Question 2

(Suggested time—40 minutes. This question counts for one-third of the total essay section score.)

In the following passage from The Great Influenza, an account of the 1918 flu epidemic, author John M. Barry writes about scientists and their research. Read the passage carefully. Then, in a well-written essay, analyze how Barry uses rhetorical strategies to characterize scientific research.

Certainty creates strength. Certainty gives one something upon which to lean. Uncertainty creates weakness. Uncertainty makes one tentative if not fearful, and tentative steps, even when in the right direction, may not overcome significant obstacles.

To be a scientist requires not only intelligence and curiosity, but passion, patience, creativity, self-sufficiency, and courage. It is not the courage to venture into the unknown. It is the courage to accept—indeed, embrace—uncertainty. For as Claude Bernard, the great French physiologist of the nineteenth century, said, “Science teaches us to doubt.”

A scientist must accept the fact that all his or her work, even beliefs, may break apart upon the sharp edge of a single laboratory finding. And just as Einstein refused to accept his own theory until his predictions were tested, one must seek out such findings. Ultimately a scientist has nothing to believe in but the process of inquiry. To move forcefully and aggressively even while uncertain requires a confidence and strength deeper than physical courage.

All real scientists exist on the frontier. Even the least ambitious among them deal with the unknown, if only one step beyond the known. The best among them move deep into a wilderness region where they know almost nothing, where the very tools and techniques needed to clear the wilderness, to bring order to it, do not exist. There they probe in a disciplined way. There a single step can take them through the looking glass into a world that seems entirely different, and if they are at least partly correct their probing acts like a crystal to precipitate an order out of chaos, to create form, structure, and direction.

A single step can also take one off a cliff.

In the wilderness the scientist must create ... everything. It is grunt work, tedious work that begins with figuring out what tools one needs and then making them. A shovel can dig up dirt but cannot penetrate rock. Would a pick be best, or would dynamite be better—or would dynamite be too indiscriminately destructive? If the rock is impenetrable, if dynamite would destroy what one is looking for, is there another way of getting information about what the rock holds? There is a stream passing over the rock. Would analyzing the water after it passes over the rock reveal anything useful? How would one analyze it?

Ultimately, if the researcher succeeds, a flood of colleagues will pave roads over the path laid, and those roads will be orderly and straight, taking an investigator in minutes to a place the pioneer spent months or years looking for. And the perfect tool will be available for purchase, just as laboratory mice can now be ordered from supply houses.

Not all scientific investigators can deal comfortably with uncertainty, and those who can may not be creative enough to understand and design the experiments that will illuminate a subject—to know both where and how to look. Others may lack the confidence to persist. Experiments do not simply work. Regardless of design and preparation, experiments—especially at the beginning, when one proceeds by intelligent guesswork—rarely yield the results desired. An investigator must make them work. The less known, the more one has to manipulate and even force experiments to yield an answer.
General Directions: This scoring guide will be useful for most of the papers you read. If it seems inappropriate for a specific paper, ask your Table Leader for assistance. Always show your Table Leader books that seem to have no response or that contain responses that seem unrelated to the question. Do not assign a score of 0 or — without this consultation.

Your score should reflect your judgment of the paper’s quality as a whole. Remember that students had only 40 minutes to read and write; the paper, therefore, is not a finished product and should not be judged by standards appropriate for an out-of-class assignment. Evaluate the paper as a draft, making certain to reward students for what they do well.

All papers, even those scored 8 or 9, may contain occasional flaws in analysis, prose style, or mechanics. Such features should enter into your holistic evaluation of a paper’s overall quality. In no case should you score a paper with many distracting errors in grammar and mechanics higher than a 2.

9 Papers earning a score of 9 meet the criteria for 8 papers and, in addition, are especially sophisticated in their explanation or demonstrate particularly impressive control of language.

8 Effective Papers earning a score of 8 effectively analyze* how Barry uses rhetorical strategies to characterize scientific research. The prose demonstrates an ability to control a wide range of the elements of effective writing but is not necessarily flawless.

7 Papers earning a score of 7 fit the description of 6 papers but provide a more complete explanation or demonstrate a more mature prose style.

6 Adequate Papers earning a score of 6 adequately analyze how Barry uses rhetorical strategies to characterize scientific research. The writing may contain lapses in diction or syntax, but generally the prose is clear.

5 Papers earning a score of 5 analyze how Barry uses rhetorical strategies to characterize scientific research. These papers may, however, provide uneven, inconsistent, or limited explanations. The writing may contain lapses in diction or syntax, but it usually conveys the writer’s ideas.

4 Inadequate Papers earning a score of 4 inadequately analyze how Barry uses rhetorical strategies to characterize scientific research. The prose generally conveys the writer’s ideas but may suggest immature control of writing.

3 Papers earning a score of 3 meet the criteria for a score of 4 but demonstrate less success in analyzing the strategies Barry uses to characterize scientific research. The papers may show less control of writing.

2 Little Success Papers earning a score of 2 demonstrate little success in analyzing how Barry uses rhetorical strategies to characterize scientific research. These papers may misunderstand the prompt; fail to analyze the strategies Barry uses to characterize scientific research; or substitute a simpler task by responding to the prompt tangentially with unrelated, inaccurate, or inappropriate explanation. The prose often demonstrates consistent weaknesses in writing.

1 Papers earning a score of 1 meet the criteria for a score of 2 but are undeveloped, especially simplistic in their explanation and/or weak in their control of language.

0 Indicates an on-topic response that receives no credit, such as one that merely repeats the prompt.
— Indicates a blank response or one that is completely off topic.

* For the purposes of scoring, analysis refers to identifying features of a text and explaining how the author uses these to achieve a particular effect or purpose.