2024

AP® European History

Sample Student Responses and Scoring Commentary Set 1

Inside:

Short-Answer Question 1

- ☑ **Scoring Guidelines**
- ☑ **Student Samples**
- ☑ **Scoring Commentary**

Question 1: Short Answer Secondary Source — 3 points

General Scoring Notes

- Each point is earned independently.
- **Accuracy:** These scoring guidelines require that students demonstrate historically defensible content knowledge. Given the timed nature of the exam, responses may contain errors that do not detract from their overall quality, as long as the historical content used to advance the argument is accurate.
- **Clarity:** Exam responses should be considered first drafts and thus may contain grammatical errors. Those errors will not be counted against a student unless they obscure the successful demonstration of the content knowledge, skills, and practices described below.
- **Describe:** Provide the relevant characteristics of a specified topic. Description requires more than simply mentioning an isolated term.
- **Explain:** Provide information about how or why a historical development or process occurs or how or why a relationship exists.

[a] Describe an argument made in the excerpt. **1 point**

Examples that earn this point include the following:

- During the Scientific Revolution, scientific inquiry became more regimented and disciplined.
- Scientists began to use only empirical evidence to argue for their theories.
- Doing science became a process of eliminating bad ideas on the basis of evidence.
- Scientists narrowed their focus to observable evidence and how well such evidence explained natural phenomena.
- Religion declined as an explanation for natural phenomena.

[b] Explain how one piece of historical evidence not in the excerpt would support an argument about science made in the excerpt. **1 point**

Examples that earn this point include the following:

- Galileo's observations with a telescope were used to discredit the geocentric model of the solar system and promote heliocentrism and/or Kepler's laws of planetary motion.
- Harvey's observations of the actions of the heart were used to undermine the theory of humors and establish more accurate notions of anatomy.
- Newton's mathematical models of force, acceleration, and gravity were used to explain the motion of physical objects and displacing earlier models of mechanics.
- Boyle's work developed the field of chemistry, separating it from alchemy.
- Bacon's scientific methodology required a hypothesis to be tested with rigorous experimentation and observation.

[c] Explain one way in which the change discussed in the excerpt affected European society in the period 1600 to 1800. **1 point**

Examples that earn this point include the following:

- The Enlightenment evolved as an intellectual outgrowth of the Scientific Revolution examining human society using scientific practices of natural observation and empiricism.
- The success of the empirical approach within the sciences encouraged intellectuals to try this approach, or at least adopt the language of empiricism, in their attempts to improve society and government.
- Scientific discoveries gradually began to lead to technological improvements in many areas, such as medicine.
- The prestige of science and scientific discoveries led monarchs and governments to support scientific inquiry by funding and patronage of scientific societies.
- Belief in the supernatural diminished as an explanation for natural forces.
- There were widespread critiques of traditional religious beliefs and the Catholic Church based on scientific inquiry and empiricism, as well as criticism of the Church's resistance to new scientific approach.

Total for question 1 3 points

Sample A

Write your answer to SHORT-ANSWER QUESTION 1 on this page only. Do NOT write outside the box. Do not skip lines.

1a) An argument Michael Stevens makes in his "The knowledge Machine" is between 1600 and 1700 scientists could only make arguments based on empirical data only. The reasoning for this is because observations were definite while theology and philosophy were unanswered questions. This is what make observations an "explanatory power" in the context of a scientific argument. b) Scientists like Newton took the observable laws of nature and created arguments and theories based only on empirical data. Newton's laws of gravity were based on the science he observed first hand, conducted through experiments backed by empirical data c) Assertion of the use of observable data manifested in the rise of rationalism. European society from the period 1600 to 1600 began to rely on secular explanations of the world around them. People started to question the churches' ideologies in response to other ideas like the Helio centric model by Copernicus. These new ideas of the mechanism of the world led to a drastic change in European society.

End of response area for Q1

Use a pen with black or dark blue ink only. Do NOT write your name. Do NOT write outside the box.

Sample B

Write your answer to **SHORT-ANSWER QUESTION 1** on this page only. Do NOT write outside the box. Do not skip lines.

A) One argument made in the excerpt is that the new scientific thinking of the time led to progress. Strevens proclaims this by saying how the new processes led to "long-term unmistakable progress."

B) One piece of historical evidence that would support an argument would ~~be the scientific field of medicine. In this time, countless advancements led to progress. An example~~ be the work of scientists like Newton. Newton made many discoveries in the field of physics and mathematics. These discoveries are evidence of the progress being made during this time. The discoveries led to progression in different fields.

C) One way this affected European society was the increased skepticism in the church's teachings. New discoveries like that of the heliocentric universe, that the sun was the center of the universe directly combatted the church's teachings, like that of the geocentric model. With new discoveries being made, previously believed ideas were being challenged.

End of response area for Q1

Use a pen with black or dark blue ink only. Do NOT write your name. Do NOT write outside the box.

0042304

Sample C

Write your answer to **SHORT-ANSWER QUESTION 1** on this page only. Do NOT write outside the box. Do not skip lines.

A: The arguement author Strevens is making is that during the scientific revolution, the creation of the scientific method greatly advanced science by forcing scientists to find observable evidence to support their theories.

B: One piece of evidence that supports Strevens' arguement is the development of germ theory, the theory that sickness was caused by germs. John Snow would use germ theory to help contain cholera outbreaks within London, proving the theory correct.

C: The newly found basis of science greatly affected European medicine, with ~~+~~ now common practices such as regular hand washing ~~becom~~ ~~becoming~~ being proven to prevent sickness.

End of response area for Q1

Use a pen with black or dark blue ink only. Do NOT write your name. Do NOT write outside the box.

0029547

Short Answer Question 1

Note: Student samples are quoted verbatim and may contain spelling and grammatical errors.

Overview

Responses to part (a) were expected to describe an argument demonstrating comprehension of Michael Strevens' assertion that new scientific methodologies prioritized the use of empiricism, sensory observation, and experimentation. The excerpt describes the seventeenth century as a period of exciting scientific discovery, which obligated scientists to utilize empirical evidence rather than rely on traditional philosophically or theologically derived knowledge. Responses could describe how scientists used empirical evidence to argue their theories, how scientists focused on natural phenomena, or how religion and theology were no longer viewed as explanatory perspectives for the natural world.

Responses to part (b) were expected to explain how an outside piece of historical evidence not found in the excerpt would support Strevens' claims regarding seventeenth-century scientific methodology. Successful responses explained how an outside piece of historical evidence supported the argument of observable and quantifiable scientific practices. Many explanations involved specific scientists and their discoveries, including Galileo and his use of a telescope to advance the theory of heliocentrism, Newton using observation and mathematical proofs for gravitational law, Harvey's anatomical observations which undermined Galen's four humours theory, Kepler and Brahe's observational work on astronomy, and Bacon's use of hypothesis and experimentation in the modern scientific method.

Responses to part (c) were expected to make connections between the scientific methodology described in the excerpt and a specific societal development in Europe in the seventeenth and eighteenth centuries. Successful responses explained a societal development within the correct time frame. Explanations regarding the origins of the Enlightenment in seventeenth-century scientific observation of the natural world, the decline of theological explanations of natural phenomena, the decline of church authority through opposition to the new science, increased prestige for scientists with noble and royal patronage, the rise of coffeehouses and salons as a means of socialization based on discussions of science, changes in medicinal practices and public health, including quarantine and inoculations, based on scientific advances, and the creation of new technologies based on scientific inquiry, such as the seed drill or water frame, would be sufficient explanations.

Sample: 1A
Score: 3

The response earned the point for part (a) with a description of Strevens' argument that empiricism and observation replaced theology and philosophy as a means of understanding the natural world.

The response earned the point for part (b) with an explanation of Newton's laws of gravity as a piece of outside evidence that supports the argument in the excerpt.

The response earned the point for part (c) with an explanation of how observable data led to conclusions such as heliocentrism, which undermined religious ideologies over the natural world and increased a secular outlook in European society.

Short Answer Question 1 (continued)

Sample: 1B
Score: 2

The response did not earn the point for part (a) because the attempt at describing the argument in the excerpt is vague and repeats the text without describing how evidence and observation functioned in 17th century science.

The response earned the point for part (b) with an explanation of Newton's research in mathematics and physics as a piece of outside evidence that supports the argument in the excerpt.

The response earned the point for part (c) with an explanation of how theories such as heliocentrism challenged the church and traditional belief systems.

Sample: 1C
Score: 1

The response earned the point for part (a) by describing an argument in the excerpt that scientists used observation and evidence in scientific research.

The response did not earn the point for part (b) because the example of germ theory is outside the time frame for the question.

The response did not earn the point for part (c) because the reference to medicine is passing and vague and uses the example.