, Greenhaven Press

- 2 Based on this document, state **one** impact of the Neolithic Revolution on the way people lived. [1]

Score

Document 3

This extract summarizes the findings of several archaeologists in the 1950s and 1960s.

. . . The first archaeological evidence for the domestication of cereals, and some of the earliest evidence for the domestication of animals, comes from a broad region stretching from Greece and Crete in the west to the foothills of the Hindu Kush south of the Caspian in the east. Here are found the wild plants from which wheat and barley were domesticated, whilst it is only in this zone that the wild progenitors [ancestors] of sheep, goats, cattle and pigs were found together, for the latter two had a much broader distribution than wild sheep and goats. By the tenth millennium B.C. peoples who relied upon hunting and gathering were reaping wild barley and wild wheat with knives, grinding the grain and using storage pits. By the sixth millennium there is evidence of village communities growing wheat and barley, and keeping sheep and goats, in Greece and Crete in the west, in southern Turkey, the Galilean uplands of the eastern littoral [coastal region] of the Mediterranean, in the Zagros mountains of Iran and Iraq, the interior plateaux of Iran, and in the foothills south east of the Caspian. Subsequently the number of domesticated plants grown was increased, including flax, for its oil rather than for fibre, peas, lentils and vetch [plants used for food]. By the fourth millennium the olive, vine and fig, the crops which give traditional Mediterranean agriculture much of its distinctiveness, had been domesticated in the eastern Mediterranean. Cattle and pigs are thought to have been domesticated after sheep and goats. Cattle were used as draught animals, and for meat; not until the late fourth millennium is there evidence of milking in South West Asia. . . .

Source: D. B. Grigg, *The Agricultural Systems of the World*, Cambridge University Press

3 Based on this document, state **two** changes in agriculture that occurred during the Neolithic Revolution. [2]

(1) _____

Score

(2) _____

Score

Document 4

. . . Gradually scientists came to challenge more and more what the ancients [past civilizations] taught. They came to develop new, better methods of finding out how things worked. Mathematical knowledge increased and helped them to reason. They began to think up experiments to check on their ideas in a methodical way. The scientific revolution had begun.

Many men were needed to bring this about. These men came from every part of Europe. They wrote books to explain their ideas. The printing press made it possible to produce thousands of copies which found their way all over Europe. Scientists were able to learn from one another and give one another new ideas. So the Scientific Revolution was not the work of Englishmen, or Frenchmen, or Italians alone. It was the work of Europeans. And, as we have seen, even they did not do it all by themselves. The Chinese, the Indians, the Persians, and the Arabs all gave something before it came about. Today this is not hard to understand, because men and women from all over the world add to scientific knowledge and so help one another. . . .

Source: Peter Amey, *Scientific Revolution*, Greenhaven Press

4 Based on this document, state **two** changes resulting from the Scientific Revolution. [2]

(1) _____

Score

(2) _____

Score

Document 5

. . . Assumptions

1. There is no one center of all the celestial [heavenly] circles or spheres [planets].
2. The center of the earth is not the center of the universe, but only of gravity and of the lunar sphere.
3. All the spheres [planets] revolve about the sun as their mid-point, and therefore the sun is the center of the universe. . . .

— Nicholas Copernicus, *The Commentariolus*, (1510)

Source: Edward Rosen, *Three Copernican Treatises*, Columbia University Press

5 State **one** scientific belief of Copernicus that is being described in this passage. [1]

Score

Document 6

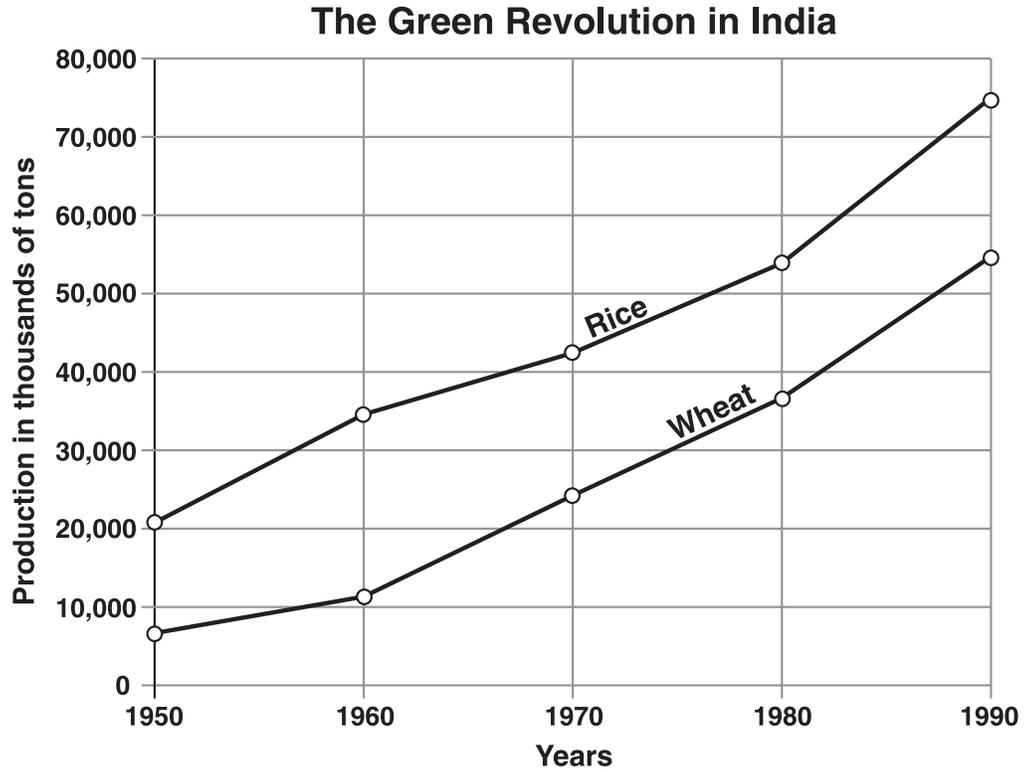
. . . As in Mathematicks, so in natural philosophy, the investigation of difficult things by the method of analysis [scientific method], ought ever to precede the method of composition. This analysis consists in making experiments and observations, and in drawing general conclusions from them by induction [reason], and admitting of no objections against the conclusions, but such as are taken from experiments, or other certain truths. For hypotheses [theories] are not to be regarded in experimental philosophy. And although the arguing from experiments and observations by induction be no demonstration of general conclusions; yet it is the best way of arguing which the nature of things admits of, and may be looked upon as so much the stronger, by how much the induction is more general. And if no exception occur from phenomena [facts], the conclusion may be pronounced generally. But if at any time afterwards any exception shall occur from experiments, it may then begin to be pronounced with such exceptions as occur. By this way of analysis we may proceed from compounds to ingredients, and from motions to the forces producing them; and in general, from effects to their causes, and from particular causes to more general ones, till the argument end in the most general. This is the method of analysis [scientific method]: and the synthesis [combination of parts] consists in assuming the causes discovered, and established as principles, and by them explaining the phenomena proceeding from them, and proving the explanations. . . .

Source: Sir Isaac Newton, *Opticks*, 1718

6 According to this document, why is the scientific method important? [1]

Score

Document 7



Source: Library of Congress, Federal Research Division (adapted)

7 Based on this document, state *one* way the Green Revolution affected India. [1]

Score

Document 8

The Green Revolution

. . . [Norman] Borlaug is an eighty-two-year-old plant breeder who for most of the past five decades has lived in developing nations, teaching the techniques of high-yield agriculture. He received the Nobel [Peace Prize] in 1970, primarily for his work in reversing the food shortages that haunted India and Pakistan in the 1960s. Perhaps more than anyone else, Borlaug is responsible for the fact that throughout the postwar era, except in Sub-Saharan Africa, global food production has expanded faster than the human population, averting the mass starvations that were widely predicted—for example, in the 1967 best seller *Famine—1975!* The form of agriculture that Borlaug preaches may have prevented a billion deaths. . . .

The Ford and Rockefeller Foundations and the World Bank, once sponsors of his work, have recently given Borlaug the cold shoulder. Funding institutions have also cut support for the International Maize and Wheat Center—located in Mexico and known by its Spanish acronym, CIMMYT—where Borlaug helped to develop the high-yield, low pesticide dwarf wheat upon which a substantial portion of the world’s population now depends for sustenance [food]. And although Borlaug’s achievements are arguably the greatest that Ford or Rockefeller has ever funded, both foundations have retreated from the last effort of Borlaug’s long life: the attempt to bring high-yield agriculture to Africa. . . .

To Borlaug, the argument for high-yield cereal crops, inorganic fertilizers, and irrigation became irrefutable when the global population began to take off after the Second World War. But many governments of developing nations were suspicious, partly for reasons of tradition (wheat was then a foreign substance in India) and partly because contact between Western technical experts and peasant farmers might shake up feudal cultures to the discomfort of the elite classes. Meanwhile, some commentators were suggesting that it would be wrong to increase the food supply in the developing world: better to let nature do the dirty work of restraining the human population. . . .

Source: Greg Easterbrook, “Forgotten Benefactor of Humanity,” *Atlantic Monthly*, January 1997

8a Based on this document, state **one** development since World War II that led to the Green Revolution. [1]

Score

b Based on this document, identify **one** effect of the Green Revolution on food production. [1]

Score

Document 9

. . . It is not clear which are greater—the successes of modern high-intensity agriculture, or its shortcomings. The successes are immense. Because of the green revolution, agriculture has met the food needs of most of the world's population even as the population doubled during the past four decades. But there has been a price to pay, and it includes contamination of groundwaters, release of greenhouse gases, loss of crop genetic diversity and eutrophication [pollution] of rivers, streams, lakes and coastal marine ecosystems (contamination by organic and inorganic nutrients that cause oxygen depletion, spread of toxic species and changes in the structure of aquatic food webs). It is unclear whether high-intensity agriculture can be sustained, because of the loss of soil fertility, the erosion of soil, the increased incidence of crop and livestock diseases, and the high energy and chemical inputs associated with it. The search is on for practices that can provide sustainable yields, preferably comparable to those of high-intensity agriculture but with fewer environmental costs. . . .

Source: David Tilman, "The Greening of the Green Revolution," *Nature*, November 1998

9 According to David Tilman, what are **two** effects of the Green Revolution? [2]

(1) _____

Score

(2) _____

Score

Part B

Essay

Directions: Write a well-organized essay that includes an introduction, several paragraphs, and a conclusion. Use evidence from at least **four** documents in the body of the essay. Support your response with relevant facts, examples, and details. Include additional outside information.

Historical Context:

The term *revolution* refers to change that has a significant impact on history. Although the term is most often used to describe political revolutions, it can also describe social, intellectual, and/or economic change, as in the Neolithic, Scientific, and Green Revolutions.

Task: Using information from the documents and your knowledge of global history, write an essay in which you:

- Discuss **two** of these revolutions: the Neolithic Revolution, the Scientific Revolution, the Green Revolution
- Explain the significant social, intellectual, **and/or** economic changes resulting from **each** of the **two** revolutions

Guidelines:

In your essay, be sure to

- Address all aspects of the *Task* by accurately analyzing and interpreting at least **four** documents
- Incorporate information from the documents
- Incorporate relevant outside information
- Support the theme with relevant facts, examples, and details
- Use a logical and clear plan of organization
- Include an introduction and a conclusion that are beyond a simple restatement of the *Historical Context*