

### QUESTION 41.

**Choice B is the best answer.** In lines 54-56, Stanton provides evidence that men are lamenting the problems they have created, as they recognize that their actions have caused “falsehood, selfishness, and violence [to become] the law of life.”

Choices A, C, and D are incorrect because they do not provide the best evidence that men are lamenting the problems they have created. Choice A explains society’s current fragmentation. Choices C and D present Stanton’s main argument for women’s enfranchisement.

### QUESTION 42.

**Choice D is the best answer.** In the sixth paragraph, Stanton differentiates between men and masculine traits. Stanton argues that masculine traits or “characteristics,” such as a “love of acquisition and conquest,” serve to “subjugate one man to another” (lines 69-80). Stanton is suggesting that some masculine traits position men within certain power structures.

Choices A and B are incorrect because the sixth paragraph does not primarily establish a contrast between men and women or between the spiritual and material worlds. Choice C is incorrect because although Stanton argues that not “all men are hard, selfish, and brutal,” she does not discuss what constitutes a “good” man.

### QUESTION 43.

**Choice C is the best answer.** In the first paragraph, the author identifies the natural phenomenon “internal waves” (line 3), and explains why they are important: “internal waves are fundamental parts of ocean water dynamics, transferring heat to the ocean depths and bringing up cold water from below” (lines 7-9).

Choices A, B, and D are incorrect because they do not identify the main purpose of the first paragraph, as that paragraph does not focus on a scientific device, a common misconception, or a recent study.

### QUESTION 44.

**Choice B is the best answer.** In lines 17-19, researcher Tom Peacock argues that in order to create precise global climate models, scientists must be able to “capture processes” such as how internal waves are formed. In this context, to “capture” a process means to record it for scientific study.

Choices A, C, and D are incorrect because in this context “capture” does not mean to control, secure, or absorb.

#### **QUESTION 45.**

**Choice D is the best answer.** In lines 17-19, researcher Tom Peacock argues that scientists need to “capture processes” of internal waves to develop “more and more accurate climate models.” Peacock is suggesting that studying internal waves will inform the development of scientific models.

Choices A, B, and C are incorrect because Peacock does not state that monitoring internal waves will allow people to verify wave heights, improve satellite image quality, or prevent coastal damage.

#### **QUESTION 46.**

**Choice C is the best answer.** In lines 17-19, researcher Tom Peacock provides evidence that studying internal waves will inform the development of key scientific models, such as “more accurate climate models.”

Choices A, B, and D are incorrect because they do not provide the best evidence that studying internal waves will inform the development of key scientific models; rather, they provide general information about internal waves.

#### **QUESTION 47.**

**Choice A is the best answer.** In lines 65-67, the author notes that Tom Peacock and his team “were able to devise a mathematical model that describes the movement and formation of these waves.” In this context, the researchers devised, or created, a mathematical model.

Choices B, C, and D are incorrect because in this context “devise” does not mean to solve, imagine, or begin.

#### **QUESTION 48.**

**Choice B is the best answer.** Tom Peacock and his team created a model of the “Luzon’s Strait’s underwater topography” and determined that its “distinct double-ridge shape . . . [is] responsible for generating the underwater [internal] waves” (lines 53-55). The author notes that this model describes only internal waves in the Luzon Strait but that the team’s findings may “help researchers understand how internal waves are generated in other places around the world” (lines 67-70). The author’s claim suggests that while internal waves in the Luzon Strait are “some of the largest in the world” (line 25) due to the region’s topography, internal waves occurring in other regions may be caused by some similar factors.

Choice A is incorrect because the author notes that the internal waves in the Luzon Strait are “some of the largest in the world” (line 25), which suggests that internal waves reach varying heights. Choices C and D are incorrect because they are not supported by the researchers’ findings.

### QUESTION 49.

**Choice D is the best answer.** In lines 67-70, the author provides evidence that, while the researchers' findings suggest the internal waves in the Luzon Strait are influenced by the region's topography, the findings may "help researchers understand how internal waves are generated in other places around the world." This statement suggests that all internal waves may be caused by some similar factors.

Choices A, B, and C are incorrect because they do not provide the best evidence that internal waves are caused by similar factors but influenced by the distinct topographies of different regions. Rather, choices A, B, and C reference general information about internal waves or focus solely on those that occur in the Luzon Strait.

### QUESTION 50.

**Choice D is the best answer.** During the period 19:12 to 20:24, the graph shows the 13°C isotherm increasing in depth from about 20 to 40 meters.

Choices A, B, and C are incorrect because during the time period 19:12 to 20:24 the 9°C, 10°C, and 11°C isotherms all decreased in depth.

### QUESTION 51.

**Choice D is the best answer.** In lines 3-6, the author notes that internal waves "do not ride the ocean surface" but "move underwater, undetectable without the use of satellite imagery or sophisticated monitoring equipment." The graph shows that the isotherms in an internal wave never reach the ocean's surface, as the isotherms do not record a depth of 0.

Choice A is incorrect because the graph provides no information about salinity. Choice B is incorrect because the graph shows layers of less dense water (which, based on the passage, are warmer) riding above layers of denser water (which, based on the passage, are cooler). Choice C is incorrect because the graph shows that internal waves push isotherms of warmer water above bands of colder water.

### QUESTION 52.

**Choice A is the best answer.** In lines 7-9, the author notes that internal waves are "fundamental parts of ocean water dynamics" because they transfer "heat to the ocean depths and brin[g] up cold water from below." The graph shows an internal wave forcing the warm isotherms to depths that typically are colder. For example, at 13:12, the internal wave transfers "heat to the ocean depths" by forcing the 10°C, 11°C, and 13°C isotherms to depths that typically are colder.

Choices B, C, and D are incorrect because the graph does not show how internal waves affect the ocean's density, surface temperature, or tide flow.

**QUESTION 36.**

**The correct answer is 32.** Since segments  $LM$  and  $MN$  are tangent to the circle at points  $L$  and  $N$ , respectively, angles  $OLM$  and  $ONM$  are right angles. Thus, in quadrilateral  $OLMN$ , the measure of angle  $O$  is  $360^\circ - (90^\circ + 60^\circ + 90^\circ) = 120^\circ$ . Thus, in the circle, central angle  $O$  cuts off  $\frac{120}{360} = \frac{1}{3}$  of the circumference; that is, minor arc  $\widehat{LN}$  is  $\frac{1}{3}$  of the circumference. Since the circumference is 96, the length of minor arc  $\widehat{LN}$  is  $\frac{1}{3} \times 96 = 32$ .

**QUESTION 37.**

**The correct answer is 3284.** According to the formula, the number of plants one year from now will be  $3000 + 0.2(3000)\left(1 - \frac{3000}{4000}\right)$ , which is equal to 3150. Then, using the formula again, the number of plants two years from now will be  $3150 + 0.2(3150)\left(1 - \frac{3150}{4000}\right)$ , which is 3283.875. Rounding this value to the nearest whole number gives 3284.

**QUESTION 38.**

**The correct answer is 7500.** If the number of plants is to be increased from 3000 this year to 3360 next year, then the number of plants that the environment can support,  $K$ , must satisfy the equation  $3360 = 3000 + 0.2(3000)\left(1 - \frac{3000}{K}\right)$ . Dividing both sides of this equation by 3000 gives  $1.12 = 1 + 0.2\left(1 - \frac{3000}{K}\right)$ , and therefore, it must be true that  $0.2\left(1 - \frac{3000}{K}\right) = 0.12$ , or equivalently,  $1 - \frac{3000}{K} = 0.6$ . It follows that  $\frac{3000}{K} = 0.4$ , and so  $K = \frac{3000}{0.4} = 7500$ .