

Reading and Writing

33 QUESTIONS

DIRECTIONS

The questions in this section address a number of important reading and writing skills. Each question includes one or more passages, which may include a table or graph. Read each passage and question carefully, and then choose the best answer to the question based on the passage(s).

All questions in this section are multiple-choice with four answer choices. Each question has a single best answer.

1

The following text is from the 1913 story “The King’s Coin” by Emily Pauline Johnson, a Kanienkahagen (Mohawk) writer also known as Tekahionwake. Fox-Foot, a young Ojibwe man, is guiding a group of fur traders who are traveling by canoe and suspects that they are being followed.

At supper time, Fox-Foot would allow no fire to be built, no landing to be made, no trace of their passing to be left. They ate canned meat and marmalade, drank again of the stream and pushed on, until just at dusk they reached the edge of a long, still lake, with shores of granite and dense fir forest.

As used in the text, what does the word “trace” most nearly mean?

- A) Evidence
- B) Blemish
- C) Amount
- D) Sketch

2

Many ancient sculptures of people’s heads are missing their noses. This is because the nose is the most _____ part of a sculpture of a person’s head. It is delicate and sticks out from the rest of the sculpture, making it especially easy to break.

Which choice completes the text with the most logical and precise word or phrase?

- A) recognizable
- B) fragile
- C) common
- D) sophisticated

3

K.D. Leka and colleagues found that the Sun's corona provides an advance indication of solar flares—intense eruptions of electromagnetic radiation that emanate from active regions in the Sun's photosphere and can interfere with telecommunications on Earth. Preceding a flare, the corona temporarily exhibits increased brightness above the region where the flare is _____.

Which choice completes the text with the most logical and precise word or phrase?

- A) antecedent
- B) impending
- C) innocuous
- D) perpetual

4

To demonstrate that the integrity of underground metal pipes can be assessed without unearthing the pipes, engineer Aroba Saleem and colleagues _____ the tendency of some metals' internal magnetic fields to alter under stress: the team showed that such alterations can be measured from a distance and can reveal concentrations of stress in the pipes.

Which choice completes the text with the most logical and precise word or phrase?

- A) hypothesized
- B) discounted
- C) redefined
- D) exploited

5

Despite the generalizations about human behavior they have produced, many studies of behavioral psychology have used highly unrepresentative subject pools: students at the colleges and universities where the researchers are employed. To _____ this situation, it is necessary to actively recruit subjects from diverse backgrounds and locations.

Which choice completes the text with the most logical and precise word or phrase?

- A) sanction
- B) ameliorate
- C) rationalize
- D) postulate

6

The following text is adapted from Jean Webster's 1912 novel *Daddy-Long-Legs*. The narrator is a young college student writing letters detailing her weekly experiences.

[The college is] organizing the Freshman basket-ball team and there's just a chance that I shall make it. I'm little of course, but terribly quick and wiry and tough. While the others are hopping about in the air, I can dodge under their feet and grab the ball.

Which choice best states the main purpose of the text?

- A) To compare basketball with other sports
- B) To provide details of how to play basketball
- C) To state how players will be chosen for the basketball team
- D) To explain why the narrator thinks she might make the basketball team

7

In the late 1800s, Spanish-language newspapers flourished in cities across Texas. San Antonio alone produced eleven newspapers in Spanish between 1890 and 1900. But El Paso surpassed all other cities in the state. This city produced twenty-two newspapers in Spanish during that period. El Paso is located on the border with Mexico and has always had a large population of Spanish speakers. Thus, it is unsurprising that this city became such a rich site for Spanish-language journalism.

Which choice best states the main purpose of the text?

- A) To compare Spanish-language newspapers published in Texas today with ones published there during the late 1800s
- B) To explain that Spanish-language newspapers thrived in Texas and especially in El Paso during the late 1800s
- C) To argue that Spanish-language newspapers published in El Paso influenced the ones published in San Antonio during the late 1800s
- D) To explain why Spanish-language newspapers published in Texas were so popular in Mexico during the late 1800s

8

Chile's Atacama Desert is one of the driest places on Earth. Mary Beth Wilhelm and other astrobiologists search for life, or its remains, in this harsh place because the desert closely mirrors the extreme environment on Mars. The algae and bacteria found in Atacama's driest regions may offer clues about Martian life. By studying how these and other microorganisms survive such extreme conditions on Earth, Wilhelm's team hopes to determine whether similar life might have existed on Mars and to develop the best tools to look for evidence of it.

Which choice best describes the function of the underlined sentence in the text as a whole?

- A) To contrast the conditions in the Atacama Desert with those on Mars
- B) To explain why many life-forms cannot survive in the Atacama Desert
- C) To indicate why astrobiologists choose to conduct research in the Atacama Desert
- D) To describe certain limitations to conducting scientific study in the Atacama Desert

9

More than 60% of journeys in Mexico City occur via public transit, but simply reproducing a feature of the city's transit system—e.g., its low fares—is unlikely to induce a significant increase in another city's transit ridership. As Erick Guerra et al. have shown, transportation mode choice in urban areas of Mexico is the product of a complex mix of factors, including population density, the spatial distribution of jobs, and demographic characteristics of individuals. System features do affect ridership, of course, but there is an irreducibly contextual dimension of transportation mode choice.

Which choice best describes the function of the underlined portion in the text as a whole?

- A) It presents an objection to the argument of Guerra et al. about transportation mode choice in urban areas of Mexico.
- B) It explains why it is challenging to influence transit ridership solely by altering characteristics of a transit system.
- C) It illustrates the claim that a characteristic associated with high transit ridership in Mexico City is not associated with high transit ridership elsewhere.
- D) It substantiates the assertion that population density, the spatial distribution of jobs, and demographic characteristics are important factors in transportation mode choice.

10

Changes to vegetation cover and other human activities influence carbon and nitrogen levels in soil, though how deep these effects extend is unclear. Hypothesizing that differences in land use lead to differences in carbon and nitrogen levels that are not restricted to the topsoil layer (0–30 cm deep), Chukwuebuka Okolo and colleagues sampled soils across multiple land-use types (e.g., grazing land, cropland, forest) within each of several Ethiopian locations. They found, though, that across land-use types, carbon and nitrogen decreased to comparably low levels beyond depths of 30 cm.

Which choice best describes the overall structure of the text?

- A) It describes a phenomenon that scientists do not fully understand, explains a research team's hypothesis about that phenomenon, and then describes a finding that led the team to refine the hypothesis.
- B) It introduces an unresolved scientific question, presents a research team's hypothesis pertaining to that question, and then describes an observation made by the team that conflicts with that hypothesis.
- C) It discusses a process that scientists are somewhat unclear about, introduces competing hypotheses about that process, and then explains how a research team concluded that one of those hypotheses is likely correct.
- D) It explains a hypothesis that has been the subject of scientific debate, discusses how a research team tested that hypothesis, and then presents data the team collected that validate the hypothesis.

11

Recently, scientists looked at data collected by NASA's InSight lander to learn more about seismic activity on Mars, known as marsquakes. The data show that the marsquakes all started from the same location on the planet. This discovery was surprising to scientists, as they expected that the marsquakes would originate from all over the planet because of the cooling of the planet's surface. Now, scientists believe that there could be areas of active magma flows deep beneath the planet's surface that trigger the marsquakes.

According to the text, what was surprising to scientists studying the seismic activity data from NASA's InSight lander?

- A) The surface temperature of Mars has been rising.
- B) There were different types of seismic waves causing marsquakes.
- C) NASA's InSight lander collected less data than scientists had expected.
- D) All the marsquakes started from the same location on the planet.

12

The ancient writing system used in the Maya kingdoms of southern Mexico and Central America had a symbol for the number zero. The earliest known example of the symbol dates to more than 2,000 years ago. At that time, almost none of the writing systems elsewhere in the world possessed a zero symbol. And the use of zero in Mexico and Central America may be even more ancient. Some historians suggest that Maya mathematicians inherited it from the Olmec civilization, which flourished in the region 2,400–3,600 years ago.

According to the text, what do some historians suggest about Maya civilization?

- A) Maya civilization acquired the use of zero from the Olmec civilization.
- B) Maya civilization respected its historians more than it respected its mathematicians.
- C) Maya civilization was highly secretive about its intellectual achievements.
- D) Maya civilization tried to introduce its writing system to other civilizations.

13

"The Bet" is an 1889 short story by Anton Chekhov. In the story, a banker is described as being very upset about something: _____

Which quotation from "The Bet" most effectively illustrates the claim?

- A) "Then the banker cautiously broke the seals off the door and put the key in the keyhole."
- B) "It struck three o'clock, the banker listened; everyone was asleep in the house and nothing could be heard outside but the rustling of the chilled trees."
- C) "The banker, spoilt and frivolous, with millions beyond his reckoning, was delighted at the bet."
- D) "When [the banker] got home he lay on his bed, but his tears and emotion kept him for hours from sleeping."

14

Partial List of Candidate Species for De-extinction

Common name	Scientific name	Became extinct
Huia	<i>Heteralocha acutirostris</i>	1907
Caribbean monk seal	<i>Monachus tropicalis</i>	1952
Passenger pigeon	<i>Ectopistes migratorius</i>	1914
Saber-toothed cat	<i>Smilodon</i>	11,000 years before present
Woolly mammoth	<i>Mammuthus primigenius</i>	6,400 years before present

The passage of time is among the many obstacles faced by scientists who are pursuing de-extinction efforts—that is, efforts to use breeding or a mixture of cloning and genetic engineering to bring back extinct species. Specifically, researchers are concerned that the longer a species has been extinct, the less likely it is that a suitable habitat still exists for that species. Among candidate species for de-extinction, this problem would be especially concerning for the _____

Which choice most effectively uses data from the table to complete the statement?

- A) passenger pigeon (*Ectopistes migratorius*), which became extinct only a few years after the huia (*Heteralocha acutirostris*).
- B) saber-toothed cat (*Smilodon*), which became extinct 11,000 years ago.
- C) woolly mammoth (*Mammuthus primigenius*), which became extinct several thousand years before the saber-toothed cat (*Smilodon*).
- D) Caribbean monk seal (*Monachus tropicalis*), which became extinct in 1952.

15

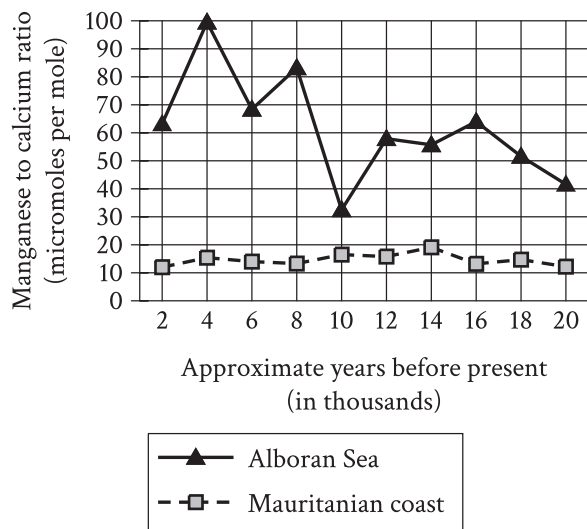
“The Yellow Wallpaper” is an 1892 short story by Charlotte Perkins Gilman. In the story, the narrator expresses mixed feelings about her surroundings:

Which quotation from “The Yellow Wallpaper” most effectively illustrates the claim?

- A) “This wallpaper has a kind of sub-pattern in a different shade, a particularly irritating one, for you can only see it in certain lights, and not clearly then.”
- B) “By moonlight—the moon shines in all night when there is a moon—I wouldn’t know it was the same paper.”
- C) “I’m really getting quite fond of the big room, all but that horrid [wall]paper.”
- D) “The color is repellant, almost revolting; a smouldering, unclean yellow, strangely faded by the slow-turning sunlight.”

16

Ratio of Manganese to Calcium in Samples
from Alboran Sea and Mauritanian Coast



The population of the coral *Lophelia pertusa* declined significantly around 9,000 years ago in the Alboran Sea and around 11,000 years ago near the Mauritanian coast. Using the ratio of manganese to calcium, which inversely correlates with ocean oxygenation levels, marine scientist Rodrigo da Costa Portilho-Ramos and colleagues evaluated whether oxygenation played a role in the declines of *L. pertusa*. The researchers concluded that oxygenation may have been important in the Alboran Sea but not the Mauritanian coast, since _____

Which choice most effectively uses data from the graph to complete the statement?

- A) a substantial increase in oxygenation in the Alboran Sea corresponded with the local decline in *L. pertusa*, but the opposite relationship between oxygenation and *L. pertusa* was found near the Mauritanian coast.
- B) *L. pertusa* declined in the Alboran Sea during a period of substantial local decline in oxygenation, but *L. pertusa* declined near the Mauritanian coast during a period of little local change in oxygenation.
- C) oxygenation in the Alboran Sea was higher before the decline in *L. pertusa* than after the decline, whereas oxygenation near the Mauritanian coast was relatively low both before and after the decline in *L. pertusa*.
- D) oxygenation in the Alboran Sea tended to be substantially higher than oxygenation near the Mauritanian coast during the period studied.

17

The Younger Dryas was a period of extreme cooling from 11,700 to 12,900 years ago in the Northern Hemisphere. Some scientists argue that a comet fragment hitting Earth brought about the cooling. Others disagree, partly because there is no known crater from such an impact that dates to the beginning of the period. In 2015, a team led by Kurt Kjær detected a 19-mile-wide crater beneath a glacier in Greenland. The scientists who believe an impact caused the Younger Dryas claim that this discovery supports their view. However, Kjær's team hasn't yet been able to determine the age of the crater. Therefore, the team suggests that _____

Which choice most logically completes the text?

- A) it can't be concluded that the impact that made the crater was connected to the beginning of the Younger Dryas.
- B) it can't be determined whether a comet fragment could make a crater as large as 19 miles wide.
- C) scientists have ignored the possibility that something other than a comet fragment could have made the crater.
- D) the scientists who believe an impact caused the Younger Dryas have made incorrect assumptions about when the period began.

18

In 2016 biological anthropologist Heather F. Smith and her team investigated the evolution of the appendix, an intestinal organ that is present in some mammals, including humans, but is generally thought to have no function. Studying 533 mammal species, the team found that the appendix has emerged independently across multiple lineages in separate instances and, significantly, hasn't disappeared after emerging in specific lineages. Moreover, the team determined that species with the organ tend to have higher concentrations of lymphoid tissue, which supports immune responses, in the cecum, the organ the appendix is attached to. Therefore, the team hypothesized that the appendix likely _____

Which choice most logically completes the text?

- A) was once present in many nonmammal species but has since disappeared from those lineages.
- B) has been preserved in certain mammal species because it benefits their immune systems.
- C) will emerge in a greater number of mammal species because it may serve a necessary function in the immune system.
- D) produced higher concentrations of lymphoid tissue in mammals in the past than it does currently.

19

Some ethicists hold that the moral goodness of an individual's actions depends solely on whether the actions themselves are good, irrespective of the context in which they are carried out. Philosopher L. Sebastian Purcell has shown that surviving works of Aztec (Nahua) philosophy express a very different view. Purcell reveals that these works posit an ethical system in which an individual's actions are judged in light of how well they accord with the individual's role in society and how well they contribute to the community. To the extent that these works are representative of Aztec thought, Purcell's analysis suggests that _____

Which choice most logically completes the text?

- A) the Aztecs would have disputed the idea that the morality of an individual's actions can be assessed by appealing to standards of behavior that are independent of the individual's social circumstances.
- B) the Aztecs would not have accepted the notion that the morality of an individual's actions can be fairly evaluated by people who do not live in the same society as that individual.
- C) actions by members of Aztec society who contributed a great deal to their community could be judged as morally good even if those actions were inconsistent with behaviors the Aztecs regarded as good in all contexts.
- D) similar actions performed by people in different social roles in Aztec society would have been regarded as morally equivalent unless those actions led to different outcomes for the community.

20

Lê Lươ ng Minh became the thirteenth secretary-general of the Association of Southeast Asian Nations (ASEAN) in January 2013, making _____ the first time the organization would appoint a Vietnamese leader.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A) these
- B) those
- C) this
- D) some

21

In 1929, Edwin Herbert Land invented a polarizing filter that was featured in a number of products, from sunglasses to 3D movies. A decade later, Land _____ his technology to invent the world's first instant camera, the Polaroid Land camera.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A) used
- B) to have used
- C) to use
- D) using

22

An online content creator who uses copyrighted songs without permission risks being demonetized (prohibited from including paid advertisements in content). The best way to avoid demonetization is to choose music from the public domain. Using one of these noncopyrighted songs _____ a creator won't lose advertising revenue.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A) are ensuring
- B) have ensured
- C) ensure
- D) ensures

23

What makes the theremin a unique musical instrument? You play it without touching it. When you place your _____ the pitch will shift as your hands move through the air.

Which choice completes the text with the most logical transition?

- A) hand's between the two antenna's,
- B) hands between the two antennas,
- C) hands' between the two antennass',
- D) hands' between the two antennas,

24

In the music video for the song "We Didn't Start the Fire" by Billy Joel, the singer lists 118 political and cultural references. Such iconic references, cited in rapid and frenetic procession by the musician, who is seated impassively at a dinner table, _____ key moments and personalities of the twentieth century.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A) represents
- B) has represented
- C) was representing
- D) represent

25

Long attributed to Jacques-Louis David, the preeminent Neoclassical painter of his day, the 1801 painting *Marie Joséphine Charlotte du Val d'Ognes* gained fresh attention in the 1990s when art historians discovered that the painting—which depicts a solitary young woman sketching—was actually the work of little-known French portrait _____ Marie-Denise Villers (1774–1821).

Which choice completes the text so that it conforms to the conventions of Standard English?

- A) artist—
- B) artist
- C) artist:
- D) artist,

26

In 1986, conceptual artist Sophie Calle asked twenty-three people, all of whom had been born without sight, to describe “their image of beauty” in rich detail. Calle paired excerpts of these conversations with photographs—both of interviewees and the items they _____ to powerful effect in her exhibition *The Blind*.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A) described, from hair to grass to sculptures
- B) described, from hair to grass to sculptures—
- C) described—from hair to grass to sculptures,
- D) described: from hair to grass to sculptures

27

Celebrated Tewa potter Maria Martinez (1887–1980) made her signature all-black ceramic vessels using a heating technique called reduction firing. This technique involves smothering the flame surrounding the clay vessel. _____ the vessel takes on a shiny, black hue.

Which choice completes the text with the most logical transition?

- A) On the contrary,
- B) For example,
- C) Previously,
- D) As a result,

28

Historians agree that the jazz pianist Jelly Roll Morton was exaggerating when he claimed to have invented jazz music. No one can deny, _____ that Morton’s innovative compositions and remarkable improvisational skills helped shape jazz as a genre during its early years.

Which choice completes the text with the most logical transition?

- A) therefore,
- B) in the second place,
- C) in other words,
- D) though,

29

According to Duverger’s law, countries with single-ballot majoritarian elections for single-member districts tend to polarize into two-party systems, wherein dueling political parties consistently dominate the political system. _____ countries with proportional-representation electoral systems tend to support multi-partyism, under which power gets distributed among many political parties.

Which choice completes the text with the most logical transition?

- A) Subsequently,
- B) Conversely,
- C) For instance,
- D) In other words,

30

A turtle shell appears external to the animal, protecting its body like armor. _____ the shell is often incorrectly assumed to be an exoskeleton, a rigid outer casing like that of a crustacean or an insect, when in fact it is an endoskeleton, a part of the turtle's internal bone structure, more akin to a spine or a pair of ribs.

Which choice completes the text with the most logical transition?

- A) That being said,
- B) However,
- C) For instance,
- D) Hence,

31

While researching a topic, a student has taken the following notes:

- In 1859, the novel *Adam Bede* was published in England.
- According to the novel's title page, the author's name was George Eliot.
- George Eliot was widely assumed to be a pseudonym.
- A pseudonym is a fake name used to conceal an author's identity.
- A woman named Mary Ann Evans later revealed herself as the novel's real author.

The student wants to identify the real author of *Adam Bede*. Which choice most effectively uses relevant information from the notes to accomplish this goal?

- A) The real author of *Adam Bede* was Mary Ann Evans, who published the novel using the pseudonym George Eliot.
- B) George Eliot, which *Adam Bede*'s title page indicated was the name of the novel's author, was widely assumed to be a pseudonym.
- C) The title page of the novel *Adam Bede* indicated that the author's name was George Eliot.
- D) A woman who had used a pseudonym to conceal her identity later revealed herself as the real author of *Adam Bede*.

32

While researching a topic, a student has taken the following notes:

- Scientists have developed a “freeze-thaw” battery that can retain 92% of its charge after twelve weeks.
- The battery contains molten salt (a type of salt that liquifies when heated and solidifies at room temperature).
- When the salt is in a liquid state, energy flows through the battery.
- When the salt is in a solid state, energy stops flowing and is stored in the battery.
- The stored (frozen) energy can be used by reheating (thawing) the battery.

The student wants to specify how the salt enables energy storage. Which choice most effectively uses relevant information from the notes to accomplish this goal?

- A) Scientists have developed a freeze-thaw battery that contains molten salt, which liquifies when heated and solidifies at room temperature.
- B) The stored energy in a freeze-thaw battery, which contains molten salt, can be used by reheating the battery.
- C) When the molten salt in a freeze-thaw battery solidifies at room temperature, energy stops flowing and can be stored in the battery.
- D) Molten salt allows a freeze-thaw battery to retain 92% of its charge after twelve weeks.

33

While researching a topic, a student has taken the following notes:

- The US Fish and Wildlife Service (FWS) keeps a list of all at-risk species.
- Species on the list are classified as either endangered or threatened.
- A species that is in danger of extinction throughout most or all of its range is classified as endangered.
- A species that is likely to soon become endangered is classified as threatened.
- The California red-legged frog (*Rana draytonii*) is likely to soon become endangered, according to the FWS.

The student wants to indicate the California red-legged frog’s FWS classification category. Which choice most effectively uses relevant information from the notes to accomplish this goal?

- A) Species on the FWS list, which includes the California red-legged frog (*Rana draytonii*), are classified as either endangered or threatened.
- B) The California red-legged frog (*Rana draytonii*) appears on the FWS list of at-risk species.
- C) According to the FWS, the California red-legged frog is in the endangered category, in danger of extinction throughout most or all of its range.
- D) Likely to soon become endangered, the California red-legged frog is classified as threatened by the FWS.

STOP

If you finish before time is called, you may check your work on this module only.

Do not turn to any other module in the test.