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## 逻辑单题

### Question Type One: Boldface

At a certain period in Earth's history, its atmosphere contained almost no oxygen, although plants were producing vast quantities of oxygen. As a way of reconciling these two facts, scientists have hypothesized that nearly all of the oxygen being produced was taken up by iron on Earth's surface. Clearly, however, **this explanation is inadequate**. New studies show that **the amount of iron on Earth's surface was not sufficient to absorb anywhere near as much oxygen as was being produced**. Therefore, something in addition to the iron on Earth's surface must have absorbed much of the oxygen produced by plant life.

1. In the argument given, the two portions in boldface play which of the following roles?
- A. The first is a claim made by the argument in support of a certain position; the second is that position.
  - B. The first is a judgment made by the argument about a certain explanation; the second is that explanation.
  - C. The first expresses the argument's dismissal of an objection to the position it seeks to establish; the second is that position.
  - D. The first sums up the argument's position with regard to a certain hypothesis; the second provides grounds for that position.
  - E. The first is a concession by the argument that its initial formulation of the position it seeks to establish requires modification; the second presents that position in a modified form.

Rain-soaked soil contains less oxygen than does drier soil. **The roots of melon plants perform less efficiently under the low-oxygen conditions present in rain soaked soil**. When the efficiency of melon roots is impaired, the roots do not supply sufficient amounts of the proper nutrients for the plants to perform photosynthesis at their usual levels. It follows that **melon plants have a lower-than-usual rate of photosynthesis when their roots are in rain-soaked soil**. When the photosynthesis of the plants slows, sugar stored in the fruits is drawn off to supply the plants with energy. Therefore, ripe melons harvested after a prolonged period of heavy rain should be less sweet than other ripe melons.

2. In the argument given, the two portions in boldface play which of the following roles?
- A. The first states the conclusion of the argument as a whole; the second provides support for that conclusion.
  - B. The first provides support for the conclusion of the argument as a whole; the second provides evidence that supports an objection to that conclusion.
  - C. The first provides support for an intermediate conclusion that supports a further conclusion stated in the argument; the second states that intermediate conclusion.
  - D. The first serves as an intermediate conclusion that supports a further conclusion stated in the

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argument; the second states the position that the argument as a whole opposes.

E. The first states the position that the argument as a whole opposes; the second supports the conclusion of the argument.

Columnist: Until very recently, Presorbin and Veltrex, two medications used to block excess stomach acid, were both available only with a prescription written by a doctor. In an advertisement for Presorbin, its makers argue that **Presorbin is superior** on the grounds that doctors have written 200 million prescriptions for Presorbin, as compared to 100 million for Veltrex. It can be argued that the number of prescriptions written is never a worthwhile criterion for comparing the merits of medicines, but that **the advertisement's argument is absurd** is quite adequately revealed by observing that Presorbin was available as a prescription medicine years before Veltrex was.

3. In the columnist's argument, **the two highlighted portions** play which of the following roles?

A. The first is a claim that the columnist's argument seeks to clarify; the second states a conclusion drawn about one possible interpretation of that claim.

B. The first identifies the conclusion of an argument that the columnist's argument is directed against; the second states the main conclusion of the columnist's argument.

C. The first states the main conclusion of the columnist's argument; the second states a conclusion that the columnist draws in defending that conclusion against an objection.

D. The first identifies an assumption made in an argument that the columnist's argument is directed against; the second states the main conclusion of the columnist's argument.

E. The first is a claim that has been offered as evidence to support a position that the columnist opposes; the second states the main conclusion of the columnist's argument.

**The number of traffic deaths in our region has increased over the past several years.** Because the poor condition of our roads and highways has caused a number of fatal accidents, the road commission recommended that, to reduce traffic deaths, the budget for road maintenance should be increased. **Many major traffic deaths, however, are attributed to traffic congestion than to poor road condition,** and better road will encourage people to drive more, worsen traffic congestion. So a better strategy for the road commission to recommend would be to reduce traffic congestion, though the best means for doing so remains to be determined. Improving mass transit is only one possibility.

4. In the politician's argument, **the two highlighted portions** play which of the following roles?

A. The first introduce the position that the politician seeks to establish, the second provides evidence to support that position.

B. The first introduces the position that the politician seeks to establish, the second is evidence that was cited in support of the position that the politician opposes.

C. The first introduces the position that the politician seeks to establish, the second is an intermediate conclusion that is made in order to support that position.

D. The first introduces a problem, the response to which is presented in the argument, the second provides evidence that is aimed at arguing that a proposed response to this problem will turn out to be

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counterproductive.

E. The first introduces a problem, the response to which is presented in the argument, the second is evidence that was cited in support of a response that the politician opposes.

Stylistic evidence and laboratory evidence strongly support the claim that the magnificent painting *Garden of Eden* is a work of the Flemish master van Eyck. Nevertheless, **the painting must have been the work of someone else**, as anyone with a little historical and zoological knowledge can tell merely by looking at the painting. **The animals in the painting are all vivid representations of actual animals, including armadillos.** Yet armadillos are native only to Americas, and van Eyck died decades before Europeans reached the Americas.

5. In the argument given, the two highlighted portions play which of the following roles?

- A. The first is a position that the argument seeks to reject, the second is evidence that the argument uses against that position.
- B. The first and the second are each pieces of evidence that have been used to support the position that the argument opposes.
- C. The first presents the main conclusion of the argument; the second provides evidence in support of that conclusion.
- D. The first is a judgment that serves as the basis for the main conclusion of the argument; the second states that main conclusion.
- E. The first is an intermediate conclusion drawn in order to support a further conclusion stated in the argument; the second provides evidence in support of that intermediate conclusion.

In most coastal regions, the level of the sea is rising in relation to the land by one to two millimeters a year, and this trend would be explained by the hypothesis that at the North and South Poles, the amount of ice that melts during the summer now exceeds the amount forms during the winter. The hypothesis is not undermined by observations that **sea levels are falling relative to the Scandinavian coast by four millimeters a year.** Much land in northern latitudes, including Scandinavia, is still rising in response to being freed of the enormous weight of the ice that used to cover it during the last ice age, and **in Scandinavia the land is now rising faster than the sea.**

6. In the passage, the two highlighted portions play which of the following roles?

- A. The first states observations the accuracy of which is challenged in the passage; the second is part of the ground on which that challenge is based.
- B. The first states observations that, according to the passage, are incompatible with a certain hypothesis; the second is part of the grounds offered in support of a revision of that hypothesis.
- C. The first states observations that, according to the passage, can be reconciled with a certain hypothesis; the second describes a phenomenon that is the factual basis of that reconciliation.
- D. The first presents a phenomenon, two competing explanations of which are considered in the passage; the second is the explanation of the phenomenon that the passage argues is correct.
- E. The first provides evidence against a position; the second is that position.

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Editors of major United States newsmagazines have been criticized for reducing the amount of space these magazines devote to international news. According to these editors, however, readers are wholly to blame for the reductions. After all, the editors point out, **sales of magazine issues that prominently feature international news stories have declined significantly**, and declining sales reflect declining reader interest. Yet even if true, this evidence does not refute the contention that editors should bear some of the blame for the reductions, unless editors are merely passive instruments responding to reader interest. And that is clearly an untenable view, since **editors can often intensify reader interest in a news topic by giving it frequent coverage**.

7. In the argument as a whole, the two highlighted portions play which of the following roles?
- A. The first is evidence that has been used to support a position that the argument opposes; the second is a point that the argument raises to cast doubt on the reasoning used to support that position.
  - B. The first presents a claim, the truth of which is evaluated in the argument, the second is information introduced to cast doubt on that claim.
  - C. The first presents a claim, the truth of which is evaluated in the argument, the second provides evidence in support of that claim
  - D. The first cites evidence in support of the main conclusion of the argument, the second states that conclusion
  - E. The first states an assumption that is explicitly made to support the main conclusion of the argument, the second is a position that the argument as a whole opposes.

In the country of Seligia, where asbestos have been used extensively in construction, that use is about to be banned, because the exposure of construction workers to asbestos can cause a certain type of cancer. We can predict that **the ban will result in reducing the incidence of that type of cancer in Seligia by as much as 50 percent**.

It is true that **no more than 30 percent of the death certificates of Seligians who have died of that cancer have “constructions” listed as the deceased’s occupation**. The cancer takes about 2-years after exposure to develop, however, and Seligians who have worked in construction commonly turn to less strenuous occupations as they age. Slogan death certificates indicate only the deceased’s last occupation.

8. In the argument given, the two highlighted portions play which of the following roles?
- A. the first is a prediction that the argument seeks to defend; the second presents evidence that if not supplemented would cast doubt on that judgment.
  - B. the first is a prediction that the argument seeks to defend; the second is a finding, the accuracy of which is disputed by the argument as a whole.
  - C. the first is a prediction that the argument as a whole rejects; the second presents evidence on which that rejection is based.
  - D. the first is a prediction that the argument as a whole seeks to defend; the second is evidence that the defense can be at best partly successful.
  - E. the first is a prediction that is cited in order to justify a stated conclusion; the second is a consideration that has been raised against that conclusion.

**Cuts that need to be held closed in order to heal properly have generally been held closed**

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**with stitches.** However, pressure to reduce medical costs is mounting. Consequently, it is likely that a newly developed adhesive will become the routine method of holding most types of cuts closed. The new adhesive holds most types of cuts closed as well as stitches do, and the cost of applying it is comparable to that of closing cuts with stitches. But whereas stitches must generally be removed by medical personnel after the cut has healed, the adhesive simply wears off. **Thus, for any cut that the adhesive can hold closed as well as stitches can, it is more economical to use the adhesive.**

9. In the argument given, the two highlighted portions play which of the following roles?

- A. The first is a claim that the argument disputes; the second provides evidence against that disputed claim.
- B. The first is a claim that is used as supporting evidence for the main conclusion of the argument; the second is that main conclusion.
- C. The first is a claim that is used as supporting evidence for the main conclusion of the argument; the second is a conclusion that is drawn in order to support that main conclusion.
- D. The first introduces a practice about which the argument makes a prediction, the second is a conclusion based on that prediction.
- E. The first introduces a practice about which the argument makes a prediction; the second is an assessment that is used to support that prediction.

The traditional color of fire trucks is red, but in cities that have introduced yellow trucks into their fleets, the rate of traffic accidents per mile driven among these trucks has been far lower than the rate among red trucks. Some critics of the innovation have questioned whether **this difference should be attributed to color**, given that the yellow trucks were generally newer than the red trucks with which they were compared. But this criticism can be dismissed. Certainly, **the mere difference in accident rates is not decisive evidence.** The decisive fact is that the rates differed significantly only in the hours around dawn and dusk. At these hours, the visibility of yellow is known to be better than that of red.

10. In the argument given, the two highlighted portions play which of the following roles?

- A. The first is a statement of the position the argument as a whole opposes, the second is a statement of the position it defends.
- B. The first is a claim that the argument as a whole calls into question, the second denies the rationale presented by some critics of that claim.
- C. The first is a claim that the argument as a whole calls into question, the second points out an error of reasoning made by defenders of that claim.
- D. The first is the position defended in the argument; the second is an intermediate conclusion drawn to support that position.
- E. The first is the position defended in the argument; the second concedes a point to critics of that position.

Archaeologists recently excavated a collection of copper tools from a grave in India. Although the tools were similar to others from the same culture, each tool found in the grave was significantly larger than any other known tool of the corresponding type produced by the same culture. Since the larger size would have made many of the tools extremely unwieldy, **the tools were probably made**

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**specifically for ceremonial burial.** Tools made for ceremonial burial would be expected to have none of the wear that comes from use, and **indeed these tools showed no such wear.**

11. In the argument given, the two highlighted portions play which of the following roles?
- A. The first is introduced as evidence that apparently supports a position the argument opposes, the second is that position.
  - B. The first is introduced as evidence that apparently supports a position the argument opposes, the second is the position the argument seeks to support.
  - C. The first is the position the argument seeks to support, the second provides evidence to support that position.
  - D. The first provides evidence for the position the argument seeks to support, the second is a position that the argument seeks to disprove.
  - E. The first provides evidence for the position the argument seeks to support, the second is that position.

The traditional color of fire trucks is red, but in cities that have introduced yellow trucks into their fleets, the rate of traffic accidents per mile driven among these trucks has been far lower than the rate among red trucks. Some critics of the innovation have questioned whether **this difference should be attributed to color**, given that the yellow trucks were generally newer than the red trucks with which they were compared. But this criticism can be dismissed. Certainly, **the mere difference in accident rates is not decisive evidence.** The decisive fact is that the rates differed significantly only in the hours around dawn and dusk. At these hours, the visibility of yellow is known to be better than that of red.

12. In the argument given, the two highlighted portions play which of the following roles?
- A. The first is a statement of the position the argument as a whole opposes; the second is a statement of the position it defends.
  - B. The first is a claim that the argument as a whole calls into question; the second denies the rationale presented by some critics of that claim.
  - C. The first is a claim that the argument as a whole calls into question; the second points out an error of reasoning made by defenders of that claim.
  - D. The first is the position defended in the argument; the second is an intermediate conclusion drawn to support that position.
  - E. The first is the position defended in the argument; the second concedes a point to critics of that position.

### Question Type Two: Inference

A ten-year comparison between the United States and the Soviet Union in terms of crop yields per acre revealed that when only planted acreage is compared, Soviet yields were equal to 68 percent of United States yields. When total agricultural acreage (planted acreage plus fallow acreage) is compared, however, Soviet yield was 114 percent of United States yield.

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1. From the information above, which of the following can be most reliably inferred about United States and Soviet agriculture during the ten-year period?

- A. A higher percentage of total agricultural acreage was fallow in the United States than in the Soviet Union.
- B. The United States had more fallow acreage than planted acreage.
- C. Fewer total acres of available agricultural land were fallow in the Soviet Union than in the United States.
- D. The Soviet Union had more planted acreage than fallow acreage.
- E. The Soviet Union produced a greater volume of crops than the United States produced.

New methods developed in genetic research have led taxonomists to revise their views on the evolutionary relationships between many species. Traditionally the relatedness of species has been ascertained by a close comparison of their anatomy. The new methods infer the closeness of any two species' relationship to each other directly from similarities between the species' genetic codes.

2. Which of the following conclusions is best supported by the information?

- A. The apparent degree of relatedness of some species, as determined by anatomical criteria, is not borne out by their degree of genetic similarity.
- B. When they know the differences between two species' genetic codes, taxonomists can infer what the observable anatomical differences between those species must be.
- C. The degree to which individuals of the same species are anatomically similar is determined more by their genetic codes than by such environmental factors as food supply.
- D. The traditional anatomical methods by which taxonomists investigated the relatedness of species are incapable of any further refinement.
- E. Without the use of genetic methods, taxonomists would never be able to obtain any accurate information about species' degrees of relatedness to one another.

Years ago, consumers in Frieland began paying an energy tax in the form of two Frieland pennies for each unit of energy consumed that came from nonrenewable sources. Following the introduction of this energy tax, there was a steady reduction in the total yearly consumption of energy from nonrenewable sources.

3. If the statements in the passage are true, then which of the following must on the basis of them be true?

- A. There was a steady decline in the yearly revenues generated by the energy tax in Frieland.
- B. There was a steady decline in the total amount of energy consumed each year in Frieland.
- C. There was a steady increase in the use of renewable energy source in Frieland.
- D. The revenues generated by the energy tax were used to promote the use of energy from renewable sources.
- E. The use of renewable energy sources in Frieland greatly increased relative to the use of nonrenewable energy sources.

Normally, seeds of *Emmenanthe penduliflora* stay dormant for years and germinate only when a

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fire burns through their habitat. Nitrogen dioxide in the smoke induces the seeds to germinate. Fires clear the bush, allowing germinating seeds to receive the sunlight they need to grow. The plants mature quickly, produce seeds, and then die. In areas with heavy automobile traffic, however, the seed germinates in the absence of fire, with automobile exhaust supplying the required nitrogen dioxide.

4. The information given, if accurate, most strongly supports which of the following hypotheses?
- A. Fires in the habitat of *E. penduliflora* do not entirely destroy the plant's seeds even in the places where the fires burn most intensely.
  - B. The nitrogen dioxide in automobile exhaust cannot harm plants of *E. penduliflora* after germination.
  - C. If human intervention decreases the number of fires in the habitat of *E. penduliflora*, automobile exhaust can replicate the conditions the plant requires in order to thrive.
  - D. Within the habitat of *E. penduliflora*, natural fires are significantly more frequent in areas with heavy automobile traffic than they are in other areas.
  - E. Unless *E. penduliflora* seeds that have germinated can survive in the shade, automobile exhaust threatens the long-term survival of the plant in areas with heavy automobile traffic.

The manuscript of a previously unknown ragtime piano piece recently been discovered. The manuscript is unsigned and has the notation "New York City, 1899" written on it. In 1899 Ben Harney was the New York musician most closely associated with ragtime. The style of the piece, however, is closer to that of Scott Joplin, but scholars believe that Joplin did not visit New York before 1906.

5. From the information given, which of the following can properly be concluded?
- A. If Scott Joplin wrote the piece, either he did visit New York before 1906 or the notation on the manuscript does not reflect the place and date of composition of the piece.
  - B. Ben Harney was stylistically influenced by Scott Joplin's music before Joplin ever visited New York.
  - C. If Scott Joplin did not visit New York before 1906, then neither Ben Harney nor Scott Joplin composed the work.
  - D. The notation on the manuscript was intended to signify something other than the place and date of composition of the piece.
  - E. If the dating on the manuscript accurately reflects when and where the piece was composed, then Scott Joplin visited New York earlier than scholars have believed.

Monarch butterflies lay their eggs hundreds of miles away from their places of origin. Each caterpillar that emerges feeds exclusively on milkweed, absorbing the glycosides that milkweed contains. Butterflies contain the glycosides they absorb as caterpillars. Research on monarch butterflies whose migration has been tracked shows that the combination of glycosides in a butterfly always exactly matches the distinctive combination of glycosides that exists in the species of milkweed in the butterfly's place of origin.

6. If the information provided is true, which of the following is most strongly supported on the basis of it?
- A. The glycosides present in a monarch caterpillar will generally match those that were present in the butterfly that laid the egg from which the caterpillar emerged.



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- B. Glycosides play an essential role in the biological mechanism that guides a monarch butterfly in its migration.
- C. The monarch butterflies present in a given region will all contain the same specific combination of glycosides
- D. A monarch butterfly does not absorb and accumulate glycosides from the milkweed of regions it reaches as a result of migration.
- E. Glycosides are the only identifiable substances from milkweed that accumulate in a monarch caterpillar and are retained in the body of the butterfly after metamorphosis.

### Question Type Three: Contradiction

In the United States between 1850 and 1880, the number of farmers continued to increase, but at a rate lower than that of the general population.

1. Which of the following statements directly contradicts the information presented above?
- A. The number of farmers in the general population increased slightly in the 30 years between 1850 and 1880.
- B. The rate of growth of the United States labor force and the rate of growth of the general population rose simultaneously in the 30 years between 1850 and 1880.
- C. The proportion of farmers in the United States labor force remained constant in the 30 years between 1850 and 1880.
- D. The proportion of farmers in the United States labor force decreased from 64 percent in 1850 to 49 percent in 1880.
- E. The proportion of farmers in the general population increased from 68 percent in 1850 to 72 percent in 1880.

### Question Type Four: Explanation

During the day in Lake Constance, the zooplankton *D. hyalina* departs for the depths where food is scarce and the water cold. *D. galeata* remains near the warm surface where food is abundant. Even though *D. galeata* grows and reproduces much faster, its population is often outnumbered by *D. hyalina*.

1. Which of the following, if true, would help resolve the apparent paradox presented above?
- A. The number of species of zooplankton living at the bottom of the lake is twice that of species living at the surface.
- B. Predators of zooplankton, such as whitefish and perch, live and feed near the surface of the lake during the day.
- C. In order to make the most of scarce food resources, *D. hyaline* matures more slowly than *D. galeata*.
- D. *D. galeata* clusters under vegetation during the hottest part of the day to avoid the Sun's rays.

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E. *D. galeata* produces twice as many offspring per individual in any given period of time as does *D. hyalina*.

In the past ten years, there have been several improvements in mountain-climbing equipment. These improvements have made the sport both safer and more enjoyable for experienced climbers. Despite these improvements, however, the rate of mountain climbing injuries has doubled in the past ten years.

2. Which of the following, if true, best reconciles the apparent discrepancy presented in the passage?
- A. Many climbers, lulled into a false sense of security, use the new equipment to attempt climbing feats of which they are not capable.
  - B. Some mountain-climbing injuries are caused by unforeseeable weather conditions.
  - C. Mountain climbing, although a dangerous sport, does not normally result in injury to the experienced climber.
  - D. In the past ten years there have been improvements in mountain-climbing techniques as well as in mountain-climbing equipment.
  - E. Although the rate of mountain-climbing injuries has increased, the rate of mountain-climbing deaths has not changed.

Astronomers found a large body orbiting close to the star Upsilon Andromedae. The standard theory of planet formation holds that no planet that large could be formed so close to a star, leading to the suggestion that the body is a companion star. A subsequent discovery puts that suggestion in doubt: two other large bodies were found orbiting close to Upsilon Andromedae, and the standard theory of companion stars allows for at most one companion star.

3. Which of the following, if true, most helps to resolve the status of the orbiting body without casting doubt on the two standard theories mentioned?
- A. The smaller a planet orbiting a star is, and the farther away it is from the star, the less likely it is to be discovered.
  - B. If a planet's orbit is disturbed, the planet can be drawn by gravity toward the star it is orbiting.
  - C. The largest of the bodies orbiting Upsilon Andromedae is the farthest away from the star, and the smallest is the nearest.
  - D. It is likely that there are many stars, in addition to Upsilon Andromedae and the Sun, that are orbited by more than one smaller body.
  - E. In most cases of companion stars, the smaller companion is much fainter than the larger star.

Electric washing machines, first introduced in the United States in 1925, significantly reduced the amount of time spent washing a given amount of clothes, yet the average amount of time households spent washing clothes increased after 1925. This increase is partially accounted for by the fact that many urban households had previously sent their clothes to professional laundries. But the average amount of time spent washing clothes also increased for rural households with no access to professional laundries.

4. Which of the following, if true, most helps to explain why the time spent washing clothes increased

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in rural areas?

- A. People with access to an electric washing machine typically wore their clothes many fewer times before washing them than did people without access to electric washing machines.
- B. Households that had sent their clothes to professional laundries before 1925 were more likely than other households to purchase an electric washing machine when they became available.
- C. People living in urban households that had previously sent their clothes to professional laundries typically owned more clothes than did people living in rural households.
- D. The earliest electric washing machines required the user to spend much more time beside the machine than do modern electric washing machines.
- E. In the 1920s and 1930s the proportion of rural households with electricity was smaller than the proportion of urban households with electricity.

Sportfishers introduced the Zander, a type of perch, to Britain's rivers and canals in the 1970s. Because zander eat large numbers of smaller fish, they have had a devastating effect on native fish populations. To protect the native fish, a government program removed a significant proportion of the zander from Britain's waterways last year. Surprisingly, this year the loss of native fish to zander has been greater than before.

5. Which of the following, if true, would most help to explain the greater effect of zander on the native fish population?

- A. The climate in Britain is very similar to the climate in regions to which zander are native.
- B. Most of the zander removed were fully grown, and fully grown zander eat large numbers of smaller zander.
- C. Every year a large number of zander are caught by sportfisher in Britain's waterway.
- D. Previous government program designed to remove nonnative species from Britain's waterways have failed.
- E. Zander are just one of several nonnative fish that prey on the other fish found in Britain's waterway.

Despite the fact that the health-inspection procedure for catering establishments are more stringent than those for ordinary restaurant, more of the cases of food poisoning reported to the city health department were brought on by banquets served by catering services than were brought on by restaurant meals.

6. Which of the following, if true, helps explain the apparent paradox in the statement above?

- A. A significantly larger number of people eat in restaurants than attend catered banquets in any given time period.
- B. Catering establishments know how many people they expect to serve, and therefore are less likely than restaurants to have, and serve, leftover foods, a major source of food poisoning.
- C. Many restaurant provide catering services for banquets in addition to serving individual meals.
- D. The number of reported food-poisoning cases at catered banquets is unrelated to whether the meal is served on the caterer's or the client's premises.
- E. People are unlikely to make a connection between a meal they have eaten and a subsequent illness unless the illness strikes a group who are in communication with one another.

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Despite a dramatic increase in the number of people riding bicycles for recreation in Parkville, a recent report by the Parkville Department of Transportation shows that the number of accidents involving bicycles has decreased for the third consecutive year.

7. Which of the following, if true during the last three years, best reconciles the apparent discrepancy in the facts?

- A. The Parkville Department of Recreation confiscated abandoned bicycles and sold them at auction to any interested Parkville residents.
- B. Increased automobile and bus traffic in Parkville had been the leading cause of the most recent increase in automobile accidents.
- C. Because of the local increase in the number of people bicycling for recreation, many out-of-town bicyclists ride in the Parkville area.
- D. The Parkville Police Department enforced traffic rules for bicycle riders much more vigorously and began requiring recreational riders to pass a bicycle safety course.
- E. The Parkville Department of Transportation canceled a program that required all bicycles to be inspected and registered each year.

Although initially symptomless, glaucoma can eventually cause blindness when not properly treated. Tests under laboratory conditions of the traditional treatment, daily administration of eyedrops, show it to be as effective in relieving the internal ocular pressure that causes glaucoma as is a new laser-surgical procedure. Yet glaucoma-related blindness occurs in a significantly smaller percentage of patients who have had the surgery than of patients for whom only the eyedrop treatment was prescribed.

8. Which of following, if true, most helps to explain the low rate glaucoma-related blindness among patients who had the surgery?

- A. Glaucoma-related blindness is no more common among patients who have had only the surgery than it is among patients who had the surgery after using the eyedrops
- B. Doctors rarely recommend the surgery for glaucoma patients who have already started the traditional course of treatment
- C. There is no known physiological cause of glaucoma other than increase in pressure inside the eye
- D. A significant percentage of the people for whom the eyedrop treatment has been prescribed fail to follow the prescribed daily regimen, because the eyedrops have unpleasant side effects.
- E. The eyedrops traditionally prescribed to treat glaucoma are normally prescribed to treat other disease of the eye.

The accepted model of planetary formation holds that Jupiter-sized planets could only form in orbits much farther from their parent star than Earth is from the Sun. Recently, astronomers have detected planets orbiting stars other than the Sun, and some of these planets, though as large as Jupiter, have orbits around stars older than the Sun that are much closer to those stars than Earth's orbit is to the Sun. Nonetheless, most astronomers continue to regard the accepted model as correct.

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9. Which of the following, if true, provides astronomers with the strongest grounds for continuing to regard the accepted model of planetary formation as correct, despite the new discoveries?

- A. The instruments used to detect planets orbiting other stars are incapable of detecting planets that are smaller than Jupiter
- B. Only a small fraction of the stars likely to have planets have been examined so far
- C. After being formed, planets as small as Earth might be attracted to larger planets, eventually becoming their satellites.
- D. There is no known reason why older stars would tend to be more likely than younger stars to have planets.
- E. Planets tend to be drawn into closer orbits to their parent star as time passes

### Question Type Five: Weaken

In 1998 the United States Department of Transportation received nearly 10,000 consumer complaints about airlines; in 1999 it received over 20,000. Moreover, the number of complaints per 100,000 passengers also more than doubled. In both years the vast majority of complaints concerned flight delays, cancellations, mishandled baggage, and customer service. Clearly, therefore, despite the United States airline industry's serious efforts to improve performance in these areas, passenger dissatisfaction with airline service increased significantly in 1999.

1. Which of the following, if true, most seriously weakens the argument?

- A. Although the percentage of flights that arrived on time dropped slightly overall, from 77 percent in 1998 to 76 percent in 1999, some United States airlines' 1999 on-time rate was actually better than their 1998 on-time rate.
- B. The number of passengers flying on United States airlines was significantly higher in 1999 than in 1998.
- C. Fewer bags per 1,000 passengers flying on United States airlines were lost or delayed in 1999 than in 1998.
- D. The appearance in 1999 of many new Internet sites that relay complaints directly to the Department of Transportation has made filing a complaint about airlines much easier for consumers than ever before.
- E. Although the number of consumer complaints increased for every major United States airline in 1999, for some airlines the extent of the increase was substantial, whereas for others it was extremely small.

The average temperature of the lobster-rich waters off the coast of Foerkland has been increasing for some years. In warmer water, lobsters grow faster. In particular, lobster larvae take less time to reach the size at which they are no longer vulnerable to predation by young cod, the chief threat to their survival. Consequently, the survival rate of lobster larvae must be going up, and the lobster population in Foerkland's coastal waters is bound to increase.

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2. Which of the following, if true, most seriously weakens the argument?

- A. There are indications that in recent years the fishing fleet operating off the coast of Foerkland has been taking cod at an unsustainably high rate.
- B. The increase in water temperatures off Foerkland has not been as pronounced as the increase in average soil temperatures in Foerkland.
- C. Because of their speeded-up growth, lobsters now get large enough to be legal catch before they reach reproductive maturity.
- D. Even though lobsters grow faster in warmer waters, warmer waters have no effect on the maximum size to which a lobster can eventually grow.
- E. Cod are a cold-water species, and the increasing water temperatures have caused a northward shift in Foerkland's cod population.

Even after numerous products made with artificial sweeteners became available, sugar consumption per capita continued to rise. Now manufacturers are introducing fat-free versions of various foods that they claim have the taste and texture of the traditional high-fat versions. Even if the manufacturers' claim is true, given that the availability of sugar-free foods did not reduce sugar consumption, it is unlikely that the availability of these fat-free foods will reduce fat consumption.

3. Which of the following, if true, most seriously undermines the argument?

- A. Several kinds of fat substitute are available to manufacturers, each of which gives a noticeably different taste and texture to products that contain it.
- B. The products made with artificial sweeteners did not taste like products made with sugar.
- C. The foods brought out in sugar-free versions did not generally have reduced levels of fat, but many of the fat-free versions about to be introduced are low in sugar.
- D. People who regularly consume products containing artificial sweeteners are more likely than others to consume fat-free foods.
- E. Not all foods containing fat can be produced in fat-free versions.

There are many structural and thematic similarities between *Piers Plowman* by Langland (1330-1400) and *House of Fame* by Chaucer (1342-1400), two Middle English poems relating dream visions. Some critics have argued that because a number of the shared elements are uncommon in Middle English poetry, and because Langland's poem probably predates Chaucer's by a few years, Chaucer was most likely influenced by *Piers Plowman* when writing *House of Fame*.

4. Which of the following, if true, most seriously weakens the critics' argument?

- A. *Piers Plowman* is one of Langland's major works, whereas *House of Fame* is a minor work of Chaucer's.
- B. *House of Fame* survives in only three manuscript copies, substantially fewer than the number of manuscript copies that exist of *Piers Plowman*.
- C. Because *Piers Plowman* became a well-known work in its day, it is likely that the similarities between it and *House of Fame* were detected by many of the people who read *House of Fame* soon after Chaucer wrote it.
- D. Many of the themes and structures of *Piers Plowman* are also found in Latin, Italian, French works with which Chaucer could well have been familiar.

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E. There is no evidence that Chaucer and Langland ever met or that they corresponded with each other about literary topics.

The Great Sphinx is a huge statue in Egypt that has a lion's body with a man's head. The face of the Sphinx has long been claimed to be that of pharaoh Khafre, who lived around 2600 B.C., but it cannot be: erosion patterns recently discovered on the lion's legs can only have been caused by heavy rains, and the Sahara has not had heavy rains in over 10,000 years.

5. Which of the following, if true, most seriously weakens the argument?

- A. The face of the Sphinx bears a resemblance to the faces on certain stylized statues dating from both before and after the reign of Khafre.
- B. Other erosion patterns that appear on the body of the Sphinx are of a sort that could be caused by wind and sand alone
- C. Other than the Sphinx, there are no surviving sculptures that have been claimed to portray the face of Khafre.
- D. In the last 10,000 years the climate of Egypt has been so dry that even rains that are not heavy have been extremely infrequent.
- E. The face of the Sphinx is small relative to the rest of the head, indicating that the face may have been recarved long after the Sphinx was built.

As an example of the devastation wrought on music publishers by the photocopier, one executive noted that for a recent choral festival with 1,200 singers, the festival's organizing committee purchased only 12 copies of the music published by her company that was performed as part of the festival.

6. Which of the following, if true, most seriously weakens the support the example lends to the executive's contention that music publishers have been devastated by the photocopier?

- A. Only a third of the 1,200 singers were involved in performing the music published by the executive's company.
- B. Half of the singers at the festival had already heard the music they were to perform before they began to practice for the festival.
- C. Because of shortages in funding, the organizing committee of the choral festival required singers to purchase their own copies of the music performed at the festival.
- D. Each copy of music that was performed at the festival was shared by two singers.
- E. As a result of publicity generated by its performance at the festival, the type of music performed at the festival became more widely known.

Last year, Mayor Stephens established a special law-enforcement task force with the avowed mission of eradicating corruption in city government. The mayor's handpicked task force has now begun prosecuting a dozen city officials. Since all of these officials were appointed by Mayor Bixby, Mayor Stephens' predecessor and longtime political foe, it is clear that those being prosecuted have been targeted because of their political affiliations.

7. Which of the following, if true, most weakens the editorial's argument?

- A. Complaints of official corruption in city government have decreased since the anticorruption task

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force began operating.

- B. Former mayor Bixby did not publicly oppose Mayor Stephens' establishment of the anticorruption task force.
- C. Almost all of the officials who have served in city government for any length of time are appointees of Mayor Bixby.
- D. All of the members of the anticorruption task force had other jobs in city government before the task force was formed.
- E. During the last mayoral election campaign, then-Mayor Bixby hotly disputed the current mayor's claim that there was widespread corruption in city government.

Princessfish are a species of coral-reef fish that are captured alive by divers who first stun the individual fish by squirting a certain poison at them. Since the divers limit their catch to a few individuals and take care not to overfish, the divers' continuing activities will clearly not result in serious harm to populations of princessfish.

8. Which of the following, if true, most seriously weaken the argument given?

- A. Princessfish cannot be captured alive by traditional methods of fishing.
- B. The poison used to stun the princessfish has no effect on humans who eat them.
- C. Demand for princessfish has remained steady during the last decade.
- D. Traces of the poison that remain in the seawater damage the corals that create and maintain the reefs on which princessfish depend.
- E. Fish that have been stunned but have selected for capture by the divers soon recover from the temporary effect of the poison.

Low bone density is the primary risk factor for bone fractures. People with a physically inactive lifestyle provide a case in point: their bone density decreases and, as a result, they become increasingly prone to bone fractures. People who routinely take Omega sleeping pills are also uncommonly prone to bone fractures, even as compared to users of other sleeping pills. Clearly, when data on Omega users' bone density are collected, what they will show is below-average bone density.

9. Which of the following, if true, casts most doubt on the prediction?

- A. When taken regularly, Omega sleeping pills, more than other sleeping pills, cause people to be unsteady on their feet.
- B. Omega sleeping pills, when taken regularly, can be taken in gradually decreasing dose without any diminution of the desired effect.
- C. Measuring a person's bone density is not currently a part of a routine medical checkup.
- D. In people whose bone density decreases, the likelihood of a hip fracture increases at a greater rate than does the likelihood of any other kind of bone fracture.
- E. People who regularly take Omega sleeping pills are no more likely than people in general are to have a physically inactive lifestyle.

A photograph from 1843 is sometimes claimed to be the earliest surviving portrait of Abraham Lincoln (1809-1865), sixteenth President of the United States. The photograph shows a face without a cleft chin, whereas Lincoln's chin was cleft. However, since skilled retouching of a photographic



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negative can undetectably change a feature such as a cleft chin in portraits produced from the negative, absence of a cleft chin is inconclusive as evidence that the photograph is not Lincoln.

10. Which of the following, if true, most seriously undermines the argument?

- A. Few of the authenticated photographs of Lincoln show his cleft chin, since during his presidency (1860-1865) he was bearded.
- B. An authenticated photograph of Lincoln taken in 1846 clearly shows a cleft chin.
- C. The photograph was made by the daguerreotype process, an early photographic process in which no negative was produced.
- D. The 1843 photograph differs from authenticated photographs of Lincoln from the time before he was President in that those photographs show a man with a sunburned face and wearing rough clothes.
- E. There is no surviving documentary evidence from Lincoln's letters or elsewhere that he sat for a photograph at any time before 1846.

Use of conventional flu medications remains common. However, in recent years, use of Sabocin, a nonconventional herbal remedy for the flu, has increased. Sabocin's effectiveness relative to conventional medications is unproven, but it is clear Sabocin is less likely to cause unpleasant side effects: Only 35 percent of people who have used Sabocin recall an unpleasant side effect, whereas 55 percent of those people recall having experienced an unpleasant side effect when they took conventional flu medication.

11. Which of the following, if true, most seriously weakens the argument?

- A. Sabocin is not the most popular nonconventional herbal remedy for the flu.
- B. Most people with the flu will recover within a week even if they do not take any sort of remedy.
- C. People who have experienced unpleasant side effects from a conventional flu medication are more likely to try Sabocin.
- D. The makers of Sabocin do not manufacture any conventional flu medication.
- E. Any particular case of the flu tends to be medicated with either conventional flu medications or nonconventional remedies, but not with both.

The Rivera Art Museum recently began charging admission. The resulting decline in visitors has been far larger than at other local museums, which have also begun charging admission. The magnitude of the decline might be due to the Rivera's location near government offices. Because an admission charge is most discouraging to those who plan a short visit, it is likely that government workers who formerly made brief visits during lunchtime and after work now do not.

12. Which of the following, if true, most seriously undermine the proposed explanation?

- A. The fee for admission to the Rivera is no larger than that charged by other museums.
- B. The Rivera does not keep track of how long individual visitors stay in the museum.
- C. The decline in visitors to the Rivera has been no greater on workdays than it has been on nonworking days.
- D. The museum with the smallest decline in visitors is the most popular with visitors from other countries.
- E. In the period between the announcement that there would be an admissions charge and its actual

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introduction, there was an increase in visitors at the Rivera.

Many shipwrecks dating from the period between A.D. 300 and 600 have been discovered in the Ramian Sea. Well over half of those ships were carrying cargo stored in large ceramic jars, many of which were preserved largely intact on the ocean floor. During that period, such jars carried only liquid. Therefore, liquid cargo was probably carried by a majority of the cargo ships that navigated the Ramian Sea during that period.

13. The force of the evidence cited in the passage is most seriously weakened if which of the following is true?

- A. For ships on the Ramian Sea during the period, a full load of liquid cargo stored in large ceramic jars was not likely to be significantly heavier than a full load of other kinds of cargo that were typical of the period.
- B. There are no surviving records dating from the period that detail specific cargoes shipped across the Ramian Sea.
- C. The ratio of liquid to solid cargo shipped across the Ramian Sea did not vary significantly over the period.
- D. The presence of a sizable quantity of large ceramic jars on the ocean floor is so visually striking that a shipwreck of a ship carrying such jars is more likely to be noticed and reported than are shipwrecks of ships carrying other cargoes.
- E. During the period, grain and other solid cargo was shipped across the Ramian Sea in containers made from material other than clay.

Liane: While the government of Marania was building the new hydroelectric dam in the Cafu River valley, archaeologists discovered an incredibly important new site in the area. The government has agreed to postpone flooding of the area, but only by four months, not the two years some experts think necessary. Clearly, the government's avowed "commitment to Marania's cultural heritage" is a sham.

Tibor: Untrue! The archaeologists working at the site declared themselves entirely satisfied.

14. Which of the following, if true, could best be used to counter Tibor's objection?

- A. If it had not been for the impending flooding, the site might have remained undiscovered for many more years.
- B. Many of the objects already found at the site can readily be moved to higher ground that is safe from being flooded.
- C. The sincerity of the Marania government's commitment to the country's cultural heritage has not in the past been seriously questioned.
- D. Most of the on-site archaeologists are foreigners whose digging permits would be revoked immediately if the Maranian government believed they were criticizing it.
- E. Residents of the Cafu River valley are counting on the electricity from the dam to stimulate economic development.

Astronomers occasionally detect gamma-ray bursts in the sky. Matter crashing onto neutron stars in our galaxy would emit gamma-ray bursts with durations and intensities like those of the bursts

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observed by astronomers. Therefore, such interactions between matter and neutron stars are, plausibly, the explanation for these bursts.

15. Which of the following, if true, most strongly undermines the proposed explanation for gamma-ray bursts?

- A. Astronomers first detected gamma-ray bursts in 1973, whereas neutron stars were known to exist several decades before that.
- B. Astronomers believe that neutron stars are the remnants of stars that once violently exploded and ejected most of their constituent matter.
- C. Gamma-ray bursts vary in duration from as little as a thousandth of a second to more than 100 seconds.
- D. Gamma-ray bursts occur just as often in regions of the sky where neutron stars are thought not to exist as they do where neutron stars are known to exist.
- E. Some neutron stars emit short pulses of radio waves, which are known to be of lower frequency than gamma rays.

Between 1970 and 1980, energy consumption by United States industry peaked and then declined, so that by 1980 total industrial use of energy was below the 1970 level even though total industrial output had grown substantially in the same period. Industry must have instituted highly effective energy conservation measures in those years to have achieved such impressive results.

16. Which of the following, if true, most seriously weakens the conclusion of the argument?

- A. Many industries switched to the greatest extent possible from high-priced oil to lower-priced alternatives throughout the 1970's.
- B. Total residential energy consumption was higher in the United States in 1980 than it had been in 1970.
- C. Many industrial users of energy had paid little attention to energy conservation prior to 1970.
- D. Industrial output grew less rapidly from 1970 to 1980 than it had from 1960 to 1970.
- E. The industries whose production dropped sharply during the 1970's included a disproportionately large number of energy-intensive industries.

Many scholars believe that it was Granziera who actually wrote the politically charged plays attributed to Urbani. But a comparison of the texts of those plays with Granziera's known works shows a distinct difference in style: the frequency of words with at least three syllables in these plays is much lower than in the works known to have been written by Granziera. Therefore, Granziera is probably not the author of the plays attributed to Urbani.

17. Which of the following, if true, most seriously weakens the argument?

- A. All of the works known to have been written by Granziera are scholarly essays in political theory.
- B. In the period in which Granziera and Urbani wrote, many works were published anonymously.
- C. Whereas most of the plays attributed to Urbani are short, a few are very long.
- D. Granziera and Urbani are known to have held similar political views.
- E. It is relatively rare for an author to employ substantially different styles in different published works.

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In commercial fishing, people compete for their catches with whatever other creatures naturally prey on the fish sought for human consumption. From a purely commercial point of view, therefore, it would make sense to kill off those other predator species in order to increase yields of the commercially desirable prey species.

18. Which of the following, if true about aquatic species, most seriously weakens the argument above?
- A. There are many pairs of predator and prey species in which their species that is of commercial importance is the predator species.
  - B. There are species that are under little or no predatory pressure except that they are hunted by people
  - C. Commercial fishing, unless carefully managed, can deplete certain species enough to threaten the associated predator species with extinction.
  - D. In comparison with the predator species associated with a given prey species, the prey species is generally the more numerous, but the ranges occupied by the two species usually coincide.
  - E. The presence of nonhuman predators tends to improve the survival chances prey species by selectively removing weak or sick individuals or reproductive age.

TEB Attorney: TEB Corporation has been accused of not doing enough to discourage its executives from defrauding the government. This accusation is obviously false, since TEB, following its own written policy, rewards those who report the wrongdoing of others and promptly fires proven wrongdoers.

19. Which of the following, if true, most seriously undermines the attorney's argument in defense of TEB?
- A. "Wrongdoing" is defined in TEB corporate policies as "any activity by a TEB employee that defrauds TEB."
  - B. TEB has instituted what it calls "customer friendly" policies of responding to every complaint customers make
  - C. The government is not TEB's sole client, nor even its major client.
  - D. Defrauding the government would have to involve more than one employee of any company that did so.
  - E. Those who have accused TEB of not doing enough to discourage its executives from defrauding the government have themselves been government employees.

The use of nets at beach resorts to protect swimming areas from sharks has been criticized by environmentalists because the nets needlessly kill thousands of marine animals annually. However, environmentalists have recently discovered that an electrified cable buried beneath the periphery of swimming areas causes sharks to swim away while harming neither humans nor marine life. Hence, by installing such cables, resort communities will be able to maintain tourism while satisfying environmentalists' concerns.

20. Which of the following, if true, most seriously weakens the argument?
- A. Many seaside resort communities where sharks have never been sighted nonetheless paid to

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install buried electrified cables.

- B. Tourism at resorts where sharks have been sighted has suffered only slightly despite the fact that many people claim to fear sharks.
- C. Because they have a strong fear of sharks, many tourists prefer to swim at beaches that are known to be well protected from sharks.
- D. The buried electrified cable is not the only innovation approved by environmentalists that is known to be successful in repelling sharks without harming them
- E. The marine mammals that are a major tourist attraction at many resorts do not enter areas around which there are buried electrified cables.

Samples taken from the ice of glaciers show that during the last ice age there was far more dust in the atmosphere than there is now. Since greater amounts of dust in the atmosphere would result in less sunlight's reaching the Earth's surface, it is likely that the large amount of dust then present helped maintain low global temperatures and thus prolonged the ice age.

21. Which of the following, if true, most seriously weaken the argument?

- A. Large amount of dust in the atmosphere would tend to keep heat from the Sun that reached the Earth's surface from escaping into outer space.
- B. The glacial samples show that during the period between the two most recent ice ages the level of atmospheric dust was far lower than it was during either of ice ages.
- C. Volcanic eruptions in the recent past have released sufficient dust to cause detectable changes in global temperature patterns.
- D. The amount of dust in the atmosphere was significantly greater in the middle of the last ice age than at the end.
- E. Sunlight is the main heat source of the Earth's surface.

In Stanton the average number of people injured per automobile accident is consistently higher for accidents involving a taxicab than for those not involving a taxicab. Although all Stanton taxicabs are equipped with passenger seat belts, taxicab drivers report that passengers tend not to use them. It is likely, therefore, that if taxicab passengers were required to use seat belts, the number of people injured per accident would soon be no higher for taxicabs than for other automobiles.

22. Which of the following, if true about Stanton, most seriously weakens the argument?

- A. The number of automobile accidents has been declining in recent years.
- B. Since taxicabs are driven more miles annually than most other vehicles, they are more likely to be in an accident during any given year than is the average vehicle.
- C. There are more taxicabs in operation, relative to the overall number of motor vehicles, than there are in most cities of Stanton's size.
- D. The number of people, including the driver, who occupy a vehicle is generally greater for taxicabs than for other vehicles.
- E. Not all passengers in automobiles other than taxicabs use seat belts.

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Orcas are small whales that generally travel in groups called pods. Orcas that feed on marine mammals travel in very small pods, while those that feed on fish travel in relatively large pods. Since a larger pod has an increased collective ability to locate prey, it is likely that orcas that feed on mammals travel in small pods only because the mammals that they hunt can more easily detect a large pod and escape it.

23. Which of the following, if true, most strongly indicates that the conclusion is too sweeping?

- A. Orcas that feed on fish almost always remain in the pod into which they were born, while orcas that feed on mammals will form new pods if the one they are in becomes too big.
- B. No orcas have been observed to switch back and forth between feeding on fish and feeding on mammals.
- C. Pods of orcas generally include at least one mother and one or two of her offspring.
- D. Unlike marine mammals, fish generally travel in large schools, which can provide food for large pods of orcas.
- E. Individuals from different pods interact frequently, and pods are small, such interaction predominantly foraging activities.

The sixteenth-century art historian Vasari wrote about a building only when he himself had seen it or a detailed model of it. The thorough description of the new chapel at Larcona contained in the second edition of Vasari's *Lives of the Artists* must have been contributed by someone else, since the edition was published the year before Vasari's travels took him to Larcona, and no model of the chapel was ever shown in Florence, Vasari's home.

24. Which of the following, if true, most seriously weakens the argument?

- A. Vasari discussed with his collaborators the new chapel at Larcona described in the second edition of the book.
- B. A model of the proposed chapel at Larcona was displayed in Rome, a city Vasari visited often.
- C. There were many printings of the second edition of the book, all of them textually identical.
- D. Vasari did not intend to provide in his book detailed descriptions of buildings outside of his native Florence.
- E. Most sections of the book are devoted to works of art and buildings of Vasari's native Florence.

About 20 percent of professors at Torellia National University were not educated in Torellia. The average pay of professors at the university who were educated in Torellia is about 10 percent lower than that of professors with comparable levels of training and experience who were educated outside Torellia. These figures clearly indicate the existence of a university policy, though probably an unwritten one, of favoring foreign-educated professors over those educated in Torellia when determining salaries.

25. Which of the following, if true, most seriously undermines the editorials conclusion?

- A. The salaries of professors at the university are increasing more slowly than the salaries of people with comparable levels of training and experience employed by corporations.
- B. The business school of the university, where most of the professors who were educated outside Torellia teach, must pay high salaries to its faculty to compete with salaries available to them from corporations.

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C. The benefits other than salary offered to the university's professors are about the same for professors educated in Torellia as for those not educated in Torellia.

D. The university has an explicit policy setting broad salary ranges for professors at all levels of experience.

E. Most of the professors at the university who were educated outside Torellia are native-born citizens of Torellia.

It was recently discovered that the editors of a scholarly journal rejected a paper submitted for publication, even though expert reviewers had strongly recommended it. The editors said they had concerns about possible political reactions to this paper. This sorry episode shows that what many people have long suspected is true: that the journal routinely rejects papers on the basis of political rather than scholarly considerations.

26. The reasoning in the argument is open to criticism on the grounds that the argument

A. presumes that just because something happens frequently, it invariably happens

B. presumes that something is true simply on the grounds that many people think it

C. relies on evidence that contradicts the conclusion that is drawn

D. relies on a single example to establish a general claim

E. relies on claims made by people who are not experts in the field

In a five-year study of people with coronary heart disease, 85%percent of those given Artilase, a new drug developed as a treatment for coronary heart disease, were still alive at the end of the study. Since without Artilase only 75 percent of this group would have been expected to have lived the entire five years, Artilase is clearly effective in extending the lives of people with coronary heart disease.

27. Which of the following, if true, most seriously undermines the argument given?

A. Eighty-five percent of those in the study who were given a placebo (a medically ineffective but harmless pill) rather than Artilase were still alive at the end of the study.

B. The study was funded by the manufacturers of Artilase.

C. The study did not include people whose coronary heart disease was so far advanced at the time the study began that they were not expected to live more than one year.

D. At least 75 percent of the people in the study would have been expected to live an additional five years or more had they undergone surgical treatment for their heart disease.

E. The study had originally been intended to last only four years.

The national crime rate has been declining, but television news coverage of crime has been increasing. Many media analysts hold that the increasing emphasis on crime is making viewers more mistrustful of others and more afraid of crime. To support this position, they cite survey results that show that the people most likely to be mistrustful of others and to overestimate the crime rate are those who watch the most television.

28. Which of the following, if true, most seriously weakens the support provided by the survey results for the media analysts' position?

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- A. There are many people who are deeply mistrustful of others and watch little or no television.
  - B. Most people who have themselves been victims of a crime overestimate the crime rate and are mistrustful of others.
  - C. Among people who say that they are not mistrustful of others, the great majority say that they believe that when an individual event is portrayed on television, it is portrayed accurately.
  - D. Most people who watch television news on a regular basis say that they find crime stories more interesting than most other kinds of stories.
  - E. People who are unusually suspicious and particularly afraid of crime tend to stay home watching television more than do people who are not.

### Question Type Six: Assumption

In mountainous regions, the timberline is the highest altitude at which trees grow. In the Rocky Mountains, the current timberline is at the altitude above which growing season temperatures remain cooler than 10 degrees centigrade. Fossilized remains of trees that grew 10,000 years ago have been found 100 meters above the current Rocky Mountain timberline. Clearly, therefore, the climate of the Rocky Mountains is cooler now than it was 10,000 years ago.

1. Which of the following is an assumption on which the argument relies?
  - A. In the past 10,000 years, the only trees to have grown above today's timberline are the trees whose fossilized remains been found.
  - B. No trees grew 10,000 years ago at altitudes higher than the ones at which fossilized tree remains have been found.
  - C. The fossils are not of species of trees that were able to tolerate cooler growing temperatures than are the species that currently grow near the timberline.
  - D. The Rocky Mountains have not eroded significantly over the past 10,000 years.
  - E. The climate of the Rocky Mountains has never been significantly warmer than during the lifetime of the trees whose fossilized remains have been found.

Cotton grass, which grows only in arctic regions, has been the only summertime source of protein available to caribou. Caribou that do not get adequate amounts of protein in the summer are unable to reproduce the following year. Rising average temperatures in arctic regions, however, are causing cotton grass to disappear. Therefore, if the warming trend continues, caribou are likely to become extinct.

2. Which of the following is an assumption on which the argument depends?
  - A. cotton grass is the only one of the caribou's food sources that is becoming scarce as temperatures rise in arctic regions.
  - B. caribou that do not eat enough protein to reproduce do not live as long as caribou that do
  - C. The warming trend in arctic regions will not enable other plants capable of providing protein to caribou to grow there.
  - D. The caribou is the only animal that depends on cotton grass as a major source of food.



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E. If the warming trend continues and cotton grass disappears from arctic regions, then cotton grass will be extinct.

In the shallow end of Lake Tomwa, there are remains of numerous Jeffery pine trees that grew there during a lengthy drought. Researchers had believed that this drought lasted at least 150 years, but carbon dating reveals that pines were growing in the lake bed for only 120 years, from 1200 until 1320. Since the Jeffrey pines, which cannot survive in water, must have died at the end of the drought, the dating shows that the drought lasted less than 150 years.

3. The argument given relies on which of the following as an assumption?

- A. No other species of tree started growing in the bed of Lake Tomwa after 1200.
- B. No tree remains of any kind are present at the bottom of deeper parts of Lake Tomwa.
- C. There was at least one tree in the lake bed that was alive for the entire period from 1200 to 1320.
- D. There has not been a more recent drought that caused a drying up of the shallow end of the lake.
- E. The shallow end of the lake had been dry for less than 30 years by the time Jeffrey pines started growing in the lake bed.

Extensive housing construction is underway in Pataska Forest, the habitat of a large population of deer. Because deer feed at the edges of forests, these deer will be attracted to the spaces alongside the new roads being cut through Pataska Forest to serve the new residential areas. Consequently, once the housing is occupied, the annual number of the forest's deer hit by cars will be much higher than before construction started.

4. Which of the following is an assumption on which the argument depends?

- A. The number of deer hit by commercial vehicles will not increase significantly when the housing is occupied.
- B. Deer will be as attracted to the forest edge around new houses as to the forest edge alongside roads.
- C. In years past, the annual number of deer that have been hit by cars on existing roads through Pataska Forest has been very low.
- D. The development will leave sufficient forest to sustain a significant population of deer.
- E. No deer hunting will be allowed in Pataska Forest when the housing is occupied.

The surface of Venus contains calcite, a mineral that absorbs the gas sulfur dioxide. Sulfur dioxide is often produced by volcanic activity and is plentiful in Venus' atmosphere, so there must be a source, perhaps volcanic, producing sulfur dioxide on Venus.

5. Which of the following is an assumption on which the argument given depends?

- A. In the recent past, the level of sulfur dioxide in Venus' atmosphere was not much higher than it is now.
- B. If there is volcanic activity on the surface of Venus, it is not adequate to maintain the observed amount of sulfur dioxide in the atmosphere.
- C. The sulfur dioxide in Venus' atmosphere forms clouds that prevent direct observation of the surface.
- D. Sulfur dioxide produced by volcanic activity on the Earth's surface is also absorbed by minerals other than calcite.

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E. The calcite on the surface of Venus is in sufficient supply to continue to absorb sulfur for millions of years to come.

A decrease in face-to-face social contact can precipitate depression. Time spent using the Internet cannot be spent in face-to-face social contact, so psychologists have speculated that sharply increasing Internet use can cause depression. Studies of regular Internet users have found a significantly higher incidence of depression among those who had recently doubled the amount of time they spent using the Internet than among those whose use had not increased. Hence, the psychologists' speculation is correct.

6. Which of the following is an assumption on which the argument depends?

- A. In general, the reason that the people in the studies had doubled their Internet use was not that they had earlier experienced a significant decrease in opportunities for face-to-face social contact.
- B. A sharp decrease in face-to-face social contact is the only change in daily activity that can lead to an increased incidence of depression
- C. Using the Internet presents no opportunities for people to increase the amount of face-to-face social contact they experienced in their daily lives.
- D. Regular Internet users who are depressed will experience an immediate improvement in mood if they sharply decrease the amount of time they spend on the Internet.
- E. Before they doubled the time they spent on the Internet, the people who did so were already more prone to depression than are regular Internet users in general.

A plant-based automobile fuel has just become available in Ternlan. A car can be driven as far on a gallon of the new plant-based fuel as a car can be driven on a gallon of gasoline, but a gallon of the plant-based fuel both costs less and results in less pollution. Therefore, drivers in Ternland who switch to it will reduce the amount they spend on fuel in a year while causing less environmental damage.

7. Which of the following is an assumption on which the argument relies?

- A. There is no expense associated with operating an automobile that is higher when the automobile uses the plant-based fuel than when it uses gasoline.
- B. Automobiles that have been operated using the plant-based fuel can no longer be operated using regular gasoline.
- C. The environmental damage attributable to automobiles is due almost entirely to the production and combustion of fuel automobiles use.
- D. The advantages of the plant-based fuel over gasoline will not lead those who switch to the plant-based fuel to do more driving.
- E. Most drivers in Ternland will switch from gasoline to the plant-based fuel.

Currently, Sulandian television journalists are twice as likely as other workers to support the Blue Party, and Sulandian journalism students are significantly more likely to support the Blue Party than working television journalists are. Therefore, assuming that these students do not change their political affiliations as they get older, the disparity between the political affiliations of Sulandia's television journalists and those of the rest of the working population will increase as current Sulandian journalism students enter the profession.

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8. Which of the following is an assumption on which the argument depends?

- A. Few of the television journalists currently working in Sulandia were trained in Sulandian journalism schools.
- B. Journalists in Sulandia whose political affiliations differ from those of the general population tend to allow their political views to affect the way they report news about politics.
- C. Most of the television journalists currently working in Sulandia who support the Blue Party also supported the Blue Party when they were students.
- D. Support for the Blue party is not significantly less common among those current Sulaidan journalism students who intend to become television journalists than it is among current Sulandian journalism students as a whole.
- E. Classes in Sulandian journalism schools are not taught mainly by working Sulandian journalists.

Biologists studying wild monkeys sometimes need the genetic material DNA from a particular monkey to determine the animal's parentage. Until recently, DNA could be extracted only from blood. Collecting a blood sample required tranquilizing the donor animal. Now DNA can be extracted from hair. Monkeys shed large quantities of hair in places where they sleep. Therefore, researchers will now be able to determine the parentage of individual monkeys from DNA without tranquilizing the monkeys.

9. Which of the following is an assumption on which the argument depends?

- A. The places in which monkeys sleep are easily accessible to researchers.
- B. Information about a particular monkey's parentage is the only kind of information that can be determined from DNA that has been extracted from that monkey's hair.
- C. For at least some samples of hair collected from monkey habitat it will be possible to associate hairs with the individual monkeys from which they came.
- D. Examining DNA is the only way to determine the parentage of wild monkeys.
- E. It will be necessary to obtain any hair samples used in determining a monkey's parentage from a place where the monkey has slept.

The crustaceans known as harpacticoids are very widespread in marine sediments, where they feed on microorganisms by ingesting the sediment particles to which the microorganisms adhere. Heavy metals, such as those found in industrial pollution, readily adhere to sediment particles. Harpacticoids are poisoned by heavy metals but are unaffected by most other pollutants. Therefore the concentration of harpacticoids in an area is a good indication of whether that marine environment contains heavy metals.

10. Which of the following is an assumption on which the argument relies?

- A. Industrial pollution is the principal source of heavy metals in marine sediments.
- B. Harpacticoids are the only crustaceans that feed on microorganisms by ingesting sediment particles.
- C. Harpacticoids are more susceptible to poisoning by heavy metals than are other marine organisms.
- D. The microorganism that harpacticoids feed on are not killed by pollutants that are harmless to harpacticoids.
- E. The microorganism that harpacticoids feed on absorb heavy metals.

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Benovians set their clocks back an hour for the winter. The result is that, during winter's short days, it is light when most commuters drive to work, but dark when they drive back home. Darkness contributes to accidents. Changing the clocks, however, does not actually increase the amount of driving done in the dark, so it is unlikely to have any effect on Benovia's automobile accident rate.

11. Which of the following is an assumption on which the argument relies?

- A. The average number of hours that Benovians drive when it is dark is greater for days during the winter than for days during other times of the year.
- B. In Benovia, hazards to safe driving that are made worse by darkness are as likely to occur in the morning as in the evening.
- C. The majority of cars on Benovia's roads during a given day are those of people commuting to or from work.
- D. The majority of automobile accidents in Benovia take place when it is dark.
- E. Driving conditions are no worse in Benovia in the winter than during the rest of the year.

One of the legends that has been attached to the nineteenth century writer Edgar Allan Poe is that he was addicted to morphine. Poe discussed virtually every known aspect of his life in his letters. However, nowhere in his voluminous correspondence does he mention his reputed morphine addiction. On the basis of this evidence, it is safe to conclude that reports of his supposed addiction are untrue.

12. Which of the following is an assumption on which the argument depends?

- A. The symptoms that legend attributes to Poe and that have been taken as evidence of morphine addiction could instead have been caused by a different condition
- B. Poe had enemies whose own careers could have been advanced if rumors that Poe was addicted to morphine were widely believed.
- C. Poe would not have refrained, out of any considerations of privacy or reputation, from mentioning in his correspondence any addiction that he might have had.
- D. Reports claiming that Poe was addicted to morphine did not begin to circulate until after his death.
- E. None of the reports of Poe's supposed addiction to morphine can be traced to individuals who knew Poe personally.

Shoreland County recently purchased an area of wilderness land in the county to prevent it from being developed. In doing so, the county has forfeited all future property taxes on this land. Property taxes are assessed on market value, and if developed, the land would have contributed significantly to the county's overall annual tax revenue. Because of the purchase, therefore, overall annual tax revenue will be lower than it would have been if development had occurred.

13. Which of the following is an assumption on which the argument depends?

- A. The money the county would have had to expend for services to residences or industry developed on the wilderness land would have exceeded the tax revenue from the developed land.
- B. The market value of undeveloped properties in Shoreland County will not increase significantly in the foreseeable future.
- C. The property taxes received by Shoreland County from the previous owners of the wilderness area

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were insignificant relative to the county's overall annual tax revenue.

D. Land near the area bought by the county will not increase significantly in market value as a result of being near wilderness that is protected from development.

E. Shoreland County will not in the foreseeable future prevent the development of any other land in the county.

Some conservationists, concerned about the rapid depletion through poaching of elephant herds in certain parts of Africa, are urging countries to which ivory is sold to ban ivory importation. This ban, they argue, would prevent ivory sellers from reaching their market, and elephant herds would have a chance to recover.

14. The conservationists' recommendation as described is based on which of the following assumptions?

A. The capacity of any illegal channels that may exist for the sale of ivory in export markets cannot expand to meet demand in those markets

B. There now exist synthetic substitutes for ivory that are essentially indistinguishable from the natural product

C. Bans on imports of ivory need to be combined with intensified efforts to stop poaching in order to be effective

D. To the economies of those countries that have significant elephant herds, elephants are more valuable alive than dead

E. In some parts of Africa where poaching has depleted elephant herds, those herds are already beyond recovery

In an experiment, a group of pregnant mice were each given food containing minute doses of the hormone BPA. A control group of pregnant mice were given no BPA. Offspring of mothers that had been given BPA were 10 percent bigger when weaned from their mothers than were offspring of mothers in the control group. Clearly, this result supports the hypothesis that the physical development of mice is significantly affected by prenatal exposure to BPA.

15. Which of the following is an assumption on which the argument depends?

A. Prenatal exposure of mice to doses of BPA even smaller than those used in the experiment would not have significantly affected the physical development of the mice.

B. At birth, there was no difference in size between offspring of mothers that had been given BPA and offspring of mothers in the control group.

C. Postnatal exposure of mice to BPA before the mice are weaned has significant effects on the physical development of the mice.

D. Exposure of a pregnant mouse to the doses of BPA used in the experiment does not significantly enhance its ability nurse its offspring.

E. Significant differences in size between offspring of mothers that had been given BPA and offspring of mothers in the control group persisted long after the offspring were weaned

A year ago, the government of Portran predicted that Torre City would experience strong net job

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growth for the following year but that Glanville, Portran's other major city, would not. Events have clearly proved otherwise, however; in Torre City, but not in Glanville, the number of people who are unemployed is greater now than it was a year ago.

16. Which of the following is an assumption on which the editorial's argument depends?

- A. The unemployment rate is higher in Torre City than in Glanville.
- B. The unemployment rate in Torre City is higher now than it has ever been.
- C. Since making the prediction a year ago, the government of Portran has taken no steps to improve job growth in the country.
- D. Few, if any, unemployed people moved to Torre City from Glanville during the year.
- E. Government predictions about the economy in Portran are generally not reliable.

Belnovia's government provides health care to all its citizens. Five years ago, with costs incurred from smoking-related health problems accounting for 5 percent of annual government expenditures, Belnovia's health agency initiated a nationwide antismoking campaign. Although the campaign succeeded in reducing the number of smokers in Belnovia substantially, it clearly failed to reduce the annual costs incurred from smoking-related health problems, since these costs currently account for 6 percent of annual government expenditures.

17. Which of the following is an assumption on which the argument depends?

- A. Costs incurred from smoking-related health problems account for a greater portion of the Belnovian government's overall health expenditures now than they did five years ago.
- B. The average cost of treatment for smoking-related health problems in Belnovia has not increased significantly over the past five years.
- C. Overall health expenditure account for a greater portion of the Belnovian government's annual expenditures now than they did five years' ago.
- D. Belnovia's annual government expenditures are not significantly lower now than they were five years ago.
- E. Smoking-related health problems usually persist long after a person has quit smoking.

### Question Type Seven: Sufficient Assumption

X-ray examination of a recently discovered painting—judged by some authorities to be a self-portrait by Vincent van Gogh—revealed an underimage of a woman's face. Either van Gogh or another painter covered the first painting with the portrait now seen on the surface of the canvas. Because the face of the woman in the underimage also appears on canvases van Gogh is known to have painted, the surface painting must be an authentic self-portrait by van Gogh.

1. The conclusion is properly drawn if which of the following is assumed?

- A. If a canvas already bears a painted image produced by an artist, a second artist who uses the canvas to produce a new painting tends to be influenced by the style of the first artist.
- B. Many painted canvases that can be reliably attributed to van Gogh contain underimages of subjects

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that appear on at least one other canvas that van Gogh is known to have painted.

- C. Any painted canvas incorrectly attributed to van Gogh would not contain an underimage of a subject that appears in authentic paintings by that artist.
- D. A painted canvas cannot be reliably attributed to an artist unless the authenticity of any underimage that painting might contain can be reliably attributed to the artist.
- E. A painted canvas cannot be reliably attributed to a particular artist unless a reliable x-ray examination of the painting is performed.

When on an airplane, Consuelo never enjoys movies that have been widely recommended because the poor quality of the picture spoils her enjoyment. Since in no circumstances does she ever enjoy movies that have been widely derided, it follows that she never enjoys movies on airplanes.

2. Which of the following, if true, would enable the conclusion of the argument to be properly drawn?
- A. The only place where Consuelo enjoys widely recommended movies is a movie theater.
  - B. Widely recommended movies are never shown on airplane.
  - C. If a movie shown on an airplane is not widely derided, then it is invariably widely recommended.
  - D. If the picture quality of the movies shown on airplanes was better, Consuelo would enjoy the widely recommended movies.
  - E. Some movies are neither widely recommended nor widely derided.

### **Question Type Eight: Strengthen**

Sparva, unlike Treland's other provinces, requires automobile insurers to pay for any medical treatment sought by someone who has been involved in an accident; in the other provinces, insurers pay for nonemergency treatment only if they preapprove the treatment. Clearly, Sparva's less restrictive policy must be the explanation for the fact that altogether insurers there pay for far more treatments after accidents than insurers in other provinces, even though Sparva does not have the largest population.

1. Which of the following, if true, most strengthens the argument?
- A. Car insurance costs more in Sparva than in any other province.
  - B. The cost of medical care in Sparva is higher than the national average.
  - C. Different insurance companies have different standards for determining what constitutes emergency treatment.
  - D. Fewer insurance companies operate in Sparva than in any other province.
  - E. There are fewer traffic accidents annually in Sparva than in any of the provinces of comparable or greater population.

Although the percentage of first graders in Almaria who were excellent readers varied little between 1995 and 2010, the percentage of first graders who had considerable difficulty reading their schoolbooks increased markedly during that period. This evidence strongly indicates that the average reading ability of first graders decreased between 1995 and 2010.

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2. Which of the following, if true, provides the strongest additional support for the argument?
- A. The number of hours devoted to reading activities in first-grade classrooms in Almaria did not vary significantly, on average, between 1995 and 2010.
  - B. The percentage of first graders in Almaria who had difficulty solving arithmetic problems did not increase as much between 1995 and 2010 as did the percentage of first graders who had reading difficulties.
  - C. The number of children in Almaria who were enrolled as first graders decreased steadily between 1995 and 2010.
  - D. The average difficulty of the schoolbooks used in first-grade classrooms in Almaria decreased between 1995 and 2010.
  - E. The average number of schoolbooks used in first-grade classrooms in Almaria increased between 1995 and 2010.

The Minoan civilization flourished on the island of Crete around 2000 B.C. The discovery on Crete of large numbers of bronze implements and the furnaces used in their manufacture shows that the Minoans had a thriving bronze industry. Moreover, many bronze artifacts from this period that are similar in style to those produced on Crete have been found in southern Greece. Hence it is probable that, besides making bronzeware for domestic use, the Minoans exported bronzeware to southern Greece.

3. Which of the following, if true, most strengthens the argument given?
- A. Copper and tin, the main ingredients of bronze, were present in Southern Greece.
  - B. No furnaces dating from the Minoan era and suitable for the manufacture of bronze implements have been found in southern Greece.
  - C. The Minoans exported a great deal of pottery, which was highly valued by other ancient civilizations.
  - D. The fuel needed for Minoan bronzeware furnaces was provided by a variety of local species of hardwood.
  - E. Some of the pieces of bronzeware found on Crete were non-Minoan in origin.

The thylacine, a slender, wolf-like predator, lived on mainland Australia until about 3,000 years ago. The thylacine disappeared from the mainland shortly after the dingo, a kind of wild dog, was first brought to Australia. Dingoes flourished in Australia and preyed on many of the same animal species on which the thylacine relied. Thus, the introduction of the dingo probably caused the thylacine's disappearance there.

4. Which of the following, if true, most strengthens the argument?
- A. Dingoes also preyed on animal species that thylacines did not prey on
  - B. On the Australian island of Tasmania, which was never inhabited by dingoes, thylacines survived into the 1900s
  - C. The largest thylacines in Australia were much larger than dingoes
  - D. Much of the dingo's diet today consists of animal species that were not found in Australia 3000 years ago.



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E. Thylacines relied on their stamina rather than their speed to capture prey

In Gilavia, the number of reported workplace injuries has declined 16 percent in the last five years. However, perhaps part of the decline results from injuries going unreported: many employers have introduced safety-incentive programs, such as prize drawings for which only employees who have a perfect work-safety record are eligible. Since a workplace injury would disqualify an employee from such programs, some employees might be concealing injury, when it is feasible to do so.

5. Which of the following, if true in Gilavia, most strongly supports the proposed explanation?

- A. In the last five years, there has been no decline in the number of workplace injuries leading to immediate admission to a hospital emergency room.
- B. Employers generally have to pay financial compensation to employees who suffer work-related injuries.
- C. Many injuries that happen on the job are injuries that would be impossible to conceal and yet would not be severe enough to require any change to either the employee's work schedule or the employee's job responsibilities.
- D. A continuing shift in employment patterns has led to a decline in the percentage of the workforce that is employed in the dangerous occupations in which workplace injuries are likely.
- E. Employers who have instituted safety-incentive programs do not in general have a lower proportion of reported workplace injuries among their employees than do employers without such programs.

Recently an unusually high number of dolphins have been found dead of infectious diseases, and most of these had abnormally high tissue concentrations of certain compounds that, even in low concentrations, reduce dolphins' resistance to infection. The only source of these compounds in the dolphins' environment is boat paint. Therefore, since dolphins rid their bodies of the compounds rapidly once exposure ceases, their mortality rate should decline rapidly if such boat paints are banned.

6. Which of the following, if true, most strengthens the argument?

- A. The levels of the compounds typically used in boat paints today are lower than they were in boat paints manufactured a decade ago.
- B. In high concentrations, the compounds are toxic to many types of marine animals.
- C. The compounds break down into harmless substances after a few months of exposure to water or air.
- D. High tissue levels of the compounds have recently been found in some marine animals, but there is no record of any of those animals dying in unusually large numbers recently.
- E. The compounds do not leach out of the boat paint if the paint is applied exactly in accordance with the manufacturer's directions.

The dusky salamander lives only in slow-moving streams where organic debris settles and accumulates. In almost all places in New York State where dusky salamanders used to live, suburban development has cleared uplands and put down asphalt. As a result, rainwater now runs directly into streams, causing increased flow that slows the accumulation of organic sediments. Therefore, it is probably the increased flow caused by suburban development that is responsible for the dusky salamander's virtual disappearance from New York State.

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7. Which of the following, if true, most strongly supports the argument?

- A. Since 1980 the suburban population of New York State has grown ten times faster than its urban population.
- B. Dusky salamanders have disappeared in the past ten years from some suburban areas of New York State that were originally developed more than a century ago and that have not experienced significant development for decades.
- C. The two-line salamander, a species that lives in both slow- and swift-moving waters, continues to thrive in streams in New York State from which dusky salamanders have disappeared.
- D. Suburban development in New York State contributes significantly to pollution of local streams with lawn fertilizers that are poisonous to most small aquatic animals.
- E. Much of the suburban development in New York State has been occurring in areas that never provided prime habitat for dusky salamanders.

That sales can be increased by the presence of sunlight within a store has been shown by the experience of the only Savefast department store with a large skylight. The skylight allows sunlight into half of the store, reducing the need for artificial light. The rest of the store uses only artificial light. Since the store opened two years ago, the departments on the sunlit side have had substantially higher sales than the other.

8. Which of the following, if true, most strengthens the argument?

- A. On particularly cloudy days, more artificial light is used to illuminate the part of the store under the skylight.
- B. When the store is open at night, the departments in the part of the store under the skylight have sales that are no higher than those of other departments.
- C. Many customers purchase items from departments in both parts of the store on a single shopping trip.
- D. Besides the skylight, there are several significant architectural differences between the two parts of the store.
- E. The departments in the part of the store under the skylight are the departments that generally have the highest sales in other stores in the Savefast chain.

The plant called the scarlet gilia can have either red or white flowers. It had long been thought that hummingbirds, which forage by day, pollinate its red flowers and that hawkmoths, which forage at night, pollinate its white flowers. To try to show that this pattern of pollination by color exists, scientists recently covered some scarlet gilia flowers only at night and others only by day: plants with red flowers covered at night became pollinated; plants with white flowers covered by day became pollinated.

9. Which of the following, if true, would be additional evidence to suggest that hummingbirds are attracted to the red flowers and hawkmoths to the white flowers of the scarlet gilia?

- A. Uncovered scarlet gilia flowers, whether red or white, became pollinated at approximately equal rates.
- B. Some red flowers of the scarlet gilia that remained uncovered at all times never became pollinated.

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- C. White flowers of the scarlet gilia that were covered at night became pollinated with greater frequency than white flowers of the scarlet gilia that were left uncovered.
- D. Scarlet gilia plants with red flowers covered by day and scarlet gilia plants with white flowers covered at night remained unpollinated.
- E. In late August, when most of the hummingbirds had migrated but hawkmoths were still plentiful, red scarlet gilia plants produced fruits more frequently than they had earlier in the season.

Professor Hassan: In support of the broad claim that the mainstream press accepts and propagates biased assumptions and never presents countervailing information, Dr. North cites a large number of newspaper articles that incorporate such assumptions and then provides evidence against those assumptions. Few would wish to defend the articles that Dr. North cites, but the procedure Dr. North used in gathering evidence against the assumptions in the articles undermines North's overall claim.

10. Which of the following, if true, provides the strongest foundation for Professor Hassan's judgment of Dr. North's analysis?

- A. Print journalists rarely have the time or space in which to present a full and scholarly investigation of a topic.
- B. Readers of the mainstream press are not uncritical of what they find in it, since events have often proved previously accepted information to have been incorrect.
- C. The evidence that Dr. North uses to contradict assumptions inherent in selected newspaper articles would be equally effective for exposing errors made in broadcast journalism.
- D. Dr. North has selected newspaper articles that focus on only a small number of the many assumptions prevalent in the mainstream press.
- E. Most of the evidence Dr. North uses to contradict the assumptions in the article comes from the mainstream press.

Although several ancient cultures practiced mummification, mummies from ancient Egypt are generally more well-preserved than mummies of similar antiquity from other cultures. One possible explanation for this difference is that the mummification techniques or material used by ancient Egyptians were better than those of other cultures. A second, more likely, explanation is that the extremely dry climate of ancient Egypt was largely responsible, given that dryness promotes the preservation of organic remains generally.

11. Which of the following provide the most support for the argument?

- A. The materials used by ancient Egyptians for mummification were not used by any other ancient culture that practiced mummification
- B. Some ancient Egyptian mummies are better preserved than other ancient Egyptian mummies from around the same time.
- C. No ancient people living in very damp areas practiced mummification.
- D. Bodies from ancient Egyptian tombs dating from before the practice of mummification began are almost as well preserved as ancient Egyptian mummies.
- E. Ancient mummies discovered in places other than Egypt have typically not been as well protected from the elements as ancient Egyptian mummies were.

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The standard technique for studying the molecular structure of proteins involves growing crystals of the proteins and observing how these crystals deflect x-rays. Recently a new, much more intense source of x-rays has become available. This source will allow scientists to work with much smaller protein crystals, which can be grown more quickly. Scientists are predicting that the new x-ray source will greatly facilitate study of the molecular structure of proteins.

12. Which of the following, if true, provides the scientists with the strongest additional reason for making their prediction?

- A. Most laboratories that currently use the standard technique cannot afford to purchase the equipment necessary to use the new source
- B. The likelihood that an unusable flawed crystal will be produced increases with the size of the crystal being grown
- C. The new source of x-rays is more effective for studying relatively small protein crystals than for studying large protein crystals
- D. If crystals of a given protein can be grown, there is no theoretical limit on the maximum size of those crystals
- E. The molecular structure of proteins can also be studied through the use of efficient high-powered electron microscope

An alarming number of Mediterranean monk seals, an endangered species, have recently died. Postmortem analysis showed the presence of an as yet unidentified virus, as well as evidence of a known bacterial toxin. Seawater samples from the area where the seals died did contain unusually high concentrations of the toxic bacterium. Therefore, although both viruses and bacterial toxins can kill seals, it is more likely that these deaths were the result of the bacterial toxin.

13. Which of the following, if true, provides additional evidence to support the conclusion?

- A. Viruses are much more difficult to identify in postmortem analysis than bacteria are.
- B. Mediterranean monk seals are the only species of seal in the area where the bacterium was found.
- C. The bacterium is almost always present in the water in at least small concentrations.
- D. Nearly all the recent deaths were among adult seals, but young seals are far more susceptible to viruses than are adult seals.
- E. Several years ago, a large number of monk seals died in the same area as a result of exposure to a different bacterial toxin.

A law has been proposed requiring the cargo boxes of trucks carrying gravel to be covered by a tarpaulin, because vehicles driving close behind open-topped gravel trucks can be damaged by gravel flying off these trucks. The law is unlikely to substantially reduce such damage, however: flying gravel is much less likely to come from the cargo box itself than from the grooves of the tires, in which gravel can become wedged during loading.

14. Which of the following, if true, provides the strongest support for the argument given?

- A. The drivers of vehicles behind a gravel truck are more likely to remain close behind the truck if the truck's cargo box is covered than if it is uncovered.
- B. Most trucks that carry gravel already carry tarpaulins that their drivers use to cover the cargo box

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- when they are carrying sand, which can blow out of the cargo box in significant quantities.
- C. Of all the damage that occurs to vehicles on the highway, debris that flies off trucks is the cause of only a very small fraction.
- D. The proposed law allows open-topped trucks on the highway to have uncovered cargo boxes whenever their cargo boxes are empty.
- E. Because of the great weight of a load of gravel, the driver of a gravel truck is often driving much more slowly than most of the other vehicles on the road.

For 20 years all applicants for jobs as technicians at EquipCorp were required to demonstrate that they could operate and repair the machinery that was central to EquipCorp's manufacturing business. Now, however, that particular machinery is obsolete, and very different machinery fills the central role. Therefore, the old requirement is no longer a useful method for evaluating whether applicants for jobs as technicians at EquipCorp have the skills necessary for the job.

15. Which of the following, if true, most strengthens the argument?
- A. The machinery that is now obsolete was used by a large number of manufacturing companies before it became obsolete.
- B. Among the people already holding jobs as technicians at EquipCorp, those who are most skillful at operating the new machinery had been some of the least skillful at operating the old machinery.
- C. Most people applying for jobs as technicians today have much broader skills than did people applying for jobs as technicians 20 years ago.
- D. The skills required to operate and repair the obsolete machinery are useful in operating and maintaining many other types of machinery at EquipCorp that are not obsolete.
- E. Much of the machinery that EquipCorp now uses in manufacturing is very likely to become obsolete within the next 20 years.

Iridium, a hard, whitish metal similar to platinum, is extremely rare on Earth. Extremely high concentrations of iridium on Earth result from only two scenarios: massive volcanic eruptions that release iridium from deep within the Earth and meteorites that shower down on Earth from space. When scientists found concentrations of iridium 30 times higher than normal in rock stratum from 65 million years ago, they concluded that a massive meteor or comet hit the Earth and caused the massive extinction of the dinosaurs.

16. Which of the following, if true, most strongly supports the scientist's conclusion?
- A. Volcanoes massive enough to generate high concentrations of iridium are very rare.
- B. Massive volcanic eruptions occurred frequently 80 million years ago.
- C. Most scientists support the hypothesis that a cosmic impact wiped out the dinosaurs.
- D. The massive extinction that occurred 70 million years ago killed not only the dinosaurs but also 70 percent of all life on Earth.
- E. A comet struck the earth some 120 million years ago, but no widespread extinction occurred.

Upon maturity, monarch butterflies travel hundreds of miles from their places of origin and lay their eggs on milkweed. The caterpillars that emerge feed on milkweed and absorb the glycosides in milkweed sap. The specific glycosides present in milkweed differ from region to region within the

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monarch butterfly's range. Since mature butterflies retain the glycosides, the glycosides in a mature monarch butterfly could be used to determine its place of origin.

17. Which of the following, if true, most strengthens the argument?

- A. Mature monarch butterflies do not feed on parts of milkweed that contain glycosides.
- B. The glycosides in milkweed sap are slightly toxic to caterpillars of other species.
- C. The vast majority of the monarch butterflies that are laying eggs in a given region will have traveled there from a single region.
- D. There are substances other than glycosides in milkweed sap that accumulate in a monarch caterpillar and are retained in the body of the mature butterfly.
- E. There are certain glycosides that are found in the sap of all milkweeds, no matter where they grow within the monarch butterfly's range.

In the 1600s there was intense competition in Europe to discover how to make porcelain. The two groups of Europeans working in China—Dutch merchants and French missionaries—each tried to discover the Chinese manufacturers' secrets. The first French missionary journal, was not published until 1717, several years after European porcelain manufacture began. Therefore, rather than copying the Chinese techniques, the European manufacturers must have learned by experiment.

18. Which of the following, if true, provides the strongest support for the argument?

- A. The techniques used by the first European makers of porcelain were essentially identical to techniques that Chinese porcelain maker used.
- B. The first European-manufactured porcelain items were comparable in quality to some of the lower-quality porcelain that was then being imported into Europe from China.
- C. The manuscript from which the 1717 journal article was published had been written down by French missionaries in China and sent to France some years before 1717.
- D. The particular raw materials that are needed to make porcelain were not used in European ceramic making until the manufacture of porcelain began.
- E. The first porcelain factory in Europe was founded in Germany by a manufacturer who had no channels of communication with China or Europeans working in China.

The ship Mary Rose, first launched in 1511, underwent extensive repairs in 1528 and 1536 and sank in 1543. Researchers raised the ship in 1982 and analyzed the wreck's preserved timbers; some timbers came from trees felled after 1511, so they must have been added during repair. There were some beams, however, that came from trees felled before 1511. It is likely, therefore, that these beams were part of the original ship.

19. Which of the following, if true, most strengthens the argument?

- A. The repair caused the Mary Rose to be significantly more difficult to handle and ultimately may have led to the ship's sinking.
- B. The beams were fastened with wooden nails that came from trees felled after 1511.
- C. The beams came from a part of the ship that quite commonly needs to be repaired every few years.
- D. One structurally important timber came from a tree felled after 1528.

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E. Shipbuilders of the 1500s preferred to work with recently felled wood that was still green with sap

Tea is rich in compounds called polyphenols, which are similar to certain compounds known to help prevent cancer. Among people in Japan, those who drink over ten cups of tea per day have lower rates of stomach cancer than others. On average, people in Japan drink much more tea than people in the United States and have lower rates of lung cancer. It is therefore likely that polyphenols also help prevent cancer.

20. Which of the following, if true, provides the most support for the argument?

- A. Smoking, a known cause of lung cancer, is more common in Japan than it is in the United States.
- B. Few people in the United States drink more than ten cups of tea per day.
- C. Stomach cancer is much more common in Japan than it is in the United States.
- D. Soy products, which are known to help prevent cancer, are more widely used in Japan than in the United States.
- E. Coffee, which like tea is a source of caffeine, is more popular in the United States than in Japan.

Tropical forests typically have many more species of plants and animals than do temperate forests of comparable size. During the Ice Age, forests in temperate regions were destroyed, while those in the tropics were not. Accordingly, one proposed explanation of this difference in the number of species is that tropical forests typically had a much longer period than temperate forests in which different species could take hold.

21. Which of the following, if true, most strongly supports the proposed explanation?

- A. The greater warmth of tropical forests enables them to sustain a greater density of plants and animals than temperate forests can.
- B. There is virtually no overlap between the species that are found in tropical forests and those found in temperate forests.
- C. Some areas that were temperate forests before the Ice Age are no longer forested.
- D. The number of plants and animal species is no greater in tropical forests that have arisen since the Ice Age than in temperate forests of comparable size.
- E. A change in climate tends to increase the rate at which new species become established in a region.

### Question Type Nine: Evaluation

A mouse's immune system generally rejects proteins different from those produced by that mouse. The immune system of a pregnant mouse does not, however, reject the mouse's fetuses, although the fetal tissue a fetus produces as it develops typically contains many such proteins. Some scientists hypothesize that the placenta surrounding the fetus typically blocks the mother's immune system. But others, noting that the placenta produces IDO, an enzyme that suppresses the immune system, hypothesize that IDO plays a crucial role in protecting the fetus.

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1. In order to choose between the two hypotheses, it would be most useful to determine which of the following?

- A. whether mice sometimes produceIDO when they are not pregnant
- B. whether the immune systems of fetal mice are capable of attacking the tissue of the mother
- C. whether there are cases in which the immune system of a pregnant mouse rejects some fetuses but not others
- D. whether IDO is the only substance capable of suppressing the immune system produced by mice
- E. whether the immune systems of pregnant mice that are given a drug that inhibits IDO production subsequently reject the fetus.

When rats are placed under conditions of stress, their adrenal glands immediately increase production of the hormone corticosterone, and soon thereafter the rats' white blood cell count drops substantially. Yet rats without functioning adrenal glands experience little decrease in white blood cell count when placed under conditions of stress. It is likely, therefore, that an increase in corticosterone produced by a rat's adrenal glands causes the rat's white blood cell count to decrease.

2. Which of the following would it be most useful to know in evaluating the reasoning of the argument?

- A. Whether the drop in white blood cell count that occurs in rats under conditions of stress is sufficient to make the rats more susceptible to diseases that white blood cells normally combat
- B. Whether normal white blood cell counts vary widely among healthy rats that are not under conditions of stress
- C. Whether the adrenal glands of rats that are under conditions of stress increase production of any hormone other than corticosterone
- D. Whether the adrenal glands of rats produce elevated levels of corticosterone on occasions when the rats are not under conditions of stress
- E. Whether rats' adrenal glands are affected by hormones produced by any of the rats' other organs.

Spiders of many species change color to resemble the color of the flowers they sit on. Many animals that prey on such spiders possess color discrimination so acute that they, unlike human beings, can readily see the spiders despite the seeming camouflage. It is unlikely, therefore, that the spiders' color changes confer significant survival benefit on these spiders.

3. Which of the following would it be most useful to determine in order to evaluate the argument?

- A. Whether the spiders' own ability to discriminate color-camouflaged species is as acute as that of their predators
- B. Whether the spiders have a color that could properly be regarded as their natural color
- C. Whether the spiders' color-changes allow them to remain undetected by prey
- D. Whether different species of color-changing spiders tend to favor different species of flower
- E. Whether the color-changing spiders prey on any insects that themselves change color

Pharmaceuticals imported into Bornland are inspected for quality to the extent that staff limitations permit. For the last few years, the proportion of shipments examined that have been found to be deficient has been consistently around 25 percent. This year, the number of inspectors and



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inspections was doubled, and only 21 percent of shipments inspected were found deficient. Clearly, therefore, the quality of pharmaceuticals being imported into Bornland has greatly improved.

4. The answer to which of the following would be most helpful in evaluating this argument?

A. What is the maximum fine that the inspectors can impose when they find that an importer's pharmaceutical shipments are of deficient quality?

B. Can the newly hired inspectors detect deficiencies in shipments at least as well as their more experienced colleagues?

C. Is Bornland currently a major exporter of pharmaceutical products?

D. How many pharmaceutical companies import pharmaceuticals into Bornland?

E. When did Bornland first consider the hiring of additional inspectors for pharmaceutical imports?

### Question Type Ten: Logical Completion

Observations of the Arctic reveal that the Arctic Ocean is covered by less ice each summer than the previous summer. If this warming trend continues, within 50 years the Arctic Ocean will be ice free during the summer months. This occurrence would in itself have little or no effect on global sea levels, since the melting of ice floating in water does not affect the water level. However, serious consequences to sea levels would eventually result, because \_\_\_\_\_.

1. Which of the following most logically completes the passage?

A. large masses of floating sea ice would continue to form in the wintertime

B. significant changes in Arctic sea temperatures would be accompanied by changes in sea temperatures in more temperate parts of the world

C. such a warm Arctic Ocean would trigger the melting of massive landbased glaciers in the Arctic

D. an ice-free Arctic Ocean would support a very different ecosystem than it does presently

E. in the spring, melting sea ice would cause more icebergs to be created and to drift south into shipping routes

The economy of Colonia has been in recession for the past eight years. Most companies that have not been forced into bankruptcy have survived thanks to the high efficiency of the employees they retained, which helped the companies control costs. In recent months, however, the Colonian economy has begun to recover, and companies are beginning to expand their workforces. Colonia, therefore, will soon experience a drop in average worker efficiency, since \_\_\_\_\_.

2. Which of the following, if true, most logically complete the argument?

A. people who have been employed throughout the recession will, no doubt, continue to be employed

B. Colonia is expected to begin importing more goods from other countries

C. most companies will find that few of the workers available for hiring are as efficient as those they retained during the recession.

D. during the recession, workers did not receive any raise in their pay.

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E. many companies that were forced into bankruptcy in the past eight years had a fair number of efficient workers.

A hoard of coins recently unearthed at an ancient Carthagian site bear an image of a face in profile with what appears to be a large mole on the cheek. Pointing out that an artist would be unlikely to include such a specific detail in a generalized portrayal of a face, some archaeologists have concluded that these coins portray an actual individual rather than an idealized type. However, this conclusion is unwarranted, since \_\_\_\_\_.

3. Which of the following most logically completes the argument?

- A. archaeologists cannot determine the actual identity of the individual portrayed just from the likeness that appears on the coins
- B. it cannot be established with certainty that Carthagian artists were on the whole less skillful at portraying human face than artists of other cultures
- C. none of the other designs of Carthagian coins that have been discovered features a face with a mole on it
- D. in ancient times it was quite common for the money circulated in a city or country to include coins that originated in other jurisdictions.
- E. the relatively soft metal used for Carthagian coin molds sometimes resulted in the production of series of coins with unintended bumps

People widely believed that the controlled use of fire originated 200,000 years ago with the human species *Homo sapiens*. However, a site containing a deposit, estimated to be nearly 500,000 years old, consisting of charcoal, burned animal bones, and charred rocks, has recently been found. Although *homo sapiens* did not exist at that time, this discovery provides no basis to the claim that the controlled use of fire preceded the *Homo sapiens*, since \_\_\_\_\_.

4. Which of the following most logically completes the passage?

- A. the use of fire might have originated independently in several different parts of the world
- B. it is possible that fire was used much earlier than 500,000 years ago
- C. the charred rocks found in the deposit included several different kinds of stone, all of which are common in the immediate vicinity of the site
- D. animal bones could have been discarded in a fire used for purposes such as protection or heat rather than for cooking
- E. it is impossible to determine whether a charred deposit dating from so long ago resulted from a fire caused by lightening or from the purposeful use of fire

Because of strong overall stylistic similarities, prehistoric cave paintings in El Castillo, Spain and others in Altamira, Spain, were thought to date from the same period. Recent pigment analyses, however, established the Altamira paintings as by far the older and as about the same age as a third group of paintings done in a different overall style. Nevertheless, this case does not prove that stylistic similarities cannot be a reliable indicator of closeness in age, since \_\_\_\_\_.

5. Which of the following most logically completes the passage?

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- A. experts who knew the results of the pigment analyses reexamined these paintings and found no previously unnoticed stylistic similarities between the Altamira paintings and the paintings in the third group
  - B. there are certain stylistic features that the Altamira paintings share with all known paintings of their period and do not share with the El Castillo paintings
  - C. before dating by pigment analysis was widely practiced, stylistic similarities were the only means of determining whether two prehistoric cave paintings dated from the same period
  - D. determining the age of a prehistoric cave painting simply by reference to the age of the pigments used in that painting substitutes technology for artistic judgment
  - E. there are experts who maintain that the results of the recent pigment analyses leave the striking stylistic similarities between the El Castillo paintings and the Altamira paintings unexplained

Members of the San, a hunter-gatherer society, have a diet far richer in fruits and vegetables and lower in salt than is typical in industrialized societies. They also differ from industrialized societies in that they have extremely low rates of high blood pressure and obesity. However, contrary to what some have claimed, if people in industrialized societies adopted the San's diet, the incidence of high blood pressure and obesity in these societies might not be dramatically reduced, because \_\_\_\_\_.

6. Which of the following most logically completes the passage?

- A. psychological stress, which can also cause high blood pressure, occurs in both industrialized and nonindustrialized societies
- B. the San's low-salt diet is due, not to preference, but to the limited availability of salt in their region
- C. a few members of the San have been found to suffer from circulatory system ailments other than high blood pressure
- D. members of the San are far more physically active than are most members of industrialized societies
- E. not all individuals with high blood pressure are obese

For the first time, funding for designing experiments to be conducted during space flights has been made available by the government space program to university biologists not already employed by the space program. From the fact that little interest has been expressed in this offer, however, it cannot be concluded that virtually the only biologists interested in research that such experiments could address are those biologists already employed by the space program, since \_\_\_\_\_.

7. Which of the following most logically complete the passage?

- A. Relatively few of the biologists already employed by the space program have ever held university positions
- B. There are more research biologist in industry than at universities.
- C. Biologists are not the only scientists interested in research that could be furthered by the opportunity to conduct experiments in space
- D. The space program employs only a small percentage of the research biologists employed by the government.
- E. Much of the biological research currently funded by the government's space program is concerned with the biological effects of a weightless environment.

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Unlike most plants, cactuses absorb carbon dioxide from the air mainly at night. Night air contains greater quantities of certain types of carbon than does daytime air. Consequently, these types of carbon are more common in cactuses than in most other plants. Quintral plants, however, which grow as parasites on cactuses, contain nearly the same proportions of these types of carbon as cactuses. Therefore, quintral plants probably take significant quantities of carbon from their cactus hosts, since \_\_\_\_\_.

8. Which of the following most logically completes the passage above?

- A. in the desert climates where cactuses grow, carbon dioxide is significantly more abundant in the air during the day than at night.
- B. cactuses that have quintral plants growing as parasites on them do not absorb as much carbon dioxide from the air as do cactuses of comparable size that are free of parasites.
- C. quintral plants are the only kind of parasites that grow on such kinds of cactuses.
- D. in areas where quintral plants are common, individual cactuses often have several such plants.
- E. nearly all of the carbon dioxide absorbed from the air by quintral plants is absorbed during the day.

The *Menkentown Business Herald* dated June 4, 1965, carried an article about four dry cleaners in Menkentown and reported that in 1964 each of them took in a larger proportion of the total dollar amount spent by Menkentown residents at dry cleaners than it had in 1963. Assuming that the article is accurate and that during 1963 and 1964 no Menkentown resident patronized any dry cleaner outside of Menkentown, it follows that \_\_\_\_\_.

9. Which of the following most logically completes the argument?

- A. the average cost of having an article of clothing dry-cleaned was higher in 1964 than in 1963
- B. total revenues received by Menkentown's dry cleaners increased between 1963 and 1964
- C. there were more than four dry cleaners in Menkentown in 1963
- D. the total number of dry cleaners in Menkentown increased during 1963
- E. some dry cleaners in Menkentown that were in operation in 1963 were not in operation in 1964

Fuel cells produce energy by reaction between hydrogen and atmosphere oxygen. Automobiles powered by fuel cells are touted as gasoline-conserving alternatives to conventional automobiles. However, automobiles cannot safely carry tanks of hydrogen. One type of fuel cell solves this problem by extracting hydrogen in small quantities, as needed, from gasoline. Although such fuel cells perpetuate gasoline usage, their widespread adoption would have a moderating effect on the country's total gasoline consumption, since \_\_\_\_\_.

10. Which of the following most logically completes the passage above?

- A. automobile powered by fuel cells of the type travel farther per gallon of gasoline than automobile powered by conventional engine
- B. there are other types of fuel cells that avoid the use of gasoline altogether by extracting hydrogen from alcohol.
- C. automobile powered by this type of fuel cells would be outnumbered by those powered by those conventional gasoline engines for many years.
- D. carbon dioxide, an atmosphere pollutant, is emitted by both the extraction of hydrogen from

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gasoline and the combustion of gasoline in a conventional automobile engine.

E. automobiles powered by conventional engines cannot readily converted to run on fuel cells.

Virtually everyone who speaks Torvic lives in Torvia, a small country that takes pride in its unique culture. Since Torvia trades with many other countries, however, most people who live in Torvia speak several languages, and many languages are taught in Torvia's public schools. Nevertheless, from these facts it should not be inferred that most speakers of Torvic speak several languages, because \_\_\_\_\_.

11. Which of the following most logically completes the argument?

- A. very few languages are as difficult to learn as a second language as Torvic is
- B. of all the people in the world who speak several languages, only a small minority speak Torvic
- C. few people who live in Torvia actually speak Torvic
- D. few people who live in Torvia have ever lived outside Torvia
- E. some of the languages taught in Torvia's public schools are not spoken in any of the country

In past studies, young people have typically outperformed older people on identical tasks requiring short-term memory. A new study shows that, for younger subjects, recall based on short-term memory is better in the afternoon than in the morning, whereas for older subjects it is better in the morning than in the afternoon. Since in past studies of short-term memory nearly all of the tests measuring short-term memory were conducted solely in the afternoon, \_\_\_\_\_.

12. Which of the following most logically completes the argument given?

- A. most of the subjects in short-term memory studies conducted in the past performed better as the testing session wore on
- B. the past studies have not clearly established that young people typically have better recall based on short-term memory than do older people
- C. there are not significant differences according to the time of day in the long-term memory of both younger and older people
- D. younger people will find that for the recall based on short-term memory is better late at night than in the afternoon
- E. if short-term memory tests were to be conducted solely in the morning, older people would outperform younger people by a wide margin

The pepper *Capsicum chinense* grows as a native wild plant only in South America. Birds swallow the pepper's fruit whole, thereby providing the plant with its means of distributing seeds. Domesticated varieties of *C. chinense* grow in the Caribbean islands as well as in South America. Although it is unknown just when *C. chinense* was introduced into the islands, the introduction of the species was probably the result of human activity, because \_\_\_\_\_.

13. Which of the following most logically completes the argument?

- A. the fruits of the domesticated varieties are too large for birds to swallow
- B. *C. chinense* grows in the Caribbean islands under climatic conditions very similar to those under which the wild variety grows.

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- C. the peppers are an important part of the Caribbean islands' characteristic cooking.
  - D. most of the plant species in the Caribbean islands originated in South America
  - E. many of the species of birds that are found in the Caribbean islands spend only the winter there

Before 1970, children in the United States were commonly vaccinated against smallpox. In the early 1970s, large-scale vaccinations of children against smallpox were discontinued because smallpox had virtually disappeared from the world. Recently, some scientists have cautioned that the United States could be exposed to smallpox again. Contrary to what many people believe, this exposure would probably find all age-groups within the United States population at comparable levels of risk of contracting smallpox, since \_\_\_\_\_.

14. Which of the following most logically completes the passage?
- A. smallpox is a highly communicable disease among people who are not immune to it
  - B. smallpox vaccine is not now widely available in the United States
  - C. the population of the United States has been growing more slowly since 1970 than it was before then
  - D. smallpox vaccinations lose their efficacy after about 20 years
  - E. people in the United States travel more than they did in 1970, thereby increasing the chances that an epidemic could spread

People who have low bone density have a markedly higher-than-average incidence of stroke, as do people with high blood pressure. There are well-known mechanisms by which high blood pressure can cause a stroke, but since it is highly unlikely that there are any mechanisms by which low bone density can cause a stroke, or vice versa, a possible hypothesis to account for the association between low bone density and stroke is that \_\_\_\_\_.

15. Which of the following most logically completes the argument?
- A. a higher proportion of people with high blood pressure than of people with low bone density have strokes
  - B. whatever causes low bone density in people protects them from high blood pressure
  - C. there is a condition that can cause both low bone density and strokes
  - D. those people with high blood pressure who take steps to lower it in order to prevent a stroke generally take no steps to increase their bone density
  - E. there are few initial symptoms of high blood pressure or of low bone density

Spiders of the species *Argiope* build distinctive zig-zag patterns, called stabilimenta, into their webs. Recent research has established that *Argiope* spiders use stabilimenta to collect drinking water. This discovery, far from discrediting the long-standing hypothesis that stabilimenta serve to reinforce the webs, actually supports that hypothesis since \_\_\_\_\_.

16. Which of the following, if true, most logically completes the argument?
- A. the source of the spiders' drinking water is not rainwater but morning dew.
  - B. spiders would not make structures as energy-consuming as the stabilimenta are unless those structures conferred some benefit on the spiders

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C. the role of stabilimenta in collecting drinking water was discovered independently of attempts to verify the reinforcement hypothesis

D. a spider web designed to trap rather than shed water needs to be structurally stronger than one that sheds water

E. the threads that make up the stabilimenta are as strong as the threads that make up the rest of the web.

A team of researchers has claimed that by drilling below the Earth's surface, they have been able to recover microorganisms that inhabit depths where it was previously thought that no life existed. Although other microorganisms that were at first thought to have been recovered from these depths were later determined merely to have come from surface soil, that cannot be so in this case, because \_\_\_\_\_.

17. Which of the following most logically completes the argument?

A. some of the microorganisms found by the researchers are incapable of living near the Earth's surface

B. some of the microorganisms found by the researchers are known to inhabit the surface soil near the researchers' drilling site

C. when drilling below the Earth's surface, it is impossible to prevent contamination of the drill by surface-soil microorganisms

D. it is difficult to keep microorganisms alive once they have been recovered from underneath the Earth's surface

E. the drilling equipment used by the team of researchers was similar to drilling equipment used by most previous teams of researchers investigating life below the surface of the Earth

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C. few people who live in Torvia actually speak Torvic

D. few people who live in Torvia have ever lived outside Torvia

E. some of the languages taught in Torvia's public schools are not spoken in any of the countries with which Torvia trades

### Question Type Eleven: Definition

Some psychologists have proposed the hypothesis that children in different cultures have different

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psychologies, demonstrated, for example, by culture-specific tendencies for the children's behavior to be relatively self-assertive or obedient. However, that hypothesis is incorrect, since the psychological mechanisms by which children acquire behavioral traits are identical for all cultures.

1. In the argument, the author's position and the position challenged by the author differ in the criteria they use to distinguish different
- A. behaviors
  - B. cultures
  - C. mechanisms
  - D. psychologies
  - E. traits

**Question Type Twelve: Generalization**

The damage that trucks do to highways escalates dramatically with the weight borne per axle. New regulations increase the maximum permitted vehicle weight; these regulations will therefore allow onto the highway trucks capable of doing even more damage than those currently permitted.

1. The argument is open to criticism on the grounds that it:
- A. Fails to establish that the level of damage done by trucks is a serious problem
  - B. Omits evidence about one of the two relevant factors
  - C. Ignores the possibility that careful driving can lessen damage to highways
  - D. Presumes that trucks are the only vehicles capable of causing substantial damage to highways
  - E. Presumes that something is bound to happen just because it is allowed to happen



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