

AP[®] EUROPEAN HISTORY

2015 SCORING GUIDELINES

Question 7

Analyze the ways in which scientific and philosophical developments affected religion in Europe in the period 1600 to 1750.

9–8 Points

- Thesis is explicit and addresses how religion was affected by both scientific and philosophical developments between 1600 and 1750.
- Organization is clear and demonstrates both scientific and philosophical developments and how they directly affected religion in the period.
- Essay is well balanced and addresses the effect on religion by both scientific and philosophical developments.
- All major assertions in the essay are supported by multiple pieces of relevant evidence of both scientific and philosophical developments and are linked to at least one specific example of an effect on religion.
- May contain errors that do not detract from the argument.

7–6 Points

- Thesis is explicit and suggests how both scientific and philosophical developments affected religion.
- Organization is clear, but linkage between scientific and philosophical developments and their effect on religion may not be fully developed.
- Essay is balanced, addressing the effect on religion to some degree of both scientific and philosophical developments.
- All major assertions in the essay are supported by multiple pieces of relevant evidence of scientific and philosophical developments (at least one each) and are linked to an effect on religion.
- May contain an error that detracts from the argument.

5–4 Points

- Thesis is less developed and may deal vaguely with the effect on religion of both scientific and philosophical developments.
- Organization is basic; analysis of scientific and philosophical developments on religion may be thin.
- Essay shows some imbalance; it may deal unevenly with scientific and philosophical developments and their effect on religion, but it must address all to some degree.
- Some of the major assertions in the essay are supported by at least one piece of relevant evidence supporting scientific or philosophical developments and are linked to an effect on religion.
- May contain a few errors that detract from the argument.

3–2 Points

- No explicit thesis or a thesis that merely repeats/paraphrases the prompt or does not acknowledge an effect on religion.
- Organization is unclear and ineffective.
- Essay shows serious imbalance; it focuses on only scientific or philosophical developments or an effect on religion.
- Only one or two major assertions are supported by relevant evidence.
- May contain several errors that detract from the argument.

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Question 7 (continued)

1–0 Points

- No discernible attempt at a thesis.
- No discernible organization.
- One or none of the major topics suggested by the prompt is mentioned.
- Little or no relevant evidence is used.
- May contain numerous errors that detract from the argument.

In the years between 1600 and 1750, many scientific and philosophical innovations were made which challenged the teachings and authority of the church. Observations of the structure of the universe, new patterns in reason and thought,

~~the discovery of Newton's laws of motion, and the development of calculus, and the discovery of the structure of the atom, and the discovery of the structure of the DNA molecule, and the discovery of the structure of the human mind~~

~~and the discovery of the structure of the human mind~~

~~itself presented~~ and subsequent ~~perspectives~~

Enlightenment perspectives on socio-political institutions presented the church with constant challenges to its teachings and authority.

According to the teachings of the Catholic Church, the earth marked the center of God's universe, and was orbited by the sun, moon, and the rest of the planets. However, Nicolaus Copernicus developed his Heliocentric model of the solar system, in which the earth and all of the planets orbited the sun, based on observations. When the Catholic Church attempted to recruit Galileo to observe the heavens to corroborate Catholic teachings, Galileo instead made observations supporting Copernican theory. With the printing press having been developed years prior, the ~~then~~ spread of this new information inspired mass doubt of the validity of any Church

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teachings. Since these findings, other scientists continued to develop theories, such as Johannes Kepler, which developed an even more solid base of material contradicting the church.

Many years later, theories as to human reason and rational thought were introduced. During the Renaissance far previously, the principle of Scholasticism was obliterated by rediscoveries of ancient knowledge and contemporary discovery of new lands and peoples, none of which were accounted for by the teachings of the church. From 1600 to 1750, theories began to build upon this rejection of Scholasticism. No longer was scripture trusted for truths of nature, and human reason and rational thought became the primary means of discerning truths about the universe. Francis Bacon advocated the process of experimentation, and a theory of Empiricism was also introduced, in which all truths must be observed by one of the five human senses. This signified departure from traditional trust in the church's teachings.

Soon enough, Enlightenment concepts present in theories of rational thought were applied to politics. Voltaire composed his work *Candide* which advocated for religious toleration and the separation of church and state in politics. From this time

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forward, Enlightened Despotism became a trend, featuring monarchs such as Maria Theresa, Catherine the Great, and Frederick the Great. One of the trademarks of Enlightened despotism was religious toleration. This created a less exclusive European continent, in which citizens did not need to worry about religious affiliations of any particular nation they were in. Additionally, this made it more difficult for one religion to dominate a nation ruled with Enlightenment principals.

Altogether, the Scientific Revolution discredited the teachings of the Catholic church and inspired independence from it. Later, the Enlightenment promoted the separation of religion and politics, making religious affiliation less consequential ~~in~~ in the realm of European politics.

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Through the 17th Century ~~and~~ ^{till the} mid 18th Century there was more of a rational ~~and~~ thought brought upon society. These thoughts included new discoveries in the science field such as planet orbits and also ^{new} philosophical ideas such as John Locke's idea of Tabula Rasa. These new thoughts ~~The Scientific Revolution, a time when~~ then went onto contradict the already existing notions brought on by the religion.

The scientific revolution, a time when new thinkers ~~thought~~ explored new concepts ^{that created} ~~offering~~ a new type of religion going against the church. Isaac Newton ~~thought~~ founder of gravitation laws. His ~~was~~ views were very rational and mechanical. He then ^{inspired} ~~created~~ the new world view, where people looked to his rationality and applied it to life. During the Enlightenment inspired off of Newton. There was a new type of religion called Deism. Where it was very rational. God was looked at as more a watchmaker. God ~~made~~ created Earth but then stayed out of the way to let humans develop their thoughts more clearly. This went up against typical religion at the time when ~~people~~ God was a strong presence in everyday for people.

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During this time period (1600-1750). There were also major philosophical developments going against traditional beliefs such as ^{original} ~~original~~ sin in catholicism. John Locke in his "Essay on Concerning Human Understanding" expressed his views on a Tabula Rasa. Where humans were born with a blank slate. God would have no influence before hand in their development this went against the idea of God controlling everything. Bacon and Descartes also looked into scientific reasoning to find out information. They did this through being more rational and looking at scientific reasoning. This made some people's views more secular about everyday life in general. ~~This~~ This caused the church to lose some ~~of~~ truly devoted followers and also question the church's legitimacy.

Overall throughout 1600 to 1750 new developments in scientific and social thought led to more opposition to the church.

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The scientific and philosophical developments affected religion by bringing doubt, and unfaithfulness. Through expanding knowledge, deism, the betrayal of God, Atheism, the lack of God, and Existentialism, the weakness of God, flourished.

~~As knowledge of the stars and universe grew many religious theories were ~~denied~~~~

Philosophy grew between 1600-1750 that was very pessimistic and self-centered. From this many religious people began thinking there was no possible way God was still present. They began looking at the universe like a clock; it was invented by God but then abandoned. This theory formed the foundation of deism. The skeptical nature of philosophy caused this growth along with overall pessimistic views. As a result Catholicism and other religions, began being questioned and God was denied.

As knowledge of the stars grew, many religious theories were questioned and Atheism resulted. Aristotle proposed a theory of ^{perfect} spheres holding everything and Heaven above them. Earth was the center. However Copernicus squashed this with his heliocentric universe and elliptical orbits. Galileo further

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killed the theory with his telescope that showed an imperfect moon. This left many questioning where heaven was and if Earth was important. Atheism resulted carrying the belief that science made the universe not God. In this theory religion was utterly abandoned replaced by science.

Existentialism was based on how Christians were weak and God shouldn't be followed. They felt as if culture was declining due to religion. They wanted progress and rationalism to replace the fantasy of God. They viewed Jesus' slave mortality as weak and unnecessary turning to the strength of philosophy instead.

Philosophy and science caused people to turn away from God and find strength in reason and thought. Society became based on knowledge and proven truths following methods more like Bacon's scientific method not Catholicism's blind truth.

AP[®] EUROPEAN HISTORY 2015 SCORING COMMENTARY

Question 7

Overview

This was a straightforward, mainstream, cause-and-effect question that asked students to analyze how the Scientific Revolution and Enlightenment affected religion in the period from 1600 to 1750. The time period was important as it placed parameters and provided guidance for students. It also encouraged them to focus on the years after the 16th century, making it impossible for them to use evidence from the Wars of Religion and/or the Reformation.

Sample: 7A

Score: 8

The essay has an explicit thesis that establishes cause and effect, e.g., the scientific and philosophical developments undermined the authority of the church. The organization is clear, proceeding with a scientific paragraph replete with relevant evidence, followed by a philosophical developments paragraph with multiple pieces of evidence, e.g., Bacon's empiricism and Voltaire's call for religious toleration. The list of rulers and statement about "Enlightened despotism" is generalized. The essay is balanced, although the discussion of philosophical developments appears to be stronger. The essay was not scored a 9 because of its thin analysis and linkage between the developments and religious effects.

Sample: 7B

Score: 6

The essay has an explicit thesis that discusses how both scientific (new discoveries in the science field such as planetary orbits) and philosophical (John Locke's idea of *tabula rasa*) developments affected religion, eventually contradicting religious ideas. The organization is clear with separate paragraphs about both scientific and philosophical developments. The essay is balanced, and major assertions are supported by multiple pieces of evidence. For science, Newton as the founder of gravitational laws and his mechanical universe are clearly linked to the development of deism. For philosophical developments, Locke's *Essay Concerning Human Understanding* and his idea of *tabula rasa* are loosely linked to the role of God in people's lives. Additionally, Bacon's and Descartes' scientific reasoning is linked to a more secular view and a loss of church followers. There are no errors that detract from the argument. The essay was scored higher than a 5 due to its specific evidence in response to both parts of the prompt with multiple pieces of evidence under philosophical developments and one effective piece under science. The essay was not scored a 7 because the second point of evidence on philosophy (Bacon/Descartes) is not well developed.

Sample: 7C

Score: 4

The essay has a discernible thesis that addresses the prompt. The essay addresses the effects of both science and philosophy on religion, but the discussion is weakly developed. There are three errors/off-topic statements that detract from the argument, e.g., religion abandoned, existentialism, and Jesus slave mortality. The essay scored higher than a 3 because there is enough relevant evidence on each major assertion; however, it was not a 5 because of the errors and weak analysis.