Scholarship and Culture in the Muslim World

Short Response Question: Use Chapter 14 of the AP text and your knowledge of World History to answer.

   A. Identify and explain one important contribution from **Greek** culture to the Islamic Golden Age.

   B. Identify and explain one important contribution from **Persian** culture to the Islamic Golden Age.

   C. Identify and explain one important contribution from **Indian** culture to the Islamic Golden Age.

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

Write your answer to SECTION I: PART B, QUESTION 1 on this page only.

On the Separation of Mathematics and Religion

Abu Ḥamid Muḥammad ibn Muḥammad al-Ghazali (1058 – 1111), shortened as Al-Ghazali in Arabic and known as Algazel to the Western medieval world, was a Muslim theologian, jurist, philosopher, and mystic of Persian descent. Below is an excerpt from his book _Deliverance from Error_, in which he discusses and seeks to reconcile common conflicts between mathematics and religion.

"Mathematics comprises the knowledge of calculation, geometry, and cosmography: it has no connection with the religious sciences, and proves nothing for or against religion; it rests on a foundation of proofs which, once known and understood, can not be refuted. Mathematics tend, however, to produce two bad results.

"The first is this: Whoever studies this science admires the subtlety and clearness of its proofs. His confidence in philosophy increases, and he thinks that all its departments are capable of the same clearness and solidity of proof as mathematics. But when he hears people speak of the unbelief and impiety of mathematicians, of their professed disregard for the Divine law, which is notorious, it is true that, out of regard for authority, he echoes these accusations, but he says to himself at the same time that, if there was truth in religion, it would not have escaped those who have displayed so much keenness of intellect in the study of mathematics. Next, when he becomes aware of the unbelief and rejection of religion on the part of these learned men, he concludes that to reject religion is reasonable. How many of such men gone astray I have met whose sole argument was that just mentioned…

"The second evil comes from the sincere but ignorant Muslims who thinks the best way to defend religion is by rejecting all the exact sciences. Accusing their professors of being astray, he rejects their theories of the eclipses of the sun and moon, and condemns them in the name of religion…

It is therefore a great injury to religion to suppose that the defense of Islam involves the condemnation of the exact sciences. The religious law contains nothing which approves them or condemns them, and in their turn they make no attack on religion. The words of the Prophet, "The sun and the moon are two signs of the power of God; they are not eclipsed for the birth or the death of any one; when you see these signs take refuge in prayer and invoke the name of God"---these words, I say, do not in any way condemn the astronomical calculations which define the orbits of these two bodies, their conjunction and opposition according to particular laws…

<u>Source</u>: Al-Ghazzali, "On the Separation of Mathematics and Religion," _Deliverance from Error_, 1100 CE

1. According to Al Ghazali, what are the two opposing but equally mistaken conclusions that people often draw about math and religion?

2. What is Al Ghazali's view regarding conflict between math and religion? How does he explain and reconcile the two opposing views?