Instruction

You are given {#num of seed exampples} multiple-choice questions of the {subject} exam for reference. Your task is to generate a new multiple-choice question similarly based on your {subject} knowledge. Ensure the new question is clear, concise, and academically

(Sampling from Seed Question Set)

Reference question 0:

Why is Venus hotter than Mercury, despite being further from the Sun?

- (A) Venus has a thicker atmosphere that traps heat
- (B) Venus is closer to the Sun than Mercury
- (C) Venus has a stronger magnetic field that attracts more solar radiation
- (D) Venus has more volcanic activity that releases heat



Reference question K:

Which of the following phenomena is NOT a result of orbital resonance?

- (A) The gaps in the asteroid belt.
- (B) The Laplace resonance of Jupiter's moons.
- (C) The 2:3 resonance between Neptune and Pluto.
- (D) The formation of the Milky Way galaxy.



Synthetic question Generation



Synthetic question:

Which of the following is not considered as a supporting evidence for the Giant Impact Hypothesis?

- (A) The Moon's iron core is significantly smaller than Earth's, even when taking into account their size difference.
- (B) The Moon was once completely molten.
- (C) The Moon's size relative to Earth is unusually large compared to other planet-moon systems.
- (D) The Moon's surface is covered with water.



Answer Generation



Answer of the synthetic question:

The Giant Impact Hypothesis suggests that the Moon was formed from the debris left over after a collision between Earth and a body the size of Mars. (A), (B) and (C) are all consistent with this hypothesis. However, (D) is not a supporting evidence for the Giant Impact Hypothesis. In fact, the Moon's surface is not covered with water. So the correct option is (D). The answer is (D).