

General Assessment - AGRP 2023 - Software Development

Time remaining
0:28:20

CHOOSE THE CORRECT ANSWER AFTER READING THE PASSAGE:

This passage is followed by questions based on its content. After reading the passage, choose the best answer to each question. Answer all the questions following a passage on the basis of what is stated or implied in that passage.

PASSAGE: Theorists are divided concerning the origin of the Moon. Some hypothesize that the Moon was formed in the same way as were the planets in the inner solar system (Mercury, Venus, Mars, and Earth)—from planet-forming materials in the presolar nebula. But, unlike the cores of the inner planets, the Moon's core contains little or no iron, while the typical planet-forming materials were quite rich in iron. Other theorists propose that the Moon was ripped out of the Earth's rocky mantle by the Earth's collision with another large celestial body after much of the Earth's iron fell to its core. One problem with the collision hypothesis is the question of how a satellite formed in this way could have settled into the nearly circular orbit that the Moon has today. Fortunately, the collision hypothesis is testable. If it is true, the mantle rocks of the Moon and the Earth should be the same geochemically.

16. According to the passage, Mars and the Earth are similar in which of the following ways?

- I. Their satellites were formed by collisions with other celestial bodies.
- II. Their cores contain iron.
- III. They were formed from the presolar nebula.

- ☐ I and III only
- ☐ I, II and III
- ☒ II and III only
- ☐ I and II only
- ☐ III only

17. The author implies that a nearly circular orbit is unlikely for a satellite that:

- ☒ circles one of the inner planets
- ☐ was formed out of the planet-forming materials in the presolar nebula
- ☐ is different from its planet geochemically
- ☐ is deficient in iron
- ☐ was formed by a collision between two celestial bodies

18. Which of the following, if true, would be most likely to make it difficult to verify the collision hypothesis in the manner suggested by the author?

- ☒ The Moon's core and mantle rock are almost inactive geologically.
- ☐ Certain of the Earth's elements, such as platinum, gold, and iridium, followed iron to the Earth's core.
- ☐ The mantle rock of the Moon contains elements such as platinum, gold, and iridium.
- ☐ Much of the Earth's iron fell to the Earth's core long before the formation of the Moon, after which the Earth's mantle rock remained unchanged.
- ☐ The mantle rock of the Earth has changed in composition since the formation of the Moon, while the mantle rock of the Moon has remained chemically inert.

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Answered 17 of 30 (56%)