

Answers Part 1

1. C
2. D
3. B
4. D
5. C
6. A
7. E
8. A
9. C
10. C
11. D
12. C
13. A
14. B
15. A
16. A
17. A
18. A
19. D
20. E
21. A
22. D
23. B
24. B
25. B
26. B
27. E
28. A
29. B
30. E
31. D
32. A
33. C
34. C
35. E
36. A
37. C
38. E
39. C
40. A
41. D
42. D
43. B
44. B
45. ...
46. D
47. D
48. D
49. E
50. A
51. E
52. C
53. C
54. D
55. A
56. C
57. D
58. D
59. E
60. B
61. A

Answers Part 2

1. C
2. B
3. E
4. A
5. D
6. C
7. A
8. E
9. B
10. C
11. D
12. A
13. A
14. D
15. C
16. C
17. D
18. A
19. D
20. C
21. A
22. A
23. E
24. D
25. D
26. C
27. A
28. D
29. E
30. A
31. E
32. D
33. C
34. E
35. B
36. C
37. D
38. C
39. E
40. C
41. A
42. C
43. C
44. D
45. D
46. E
47. D
48. B
49. A
50. B
51. C
52. C
53. A
54. D
55. D
56. B
57. E
58. E
59. A
60. C
61. C

- 62. C
- 63. D
- 64. A
- 65. E

Part 3

Total about 75 passages

Answer-key

The **idea** that equipping homes with electrical appliances and other “modern” household technologies would eliminate drudgery, save labor time, and increase leisure for women who were full-time home workers remained largely unchallenged until the women’s movement of the 1970’s spawned the groundbreaking and influential works of sociologist Joann Vanek and historian Ruth Cowan. Vanek analyzed 40 years of time-use surveys conducted by home economists to argue that electrical appliances and other modern household technologies reduced the effort required to perform specific tasks, but ownership of these appliances did not correlate with less time spent on housework by full-time home workers. In fact, time spent by these workers remained remarkably constant—at about 52 to 54 hours per week—from the 1920’s to the 1960’s, a period of significant change in household technology. In surveying two centuries of household technology in the United States, Cowan argued that the “industrialization” of the home often resulted in more work for full-time home workers because the use of such devices as coal stoves, water pumps, and vacuum cleaners tended to reduce the workload of married-women’s helpers (husbands, sons, daughters, and servants) while promoting a more rigorous standard of housework. The full-time home worker’s duties also shifted to include more household management, child care, and the post-Second World War phenomenon of being “Mom’s taxi.”

According to the passage, which of the following is true about the idea mentioned in the highlighted text?

- A. It has been undermined by data found in time-use surveys conducted by home economists.
- B. It was based on a definition of housework that was explicitly rejected by Vanek and Cowan.
- C. It is more valid for the time period studied by Cowan than for the time period studied by Vanek.
- D. It is based on an underestimation of the time that married women spent on housework prior to the industrialization of the household.
- E. It inaccurately suggested that new household technologies would reduce the effort required to perform housework.

The passage is primarily concerned with

- A. analyzing a debate between two scholars
- B. challenging the evidence on which a new theory is based
- C. describing how certain scholars’ work countered a prevailing view
- D. presenting the research used to support a traditional theory
- E. evaluating the methodology used to study a particular issue

The passage suggests that Vanek and Cowan would agree that modernizing household technology did not

- A. reduce the workload of servants and other household helpers
- B. raise the standard of housework that women who were full-time home workers set for themselves
- C. decrease the effort required to perform household tasks
- D. reduce the time spent on housework by women who were full-time home workers
- E. result in a savings of money used for household maintenance

In recent years, Western business managers have been heeding the exhortations of business journalists and academics to move their companies toward long-term, collaborative "strategic partnerships" with their external business partners (e.g., suppliers). The experts' advice comes as a natural reaction to numerous studies conducted during the past decade that compared Japanese production and supply practices with those of the rest of the world. The link between the success of a certain well-known Japanese automaker and its effective management of its suppliers, for example, has led to an unquestioning belief within Western management circles in the value of strategic partnerships. Indeed, in the automobile sector all three United States manufacturers and most of their European competitors have launched programs to reduce their total number of suppliers and move toward having strategic partnerships with a few. However, new research concerning supplier relationships in various industries demonstrates that the widespread assumption of Western managers and business consultants that Japanese firms manage their suppliers primarily through strategic partnerships is unjustified. Not only do Japanese firms appear to conduct a far smaller proportion of their business through strategic partnerships than is commonly believed, but they also make extensive use of "market-exchange" relationships, in which either party can turn to the marketplace and shift to different business partners at will, a practice usually associated with Western manufacturers.

The passage is primarily concerned with

- A. examining economic factors that may have contributed to the success of certain Japanese companies
- B. discussing the relative merits of strategic partnerships as compared with those of market-exchange relationship
- C. challenging the validity of a widely held assumption about how Japanese firms operate
- D. explaining why Western companies have been slow to adopt a particular practice favored by Japanese companies
- E. pointing out certain differences between Japanese and Western supplier relationships

According to the passage, the advice referred to in the highlighted text was a response to which of the following?

- A. A recent decrease in the number of available suppliers within the United States automobile industry
- B. A debate within Western management circles during the past decade regarding the value of strategic partnerships
- C. The success of certain European automobile manufacturers that have adopted strategic partnerships
- D. An increase in demand over the past decade for automobiles made by Western manufacturers
- E. Research comparing Japanese business practices with those of other nations

The author mentions "the success of a certain well-known Japanese automaker" most probably in order to

- A. demonstrate some of the possible reasons for the success of a certain business practice
- B. cite a specific case that has convinced Western business experts of the value of a certain business practice
- C. describe specific steps taken by Western automakers that have enabled them to compete more successfully in a global market
- D. introduce a paradox about the effect of a certain business practice in Japan
- E. indicate the need for Western managers to change their relationships with their external business partners

Which of the following is most clearly an example of the practice referred to in the last sentence of the passage?

- A. A department store chain that employs a single buyer to procure all the small appliances to be sold in its stores
- B. An automobile manufacturer that has used the same supplier of a particular axle component for several years in a row
- C. A hospital that contracts only with union personnel to staff its nonmedical positions
- D. A municipal government that decides to cancel its contract with a waste disposal company and instead hire its own staff to perform that function
- E. A corporation that changes the food-service supplier for its corporate headquarters several times over a five-year period as part of a cost-cutting campaign.

Companies that must determine well in advance of the selling season how many units of a new product to manufacture often under-produce products that sell well and have overstocks of others. The increased incidence in recent years of mismatches between production and demand seems ironic, since point-of-sale scanners have improved data on consumers' buying patterns and since flexible manufacturing has enabled companies to produce, cost-effectively, small quantities of goods. This type of manufacturing has greatly increased the number of new products introduced annually in the United States. However, frequent introductions of new products have two problematic side effects. For one, they reduce the average lifetime of products; more of them are neither at the beginning of their life (when prediction is difficult) or at the end of their life (when keeping inventory is expensive because the products will soon become obsolete). For another, as new products proliferate, demand is divided among a growing number of stock-keeping units (SKU's). Even though manufacturers and retailers can forecast aggregate demand with some certainty, forecasting accurately how that demand will be distributed among the many SKU's they sell is difficult. For example, a company may be able to estimate accurately the aggregate number of shoes it will sell, but it may be uncertain about which specific types of shoes will sell more than other types.

Which of the following most accurately describes the function of the last sentence in the passage?

- A. To cite a situation in which the aggregate demand is more important than the distribution of demand among SKU's
- B. To refute an assertion about the side effects of flexible manufacturing
- C. To illustrate an assertion about companies' ability to forecast demand
- D. To provide an example of ways in which companies address the difficulties of forecasting demand
- E. To note an exception to the author's assertion about distributing demand among SKU's

The passage suggests which of the following about divided demand among a growing number of SKU's?

- A. It has increased the average lifetime of products.
- B. It has resulted from retailer's attempts to predict demand more accurately and avoid both understocks and overstocks.
- C. It has decreased the use of flexible manufacturing by companies.
- D. It has not increased the expense of keeping inventory of certain products.
- E. It has not prevented companies from predicting aggregate demand with some certainty.

According to the passage, which of the following has led to growth in the number of new products introduced in the United States each year?

- A. Reduced average lifetime of products
- B. Increased ability to forecast aggregate demand
- C. More cost-effective ways of keeping inventory for products
- D. Cost-effective production of small quantities of goods
- E. Increased ability to divide demand among a number of SKU's and to forecast how that demand will be distributed among those SKU's

Until recently, zoologists believed that all species of phocids (true seals), a pinniped family, use a different maternal strategy than do otariids (fur seals and sea lions), another pinniped family. Mother otariids use a foraging strategy. They acquire moderate energy stores in the form of blubber before arriving at breeding sites and then fast for 5 to 11 days after birth. Throughout the rest of the lactation (milk production) period, which lasts from 4 months to 3 years depending on the species, mother otariids alternately forage at sea, where they replenish their fat stores, and nurse their young at breeding sites. Zoologists had assumed that females of all phocid species, by contrast, use a fasting strategy in which mother phocids, having accumulated large energy stores before they arrive at breeding sites, fast throughout the entire lactation period, which lasts from 4 to 50 days depending on the species. However, recent studies on harbor seals, a phocid species, found that lactating females commenced foraging approximately 6 days after giving birth and on average made 7 foraging trips during the remainder of their 24-day lactation period.

The maternal strategy evolved by harbor seals may have to do with their small size and the large proportion of their fat stores depleted in lactation. Harbor seals are small compared with other phocid species such as grey seals, northern elephant seals, and hooded seals, all of which are known to fast for the entire lactation period. Studies show that mother seals of these species use respectively 84 percent, 58 percent, and 33 percent of their fat stores during lactation. By comparison, harbor seals use 80 percent of their fat stores in just the first 19 days of lactation, even though they occasionally feed during this period. Since such a large proportion of their fat stores is exhausted despite feeding, mother harbor seals clearly cannot support all of lactation using only energy stored before giving birth. Though smaller than many other phocids, harbor seals are similar in size to most otariids. In addition, there is already some evidence suggesting that the ringed seal, a phocid species that is similar in size to the harbor seal, may also use a maternal foraging strategy.

It can be inferred from the passage that the females of all phocid species differ from the females of all otariid species in that the female phocids

- A. have shorter lactation periods
- B. consume more food during lactation
- C. consume a higher proportion of fat stores
- D. forage for food occasionally during their lactation periods
- E. deplete a smaller percentage of their fat stores during their lactation periods

The primary purpose of the passage is to

- A. present evidence that several phocid species use the maternal fasting strategy
- B. explain why the maternal strategy typically used by phocids is different from the maternal strategy used by otariids
- C. argue that zoologists' current understanding of harbor seals' maternal strategy is incorrect
- D. describe an unexpected behavior observed in harbor seals and propose an explanation that may account for that behavior
- E. describe evidence concerning the maternal strategy of the harbor seal and suggest that the harbor seal belongs to the otariid rather than to the phocid family

According to the passage, until recently zoologists believed which of the following about all phocid mothers?

- A. Their fasting periods after giving birth were typically shorter than those of otariids.
- B. Their lactation periods were generally as long as those of comparably sized otariids.
- C. They acquired only moderate energy stores in the form of blubber before arriving at breeding sites.
- D. They depleted less than a third of their stored body fat during lactation.
- E. They replenished their fat stores only after their lactation period ended.

The author of the passage mentions ringed seals most probably in order to

- A. provide an example of a phocid species that fasts throughout its entire lactation period
- B. provide an example of a phocid species whose maternal strategy is typical of phocid species
- C. provide an example of a phocid species that may deplete an even higher proportion of its fat stores during lactation than harbor seals do
- D. support the assertion that harbor seals are smaller than many other phocids
- E. support the assertion that harbor seals' maternal strategy may be related to their small size

Prior to 1965 geologists assumed that the two giant rock plates meeting at the San Andreas Fault generate heat through friction as they grind past each other, but in 1965 Henyey found that temperatures in drill holes near the fault were not as elevated as had been expected. Some geologists wondered whether the absence of friction-generated heat could be explained by the kinds of rock composing the fault. Geologists' pre-1965 assumptions concerning heat generated in the fault were based on calculations about common varieties of rocks, such as limestone and granite; but "weaker" materials, such as clays, had already been identified in samples retrieved from the fault zone. Under normal conditions, rocks composed of clay produce far less friction than do other rock types. In 1992 Byerlee tested whether these materials would produce friction 10 to 15 kilometers below the Earth's surface. Byerlee found that when clay samples were subjected to the thousands of atmospheres of pressure they would encounter deep inside the Earth, they produced as much friction as was produced by other rock types. The harder rocks push against each other, the hotter they become; in other words, pressure itself, not only the rocks' properties, affects frictional heating. Geologists therefore wondered whether the friction between the plates was being reduced by pockets of pressurized water within the fault that push the plates away from each other.

The passage suggests which of the following regarding Henyey's findings about temperature in the San Andreas Fault?

- A. Scientists have yet to formulate a definitive explanation for Henyey's findings.
- B. Recent research suggests that Henyey's explanation for the findings should be modified.
- C. Henyey's findings had to be recalculated in light of Byerlee's 1992 experiment.
- D. Henyey's findings provided support for an assumption long held by geologists.
- E. Scientists have been unable to duplicate Henyey's findings using more recent experimental methods.

The passage is primarily concerned with

- A. evaluating a method used to test a particular scientific hypothesis
- B. discussing explanations for an unexpected scientific finding
- C. examining the assumptions underlying a particular experiment
- D. questioning the validity of a scientific finding
- E. presenting evidence to support a recent scientific hypothesis

The passage mostly agree that Heney's findings about temperature in the San Andreas Fault made the greatest contribution in that they

- A. revealed an error in previous measurements of temperature in the San Andreas Fault zone
- B. indicated the types of clay present in the rocks that form the San Andreas Fault
- C. established the superiority of a particular technique for evaluating data concerning friction in the San Andreas Fault
- D. suggested that geologists had inaccurately assumed that giant rock plates that meet at the San Andreas Fault generate heat through friction
- E. confirmed geologists' assumptions about the amount of friction generated by common varieties of rocks, such as limestone and granite

One proposal for preserving rain forests is to promote the adoption of new agricultural technologies, such as improved plant varieties and use of chemical herbicides, which would increase productivity and slow deforestation by reducing demand for new cropland. Studies have shown that farmers in developing countries who have achieved certain levels of education, wealth, and security of land tenure are more likely to adopt such technologies. But these studies have focused on villages with limited land that are tied to a market economy rather than on the relatively isolated, self-sufficient communities with ample land characteristic of rain-forest regions. A recent study of the Tawahka people of the Honduran rain forest found that farmers with some formal education were more likely to adopt improved plant varieties but less likely to use chemical herbicides and that those who spoke Spanish (the language of the market economy) were more likely to adopt both technologies. Non-land wealth was also associated with more adoption of both technologies, but availability of uncultivated land reduced the incentive to employ the productivity-enhancing technologies. Researchers also measured land-tenure security: in Tawahka society, kinship ties are a more important indicator of this than are legal property rights, so researchers measured it by a household's duration of residence in its village. They found that longer residence correlated with more adoption of improved plant varieties but less adoption of chemical herbicides.

The primary purpose of the passage is to

- A. evaluate the likelihood that a particular proposal, if implemented, would ultimately succeed in achieving its intended result
- B. question the assumption that certain technological innovations are the most effective means of realizing a particular environmental objective
- C. discuss the progress of efforts to encourage a particular traditional society to adopt certain modern agricultural methods
- D. present the results of new research suggesting that previous findings concerning one set of conditions may not be generalizable to another set of conditions
- E. weigh the relative importance of three factors in determining whether a particular strategy will be successful

According to the passage, the proposal mentioned in line 1 is aimed at preserving rain forests by encouraging farmers in rain-forest regions to do each of the following EXCEPT

- A. adopt new agricultural technologies
- B. grow improved plant varieties
- C. decrease their use of chemical herbicides
- D. increase their productivity
- E. reduce their need to clear new land for cultivation

The passage suggests that in the study mentioned in the highlighted text the method for gathering information about security of land tenure reflects which of the following pairs of assumptions about Tawahka society?

A. The security of a household's land tenure depends on the strength of that household's kinship ties, and the duration of a household's residence in its village is an indication of the strength of that household's kinship ties.

B. The ample availability of land makes security of land tenure unimportant, and the lack of a need for secure land tenure has made the concept of legal property rights unnecessary.

C. The strength of a household's kinship ties is a more reliable indicator of that household's receptivity to new agricultural technologies than is its quantity of nonland wealth, and the duration of a household's residence in its village is a more reliable indicator of that household's security of land tenure than is the strength of its kinship ties.

D. Security of land tenure based on kinship ties tends to make farmers more receptive to the use of improved plant varieties, and security of land tenure based on long duration of residence in a village tends to make farmers more receptive to the use of chemical herbicides.

E. A household is more likely to be receptive to the concept of land tenure based on legal property rights if it has easy access to uncultivated land, and a household is more likely to uphold the tradition of land tenure based on kinship ties if it possesses a significant degree of non-land wealth.

The findings of the study mentioned in the highlighted text, if valid for rain-forest regions in general, suggest that which of the following is an obstacle most likely to be faced by those wishing to promote rain-forest preservation by implementing the proposal mentioned in line 1?

A. Lack of legal property rights tends to discourage local farmers from investing the time and resources required to successfully implement new agricultural technologies.

B. The ability to evaluate the wider economic ramifications of adopting new agricultural technologies depends on a relatively high level of formal education.

C. Isolation from the market economy tends to restrict local farmers' access to new agricultural technologies that could help them to increase their productivity.

D. Ready availability of uncultivated land tends to decrease local farmers' incentive to adopt new agricultural technologies that would reduce their need to clear new land for cultivation.

E. Traditions of self-sufficiency and reliance on kinship ties tend to diminish local farmers' receptivity to new agricultural technologies introduced by people from outside the local community.

(This passage was excerpted from material published in 1993.)

Like many other industries, the travel industry is under increasing pressure to expand globally in order to keep pace with its corporate customers, who have globalized their operations in response to market pressure, competitor actions, and changing supplier relations. But it is difficult for service organizations to globalize. Global expansion through acquisition is usually expensive, and expansion through internal growth is time-consuming and sometimes impossible in markets that are not actively growing. Some service industry companies, in fact, regard these traditional routes to global expansion as inappropriate for service industries because of their special need to preserve local responsiveness through local presence and expertise. One travel agency has eschewed the traditional route altogether. A survivor of the changes that swept the travel industry as a result of the deregulation of the airlines in 1978—changes that included dramatic growth in the corporate demand for travel services, as well as extensive restructuring and consolidation within the travel industry—this agency adopted a unique structure for globalization. Rather than expand by attempting to develop its own offices abroad, which would require the development of local travel management expertise sufficient to capture foreign markets, the company solved its globalization dilemma effectively by forging alliances with the best foreign partners it could find. The resulting cooperative alliance of independent agencies now comprises 32 partners spanning 37 countries.

The passage suggests that one of the effects of the deregulation of the airlines was

- A. a decline in the services available to noncommercial travelers
- B. a decrease in the size of the corporate travel market
- C. a sharp increase in the number of cooperative alliances among travel agencies
- D. increased competition in a number of different service industries
- E. the merging of some companies within the travel industry

The author discusses a particular travel agency in the passage most likely in order to

- A. provide evidence of the pressures on the travel industry to globalize
- B. demonstrate the limitations of the traditional routes to global expansion
- C. illustrate an unusual approach to globalizing a service organization
- D. highlight the difficulties confronting travel agencies that attempt to globalize
- E. underscore the differences between the service industry and other industries

According to the passage, which of the following is true of the traditional routes to global expansion?

- A. They have been supplanted in most service industries by alternative routes.
- B. They are less attractive to travel agencies since deregulation of the airlines.
- C. They may represent the most cost-effective means for a travel agency to globalize.
- D. They may be unsuitable for service agencies that are attempting to globalize.
- E. They are most likely to succeed in markets that are not actively growing.

Firms traditionally claim that they downsize (i.e., make permanent personnel cuts) for economic reasons, laying off supposedly unnecessary staff in an attempt to become more efficient and competitive. Organization theory would explain this reasoning as an example of the "economic rationality" that it assumes underlies all organizational activities. There is evidence that firms believe they are behaving rationally whenever they downsize; yet recent research has shown that the actual economic effects of downsizing are often negative for firms. Thus, organization theory cannot adequately explain downsizing; non-economic factors must also be considered. One such factor is the evolution of downsizing into a powerful business myth: managers simply believe that downsizing is efficacious. Moreover, downsizing nowadays is greeted favorably by the business press; the press often refers to soaring stock prices of downsizing firms (even though research shows that stocks usually rise only briefly after downsizing and then suffer a prolonged decline). Once viewed as a sign of desperation, downsizing is now viewed as a signal that firms are serious about competing in the global marketplace; such signals are received positively by key actors—financial analysts, consultants, shareholders—who supply firms with vital organizing resources. Thus, even if downsizers do not become economically more efficient, downsizing's mythic properties give them added prestige in the business community, enhancing their survival prospects.

According to the passage, the "key actors" view a firm's downsizing activities as an indication of the firm's

- A. troubled financial condition
- B. inability to develop effective long-term strategies
- C. inability to retain vital organizational resources
- D. desire to boost its stock price
- E. desire to become more competitive

The primary purpose of the passage is to

- A. criticize firms for engaging in the practice of downsizing
- B. analyze the negative economic impact of downsizing on firms
- C. offer an alternative to a traditional explanation for the occurrence of downsizing
- D. chronicle how perceptions of downsizing have changed over time
- E. provide evidence disputing the prevalence of downsizing

The passage suggests which of the following about the claim that a firm will become more efficient and competitive by downsizing?

- A. Few firms actually believe this claim to be true.
- B. Fewer firms have been making this claim in recent years.
- C. This claim contradicts the basic assumption of organization theory.
- D. This claim is called into question by certain recent research.
- E. This claim is often treated with skepticism by the business press.

The passage suggests that downsizing's mythic properties can be beneficial to a downsizing firm because these properties

- A. allow the firm to achieve significant operating efficiencies
- B. provide the firm with access to important organizing resources
- C. encourage a long-term increase in the firm's stock price
- D. make the firm less reliant on external figures such as financial analysts and consultants
- E. discourage the firm's competitors from entering the global marketplace

In 1675, Louis XIV established the Parisian seamstresses' guild, the first independent all-female guild created in over 200 years. Guild members could make and sell women's and children's clothing, but were prohibited from producing men's clothing or dresses for court women. Tailors resented the ascension of seamstresses to guild status; seamstresses, meanwhile, were impatient with the remaining restrictions on their right to clothe women. The conflict between the guilds was not purely economic, however. A 1675 police report indicated that since so many seamstresses were already working illegally, the tailors were unlikely to suffer additional economic damage because of the seamstresses' incorporation. Moreover, guild membership held very different meanings for tailors and seamstresses. To the tailors, their status as guild members overlapped with their role as heads of household, and entitled them to employ as seamstresses female family members who did not marry outside the trade. The seamstresses, however, viewed guild membership as a mark of independence from the patriarchal family. Their guild was composed not of family units but of individual women who enjoyed unusual legal and economic privileges. At the conflict's center was the issue of whether tailors' female relatives should be identified as family members protected by the tailors' guild or as individuals under the jurisdiction of the seamstresses' guild.

The primary purpose of the passage is to

- A. outline a scholarly debate over the impact of the Parisian seamstresses' guild
- B. summarize sources of conflict between the newly created Parisian seamstresses' guild and the tailors' guild
- C. describe opposing views concerning the origins of the Parisian seamstresses' guild
- D. explore the underlying reasons for establishing an exclusively female guild in seventeenth-century Paris
- E. correct a misconception about changes in seamstresses' economic status that took place in Paris in the late seventeenth century

According to the passage, one source of dissatisfaction for Parisian seamstresses after the establishment of the seamstresses' guild was that

- A. seamstresses were not allowed to make and sell clothing for all women
- B. tailors continued to have the exclusive legal right to clothe men
- C. seamstresses who were relatives of tailors were prevented from becoming members of the seamstresses' guild
- D. rivalry between individual seamstresses increased, thus hindering their ability to compete with the tailors for business
- E. seamstresses were not allowed to accept male tailors as members of the guild

It can be inferred from the passage that which of the following was true of seamstresses employed by relatives who were members of the tailors' guild?

- A. They were instrumental in convincing Louis XIV to establish the seamstresses' guild.
- B. They were rarely allowed to assist master tailors in the production of men's clothing.
- C. They were considered by some tailors to be a threat to the tailors' monopoly.
- D. They did not enjoy the same economic and legal privileges that members of the seamstresses' guild enjoyed.
- E. They felt their status as working women gave them a certain degree of independence from the patriarchal family.

The author mentions the seamstresses' view of guild membership as a "mark of independence from the patriarchal family" primarily in order to

- A. emphasize that the establishment of the seamstresses' guild had implications that were not solely economic
- B. illustrate the conflict that existed between tailors and their female family members over membership in the tailors' guild
- C. imply that the establishment of the seamstresses' guild ushered in a period of increased economic and social freedom for women in France
- D. provide an explanation for the dramatic increase in the number of women working as seamstresses after 1675
- E. indicate that members of the seamstresses' guild were financially more successful than were tailors' female relatives protected by the tailors' guild

Anthropologists studying the Hopi people of the southwestern United States often characterize Hopi society between 1680 and 1880 as surprisingly stable, considering that it was a period of diminution in population and pressure from contact with outside groups, factors that might be expected to cause significant changes in Hopi social arrangements.

The Hopis' retention of their distinctive socio-cultural system has been attributed to the Hopi religious elite's determined efforts to preserve their religion and way of life, and also to a geographical isolation greater than that of many other Native American groups, an isolation that limited both cultural contact and exposure to European diseases. But equally important to Hopi cultural persistence may have been an inherent flexibility in their social system that may have allowed preservation of traditions even as the Hopis accommodated themselves to change. For example, the system of matrilineal clans was maintained throughout this period, even though some clans merged to form larger groups while others divided into smaller descent groups. Furthermore, although traditionally members of particular Hopi clans appear to have exclusively controlled particular ceremonies, a clan's control of a ceremony might shift to another clan if the first became too small to manage the responsibility. Village leadership positions traditionally restricted to members of one clan might be similarly extended to members of other clans, and women might assume such positions under certain unusual conditions.

The author of the passage would be most likely to agree with which of the following statements about the explanation outlined in the highlighted text?

- A. It fails to take into account the effect of geographical circumstances on Hopi culture.
- B. It correctly emphasizes the role of the religious elite in maintaining the system of matrilineal clans.
- C. It represents a misreading of Hopi culture because it fails to take into account the actual differences that existed among the various Hopi clans.
- D. It underestimates the effect on Hopi cultural development of contact with other cultural groups.
- E. It is correct but may be insufficient in itself to explain Hopi socio-cultural persistence.

Which of the following can be inferred from the passage about the Hopis' geographic situation between 1680 and 1880?

- A. It prevented the Hopis from experiencing a diminution in population.
- B. It helped to promote flexibility within their social system.
- C. It limited but did not eliminate contact with other cultural groups.
- D. It reinforced the religious elite's determination to resist cultural change.
- E. It tended to limit contact between certain Hopi clans.

The passage is primarily concerned with

- A. reassessing a phenomenon in light of new findings
- B. assessing the relative importance of two factors underlying a phenomenon
- C. examining the assumptions underlying an interpretation of a phenomenon
- D. expanding on an explanation of a phenomenon
- E. contrasting two methods for evaluating a phenomenon

A small number of the forest species of lepidoptera (moths and butterflies, which exist as caterpillars during most of their life cycle) exhibit regularly recurring patterns of population growth and decline—such fluctuations in population are known as population cycles. Although many different variables influence population levels, a regular pattern such as a population cycle seems to imply a dominant, driving force. Identification of that driving force, however, has proved surprisingly elusive despite considerable research. The common approach of studying causes of population cycles by measuring the mortality caused by different agents, such as predatory birds or parasites, has been unproductive in the case of lepidoptera. Moreover, population ecologists' attempts to alter cycles by changing the caterpillars' habitat and by reducing caterpillar populations have not succeeded. In short, the evidence implies that these insect populations, if not self-regulating, may at least be regulated by an agent more intimately connected with the insect than are predatory birds or parasites.

Recent work suggests that this agent may be a virus. For many years, viral disease had been reported in declining populations of caterpillars, but population ecologists had usually considered viral disease to have contributed to the decline once it was underway rather than to have initiated it. The recent work has been made possible by new techniques of molecular biology that allow viral DNA to be detected at low concentrations in the environment. Nuclear polyhedrosis viruses are hypothesized to be the driving force behind population cycles in lepidoptera in part because the viruses themselves follow an infectious cycle in which, if protected from direct sun light, they may remain virulent for many years in the environment, embedded in durable crystals of polyhedrin protein. Once ingested by a caterpillar, the crystals dissolve, releasing the virus to infect the insect's cells. Late in the course of the infection, millions of new virus particles are formed and enclosed in polyhedrin crystals. These crystals reenter the environment after the insect dies and decomposes, thus becoming available to infect other caterpillars.

One of the attractions of this hypothesis is its broad applicability. Remarkably, despite significant differences in habitat and behavior, many species of lepidoptera have population cycles of similar length, between eight and eleven years. Nuclear polyhedrosis viral infection is one factor these disparate species share.

Which of the following, if true, would most weaken the author's conclusion in the highlighted text?

- A. New research reveals that the number of species of birds and parasites that prey on lepidoptera has dropped significantly in recent years.
- B. New experiments in which the habitats of lepidoptera are altered in previously untried ways result in the shortening of lepidoptera population cycles.
- C. Recent experiments have revealed that the nuclear polyhedrosis virus is present in a number of predators and parasites of lepidoptera.
- D. Differences among the habitats of lepidoptera species make it difficult to assess the effects of weather on lepidoptera population cycles.
- E. Viral disease is typically observed in a large proportion of the Lepidoptera population.

It can be inferred from the passage that the mortality caused by agents such as predatory birds or parasites was measured in an attempt to

- A. develop an explanation for the existence of lepidoptera population cycles
- B. identify behavioral factors in lepidoptera that affect survival rates
- C. identify possible methods for controlling lepidoptera population growth
- D. provide evidence that lepidoptera populations are self-regulating
- E. determine the life stages of lepidoptera at which mortality rates are highest

The primary purpose of the passage is to

- A. describe the development of new techniques that may help to determine the driving force behind population cycles in lepidoptera
- B. present evidence that refutes a particular theory about the driving force behind population cycles in lepidoptera
- C. present a hypothesis about the driving force behind population cycles in lepidoptera
- D. describe the fluctuating patterns of population cycles in Lepidoptera
- E. question the idea that a single driving force is behind population cycles in lepidoptera

According to the passage, before the discovery of new techniques for detecting viral DNA, population ecologists believed that viral diseases

- A. were not widely prevalent among insect populations generally
- B. affected only the caterpillar life stage of lepidoptera
- C. were the driving force behind lepidoptera population cycles
- D. attacked already declining caterpillar populations
- E. infected birds and parasites that prey on various species of lepidoptera

Although many lines of evidence indicate that birds evolved from ground-dwelling theropod dinosaurs, some scientists remain unconvinced. They argue that theropods appeared too late to have given rise to birds, noting that *Archaeopteryx lithographica*—the oldest known bird—appears in the fossil record about 150 million years ago, whereas the fossil remains of various nonavian maniraptor theropods—the closest known relatives of birds—date only to about 115 million years ago. But investigators have now uncovered bones that evidently belong to nonavian maniraptors dating to the time of *Archaeopteryx*. In any case, failure to find fossils of a predicted kind does not rule out their existence in an undiscovered deposit. Skeptics also argue that the fused clavicles (the “wishbone”) of birds differ from the unfused clavicles of theropods. This objection was reasonable when only early theropod clavicles had been discovered, but fossilized theropod clavicles that look just like the wishbone of *Archaeopteryx* have now been unearthed. Finally, some scientists argue that the complex lungs of birds could not have evolved from theropod lungs, an assertion that cannot be supported or falsified at the moment, because no fossil lungs are preserved in the paleontological record.

The primary purpose of the passage is to

- A. compare the development of two hypotheses concerning the evolutionary origin of birds
- B. suggest revisions to the standard theory of the evolutionary history of birds
- C. evaluate the usefulness of fossil evidence in determining the evolutionary history of birds
- D. challenge the theory that birds evolved from ground-dwelling theropod dinosaurs
- E. respond to criticisms of the theory that birds evolved from ground-dwelling theropod dinosaurs

In the context of the passage, the phrase “fossils of a predicted kind” most likely refers to which of the following?

- A. Theropod fossils with fused clavicles
- B. Theropod fossils that are similar in structure to *Archaeopteryx* fossils
- C. Theropod fossils dating back more than 150 million years
- D. Fossils indicating the structure of theropod lungs
- E. Fossils indicating the structure of *Archaeopteryx* lungs

Which of the following is mentioned in the passage as an argument made by scientists who are unconvinced that birds evolved from theropod dinosaurs?

- A. There are no known theropod dinosaur fossils dating from a period after the time of *Archaeopteryx*.
- B. There are no known theropod dinosaur fossils that indicate the structure of those dinosaurs’ lungs.
- C. Theropod dinosaurs appear in the fossil record about 150 million years ago.
- D. Theropod dinosaurs did not have fused clavicles.
- E. Theropod dinosaurs had certain bones that look just like those of *Archaeopteryx*.

The term "episodic memory" was introduced by Tulving to refer to what he considered a uniquely human capacity—the ability to recollect specific past events, to travel back into the past in one's own mind—as distinct from the capacity simply to use information acquired through past experiences. Subsequently, Clayton et al. developed criteria to test for episodic memory in animals. According to these criteria, episodic memories are not of individual bits of information; they involve multiple components of a single event "bound" together. Clayton sought to examine evidence of scrub jays' accurate memory of "what," "where," and "when" information and their binding of this information. In the wild, these birds store food for retrieval later during periods of food scarcity. Clayton's experiment required jays to remember the type, location, and freshness of stored food based on a unique learning event. Crickets were stored in one location and peanuts in another. Jays prefer crickets, but crickets degrade more quickly. Clayton's birds switched their preference from crickets to peanuts once the food had been stored for a certain length of time, showing that they retain information about the what, the where, and the when. Such experiments cannot, however, reveal whether the birds were re-experiencing the past when retrieving the information. Clayton acknowledged this by using the term "episodic-like" memory.

The primary purpose of the passage is to

- A. explain how the findings of a particular experiment have been interpreted and offer an alternative interpretation
- B. describe a particular experiment and point out one of its limitations
- C. present similarities between human memory and animal memory
- D. point out a flaw in the argument that a certain capacity is uniquely human
- E. account for the unexpected behavior of animal subjects in a particular experiment

According to the passage, Clayton's experiment depended on the fact that scrub jays

- A. recall "when" and "where" information more distinctly than "what" information
- B. are not able to retain information about a single past event for an indefinitely long period of time
- C. choose peanuts over crickets when the crickets have been stored for a long period of time
- D. choose crickets over peanuts whenever both are available
- E. prefer peanuts that have been stored for a short period to crickets that have been stored for a short period

The passage suggests that Clayton's experiment demonstrated scrub jays' ability to

- A. choose different storage places for different kinds of food to minimize the rate at which a food will degrade
- B. unlearn a behavior they use in the wild in order to adapt to laboratory conditions
- C. bind together information about different aspects of a single past event
- D. re-experience a past event in memory and act accordingly
- E. distinguish one learning event from a subsequent learning event

It can be inferred from the passage that both Tulving and Clayton would agree with which of the following statements?

- A. Animals' abilities to use information about a specific past event are not conclusive evidence of episodic memory.
- B. Animals do not share humans' abilities to reexperience the past through memory.
- C. The accuracy of animals' memories is difficult to determine through direct experimentation.
- D. Humans tend to recollect single bits of information more accurately than do animals.
- E. The binding of different kinds of information is not a distinctive feature of episodic memory.

Many managers are influenced by dangerous myths about pay that lead to counterproductive decisions about how their companies compensate employees. One such **myth** is that labor rates, the rate per hour paid to workers, are identical with labor costs, the money spent on labor in relation to the productivity of the labor force. This myth leads to the assumption that a company can simply lower its labor costs by cutting wages. But labor costs and labor rates are not in fact the same: one company could pay its workers considerably more than another and yet have lower labor costs if that company's productivity were higher due to the talent of its workforce, the efficiency of its work processes, or other factors. The confusion of costs with rates persists partly because labor rates are a convenient target for managers who want to make an impact on their company's budgets. Because labor rates are highly visible, managers can easily compare their company's rates with those of competitors. Furthermore, labor rates often appear to be a company's most malleable financial variable: cutting wages appears an easier way to control costs than such options as reconfiguring work processes or altering product design.

The myth that labor rates and labor costs are equivalent is supported by business journalists, who frequently confound the two. For example, prominent **business journals** often remark on the "high" cost of German labor, citing as evidence the average amount paid to German workers. The myth is also perpetuated by the compensation consulting industry, which has its own incentives to keep such myths alive. First, although some of these consulting firms have recently broadened their practices beyond the area of compensation, their mainstay continues to be advising companies on changing their compensation practices. Suggesting that a company's performance can be improved in some other way than by altering its pay system may be empirically correct but contrary to the consultants' interests. Furthermore, changes to the compensation system may appear to be simpler to implement than changes to other aspects of an organization, so managers are more likely to find such advice from consultants palatable. Finally, to the extent that changes in compensation create new problems, the consultants will continue to have work solving the problems that result from their advice.

The passage suggests that the "myth" mentioned in the highlighted text persists partly because

A. managers find it easier to compare their companies' labor rates with those of competitors than to compare labor costs

B. managers tend to assume that labor rates affect their companies' budgets less than they actually do
C. managers tend to believe that labor rates can have an impact on the efficiency of their companies' work processes

D. the average amount paid to workers differs significantly from one country to another

E. many companies fail to rely on compensation consultants when making decisions about labor rates

The author of the passage mentions business journals the highlighted text primarily in order to

A. demonstrate how a particular kind of evidence can be used to support two different conclusions

B. cast doubt on a particular view about the average amount paid to German workers

C. suggest that business journalists may have a vested interest in perpetuating a particular view

D. identify one source of support for a view common among business managers

E. indicate a way in which a particular myth could be dispelled

It can be inferred from the passage that the author would be most likely to agree with which of the following statements about compensation?

A. A company's labor costs are not affected by the efficiency of its work processes.

B. High labor rates are not necessarily inconsistent with the goals of companies that want to reduce costs.

C. It is more difficult for managers to compare their companies' labor rates with those of competitors than to compare labor costs.

D. A company whose labor rates are high is unlikely to have lower labor costs than other companies.

E. Managers often use information about competitors' labor costs to calculate those companies' labor rates.

The author of the passage suggests which of the following about the advice that the consulting firms discussed in the passage customarily give to companies attempting to control costs?

A. It often fails to bring about the intended changes in companies' compensation systems.

B. It has highly influenced views that predominate in prominent business journals.

C. It tends to result in decreased labor rates but increased labor costs.

D. It leads to changes in companies' compensation practices that are less visible than changes to work processes would be.

E. It might be different if the consulting firms were less narrowly specialized.

According to the passage, which of the following is true about changes to a company's compensation system?

A. They are often implemented in conjunction with a company's efforts to reconfigure its work processes.

B. They have been advocated by prominent business journals as the most direct way for a company to bring about changes in its labor costs.

C. They are more likely to result in an increase in labor costs than they are to bring about competitive advantages for the company.

D. They sometimes result in significant cost savings but are likely to create labor-relations problems for the company.

E. They may seem to managers to be relatively easy to implement compared with other kinds of changes managers might consider.

Acting on the recommendation of a British government committee investigating the high incidence in white lead factories of illness among employees, most of whom were women, the Home Secretary proposed in 1895 that Parliament enact legislation that would prohibit women from holding most jobs in white lead factories. Although the Women's Industrial Defence Committee (WIDC), formed in 1892 in response to earlier legislative attempts to restrict women's labor, did not discount the white lead trade's potential health dangers, it opposed the proposal, viewing it as yet another instance of limiting women's work opportunities. Also opposing the proposal was the Society for Promoting the Employment of Women (SPEW), which attempted to challenge it by investigating the causes of illness in white lead factories. SPEW contended, and WIDC concurred, that controllable conditions in such factories were responsible for the development of lead poisoning. SPEW provided convincing evidence that lead poisoning could be avoided if workers were careful and clean and if already extant workplace safety regulations were stringently enforced. However, the Women's Trade Union League (WTUL), which had ceased in the late 1880's to oppose restrictions on women's labor, supported the eventually enacted proposal, in part because safety regulations were generally not being enforced in white lead factories, where there were no unions (and little prospect of any) to pressure employers to comply with safety regulations.

The passage is primarily concerned with

- A. presenting various groups' views of the motives of those proposing certain legislation
- B. contrasting the reasoning of various groups concerning their positions on certain proposed legislation
- C. tracing the process whereby certain proposed legislation was eventually enacted
- D. assessing the success of tactics adopted by various groups with respect to certain proposed legislation
- E. evaluating the arguments of various groups concerning certain proposed legislation

The passage suggests that WIDC differed from WTUL in which of the following ways?

- A. WIDC believed that the existing safety regulations were adequate to protect women's health, whereas WTUL believed that such regulations needed to be strengthened.
- B. WIDC believed that unions could not succeed in pressuring employers to comply with such regulations, whereas WTUL believed that unions could succeed in doing so.
- C. WIDC believed that lead poisoning in white lead factories could be avoided by controlling conditions there, whereas WTUL believed that lead poisoning in such factories could not be avoided no matter how stringently safety regulations were enforced.
- D. At the time that the legislation concerning white lead factories was proposed, WIDC was primarily concerned with addressing health conditions in white lead factories, whereas WTUL was concerned with improving working conditions in all types of factories.
- E. At the time that WIDC was opposing legislative attempts to restrict women's labor, WTUL had already ceased to do so.

According to the passage, the WIDC believed that the proposed legislation resembled earlier legislation concerning women's labor in that it

- A. caused divisiveness among women's organizations
- B. sought to protect women's health
- C. limited women's occupational opportunities
- D. failed to bolster workplace safety regulations
- E. failed to make distinctions among types of factory work

Which of the following, if true, would most clearly support the contention attributed to SPEW in the highlighted text?

- A. Those white lead factories that most strongly enforced regulations concerning worker safety and hygiene had the lowest incidences of lead poisoning among employees.
- B. The incidence of lead poisoning was much higher among women who worked in white lead factories than among women who worked in other types of factories.
- C. There were many household sources of lead that could have contributed to the incidence of lead poisoning among women who also worked outside the home in the late nineteenth century.
- D. White lead factories were more stringent than were certain other types of factories in their enforcement of workplace safety regulations.
- E. Even brief exposure to the conditions typically found in white lead factories could cause lead poisoning among factory workers.

In *American Genesis*, which covers the century of technological innovation in the United States beginning in 1876, Thomas Hughes assigns special prominence to Thomas Edison as archetype of the independent nineteenth-century inventor. However, Hughes virtually ignores Edison's famous contemporary and notorious adversary in the field of electric light and power, George Westinghouse. This comparative neglect of Westinghouse is consistent with other recent historians' works, although it marks an intriguing departure from the prevailing view during the inventors' lifetimes (and for decades afterward) of Edison and Westinghouse as the two "pioneer innovators" of the electrical industry.

My recent reevaluation of Westinghouse, facilitated by materials found in railroad archives, suggests that while Westinghouse and Edison shared important traits as inventors, they differed markedly in their approach to the business aspects of innovation. For Edison as an inventor, novelty was always paramount: the overriding goal of the business of innovation was simply to generate funding for new inventions. Edison therefore undertook just enough sales, product development, and manufacturing to accomplish this. Westinghouse, however, shared the attitudes of the railroads and other industries for whom he developed innovations: product development, standardization, system, and order were top priorities. Westinghouse thus better exemplifies the systematic approach to technological development that would become a hallmark of modern corporate research and development.

The primary purpose of the passage is to

- A. reevaluate a controversial theory
- B. identify the flaws in a study
- C. propose a new method of historical research
- D. compare two contrasting analyses
- E. provide a fresh perspective

According to the passage, Edison's chief concern as an inventor was the

- A. availability of a commercial market
- B. costs of developing a prototype
- C. originality of his inventions
- D. maintenance of high standards throughout production
- E. generation of enough profits to pay for continued marketing

The author of the passage implies that the shift away from the views of Westinghouse's contemporaries should be regarded as

- A. a natural outgrowth of the recent revival of interest in Edison
- B. a result of scholarship based on previously unknown documents
- C. reflective of modern neglect of the views of previous generations
- D. inevitable, given the changing trends in historical interpretations
- E. surprising, given the stature that Westinghouse once had

For many years, historians thought that the development of capitalism had not faced serious challenges in the United States. Writing in the early twentieth century, **progressive historians** sympathized with the battles waged by farmers and small producers against large capitalists in the late nineteenth century, but they did not question the widespread acceptance of laissez-faire (unregulated) capitalism throughout American history. Similarly, Louis Hartz, who sometimes disagreed with the Progressives, argued that Americans accepted laissez-faire capitalism without challenge because they lacked a feudal, pre-capitalist past. Recently, however, some **scholars** have argued that even though laissez-faire became the prevailing ethos in nineteenth-century America, it was not accepted without struggle. Laissez-faire capitalism, they suggest, clashed with existing religious and communitarian **norms** that imposed moral constraints on acquisitiveness to protect the weak from the predatory, the strong from corruption, and the entire culture from materialist excess. Buttressed by mercantilist notions that government should be both regulator and promoter of economic activity, these norms persisted long after the American Revolution helped unleash the economic forces that produced capitalism. These scholars argue that even in the late nineteenth century, with the government's role in the economy considerably diminished, laissez-faire had not triumphed completely. Hard times continued to revive popular demands for regulating business and softening the harsh edges of laissez-faire capitalism.

The primary purpose of the passage is to

- A. reveal the underlying similarities of certain arguments regarding the development of capitalism in the United States
- B. synthesize two competing arguments regarding the development of capitalism in the United States
- C. defend an established argument regarding the development of capitalism in the United States
- D. summarize a scholarly refutation of an argument regarding the development of capitalism in the United States**
- E. discuss a new methodology for the study of the development of capitalism in the United States

According to the passage, the Progressive historians and the scholars mentioned in the highlighted texts disagree with regard to which of the following?

- A. Whether laissez-faire became the predominant ethos in the nineteenth-century United States
- B. Whether moral restraints on acquisitiveness were necessary in the nineteenth century United States
- C. The economic utility of mercantilist notions of government
- D. The nature of the historical conditions necessary for the development of laissez-faire capitalism in the nineteenth-century United States
- E. The existence of significant opposition to the development of laissez-faire capitalism in the nineteenth-century United States**

The passage suggests that the scholars mentioned in the highlighted text would agree with which of the following statements regarding the "norms" mentioned in the subsequent highlighted text?

- A. They provided a primary source of opposition to the development of laissez-faire capitalism in the United States in the nineteenth century.**
- B. Their appeal was undermined by difficult economic times in the United States at the end of the nineteenth century.
- C. They disappeared in the United States in the late nineteenth century because of the triumph of laissez-faire capitalism.
- D. They facilitated the successful implementation of mercantilist notions of government in the United States in the nineteenth-century.
- E. They are now recognized by historians as having been an important part of the ideology of the American Revolution.

In the fourteenth and fifteenth centuries, many Western Pueblo settlements in what is now the southwestern United States may have possessed distinctly hierarchical organizational structures. These communities' agricultural systems—which were “intensive” in the use of labor rather than “extensive” in area—may have given rise to political leadership that managed both labor and food resources. That formal management of food resources was needed is suggested by the large size of storage spaces located around some communal Great Kivas (underground ceremonial chambers). Though no direct evidence exists that such spaces were used to store food, Western Pueblo communities lacking sufficient arable land to support their populations could have preserved the necessary extra food, including imported foodstuffs, in such apparently communal spaces. Moreover, evidence of specialization in producing raw materials and in manufacturing ceramics and textiles indicates differentiation of labor within and between communities. The organizational and managerial demands of such specialization strengthen the possibility that a decision-making elite existed, an elite whose control over labor, the use of community surpluses, and the acquisition of imported goods would have led to a concentration of economic resources in their own hands. Evidence for differential distribution of wealth is found in burials of the period: some include large quantities of pottery, jewelry, and other artifacts, whereas others from the same sites lack any such materials.

Which of the following, if true, would most clearly undermine the author's statement in the last sentence of the passage regarding the distribution of wealth in Western Pueblo settlements?

- A. Only community members of exceptional wealth are likely to have been buried with their personal possessions.
- B. Members of communities with extensive agricultural systems are usually buried without personal possessions.
- C. Most artifacts found in burial sites were manufactured locally rather than imported from other communities.
- D. Burial artifacts are often ritual objects associated with religious practices rather than being the deceased's personal possessions.
- E. The quality of burial artifacts varies depending on the site with which they are associated.

According to the passage, which of the following is probably true of the storage spaces mentioned in highlighted text?

- A. They were used by the community elite for storage of their own food supplies.
- B. They served a ceremonial as well as a practical function.
- C. Their size is an indication of the wealth of the particular community to which they belonged.
- D. Their existence proves that the community to which they belonged imported large amounts of food.
- E. They belonged to and were used by the community as a whole.

The primary purpose of the passage is to

- A. outline the methods by which resources were managed within a particular group of communities
- B. account for the distribution of wealth within a particular group of communities
- C. provide support for a hypothesis concerning the social structure of a particular society
- D. explain how political leadership changed in a particular historical situation
- E. present new evidence that contradicts previous theories about a particular historical situation

Researchers studying how genes control animal behavior have had to deal with many uncertainties. In the first place, most behaviors are governed by more than one gene, and until recently geneticists had no method for identifying the multiple genes involved. In addition, even when a single gene is found to control a behavior, researchers in different fields do not necessarily agree that it is a "behavioral gene." Neuroscientists, whose interest in genetic research is to understand the nervous system (which generates behavior), define the term broadly. But ethologists—specialists in animal behavior—are interested in evolution, so they define the term narrowly. They insist that mutations in a behavioral gene must alter a specific normal behavior and not merely make the organism ill, so that the genetically induced behavioral change will provide variation that natural selection can act upon, possibly leading to the evolution of a new species. For example, in the fruit fly, researchers have identified the gene *Shaker*, mutations in which cause flies to shake violently under anesthesia. Since shaking is not healthy, ethologists do not consider *Shaker* a behavioral gene. In contrast, ethologists do consider the gene *period (per)*, which controls the fruit-fly's circadian (24-hour) rhythm, a behavioral gene because flies with mutated *per* genes are healthy; they simply have different rhythms.

The passage suggests that neuroscientists would most likely consider *Shaker* to be which of the following?

A. An example of a behavioral gene

B. One of multiple genes that control a single behavior

C. A gene that, when mutated, causes an alteration in a specific normal behavior without making the organism ill

D. A gene of interest to ethologists but of no interest to neuroscientists

E. A poor source of information about the nervous system

It can be inferred from the passage that which of the following, if true, would be most likely to influence ethologists' opinions about whether a particular gene in a species is a behavioral gene?

A. The gene is found only in that species.

B. The gene is extremely difficult to identify.

C. The only effect of mutations in the gene is to make the organism ill.

D. Neuroscientists consider the gene to be a behavioral gene.

E. Geneticists consider the gene to be a behavioral gene.

The primary purpose of the passage is to

A. summarize findings in an area of research

B. discuss different perspectives on a scientific question

C. outline the major questions in a scientific discipline

D. illustrate the usefulness of investigating a research topic

E. reconcile differences between two definitions of a term

(This passage is excerpted from material published in 1997.)

Whereas United States economic productivity grew at an annual rate of 3 percent from 1945 to 1965, it has grown at an annual rate of only about 1 percent since the early 1970's. What might be preventing higher productivity growth? Clearly, the manufacturing sector of the economy cannot be blamed. Since 1980, productivity improvements in manufacturing have moved the United States from a position of acute decline in manufacturing to one of world prominence. Manufacturing, however, constitutes a relatively small proportion of the economy. In 1992, goods-producing businesses employed only 19.1 percent of American workers, whereas service-producing businesses employed 70 percent. Although the service sector has grown since the late 1970's, its productivity growth has declined.

Several explanations have been offered for this decline and for the **discrepancy** in productivity growth between the manufacturing and service sectors. One is that traditional measures fail to reflect service-sector productivity growth because it has been concentrated in improved quality of services. Yet traditional measures of manufacturing productivity have shown significant increases despite the under-measurement of quality, whereas service productivity has continued to stagnate. Others argue that since the 1970's, manufacturing workers, faced with strong foreign competition, have learned to work more efficiently in order to keep their jobs in the United States, but service workers, who are typically under less global competitive pressure, have not. However, the pressure on manufacturing workers in the United States to work more efficiently has generally been overstated, often for political reasons. In fact, while some manufacturing jobs have been lost due to foreign competition, many more have been lost simply because of slow growth in demand for manufactured goods.

Yet another explanation blames the federal **budget deficit**: if it were lower, interest rates would be lower too, thereby increasing investment in the development of new technologies, which would spur productivity growth in the service sector. There is, however, no dearth of technological resources; rather, managers in the service sector fail to take advantage of widely available skills and machines. High productivity growth levels attained by leading-edge service companies indicate that service-sector managers who wisely implement available technology and choose skillful workers can significantly improve their companies' productivity. The culprits for service-sector productivity stagnation are the forces—such as corporate takeovers and unnecessary governmental regulation—that distract managers from the task of making optimal use of available resources.

Which of the following, if true, would most weaken the budget-deficit explanation mentioned in the highlighted text for the discrepancy mentioned in the highlighted?

- A. Research shows that the federal budget deficit has traditionally caused service companies to invest less money in research and development of new technologies.
- B. New technologies have been shown to play a significant role in companies that have been able to increase their service productivity.
- C. In both the service sector and manufacturing, productivity improvements are concentrated in gains in quality.
- D. The service sector typically requires larger investments in new technology in order to maintain productivity growth than does manufacturing.
- E. High interest rates tend to slow the growth of manufacturing productivity as much as they slow the growth of service-sector productivity in the United States.

The passage states which of the following about the effect of foreign competition on the American manufacturing sector since the 1970's?

- A. It has often been exaggerated.
- B. It has not been a direct cause of job loss.
- C. It has in large part been responsible for the subsequent slowing of productivity growth.
- D. It has slowed growth in the demand for manufactured goods in the United States.
- E. It has been responsible for the majority of American jobs lost in manufacturing.

It can be inferred from the passage that which of the following was true of the United States manufacturing sector in the years immediately prior to 1980?

- A. It was performing relatively poorly.
- B. It was in a position of world prominence.
- C. It was increasing its productivity at an annual rate of 3 percent.
- D. It was increasing its productivity at an annual rate of 1 percent.
- E. Its level of productivity was higher than afterward.

The author of the passage would be most likely to agree with which of the following statements about productivity improvements in United States service companies?

- A. Such improvements would be largely attributable to efficiencies resulting from corporate takeovers.
- B. Such improvements would depend more on wise implementation of technology than on managers' choice of skilled workers.
- C. Such improvements would be more easily accomplished if there were fewer governmental regulations of the service sector.
- D. Such improvements would require companies to invest heavily in the development of new technologies.
- E. Such improvements would be attributable primarily to companies' facing global competitive pressure.

Years before the advent of plate tectonics—the widely accepted theory, developed in the mid-1960's, the holds that the major features of Earth's surface are created by the horizontal motions of Earth's outer shell, or lithosphere—a similar theory was rejected by the geological community. In 1912, Alfred Wegener proposed, in a widely debated theory that came to be called continental drift, that Earth's continents were mobile.

To most geologists today, Wegener's The origin of Continents and Oceans appears an impressive and prescient document, containing several of the essential presumptions underlying plate tectonics theory: the horizontal mobility of pieces of Earth's crust; the essential difference between oceanic and continental crust; and a causal connection between horizontal displacements and the formation of mountain chains. Yet despite the considerable overlap between Wegener's concepts and the later widely embraced plate tectonics theory, and despite the fact that continental drift theory presented a possible solution to the problem of the origin of mountains at a time when existing explanations were seriously in doubt, in its day Wegener's theory was rejected by the vast majority of geologists.

Most geologists and many historians today believe that Wegener's theory was rejected because of its lack of an adequate mechanical basis. Stephen Jay Gould, for example, argues that continental drift theory was rejected because it did not explain how continents could move through an apparently solid oceanic floor. However, as Anthony Hallam has pointed out, many scientific phenomena, such as the ice ages, have been accepted before they could be fully explained. The most likely cause for the rejection of continental drift—a cause that has been largely ignored because we consider Wegener's theory to have been validated by the theory of plate tectonics—is the nature of the evidence that was put forward to support it. Most of Wegener's evidence consisted of homologies—similarities of patterns and forms based on direct observations of rocks in the field, supported by the use of hammers, hand lenses, and field notebooks. In contrast, the data supporting plate tectonics were impressively geophysical—instrumental determinations of the physical properties of Earth garnered through the use of seismographs, magnetometers, and computers.

The author cites Hallam on the ice ages primarily in order to

- A. provide an example of a geologic phenomenon whose precise causes are not fully understood by geologists today
- B. criticize the geological community for an apparent lack of consistency in its responses to new theories
- C. offer evidence held to undermine a common view of why Wegener's theory was not accepted in its day
- D. give an example of a modern scientist who believes that Wegener's theory was rejected because it failed to adequately explain the mechanical basis of continental drift
- E. support Gould's rationale for why Wegener's theory was rejected by most geologists in the early twentieth century

The author of the passage refers to the "considerable overlap" between continental drift theory and plate tectonics theory most probably in order to

- A. suggest that plate tectonics theory is derived from Wegener's work
- B. introduce a discussion comparing the elements of the two theories
- C. examine the question of whether continental drift theory was innovative in its time
- D. provide a reason why it might seem surprising that continental drift theory was not more widely embraced by geologists
- E. cite an explanation that has been frequently offered for Wegener's high standing among geologists today

The author of the passage suggests that the most likely explanation for the geological community's response to continental drift theory in its day was that the theory

- A. was in conflict with certain aspects of plate tectonics theory
- B. failed to account for how mountains were formed
- C. did not adequately explain how continents moved through the ocean floor
- D. was contradicted by the geophysical data of the time
- E. was based on a kind of evidence that was considered insufficiently convincing

It can be inferred from the passage that geologists today would be most likely to agree with which of the following statements about Wegener's The Origin of Continents and Oceans?

- A. It was a worthy scientific effort that was ahead of its time.
- B. It was based on evidence that was later disproved.
- C. It was directly responsible for the acceptance of the theory of plate tectonics.
- D. It has been disproved by continental drift theory.
- E. It misrepresented how horizontal displacements cause the formation of mountain chains.

Many economists believe that a high rate of business savings in the United States is a necessary precursor to investment, because business savings, as opposed to personal savings, comprise almost three-quarters of the national savings rate, and the national savings rate heavily influences the overall rate of business investment. These economists further postulate that real interest rates—the difference between the rates charged by lenders and the inflation rates—will be low when national savings exceed business investment (creating a savings surplus), and high when national savings fall below the level of business investment (creating a savings deficit). However, during the 1960's real interest rates were often higher when the national savings surplus was large. Counterintuitive behavior also occurred when real interest rates skyrocketed from 2 percent in 1980 to 7 percent in 1982, even though national savings and investments were roughly equal throughout the period. Clearly, real interest rates respond to influences other than the savings/investment nexus. Indeed, real interest rates may themselves influence swings in the savings and investment rates. As real interest rates shot up after 1979, foreign investors poured capital into the United States, the price of domestic goods increased prohibitively abroad, and the price of foreign-made goods became lower in the United States. As a result, domestic economic activity and the ability of businesses to save and invest were restrained.

The passage is primarily concerned with

- A. contrasting trends in two historical periods
- B. presenting evidence that calls into question certain beliefs
- C. explaining the reasons for a common phenomenon
- D. criticizing evidence offered in support of a well-respected belief
- E. comparing conflicting interpretations of a theory

According to the passage, which of the following resulted from foreign investment in the United States after 1979?

- A. An increase in real interest rates
- B. A decrease in the savings rate of certain other nations
- C. An increase in American investment abroad
- D. An increase in the price of American goods abroad
- E. A decrease in the price of domestic goods sold at home

The author of the passage would be most likely to agree with which of the following statements regarding the economists mentioned in line 1?

- A. Their beliefs are contradicted by certain economic phenomena that occurred in the United States during the 1960's and the 1980's.
- B. Their theory fails to predict under what circumstances the prices of foreign and domestic goods are likely to increase.
- C. They incorrectly identify the factors other than savings and investment rates that affect real interest rates.
- D. Their belief is valid only for the United States economy and not necessarily for other national economies.
- E. They overestimate the impact of the real interest rate on the national savings and investment rates.

According to a theory advanced by researcher Paul Martin, the wave of species extinctions that occurred in North America about 11,000 years ago, at the end of the Pleistocene era, can be directly attributed to the arrival of humans, i.e., the Paleoindians, who were ancestors of modern Native Americans. However, anthropologist Shepard Krech points out that large animal species vanished even in areas where there is no evidence to demonstrate that Paleoindians hunted them. Nor were extinctions confined to large animals: small animals, plants, and insects disappeared, presumably not all through human consumption. Krech also contradicts Martin's exclusion of climatic change as an explanation by asserting that widespread climatic change did indeed occur at the end of the Pleistocene. Still, Krech attributes secondary if not primary responsibility for the extinctions to the Paleoindians, arguing that humans have produced local extinctions elsewhere. But, according to historian Richard White, even the attribution of secondary responsibility may not be supported by the evidence. White observes that Martin's thesis depends on coinciding dates for the arrival of humans and the decline of large animal species, and Krech, though aware that the dates are controversial, does not challenge them; yet recent archaeological discoveries are providing evidence that the date of human arrival was much earlier than 11,000 years ago.

Which of the following is true about Martin's theory, as that theory is described in the passage?

- A. It assumes that the Paleoindians were primarily dependent on hunting for survival.
- B. It denies that the Pleistocene species extinctions were caused by climate change.
- C. It uses as evidence the fact that humans have produced local extinctions in other situations.
- D. It attempts to address the controversy over the date of human arrival in North America.
- E. It admits the possibility that factors other than the arrival of humans played a role in the Pleistocene extinctions.

In the last sentence of the passage, the author refers to "recent archaeological discoveries" most probably in order to

- A. refute White's suggestion that neither Martin nor Krech adequately account for Paleoindians' contributions to the Pleistocene extinctions
- B. cast doubt on the possibility that a more definitive theory regarding the causes of the Pleistocene extinctions may be forthcoming
- C. suggest that Martin's, Krech's, and White's theories regarding the Pleistocene extinctions are all open to question
- D. call attention to the most controversial aspect of all the current theories regarding the Pleistocene extinctions
- E. provide support for White's questioning of both Martin's and Krech's positions regarding the role of Paleoindians in the Pleistocene extinctions

Which of the following, if true, would most weaken Krech's objections to Martin's theory?

- A. Further studies showing that the climatic change that occurred at the end of the Pleistocene era was even more severe and widespread than was previously believed
- B. New discoveries indicating that Paleoindians made use of the small animals, plants, and insects that became extinct
- C. Additional evidence indicating that widespread climatic change occurred not only at the end of the Pleistocene era but also in previous and subsequent eras
- D. Researchers' discoveries that many more species became extinct in North America at the end of the Pleistocene era than was previously believed
- E. New discoveries establishing that both the arrival of humans in North America and the wave of Pleistocene extinctions took place much earlier than 11,000 years ago

Behavior science courses should be gaining prominence in business school curricula. Recent theoretical work convincingly shows why behavioral factors such as organizational culture and employee relations are among the few remaining sources of sustainable competitive advantage in modern organizations. Furthermore, empirical evidence demonstrates clear linkages between human resource (HR) practices based in the behavioral sciences and various aspects of a firm's financial success. Additionally, some of the world's most successful organizations have made unique HR practices a core element of their overall business strategies.

Yet the behavior sciences are struggling for credibility in many business schools. Surveys show that business students often regard behavioral studies as peripheral to the mainstream business curriculum. This perception can be explained by the fact that business students, hoping to increase their attractiveness to prospective employers, are highly sensitive to business norms and practices, and current business practices have generally been moving away from an emphasis on understanding human behavior and toward more mechanistic organizational models. Furthermore, the status of HR professionals within organizations tends to be lower than that of other executives.

Students' perceptions would matter less if business schools were not increasingly dependent on external funding—from legislatures, businesses, and private foundations—for survival. Concerned with their institutions' ability to attract funding, administrators are increasingly targeting low-enrollment courses and degree programs for elimination.

The primary purpose of the passage is to

- A. propose a particular change to business school curricula
- B. characterize students' perceptions of business school curricula
- C. predict the consequences of a particular change in business school curricula
- D. challenge one explanation for the failure to adopt a particular change in business school curricula
- E. identify factors that have affected the prestige of a particular field in business school curricula

The author of the passage mentions "empirical evidence" in the highlighted text primarily in order to

- A. question the value of certain commonly used HR practices
- B. illustrate a point about the methodology behind recent theoretical work in the behavioral sciences
- C. support a claim about the importance that business schools should place on courses in the behavioral sciences
- D. draw a distinction between two different factors that affect the financial success of a business
- E. explain how the behavioral sciences have shaped HR practices in some business organizations

The author of the passage suggests which of the following about HR professionals in business organizations?

- A. They are generally skeptical about the value of mechanistic organizational models.
- B. Their work increasingly relies on an understanding of human behavior.
- C. Their work generally has little effect on the financial performance of those organizations.
- D. Their status relative to other business executives affects the attitude of business school students toward the behavioral sciences.
- E. Their practices are unaffected by the relative prominence of the behavioral sciences within business schools.

The author of the passage considers each of the following to be a factor that has contributed to the prevailing attitude in business schools toward the behavioral sciences EXCEPT

- A. business students' sensitivity to current business norms and practices
- B. the relative status of HR professionals among business executives
- C. business schools' reliance on legislatures, businesses, and private foundations for funding
- D. businesses' tendency to value mechanistic organizational models over an understanding of human behavior
- E. theoretical work on the relationship between behavioral factors and a firm's financial performance

Most pre-1990 literature on businesses' use of information technology (IT)—defined as any form of computer based information system—focused on spectacular IT successes and reflected a general optimism concerning IT's potential as a resource for creating competitive advantage. But toward the end of the 1980's, some economists spoke of a "productivity paradox": despite huge IT investments, most notably in the service sectors, productivity stagnated. In the retail industry, for example, in which IT had been widely adopted during the 1980's, productivity (average output per hour) rose at an average annual rate of 1.1 percent between 1973 and 1989, compared with 2.4 percent in the preceding 25-year period. Proponents of IT argued that it takes both time and a critical mass of investment for IT to yield benefits, and some suggested that growth figures for the 1990's proved these benefits were finally being realized. They also argued that measures of productivity ignore what would have happened without investments in IT—productivity gains might have been even lower. There were even claims that IT had improved the performance of the service sector significantly, although macroeconomic measures of productivity did not reflect the improvement.

But some observers questioned why, if IT had conferred economic value, it did not produce direct competitive advantages for individual firms. Resource-based theory offers an answer, asserting that, in general, firms gain competitive advantages by accumulating resources that are economically valuable, relatively scarce, and not easily replicated. According to a recent study of retail firms, which confirmed that IT has become pervasive and relatively easy to acquire, IT by itself appeared to have conferred little advantage. In fact, though little evidence of any direct effect was found, the frequent negative correlations between IT and performance suggested that IT had (50) probably weakened some firms' competitive positions. However, firms' human resources, in and of themselves, did explain improved performance, and some firms gained IT-related advantages by merging IT with complementary resources, particularly human resources. The findings support the notion, founded in resource-based theory, that competitive advantages do not arise from easily replicated resources, no matter how impressive or economically valuable they may be, but from complex, intangible resources.

The passage is primarily concerned with

- A. describing a resource and indicating various methods used to study it
- B. presenting a theory and offering an opposing point of view
- C. providing an explanation for unexpected findings
- D. demonstrating why a particular theory is unfounded
- E. resolving a disagreement regarding the uses of a technology

The passage suggests that proponents of resource-based theory would be likely to explain IT's inability to produce direct competitive advantages for individual firms by pointing out that

- A. IT is not a resource that is difficult to obtain
- B. IT is not an economically valuable resource
- C. IT is a complex, intangible resource
- D. economic progress has resulted from IT only in the service sector
- E. changes brought about by IT cannot be detected by macroeconomic measures

The author of the passage discusses productivity in the retail industry in the first paragraph primarily in order to

- A. suggest a way in which IT can be used to create a competitive advantage
- B. provide an illustration of the "productivity paradox"
- C. emphasize the practical value of the introduction of IT
- D. cite an industry in which productivity did not stagnate during the 1980's
- E. counter the argument that IT could potentially create competitive advantage

According to the passage, most pre-1990 literature on businesses' use of IT included which of the following?

- A. Recommendations regarding effective ways to use IT to gain competitive advantage
- B. Explanations of the advantages and disadvantages of adopting IT
- C. Information about ways in which IT combined with human resources could be used to increase competitive advantage
- D. A warning regarding the negative effect on competitive advantage that would occur if IT were not adopted
- E. A belief in the likelihood of increased competitive advantage for firms using IT

Recent feminist scholarship concerning the United States in the 1920's challenges earlier interpretations that assessed the twenties in terms of the unkept "promises" of the women's suffrage movement. This new scholarship disputes the long-held view that because a women's voting bloc did not materialize after women gained the right to vote in 1920, suffrage failed to produce long-term political gains for women. These feminist scholars also challenge the old view that pronounced suffrage a failure for not delivering on the promise that the women's vote would bring about moral, corruption-free governance. Asked whether women's suffrage was a failure, these scholars cite the words of turn-of-the-century social reformer Jane Addams, "Why don't you ask if suffrage in general is failing?"

In some ways, however, these scholars still present the 1920's as a period of decline. After suffrage, they argue, the feminist movement lost its cohesiveness, and gender consciousness waned. After the mid-1920's, few successes could be claimed by feminist reformers: little could be seen in the way of legislative victories.

During this decade, however, there was intense activism aimed at achieving increased autonomy for women, broadening the spheres within which they lived their daily lives. Women's organizations worked to establish opportunities for women: they strove to secure for women the full entitlements of citizenship, including the right to hold office and the right to serve on juries.

The passage is primarily concerned with

- A. providing evidence indicating that feminist reformers of the 1920's failed to reach some of their goals
- B. presenting scholarship that contrasts suffragist "promises" with the historical realities of the 1920's
- C. discussing recent scholarship concerning the achievements of women's suffrage during the 1920's and presenting an alternative view of those achievements
- D. outlining recent findings concerning events leading to suffrage for women in the 1920's and presenting a challenge to those findings
- E. providing support for a traditional view of the success of feminist attempts to increase gender consciousness among women during the 1920's

It can be inferred that the author of the passage disagrees with the "new scholarship" mentioned in the highlighted text regarding the

- A. degree to which the "promises" of the suffrage movement remained unkept
- B. degree to which suffrage for women improved the morality of governance
- C. degree to which the 1920's represented a period of decline for the feminist movement
- D. degree of legislative success achieved by feminist reformers during the 1920's
- E. accuracy of the view that a women's voting bloc did not materialize once suffrage was achieved

The purpose of the second paragraph of the passage is to

- A. suggest a reason why suffragist "promises" were not kept
- B. contrast suffragist "promises" with the reality of the 1920's
- C. deplore the lack of successful feminist reform in 1920's
- D. explain a view held by feminist scholars
- E. answer the question asked by Jane Addams

By the sixteenth century, the Incas of South America ruled an empire that extended along the Pacific coast and Andean highlands from what is now Ecuador to central Chile. While most of the Incas were self-sufficient agriculturists, the inhabitants of the highland basins above 9,000 feet were constrained by the kinds of crops they could cultivate. Whereas 95 percent of the principal Andean food crops can be cultivated below 3,000 feet, only 20 percent reproduce readily above 9,000 feet. Given this unequal resource distribution, highland Incas needed access to the products of lower, warmer climatic zones in order to enlarge the variety and quantity of their foodstuffs. In most of the preindustrial world, the problem of different resource distribution was resolved by long-distance trade networks over which the end consumer exercised little control. Although the peoples of the Andean highlands participated in such networks, they relied primarily on the maintenance of autonomous production forces in as many ecological zones as possible. The commodities produced in these zones were extracted, processed, and transported entirely by members of a single group.

This strategy of direct access to a maximum number of ecological zones by a single group is called vertical economy. Even today, one can see Andean communities maintaining use rights simultaneously to pasturelands above 12,000 feet, to potato fields in basins over 9,000 feet, and to plots of warm-land crops in regions below 6,000 feet. This strategy has two principal variations. The first is "compressed verticality," in which a single village resides in a location that permits easy access to closely located ecological zones. Different crop zones or pasturelands are located within a few days walk of the parent community. Community members may reside temporarily in one of the lower zones to manage the extraction of products unavailable in the homeland. In the second variation, called the "vertical archipelago," the village exploits resources in widely dispersed locations, constituting a series of independent production "islands." In certain pre-Columbian Inca societies, groups were sent from the home territory to establish permanent satellite communities or colonies in distant tropical forests or coastal locations. There the colonists grew crops and extracted products for their own use and for transshipment back to their high-altitude compatriots. In contrast to the compressed verticality system, in this system, commodities rather than people circulated through the archipelago.

According to the passage, which of the following is true about the preindustrial long-distance trade networks mentioned in the highlighted text?

- A. They were not used extensively in most of the preindustrial world.
- B. They were used to some extent by the people of the Andean highlands.
- C. They were not an effective means of solving the problem of different resource distribution.
- D. They necessitated the establishment of permanent satellite communities in widely dispersed locations.
- E. They were useful only for the transportation of products from warm climatic zones.

According to the passage, the inhabitants of the Andean highlands resolved the problem of unequal resource distribution primarily in which of the following ways?

- A. Following self-sufficient agricultural practices
- B. Increasing commodity production from the ecological zones in the highland basins
- C. Increasing their reliance on long-distance trade networks
- D. Establishing satellite communities throughout the Andean highlands
- E. Establishing production forces in ecological zones beyond their parent communities

The passage suggests that as a way of addressing the problem of different resource distribution in the preindustrial world, the practice of vertical economy differed from the use of long-distance trade networks in that vertical economy allowed

- A. commodities to reach the end consumer faster
- B. a wide variety of agricultural goods to reach the end consumer
- C. a single group to maintain control over the production process
- D. greater access to commodities from lower, warmer climatic zones
- E. greater use of self-sufficient agricultural techniques

The passage suggests that for an Andean highland village attempting to resolve the problem of unequal resource distribution, the strategy known as compressed verticality would probably be inappropriate for which of the following situations?

- A. The village's location is such that it is difficult for the village to participate in long-distance trade networks.
- B. The village does not have the resources to establish permanent satellite communities in production zones beyond the home community.
- C. The warm-land crop regions nearest to the village are all below 6,000 feet.
- D. The location of the village does not provide ready access to an adequate variety of ecological zones.
- E. The nearest crop production zones are located below the village, while the nearest pasturelands are located above the village.

Among the myths taken as fact by the environmental managers of most corporations is the belief that environmental regulations affect all competitors in a given industry uniformly. In reality, regulatory costs—and therefore compliance—fall unevenly, economically disadvantaging some companies and benefiting others. For example, a plant situated near a number of larger noncompliant competitors is less likely to attract the attention of local regulators than is an isolated plant, and less attention means lower costs. Additionally, large plants can spread compliance costs such as waste treatment across a larger revenue base; on the other hand, some smaller plants may not even be subject to certain provisions such as permit or reporting requirements by virtue of their size. Finally, older production technologies often continue to generate toxic wastes that were not regulated when the technology was first adopted. New regulations have imposed extensive compliance costs on companies still using older industrial coal-fired burners that generate high sulfur dioxide and nitrogen oxide outputs, for example, whereas new facilities generally avoid processes that would create such waste products. By realizing that they have discretion and that not all industries are affected equally by environmental regulation, environmental managers can help their companies to achieve a competitive edge by anticipating regulatory pressure and exploring all possibilities for addressing how changing regulations will affect their companies specifically.

Which of the following hypothetical examples would best illustrate the point the author makes in the last sentence of the passage?

- A. Believing its closest competitor is about to do the same, a plant reduces its output of a toxic chemical at great cost in order to comply with environmental regulations.
- B. In the face of new environmental regulations, a plant maintains its production methods and passes the costs of compliance on to its customers.
- C. A plant's manager learns of a competitor's methods of lowering environmental compliance costs but is reluctant to implement those methods.
- D. Having learned of an upcoming environmental ban on a certain chemical, a company designs its new plant to employ processes that avoid use of that chemical.
- E. A plant attempts to save money by refusing to comply with environmental laws.

According to the passage, which of the following statements about sulfur dioxide and nitrogen oxide outputs is true?

- A. Older production technologies cannot be adapted so as to reduce production of these outputs as waste products.
- B. Under the most recent environmental regulations, industrial plants are no longer permitted to produce these outputs.
- C. Although these outputs are environmentally hazardous, some plants still generate them as waste products despite the high compliance costs they impose.
- D. Many older plants have developed innovative technological processes that reduce the amounts of these outputs generated as waste products.
- E. Since the production processes that generate these outputs are less costly than alternative processes, these less expensive processes are sometimes adopted despite their acknowledged environmental hazards.

The passage suggests which of the following concerning the relationship between the location of a plant and the compliance costs it faces?

- A. A plant is less likely to face high compliance costs if it is located near larger plants that are in violation of environmental regulations.
- B. An isolated plant is less likely to draw the attention of environmental regulators, resulting in lower compliance costs.
- C. A large plant that is located near other large facilities will most probably be forced to pay high compliance costs.
- D. A small plant that is located near a number of larger plants will be forced to absorb some of its neighbors' compliance costs.
- E. A plant will often escape high compliance costs if it is located far away from environmental regulatory agencies.

In the 1930's and 1940's, African American industrial workers in the southern United States, who constituted 80 percent of the unskilled factory labor force there, strongly supported unionization. While the American Federation of Labor (AFL) either excluded African Americans or maintained racially segregated unions, the Congress of Industrial Organizations (CIO) organized integrated unions nationwide on the basis of a stated policy of equal rights for all, and African American unionists provided the CIO's backbone. Yet it can be argued that through contracts negotiated and enforced by White union members, unions—CIO unions not excluded—were often instrumental in maintaining the occupational segregation and other forms of racial discrimination that kept African Americans socially and economically oppressed during this period. However, recognizing employers' power over workers as a central factor in African Americans' economic marginalization, African American workers saw the need to join with White workers in seeking change despite White unionists' toleration of or support for racial discrimination. The persistent efforts of African American unionists eventually paid off: many became highly effective organizers, gaining the respect of even racist White unionists by winning victories for White as well as African American workers. African American unionists thus succeeded in strengthening the unions while using them as instruments of African Americans' economic empowerment.

The passage is primarily concerned with

- A. demonstrating that unions failed to address the concerns of African American workers during a particular period
- B. arguing that African American workers' participation in unions during a particular period was ultimately beneficial to them
- C. contrasting the treatment of African American workers by two different labor organizations during a particular period
- D. giving reasons for the success of African American unionists in winning victories for both African American and White workers during a particular period
- E. questioning one explanation for the attitudes of African American workers toward unionization during a particular period

According to the passage, which of the following was true of many racist White unionists during the period discussed in the passage?

- A. Their attitudes toward African American union organizers changed once they recognized that the activities of these organizers were serving workers' interests.
- B. They were a powerful element in the southern labor movement because they constituted the majority of the unskilled factory labor force in the southern United States.
- C. They persisted in opposing the CIO's adoption of a stated policy of equal rights for all.
- D. Their primary goal was to strengthen the negotiating power of the unions through increasing White union membership.
- E. Their advocacy of racial discrimination hampered unions in their efforts to gain more power for workers.

The author of the passage suggests which of the following about African American workers who participated in union activities in the 1930's and 1940's?

- A. They believed that the elimination of discrimination within unions was a necessary first step toward the achievement of economic advancement for African Americans.
- B. They belonged exclusively to CIO unions because they were excluded from AFL unions.
- C. They believed that the economic advancement of African American workers depended on organized efforts to empower all workers.
- D. Some of them advocated the organization of separate African American unions because of discriminatory practices in the AFL and the CIO.
- E. Many of them did not believe that White unionists in CIO unions would tolerate or support racial discrimination against African American workers.

Scientists studying the physiology of dinosaurs have long debated whether dinosaurs were warm- or cold-blooded. Those who suspect they were warm-blooded point out that dinosaur bone is generally fibro-lamellar in nature; because fibro-lamellar bone is formed quickly, the bone fibrils, or filaments, are laid down haphazardly. Consistent with their rapid growth rate, warm-blooded animals, such as birds and mammals, tend to produce fibro-lamellar bone, whereas reptiles, which are slow-growing and cold-blooded, generally produce bone in which fibrils are laid down parallel to each other. Moreover, like the bone of birds and mammals, dinosaur bone tends to be highly vascularized, or filled with blood vessels. These characteristics, first recognized in the 1930's, were documented in the 1960's by de Ricqlès, who found highly vascularized, fibro-lamellar bone in several groups of dinosaurs. In the 1970's, Bakker cited these characteristics as evidence for the warm-bloodedness of dinosaurs. Although de Ricqlès urged **caution**, arguing for an intermediate type of dinosaur physiology, a generation of paleontologists has come to believe that dinosaur bone is mammalianlike. In the 1980's, however, Bakker's contention began to be questioned, as a number of scientists found growth rings in the bones of various dinosaurs that are much like those in modern reptiles. Bone growth in reptiles is periodic in nature, producing a series of concentric rings in the bone, not unlike the growth rings of a tree. Recently, Chinsamy investigated the bones of two dinosaurs from the early Jurassic period (208-187 million years ago), and found that these bones also had growth rings; however, they were also partially fibrolamellar in nature. Chinsamy's work raises a question central to the debate over dinosaur physiology: did dinosaurs form fibro-lamellar bone because of an innately high metabolic rate associated with warm-bloodedness or because of periods of unusually fast growth that occurred under favorable environmental conditions? (Although modern reptiles generally do not form fibro-lamellar bone, juvenile crocodiles raised under optimal environmental conditions do.) This question remains unanswered; indeed, taking all the evidence into account, one cannot make a definitive statement about dinosaur physiology on the basis of dinosaur bone. It may be that dinosaurs had an intermediate pattern of bone structure because their physiology was neither typically reptilian, mammalian, nor avian.

The author of the passage would be most likely to agree that the "caution" urged by de Ricqlès regarding claims about dinosaur physiology was

- A. unjustified by the evidence available to de Ricqlès
- B. unnecessary, given the work done by Bakker and his followers
- C. indicative of the prevailing scientific opinion at the time

D. warranted, given certain subsequent findings of other scientists

E. influential in the recent work of Chinsamy

The primary purpose of the passage is to

- A. discuss the influence on other scientists of Bakker's argument concerning the warm-bloodedness of dinosaurs
- B. provide evidence that supports the claim that dinosaurs were cold-blooded
- C. challenge the contention that dinosaur bone tissue is innately fibro-lamellar

D. evaluate the claim that dinosaur bone tissue provides evidence for the warm-bloodedness of dinosaurs

E. resolve the disagreement between de Ricqlès and Bakker over the nature of dinosaur physiology

According to the passage, the discovery of growth rings in the bones of certain dinosaurs served to undermine which of the following claims?

- A. That modern reptiles are related to dinosaurs
- B. That bone growth in dinosaurs was periodic in nature

C. That dinosaurs were warm-blooded

- D. That dinosaurs had an intermediate type of physiology
- E. That fibro-lamellar bone is the product of a rapid growth rate

The author of the passage mentions bone growth patterns in juvenile crocodiles most likely in order to

- A. provide support for the argument that reptiles are not related to dinosaurs
- B. undermine the claim that most reptiles are slow-growing
- C. offer an explanation as to why juvenile crocodiles differ from most modern reptiles
- D. suggest the juvenile crocodiles have a type of physiology intermediate between that of mammals and that of reptiles

E. suggest that the presence of fibro-lamellar bone does not resolve the debate over dinosaur physiology

The system of patent-granting, which confers temporary monopolies for the exploitation of new technologies, was originally established as an incentive to the pursuit of risky new ideas. Yet studies of the most patent-conscious business of all—the semiconductor industry—suggest that firms do not necessarily become more innovative as they increase their patenting activity. Ziedonis and Hall, for example, found that investment in research and development (a reasonable proxy for innovation) did not substantially increase between 1982 and 1992, the industry's most feverish period of patenting. Instead, semiconductor firms simply squeezed more patents out of existing research and development expenditures. Moreover, Ziedonis and Hall found that as patenting activity at semiconductor firms increased in the 1980's, the consensus among industry employees was that the average quality of their firms' patents declined. Though patent quality is a difficult notion to measure, the number of times a patent is cited in the technical literature is a reasonable yardstick, and citations per semiconductor patent did decline during the 1980's. This decline in quality may be related to changes in the way semiconductor firms managed their patenting process: rather than patenting to win exclusive rights to a valuable new technology, patents were filed more for strategic purposes, to be used as bargaining chips to ward off infringement suits or as a means to block competitors' products.

The passage is primarily concerned with discussing

- A. a study suggesting that the semiconductor industry's approach to patenting during the period from 1982 to 1992 yielded unanticipated results
- B. a study of the semiconductor industry during the period from 1982 to 1992 that advocates certain changes in the industry's management of the patenting process
- C. the connection between patenting and innovation in the semiconductor industry during the period from 1982 to 1992
- D. reasons that investment in research and development in the semiconductor industry did not increase significantly during the period from 1982 to 1992
- E. certain factors that made the period from 1982 to 1992 a time of intense patenting activity in the semiconductor industry

The passage suggests which of the following about patenting in the semiconductor industry during the period from 1982 to 1992?

- A. The declining number of citations per semiconductor patent in the technical literature undermines the notion that patenting activity increased during this period.
- B. A decline in patent quality forced firms to change the way they managed the patenting process.
- C. Increased efficiencies allowed firms to derive more patents from existing research and development expenditures.
- D. Firms' emphasis on filing patents for strategic purposes may have contributed to a decline in patent quality.
- E. Firms' attempts to derive more patents from existing research and development expenditures may have contributed to a decline in infringement suites.

The passage makes which of the following claims about patent quality in the semiconductor industry?

- A. It was higher in the early 1980's than it was a decade later.
- B. It is largely independent of the number of patents granted.
- C. It changed between 1982 and 1992 in ways that were linked to changes in research and development expenditures.
- D. It is not adequately discussed in the industry's technical literature.
- E. It was measured by inappropriate means during the period from 1982 to 1992.

Which of the following, if true, would most clearly serve to weaken the author's claim about what constitutes a reasonable yardstick for measuring patent quality?

- A. It is more difficult to have an article accepted for publication in the technical literature of the semiconductor industry than it is in the technical literature of most other industries.
- B. Many of the highest-quality semiconductor patents are cited numerous times in the technical literature.
- C. It is difficult for someone not familiar with the technical literature to recognize what constitutes an innovative semiconductor patent.
- D. There were more citations made per semiconductor patent in the technical literature in the 1970's than in the 1980's.
- E. Low-quality patents tend to be discussed in the technical literature as frequently as high-quality patents.

This passage was adapted from an article written in 1990.

Research data indicate that there is a great deal of poverty in the United States among single-parent families headed by women. This problem could result from the fact that women's wages are only 60 percent of men's. Some economists believe that rigorous enforcement of existing equal pay laws would substantially decrease this wage inequity. But equal pay laws are ineffectual when women and men are concentrated in different occupations because such laws require only that women and men doing the same jobs be paid the same. Since gender concentration exists (for example, 80 percent of clerical workers are women), other economists argue that a comparable worth standard, which would mandate that women and men in any jobs that require comparable training and responsibility be paid the same, should be applied instead. But some **policy analysts** assert that, although comparable worth would virtually equalize male and female wages, many single-parent families headed by women would remain in poverty because many men earn wages that are below the poverty line. These policy analysts believe that the problem is not caused primarily by wage inequity but rather by low wages coupled with single parenthood, regardless of sex. As a solution, they challenge the government's assumption that a family's income should depend primarily on wages and urge the government to provide generous wage supplements (child and housing allowances) to single parents whose wages are low.

The passage suggests that the United States government's policy towards providing wage supplements to parents whose wages are low is

A. considered ill advised by most economists who have studied the issue

B. based on assumptions about the appropriate sources of family income

C. under revision in response to criticism from some policy analysts

D. capable of eliminating wage inequality but not of raising incomes for both women and men

E. applicable to single-parent families headed by women but not to single-parent families headed by men

Which of the following is most clearly an example of the policy advocated by the policy analysts mentioned in the highlighted portion?

A. A government provides training to women who wish to move out of occupations in which women are concentrated.

B. A government supports research that analyzes the connection between wage inequality and poverty among single-parent families headed by women.

C. A government surveys wages annually to make certain that women and men in the same jobs receive the same pay.

D. A government analyzes jobs in terms of the education and responsibility they require and publishes a list of jobs that should be considered equivalent for wage purposes.

E. A government provides large rent subsidies to single parents whose wages are less than half the average worker's wage.

According to the passage, some economists believe that, in the United States, there would be smaller differences between the wages of women and men who do the same jobs if

A. equal pay laws were enforced more fully

B. more stringent equal pay laws were passed

C. a more rigorous comparable worth standard were developed and applied

D. more men entered the occupations in which women are concentrated

E. women received the same kind and amount of job training that men receive

For many years, theoretical economists characterized humans as rational beings relentlessly bent on maximizing purely selfish reward. Results of an experimental economics study appear to contradict this view, however. In the "Ultimatum Game," two subjects, who cannot exchange information, are placed in separate rooms. One is randomly chosen to propose how a sum of money, known to both, should be shared between them; only one offer, which must be accepted or rejected without negotiation, is allowed.

If, in fact, people are selfish and rational, then the proposer should offer the smallest possible share, while the responder should accept any offer, no matter how small: after all, even **one dollar** is better than nothing. In numerous trials, however, two-thirds of the offers made were between 40 and 50 percent; only 4 percent were less than 20 percent. Among responders, more than half who were offered less than 20 percent rejected the offer. Behavior in the game did not appreciably depend on the players' sex, age, or education. Nor did the amount of money involved play a significant role: for instance, in trials of the game that were conducted in Indonesia, the sum to be shared was as much as three times the subjects' average monthly income, and still responders refused offers that they deemed too small.

The primary purpose of the passage is to

- A. provide evidence in support of the view that human beings are essentially rational and selfish
- B. use a particular study to challenge the argument that the economic behavior of human beings may be motivated by factors other than selfishness
- C. compare certain views about human nature held by theoretical economists with those held by experimental economists
- D. describe a study that apparently challenges theoretical economists' understanding of human economic behavior**
- E. suggest that researchers may have failed to take into account the impact of certain noneconomic factors in designing a study of human economic behavior

The passage implies that the results of the Ultimatum Game undermine theoretical economists' characterization of human beings by

- A. demonstrating that most people are inclined to try to maximize their own advantage whenever possible
- B. indicating that people who do not have the option of negotiating might behave more generously than do those who have the option of negotiating
- C. illustrating how people's economic behavior depends to some extent on how large a sum of money is involved
- D. showing that most people instinctively place their own economic self-interest ahead of the interest of strangers
- E. suggesting that people's economic behavior might in part be motivated by factors other than selfishness**

The author refers to the sum of one dollar in order to

- A. question the notion that the amount of money involved significantly affected players' behavior
- B. provide an example of one of the rare offers made by proposers that was less than 20 percent
- C. illustrate the rationality of accepting even a very small offer**
- D. suggest a reason that responders rejected offers that were less than 20 percent
- E. challenge the conclusion that a selfish and rational proposer should offer a responder the smallest possible share

All of the following are expressly mentioned in the passage as factors that did not significantly affect players' behavior EXCEPT the

- A. players' level of schooling
- B. amount of money to be shared
- C. ages of the players
- D. players' professions**
- E. genders of the players

Linda Kerber argued in the mid-1980's that after the American Revolution (1775-1783), an ideology of "republican motherhood" resulted in a surge of educational opportunities for women in the United States. Kerber maintained that the leaders of the new nation wanted women to be educated in order to raise politically virtuous sons. A virtuous citizenry was considered essential to the success of the country's republican form of government; virtue was to be instilled not only by churches and schools, but by families, where the mother's role was crucial. Thus, according to Kerber, motherhood became pivotal to the fate of the republic, providing justification for an unprecedented attention to female education.

Introduction of the republican motherhood thesis dramatically changed historiography. Prior to Kerber's work, educational historians barely mentioned women and girls; Thomas Woody's 1929 work is the notable exception. Examining newspaper advertisements for academies, Woody found that educational opportunities increased for both girls and boys around 1750. Pointing to "An Essay on Woman" (1753) as reflecting a shift in view, Woody also claimed that practical education for females had many advocates before the Revolution. Woody's evidence challenges the notion that the Revolution changed attitudes regarding female education, although it may have accelerated earlier trends. Historians' reliance on Kerber's "republican motherhood" thesis may have obscured the presence of these trends, making it difficult to determine to what extent the Revolution really changed women's lives.

According to the passage, within the field of educational history, Thomas Woody's 1929 work was

- A. innovative because it relied on newspaper advertisements as evidence
- B. exceptional in that it concentrated on the period before the American Revolution
- C. unusual in that it focused on educational attitudes rather than on educational practices
- D. controversial in its claims regarding educational opportunities for boys
- E. atypical in that it examined the education of girls

According to the passage, Kerber argued that political leaders thought that the form of government adopted by the United States after the American Revolution depended on which of the following for its success?

- A. Women assuming the sole responsibility for instilling political virtue in children
- B. Girls becoming the primary focus of a reformed educational system that emphasized political virtue
- C. The family serving as one of the primary means by which children were imbued with political virtue
- D. The family assuming many of the functions previously performed by schools and churches
- E. Men and women assuming equal responsibility for the management of schools, churches, and the family

The passage suggests that, with regard to the history of women's education in the United States, Kerber's work differs from Woody's primarily concerning which of the following?

- A. The extent to which women were interested in pursuing educational opportunities in the eighteenth century
- B. The extent of the support for educational opportunities for girls prior to the American Revolution
- C. The extent of public resistance to educational opportunities for women after the American Revolution
- D. Whether attitudes toward women's educational opportunities changed during the eighteenth century
- E. Whether women needed to be educated in order to contribute to the success of a republican form of government

Q6.

According to the passage, Kerber maintained that which of the following led to an increase in educational opportunities for women in the United States after the American Revolution?

- A. An unprecedented demand by women for greater educational opportunities in the decades following the Revolution
- B. A new political ideology calling for equality of opportunity between women and men in all aspects of life
- C. A belief that the American educational system could be reformed only if women participated more fully in that system
- D. A belief that women needed to be educated if they were to contribute to the success of the nation's new form of government
- E. A recognition that women needed to be educated if they were to take an active role in the nation's schools and churches.

Earth's surface consists of rigid plates that are constantly shifting and jostling one another. Plate movements are the surface expressions of motions in the mantle—the thick shell of rock that lies between Earth's crust and its metallic core. Although the hot rock of the mantle is a solid, under the tremendous pressure of the crust and overlying rock of the mantle, it flows like a viscous liquid. The mantle's motions, analogous to those in a pot of boiling water, cool the mantle by carrying hot material to the surface and returning cooler material to the depths. When the edge of one plate bends under another and its cooler material is consumed in the mantle, volcanic activity occurs as molten lava rises from the downgoing plate and erupts through the overlying one. Most volcanoes occur at plate boundaries. However, certain "misplaced" volcanoes far from plate edges result from a second, independent mechanism that cools the deep interior of Earth. Because of its proximity to Earth's core, the rock at the base of the mantle is much hotter than rock in the upper mantle. The hotter the mantle rock is, the less it resists flowing. Reservoirs of this hot rock collect in the base of the mantle. When a reservoir is sufficiently large, a sphere of this hot rock forces its way up through the upper mantle to Earth's surface, creating a broad bulge in the topography. The "mantle plume" thus formed, once established, continues to channel hot material from the mantle base until the reservoir is emptied. The surface mark of an established plume is a hot spot—an isolated region of volcanoes and uplifted terrain located far from the edge of a surface plate. Because the source of a hot spot remains fixed while a surface plate moves over it, over a long period of time an active plume creates a chain of volcanoes or volcanic islands, a track marking the position of the plume relative to the moving plate. The natural history of the Hawaiian island chain clearly shows the movement of the Pacific plate over a fixed plume.

The passage is primarily concerned with discussing

- A. the composition of Earth's mantle
- B. how the Hawaiian Islands were created
- C. what causes Earth's surface plates to move
- D. two different mechanisms by which volcanoes are formed
- E. why most volcanoes occur at plate boundaries

It can be inferred from the passage that a chain of volcanoes created by a mantle plume would most likely be characterized by

- A. a curved outline
- B. constituent volcanoes that differ from each other in age
- C. occurrence near a plate boundary where one plate bends under another
- D. appearance near many other volcanic chains
- E. rocks with a wide range of chemical composition

The author's reference to the Hawaiian Islands serves primarily to

- A. provide an example of a type of volcanic activity that does not occur elsewhere
- B. identify the evidence initially used to establish that the Pacific plate moves
- C. call into question a theory about the source of the volcanoes that created the Hawaiian Islands
- D. illustrate the distance from plate edges at which volcanoes typically appear
- E. provide an example of how mantle plumes manifest themselves on Earth's surface

According to the passage, a hot spot on Earth's surface is an indication of which of the following?

- A. An untapped reservoir of hot rock in the base of the mantle
- B. Volcanic activity at the edge of a plate
- C. Solid mantle rock under tremendous pressure
- D. The occurrence of a phenomenon unique to the Pacific plate
- E. A plume of hot mantle rock originating near Earth's core

The sloth bear, an insect-eating animal native to Nepal, exhibits only one behavior that is truly distinct from that of other bear species: the females carry their cubs (at least part-time) until the cubs are about nine months old, even though the cubs can walk on their own at six months. Cub-carrying also occurs among some other myrmecophagous (ant-eating) mammals; therefore, one explanation is that cub-carrying is necessitated by myrmecophagy, since myrmecophagy entails a low metabolic rate and high energy expenditure in walking between food patches. However, although polar bears' locomotion is similarly inefficient, polar bear cubs walk along with their mother. Furthermore, the daily movements of sloth bears and American black bears—which are similar in size to sloth bears and have similar-sized home ranges—reveal similar travel rates and distances, suggesting that if black bear cubs are able to keep up with their mother, so too should sloth bear cubs.

An alternative explanation is defense from predation. Black bear cubs use trees for defense, whereas brown bears and polar bears, which regularly inhabit treeless environments, rely on aggression to protect their cubs. Like brown bears and polar bears (and unlike other myrmecophagous mammals, which are noted for their passivity), sloth bears are easily provoked to aggression. Sloth bears also have relatively large canine teeth, which appear to be more functional for fighting than for foraging. Like brown bears and polar bears, sloth bears may have evolved in an environment with few trees. They are especially attracted to food-rich grasslands; although few grasslands persist today on the Indian subcontinent, this type of habitat was once widespread there. Grasslands support high densities of tigers, which fight and sometimes kill sloth bears; sloth bears also coexist with and have been killed by tree-climbing leopards, and are often confronted and chased by rhinoceroses and elephants, which can topple trees. Collectively these factors probably selected against tree-climbing as a defensive strategy for sloth bear cubs. Because sloth bears are smaller than brown and polar bears and are under greater threat from dangerous animals, they may have adopted the extra precaution of carrying their cubs. Although cub-carrying may also be adoptive for myrmecophagous foraging, the behavior of sloth bear cubs, which climb on their mother's back at the first sign of danger, suggests that predation was a key stimulus.

The primary purpose of the passage is to

- A. trace the development of a particular behavioral characteristic of the sloth bear
- B. explore possible explanations for a particular behavioral characteristic of the sloth bear
- C. compare the defensive strategies of sloth bear cubs to the defensive strategies of cubs of other bear species
- D. describe how certain behavioral characteristics of the sloth bear differ from those of other myrmecophagous mammals
- E. provide an alternative to a generally accepted explanation of a particular behavioral characteristic of myrmecophagous mammals

The author mentions rhinoceroses and elephants (in the highlighted text) primarily in order to

- A. explain why sloth bears are not successful foragers in grassland habitats
- B. identify the predators that have had the most influence on the behavior of sloth bears
- C. suggest a possible reason that sloth bear cubs do not use tree-climbing as a defense
- D. provide examples of predators that were once widespread across the Indian subcontinent
- E. defend the assertion that sloth bears are under greater threat from dangerous animals than are other bear species

Which of the following, if true, would most weaken the author's argument in the highlighted text ("Furthermore ... sloth bear cubs")?

- A. Cub-carrying behavior has been observed in many non-myrmecophagous mammals.
- B. Many of the largest myrmecophagous mammals do not typically exhibit cub-carrying behavior.
- C. Some sloth bears have home ranges that are smaller in size than the average home ranges of black bears.
- D. The locomotion of black bears is significantly more efficient than the locomotion of sloth bears.
- E. The habitat of black bears consists of terrain that is significantly more varied than that of the habitat of sloth bears.

Which of the following is mentioned in the passage as a way in which brown bears and sloth bears are similar?

- A. They tend to become aggressive when provoked.
- B. They live almost exclusively in treeless environments.
- C. They are preyed upon by animals that can climb or topple trees.
- D. They are inefficient in their locomotion.
- E. They have relatively large canine teeth.

Diamonds are almost impossible to detect directly because they are so rare: very rich kimberlite pipes, the routes through which diamonds rise, may contain only three carats of diamonds per ton of kimberlite. Kimberlite begins as magma in Earth's mantle (the layer between the crust and the core). As the magma smashes through layers of rock, it rips out debris, creating a mix of liquid and solid material. Some of the solid material it brings up may come from a so-called diamond-stability field, where conditions of pressure and temperature are conducive to the formation of diamonds. If diamonds are to survive, though, they must shoot toward Earth's surface quickly. Otherwise, they revert to graphite or burn. Explorers seeking diamonds look for specks of "indicator minerals" peculiar to the mantle but carried up in greater quantities than diamonds and eroded out of kimberlite pipes into the surrounding land. The standard ones are garnets, chromites, and ilmenites. One can spend years searching for indicators and tracing them back to the pipes that are their source; however, 90 percent of kimberlite pipes found this way are barren of diamonds, and the rest are usually too sparse to mine. In the 1970's the process of locating profitable pipes was refined by focusing on the subtle differences between the chemical signatures of indicator minerals found in diamond-rich pipes as opposed to those found in barren pipes. For example, G10 garnets, a type of garnet typically found in diamond-rich pipes, are lower in calcium and higher in chrome than garnets from barren pipes. Geochemists John Gurney showed that garnets with this composition were formed only in the diamond-stability field; more commonly found versions came from elsewhere in the mantle. Gurney also found that though ilmenites did not form in the diamond-stability field, there was a link useful for prospectors: when the iron in ilmenite was highly oxidized, its source pipe rarely contained any diamonds. He reasoned that iron took on more or less oxygen in response to conditions in the kimberlitic magma itself—mainly in response to heat and the available oxygen. When iron became highly oxidized, so did diamonds; that is, they vaporized into carbon dioxide.

The primary purpose of the passage is to

- A. discuss an objection to Gurney's theories about the uses of indicator minerals
- B. explore the formation of diamonds and the reasons for their scarcity
- C. analyze the importance of kimberlite pipes in the formation of diamonds
- D. define the characteristics of indicator minerals under differing conditions
- E. explain a method of determining whether kimberlite pipes are likely to contain diamonds

Each of the following is mentioned in the passage as a difference between G10 garnet and other versions of garnet EXCEPT

- A. level of oxidation
- B. commonness of occurrence
- C. chemical signature
- D. place of formation
- E. appearance in conjunction with diamonds

The passage suggests that the presence of G10 garnet in a kimberlite pipe indicates that

- A. the pipe in which the garnet is found has a 90% chance of containing diamonds
- B. the levels of calcium and chrome in the pipe are conducive to diamond formation
- C. the pipe passed through a diamond-stability field and thus may contain diamonds
- D. any diamonds the pipe contains would not have come from the diamond-stability field
- E. the pipe's temperature was so high that it oxidized any diamonds the pipe might have contained

According to the passage, Gurney refined the use of ilmenites in prospecting for diamonds in which of the following ways?

- A. He found that ilmenites are brought up from the mantle by kimberlite pipes and erode out into the surrounding land in greater quantities than diamonds.
- B. He found that since ilmenites do not form in the diamond-stability field, their presence indicates the absence of diamonds.
- C. He showed that highly oxidized iron content in ilmenites indicates a low survival rate for diamonds.
- D. He found that when the iron in ilmenites is highly oxidized, conditions in the magma were probably conducive to the formation of diamonds.
- E. He showed that ilmenites take on more or less oxygen in the kimberlite pipe depending on the concentration of diamonds.

(The following is excerpted from material written in 1992.)

Many researchers regard Thailand's recent economic growth, as reflected by its gross domestic product (GDP) growth rates, as an example of the success of a modern technological development strategy based on the market economics of industrialized countries. Yet by focusing solely on aggregate economic growth data as the measure of Thailand's development, these researchers have overlooked the economic impact of rural development projects that improve people's daily lives at the village level—such as the cooperative raising of water buffalo, improved sanitation, and the development of food crops both for consumption and for sale at local markets; such projects are not adequately reflected in the country's GDP. These researchers, influenced by Robert Heilbroner's now outdated development theory, tend to view nontechnological development as an obstacle to progress. Heilbroner's theory has become doctrine in some economics textbooks: for example, Monte Palmer disparages nontechnological rural development projects as inhibiting constructive change. Yet as Ann Kelleher's two recent case studies of the Thai villages Non Muang and Dong Keng illustrate, the nontechnological-versus-technological dichotomy can lead researchers not only to overlook real advances achieved by rural development projects but also mistakenly to conclude that because such advances are initiated by rural leaders and are based on traditional values and practices, they retard "real" economic development.

The primary purpose of the passage is to

- A. explain the true reasons for the increase in Thailand's GDP
- B. argue for the adoption of certain rural development projects
- C. question the value of technological development in Thailand
- D. criticize certain assumptions about economic development in Thailand
- E. compare traditional and modern development strategies in Thailand

It can be inferred from the passage that the term "real" in the last sentence of the passage most likely refers to economic development that is

- A. based on a technological development strategy
- B. not necessarily favored by most researchers
- C. initiated by rural leader
- D. a reflection of traditional values and practices
- E. difficult to measure statistically

The author of the passage cites the work of Palmer in order to give an example of

- A. a recent case study of rural development projects in Thai villages
- B. current research that has attempted to reassess Thailand's economic development
- C. an economics textbook that views nontechnological development as an obstacle to progress
- D. the prevalence of the view that regards nontechnological development as beneficial but inefficient
- E. a portrayal of nontechnological development projects as promoting constructive change

Historians who study European women of the Renaissance try to measure "independence," "options," and other indicators of the degree to which the expression of women's individuality was either permitted or suppressed. Influenced by Western individualism, these historians define a peculiar form of personhood: an innately bounded unit, autonomous and standing apart from both nature and society. An anthropologist, however, would contend that a person can be conceived in ways other than as an "individual." In many societies a person's identity is not intrinsically unique and self-contained but instead is defined within a complex web of social relationships. In her study of the fifteenth-century Florentine widow Alessandra Strozzi, a historian who specializes in European women of the Renaissance attributes individual intention and authorship of actions to her subject. This historian assumes that Alessandra had goals and interests different from those of her sons, yet much of the historian's own research reveals that Alessandra acted primarily as a champion of her sons' interests, taking their goals as her own. Thus Alessandra conforms more closely to the anthropologist's notion that personal motivation is embedded in a social context. Indeed, one could argue that Alessandra did not distinguish her personhood from that of her sons. In Renaissance Europe the boundaries of the conceptual self were not always firm and closed and did not necessarily coincide with the boundaries of the bodily self.

In the first paragraph, the author of the passage mentions a contention that would be made by an anthropologist most likely in order to

- A. present a theory that will be undermined in the discussion of a historian's study later in the passage
- B. offer a perspective on the concept of personhood that can usefully be applied to the study of women in Renaissance Europe
- C. undermine the view that the individuality of European women of the Renaissance was largely suppressed
- D. argue that anthropologists have applied the Western concept of individualism in their research
- E. lay the groundwork for the conclusion that Alessandra's is a unique case among European women of the Renaissance whose lives have been studied by historians

According to the passage, much of the research on Alessandra Strozzi done by the historian mentioned in the second paragraph supports which of the following conclusions?

- A. Alessandra used her position as her sons' sole guardian to further interests different from those of her sons.
- B. Alessandra unwillingly sacrificed her own interests in favor of those of her sons.
- C. Alessandra's actions indicate that her motivations and intentions were those of an independent individual.
- D. Alessandra's social context encouraged her to take independent action.
- E. Alessandra regarded her sons' goals and interests as her own.

The passage suggests that the historian mentioned in the second paragraph would be most likely to agree with which of the following assertions regarding Alessandra Strozzi?

- A. Alessandra was able to act more independently than most women of her time because she was a widow.
- B. Alessandra was aware that her personal motivation was embedded in a social context.
- C. Alessandra had goals and interests similar to those of many other widows in her society.
- D. Alessandra is an example of a Renaissance woman who expressed her individuality through independent action.
- E. Alessandra was exceptional because she was able to effect changes in the social constraints placed upon women in her society.

It can be inferred that the author of the passage believes which of the following about the study of Alessandra Strozzi done by the historian mentioned in the second paragraph?

- A. Alessandra was atypical of her time and was therefore an inappropriate choice for the subject of the historian's research.
- B. In order to bolster her thesis, the historian adopted the anthropological perspective on personhood.
- C. The historian argues that the boundaries of the conceptual self were not always firm and closed in Renaissance Europe.
- D. In her study, the historian reverts to a traditional approach that is out of step with the work of other historians of Renaissance Europe.
- E. The interpretation of Alessandra's actions that the historian puts forward is not supported by much of the historian's research.

Even more than mountainside slides of mud or snow, naturally occurring forest fires promote the survival of aspen trees. Aspens' need for fire may seem illogical since aspens are particularly vulnerable to fires; whereas the bark of most trees consists of dead cells, the aspen's bark is a living, functioning tissue that—along with the rest of the tree—succumbs quickly to fire.

The explanation is that each aspen, while appearing to exist separately as a single tree, is in fact only the stem or shoot of a far larger organism. A group of thousands of aspens can actually constitute a single organism, called a clone, that shares an interconnected root system and a unique set of genes. Thus, when one aspen—a single stem—dies, the entire clone is affected. While alive, a stem sends hormones into the root system to suppress formation of further stems. But when the stem dies, its hormone signal also ceases. If a clone loses many stems simultaneously, the resulting hormonal imbalance triggers a huge increase in new, rapidly growing shoots that can outnumber the ones destroyed. An aspen grove needs to experience fire or some other disturbance regularly, or it will fail to regenerate and spread. Instead, coniferous trees will invade the aspen grove's borders and increasingly block out sunlight needed by the aspens.

The primary purpose of the passage is to explain the

- A. qualities that make a particular organism unique
- B. evolutionary change undergone by a particular organism
- C. reasons that a phenomenon benefits a particular organism
- D. way in which two particular organisms compete for a resource
- E. means by which a particular organism has been able to survive in a barren region

It can be inferred from the passage that when aspen groves experience a "disturbance", such a disturbance

- A. leads to a hormonal imbalance within an aspen clone
- B. provides soil conditions that are favorable for new shoots
- C. thins out aspen groves that have become overly dense
- D. suppresses the formation of too many new aspen stems
- E. protects aspen groves by primarily destroying coniferous trees rather than aspens

The author of the passage refers to "the bark of most trees" most likely in order to emphasize the

- A. vulnerability of aspens to damage from fire when compared to other trees
- B. rapidity with which trees other than aspens succumb to destruction by fire
- C. relatively great degree of difficulty with which aspens catch on fire when compared to other trees
- D. difference in appearance between the bark of aspens and that of other trees
- E. benefits of fire to the survival of various types of trees

Many scholars have theorized that economic development, particularly industrialization and urbanization, contributes to the growth of participatory democracy; according to this theory, it would seem logical that women would both demand and gain suffrage in ever greater numbers whenever economic development expanded their economic opportunities. However, the economic development theory is inadequate to explain certain historical facts about the implementation of women's suffrage. For example, why was women's suffrage instituted nationally in the United States in 1920, not instituted nationally in Switzerland until the 1970's? Industrialization was well advanced in both countries by 1920: over 33 percent of American workers were employed in various industries, as compared to 44 percent of Swiss workers. Granted, Switzerland and the United States diverged in the degree to which the expansion of industry coincided with the degree of urbanization: only 29 percent of the Swiss population lived in cities of 10,000 or more inhabitants by 1920. However, urbanization cannot fully explain women's suffrage. Within the United States prior to 1920, for example, only less urbanized states had granted women suffrage. Similarly, less urbanized countries such as Cambodia and Ghana had voting rights for women long before Switzerland did. It is true that Switzerland's urbanized cantons (political subdivisions) generally enacted women's suffrage legislation earlier than did rural cantons. However, these cantons often shared other characteristics—similar linguistic backgrounds and strong leftist parties—that may help to explain this phenomenon.

The passage states which of the following about Switzerland's urbanized cantons?

- A. These cantons shared characteristics other than urbanization that may have contributed to their implementation of women's suffrage.
- B. These cantons tended to be more politically divided than were rural cantons.
- C. These cantons shared with certain rural cantons characteristics such as similar linguistic backgrounds and strong leftist parties.
- D. The populations of these cantons shared similar views because urbanization furthered the diffusion of ideas among them.
- E. These cantons were comparable to the most highly urbanized states in the United States in their stance toward the implementation of women's suffrage.

The primary purpose of the passage is to

- A. contrast two explanations for the implementation of women's suffrage
- B. demonstrate that one factor contributes more than another factor to the implementation of women's suffrage
- C. discuss the applicability of a theory for explaining the implementation of women's suffrage
- D. clarify certain assumptions underlying a particular theory about the implementation of women's suffrage
- E. explain how a particular historical occurrence was causally connected to the implementation of women's suffrage

The passage suggests which of the following about urbanization in Switzerland and the United States by 1920?

- A. A greater percentage of Swiss industrial workers than American industrial workers lived in urban areas.
- B. There were more cities of 10,000 or more inhabitants in Switzerland than there were in the United States.
- C. Swiss workers living in urban areas were more likely to be employed in industry than were American workers living in urban areas.
- D. Urbanized areas of Switzerland were more likely than similar areas in the United States to have strong leftist parties.
- E. A greater percentage of the United States population than the Swiss population lived in urban areas.

In its 1903 decision in the case of *Lone Wolf v. Hitchcock*, the United States Supreme Court rejected the efforts of three Native American tribes to prevent the opening of tribal lands to non-Indian settlement without tribal consent. In his study of the *Lone Wolf* case, Blue Clark properly emphasizes the Court's assertion of a virtually unlimited unilateral power of Congress (the House of Representatives and the Senate) over Native American affairs. But he fails to note the decision's more far-reaching impact: shortly after *Lone Wolf*, the federal government totally abandoned negotiation and execution of formal written agreements with Indian tribes as a prerequisite for the implementation of federal Indian policy. Many commentators believe that this change had already occurred in 1871 when—following a dispute between the House and the Senate over which chamber should enjoy primacy in Indian affairs—Congress abolished the making of treaties with Native American tribes. But in reality the federal government continued to negotiate formal tribal agreements past the turn of the century, treating these documents not as treaties with sovereign nations requiring ratification by the Senate but simply as legislation to be passed by both houses of Congress. The *Lone Wolf* decision ended this era of formal negotiation and finally did away with what had increasingly become the empty formality of obtaining tribal consent.

The author of the passage is primarily concerned with

- A. identifying similarities in two different theories
- B. evaluating a work of scholarship
- C. analyzing the significance of a historical event
- D. debunking a revisionist interpretation
- E. exploring the relationship between law and social reality

According to the passage, which of the following was true of relations between the federal government and Native American tribes?

- A. Some Native American tribes approved of the congressional action of 1871 because it simplified their dealings with the federal government.
- B. Some Native American tribes were more eager to negotiate treaties with the United States after the *Lone Wolf* decision.
- C. Prior to the *Lone Wolf* decision, the Supreme Court was reluctant to hear cases involving agreements negotiated between Congress and Native American tribes.
- D. Prior to 1871, the federal government sometimes negotiated treaties with Native American tribes.
- E. Following 1871, the House exercised more power than did the Senate in the government's dealings with Native American tribes.

As an element in the argument presented by the author of the passage, the reference to Blue Clark's study of the *Lone Wolf* case serves primarily to

- A. point out that this episode in Native American history has received inadequate attention from scholars
- B. support the contention of the author of the passage that the *Lone Wolf* decision had a greater long-term impact than did the congressional action of 1871
- C. challenge the validity of the Supreme Court's decision confirming the unlimited unilateral power of Congress in Native American affairs
- D. refute the argument of commentators who regard the congressional action of 1871 as the end of the era of formal negotiation between the federal government and Native American tribes
- E. introduce a view about the *Lone Wolf* decision that the author will expand upon

According to the passage, which of the following resulted from the *Lone Wolf* decision?

- A. The Supreme Court took on a greater role in Native American affairs.
- B. Native American tribes lost their legal standing as sovereign nations in their dealings with the federal government, but their ownership of tribal lands was confirmed.
- C. The federal government no longer needed to conclude a formal agreement with a Native American tribe in order to carry out policy decisions that affected the tribe.
- D. The federal government began to appropriate tribal lands for distribution to non-Indian settlers.
- E. Native American tribes were no longer able to challenge congressional actions by appealing to the Supreme Court.

Why firms adhere to or deviate from their strategic plans is poorly understood. However, theory and limited research suggest that the process through which such plans emerge may play a part. In particular, top management decision-sharing—consensus-oriented, team-based decision-making—may increase the likelihood that firms will adhere to their plans, because those involved in the decision-making may be more committed to the chosen course of action, thereby increasing the likelihood that organizations will subsequently adhere to their plans. However, the relationship between top management decision-sharing and adherence to plans may be affected by a firm's strategic mission (its fundamental approach to increasing sales revenue and market share, and generating cash flow and short-term profits). At one end of the strategic mission continuum, "build" strategies are pursued when a firm desires to increase its market share and is willing to sacrifice short-term profits to do so. At the other end, "harvest" strategies are used when a firm is willing to sacrifice market share for short-term profitability and cash-flow maximization. Research and theory suggest that top management decision-sharing may have a more positive relationship with adherence to plans among firms with harvest strategies than among firms with build strategies. In a study of strategic practices in several large firms, managers in harvest strategy scenarios were more able to adhere to their business plans. As one of the managers in the study explained it, this is partly because "[t]ypically all a manager has to do [when implementing a harvest strategy] is that which was done last year." Additionally, managers under harvest strategies may have fewer strategic options than do those under build strategies; it may therefore be easier to reach agreement on a particular course of action through decision-sharing, which will in turn tend to promote adherence to plans. Conversely, in a "build" strategy scenario, individual leadership, rather than decision-sharing, may promote adherence to plans. Build strategies—which typically require leaders with strong personal visions for a firm's future, rather than the negotiated compromise of the team-based decision—may be most closely adhered to when implemented in the context of a clear strategic vision of an individual leader, rather than through the practice of decision-sharing.

Which of the following best describes the function of the first sentence of the second paragraph of the passage?

- A. To answer a question posed in the first sentence of the passage about why firms adopt particular strategic missions
- B. To refute an argument made in the first paragraph about how top management decision-making affects whether firms will adhere to their strategic plans
- C. To provide evidence supporting a theory introduced in the first paragraph about what makes firms adhere to or deviate from their strategic plans
- D. To qualify an assertion made in the preceding sentence about how top management decision-making affects the likelihood that firms will adhere to their strategic plans
- E. To explain a distinction relied on in the second paragraph regarding two different kinds of strategic missions

The passage cites all of the following as differences between firms using build strategies and firms using harvest strategies EXCEPT

- A. their willingness to sacrifice short-term profits in order to build market share
- B. their willingness to sacrifice building market share in order to increase short-term profitability
- C. the number of strategic options available to their managers
- D. the relative importance they assign to maximizing cash-flow
- E. how likely they are to employ decision-sharing in developing strategic plans

The primary purpose of the passage is to

- A. identify some of the obstacles that make it difficult for firms to adhere to their strategic business plans
- B. compare two different theories concerning why firms adhere to or deviate from their strategic plans
- C. evaluate the utility of top management decision-sharing as a method of implementing the strategic mission of a business
- D. discuss the respective advantages and disadvantages of build and harvest strategies among several large firms
- E. examine some of the factors that may affect whether or not firms adhere to their strategic plans

The author includes the quotation in the highlighted text of the passage most probably in order to

- A. lend support to the claim that firms utilizing harvest strategies may be more likely to adhere to their strategic plans
- B. suggest a reason that many managers of large firm prefer harvest strategies to build strategies
- C. provide an example of a firm that adhered to its strategic plan because of the degree of its managers' commitment
- D. demonstrate that managers implementing harvest strategies generally have better strategic options than do managers implementing build strategies
- E. give an example of a large firm that successfully implemented a harvest strategy

While the most abundant and dominant species within a particular ecosystem is often crucial in perpetuating the ecosystem, a "keystone" species, here defined as one whose effects are much larger than would be predicted from its appearance, also play a vital role. But because complex species interactions may be involved, identifying a keystone species by removing the species and observing changes in the ecosystem is problematic. It might seem that certain traits would clearly define a species as a keystone species; for example, *Pisaster ochraceus* is often a keystone predator because it consumes and suppresses mussel populations, which in the absence of this starfish can be a dominant species. But such predation on a dominant or potentially dominant species occurs in systems that do as well as in systems that do not have species that play keystone roles. Moreover, whereas *P. ochraceus* occupies an unambiguous keystone role on wave-exposed rocky headlands, in more wave-sheltered habitats the impact of *P. ochraceus* predation is weak or nonexistent, and at certain sites sand burial is responsible for eliminating mussels. Keystone status appears to depend on context, whether of particular geography or of such factors as community diversity (for example, a reduction in species diversity may thrust more of the remaining species into keystone roles) and length of species interaction (since newly arrived species in particular may dramatically affect ecosystem).

The primary purpose of the passage is to

- A. point out some of the differences between dominant and keystone species
- B. emphasize the complexity of the interactions that occur between two particular species
- C. detail the effect of a particular habitat on the role occupied by a certain keystone species
- D. illustrate the importance of community diversity for the perpetuation of an ecosystem
- E. explain some considerations involved in determining whether a species occupies a keystone role

Which of the following, if true, would most clearly support the argument about keystone status advanced in the last sentence of the passage?

- A. A species of bat is primarily responsible for keeping insect populations within an ecosystem low, and the size of the insect population in turn affects bird species within that ecosystem.
- B. A species of iguana occupies a keystone role on certain tropical islands, but does not play that role on adjacent tropical islands that are inhabited by a greater number of animal species.
- C. Close observation of a savannah ecosystem reveals that more species occupy keystone roles within that ecosystem than biologists had previously believed.
- D. As a keystone species of bee becomes more abundant, it has a larger effect on the ecosystem it habits.
- E. A species of mouse that occupies a keystone role in a prairie habitat develops coloration patterns that camouflage it from potential predators.

The passage suggests which of the following about the identification of a species as a keystone species?

- A. Such an identification depends primarily on the species' relationship to the dominant species.
- B. Such an identification can best be made by removing the species from a particular ecosystem and observing changes that occur in the ecosystem.
- C. Such an identification is likely to be less reliable as an ecosystem becomes less diverse.
- D. Such an identification seems to depend on various factors within the ecosystem.
- E. Such an identification can best be made by observing predation behavior.

(This passage is based on an article written in 2000.)

The traditional model of employer-employee relations in the United States was a "psychological contract" in which employees made long-term commitments to organizations in exchange for long-term job security, training and development, and internal opportunities for promotion. Beginning mainly with the recession in the early 1970's, this paradigm began to unravel. Organizations began using extensive downsizing and outsourcing to decrease the number of permanent employees in the workforce. Among employees this situation has resulted in a decided shift in desire: instead of working their way up in an organization, many now prefer to work their way out. Entrepreneurship at the small business administration are now the fastest-growing majors in business schools. Several factors have generated movement from the old paradigm to the new one. Organizations have had legitimate and pressing reasons to shift to a new paradigm of employer-employee relations. Large numbers of permanent employees make it difficult for organizations to respond quickly to downturns in demand by decreasing payroll costs. The enormous rights in wrongful discharge suites has created incentives for organizations to use temporary, contract, and leased employees in order to distance themselves from potential litigation problems. Moreover, top management is under increased pressure from shareholders to generate higher and higher levels of return on investment in the short run, resulting in declines in hiring, increases in layoffs, and shortage of funds for employee development. At the same time, a lack of forthrightness on the part of organizations has led to increased cynicism among employees about management's motivation and competence. Employees are now working 15 percent more hours per week than they were 20 years ago, but organizations acknowledge this fact only by running stress-management workshops to help employees to cope. Sales people are being asked to increase sales at the same time organizations have cut travel, phone, and advertising budgets. Employees could probably cope effectively with changes in the psychological contract if organizations were more forthright about how they were changing it. But the euphemistic jargon used by executives to justify the changes they were implementing frequently backfires; rather than engendering sympathy for management's position, it sparks employees' desire to be free of the organization all together. In a recent study of employees' attitudes about management, 49 percent of the sample strongly agreed that "management will take advantage of you if given the chance."

The primary purpose of the passage is to

- A. discuss the financial implications of a recent shift in attitudes among workers
- B. propose a new approach for businesses to increase loyalty among their employees
- C. defend certain business practices in light of criticism of corporations, actions in a recent past
- D. speculate about possible long term benefits of a recent change in the general business climate
- E. consider some of the factors contributing to a major shift in employer-employee relationships

The passage suggests that which of the following is a legitimate reason for organizations' shift to the new model of employer-employee relations?

- A. Organizations tend to operate more effectively when they have a high manager-to-employee ratio.
- B. Organizations can move their operations to less expensive locations more easily when they have fewer permanent employees.
- C. Organizations have found that they often receive higher quality work when they engage in outsourcing.
- D. Organizations with large pools of permanent workers risk significant financial losses if the demand for their product or service decreases.
- E. Organizations are under increasing pressure to adopt new technologies that often obviate the need for certain workers.

Which of the following best characterizes the function of the final sentence of the passage?

- A. It is such as an alternative explanation for phenomenon discussed earlier in the passage.
- B. It provides data intended to correct a common misconception.
- C. It further weakens an argument that is being challenged by the author.
- D. It introduces a specific piece of evidence in support of a claim made at beginning of the final paragraph.
- E. It answers a question that is implicit in the preceding sentence.

The passage suggests that organizations' movement to the "new paradigm" is based in part on the expectation that wrongful discharge suites against employers are?

- A. less likely to be filed by non-managerial employees than by managers
- B. less likely to be filed by leased employees than by contract employees
- C. less likely to be filed by contract employees than by permanent employees
- D. more likely to be filed by employees with a long history in the organization than by newer hirers
- E. more likely to be filed in small organizations than in large ones

The fields of antebellum (pre-Civil War) political history and women's history use separate sources and focus on separate issues. Political historians, examining sources such as voting records, newspapers, and politicians' writings, focus on the emergence in the 1840's of a new "American political nation," and since women were neither voters nor politicians, they receive little discussion. Women's historians, meanwhile, have shown little interest in the subject of party politics, instead drawing on personal papers, legal records such as wills, and records of female associations to illuminate women's domestic lives, their moral reform activities, and the emergence of the woman's rights movement.

However, most historians have underestimated the extent and significance of women's political allegiance in the antebellum period. For example, in the presidential election campaigns of the 1840's, the Virginia Whig party strove to win the allegiance of Virginia's women by inviting them to rallies and speeches. According to Whig propaganda, women who turned out at the party's rallies gathered information that enabled them to mold party-loyal families, reminded men of moral values that transcended party loyalty, and conferred moral standing on the party. Virginia Democrats, in response, began to make similar appeals to women as well. By the mid-1850's the inclusion of women in the rituals of party politics had become commonplace, and the ideology that justified such inclusion had been assimilated by the Democrats.

The primary purpose of the passage as a whole is to

- A. examine the tactics of antebellum political parties with regard to women
- B. trace the effect of politics on the emergence of the woman's rights movement
- C. point out a deficiency in the study of a particular historical period
- D. discuss the ideologies of opposing antebellum political parties
- E. contrast the methodologies in two differing fields of historical inquiry

According to the second paragraph of the passage, Whig propaganda included the assertion that

- A. women should enjoy more political rights than they did
- B. women were the most important influences on political attitudes within a family
- C. women's reform activities reminded men of important moral values
- D. women's demonstrations at rallies would influence men's voting behavior
- E. women's presence at rallies would enhance the moral standing of the party

According to the passage, which of the following was true of Virginia Democrats in the mid-1850's?

- A. They feared that their party was losing its strong moral foundation.
- B. They believed that the Whigs' inclusion of women in party politics had led to the Whigs' success in many elections.
- C. They created an ideology that justified the inclusion of women in party politics.
- D. They wanted to demonstrate that they were in support of the woman's rights movement.
- E. They imitated the Whigs' efforts to include women in the rituals of party politics.

The author of the passage would be most likely to agree with which of the following statements regarding most historians of the antebellum period?

- A. They have failed to adequately contrast the differing roles that women played in the Democratic and Whig parties in the 1850's.
- B. They have failed to see that political propaganda advocating women's political involvement did not reflect the reality of women's actual roles.
- C. They have incorrectly assumed that women's party loyalty played a small role in Whig and Democratic party politics.
- D. They have misinterpreted descriptions of women's involvement in party politics in records of female associations and women's personal papers.
- E. They have overlooked the role that women's political activities played in the woman's rights movement.

Over the last 150 years, large stretches of salmon habitat have been eliminated by human activity: mining, livestock grazing, timber harvesting, and agriculture as well as recreational and urban development. The numerical effect is obvious: there are fewer salmon in degraded regions than in pristine ones; however, habitat loss also has the potential to reduce genetic diversity. This is most evident in cases where it results in the extinction of entire salmon populations. Indeed, most analysts believe that some kind of environmental degradation underlies the demise of many extinct salmon populations. Although some rivers have been recolonized, the unique genes of the original populations have been lost.

Large-scale disturbances in one locale also have the potential to alter the genetic structure of populations in neighboring areas, even if those areas have pristine habitats. Why? Although the homing instinct of salmon to their natal stream is strong, a fraction of the fish returning from the sea (rarely more than 15 percent) stray and spawn in nearby streams. Low levels of straying are crucial, since the process provides a source of novel genes and a mechanism by which a location can be repopulated should the fish there disappear. Yet high rates of straying can be problematic because misdirected fish may interbreed with the existing stock to such a degree that any local adaptations that are present become diluted. Straying rates remain relatively low when environmental conditions are stable, but can increase dramatically when streams suffer severe disturbance. The 1980 volcanic eruption of Mount Saint Helens, for example, sent mud and debris into several tributaries of the Columbia River. For the next couple of years, steelhead trout (a species included among the salmonids) returning from the sea to spawn were forced to find alternative streams. As a consequence, their rates of straying, initially 16 percent, rose to more than 40 percent overall.

Although no one has quantified changes in the rate of straying as a result of the disturbances caused by humans, there is no reason to suspect that the effect would be qualitatively different than what was seen in the **aftermath of the Mount Saint Helens eruption**. Such a dramatic increase in straying from damaged areas to more pristine streams results in substantial gene flow, which can in turn lower the overall fitness of subsequent generations.

The primary purpose of the passage is to

- A. argue against a conventional explanation for the extinction of certain salmon populations and suggest an alternative
- B. correct a common misunderstanding about the behavior of salmon in response to environmental degradation caused by human activity
- C. compare the effects of human activity on salmon populations with the effects of natural disturbances on salmon populations
- D. differentiate the particular effects of various human activities on salmon habitats

- E. describe how environmental degradation can cause changes in salmon populations that extend beyond a numerical reduction

It can be inferred from the passage that the occasional failure of some salmon to return to their natal streams in order to spawn provides a mechanism by which

- A. pristine streams that are near polluted streams become polluted themselves
- B. the particular adaptations of a polluted stream's salmon population can be preserved without dilution
- C. the number of salmon in pristine habitats decreases relative to the number in polluted streams
- D. an environmentally degraded stream could be recolonized by new salmon populations should the stream recover
- E. the extinction of the salmon populations that spawn in polluted streams is accelerated

According to the passage, human activity has had which of the following effects on salmon populations?

- A. An increase in the size of salmon populations in some previously polluted rivers
- B. A decline in the number of salmon in some rivers
- C. A decrease in the number straying salmon in some rivers
- D. A decrease in the gene flow between salmon populations that spawn in polluted streams and populations that spawn in pristine streams
- E. A decline in the vulnerability of some salmon populations to the effects of naturally occurring habitat destruction

The author mentions the "aftermath of the Mount Saint Helens eruption" most likely in order to

- A. provide an example of the process that allows the repopulation of rivers whose indigenous salmon population has become extinct
- B. indicate the extent to which the disturbance of salmon habitat by human activity in one stream might affect the genetic structure of salmon populations elsewhere
- C. provide a standard of comparison against which the impact of human activity on the gene flow among salmon populations should be measured
- D. show how salmon's homing instinct can be impaired as a result of severe environmental degradation of their natal streams
- E. show why straying rates in salmon populations remain generally low except when spawning streams suffer severe environmental disturbance

Recently biologists have been interested in a tide-associated periodic behavior displayed by the diatom *Hantzschia virgata*, a microscopic golden-brown alga that inhabits that portion of a shoreline washed by tides (the intertidal zone). Diatoms of this species, sometimes called “commuter” diatoms, remain burrowed in the sand during high tide, and emerge on the sand surface during the daytime low tide. Just before the sand is inundated by the rising tide, the diatoms burrow again. Some scientists hypothesize that commuter diatoms know that it is low tide because they sense an environmental change, such as an alteration in temperature or a change in pressure caused by tidal movement. However, when diatoms are observed under constant conditions in a laboratory, they still display periodic behavior, continuing to burrow on schedule for several weeks. This indicates that commuter diatoms, rather than relying on environmental cues to keep time, possess an internal pacemaker or biological clock that enables them to anticipate periodic changes in the environment. A commuter diatom has an unusually accurate biological clock, a consequence of the unrelenting environmental pressures to which it is subjected; any diatoms that do not burrow before the tide arrives are washed away.

This is not to suggest that the period of this biological clock is immutably fixed. Biologists have concluded that even though a diatom does not rely on the environment to keep time, environmental factors—including changes in the tide’s hydrostatic pressure, salinity, mechanical agitation, and temperature—can alter the period of its biological clock according to changes in the tidal cycle. In short, the relation between an organism’s biological clock and its environment is similar to that between a wristwatch and its owner: the owner cannot make the watch run faster or slower, but can reset the hands. However, this relation is complicated in intertidal dwellers such as commuter diatoms by the fact that these organisms are exposed to the solar-day cycle as well as to the tidal cycle, and sometimes display both solar-day and tidal periods in a single behavior. Commuter diatoms, for example, emerge only during those low tides that occur during the day.

The passage suggests which of the following about the accuracy of the commuter diatom’s biological clock?

- A. The accuracy of the commuter diatom’s biological clock varies according to changes in the tidal cycle.
- B. The unusual accuracy that characterizes the commuter diatom’s biological clock is rare among intertidal species.
- C. The commuter diatom’s biological clock is likely to be more accurate than the biological clock of a species that is subject to less intense environmental pressures.
- D. The commuter diatom’s biological clock tends to be more accurate than the biological clocks of most other species because of the consistency of the tidal cycle.
- E. The accuracy of the commuter diatom’s biological clock tends to fluctuate when the diatom is observed under variable laboratory conditions.

The author of the passage compares the relationship between an organism’s biological clock and its environment to the relation between a wristwatch and its owner most probably in order to

- A. point out a fundamental difference between the function of biological clocks in organisms and the use of mechanical clocks by humans
- B. illustrate the way in which the period of an organism’s biological clock can be altered by environmental factors
- C. suggest that there are important similarities between the biological clock in organisms such as the commuter diatom and the biological clock in humans
- D. support an argument regarding the methods used by certain organisms to counteract the influence of the environment on their biological clocks
- E. question the accuracy of the biological clock in organisms such as the commuter diatom

According to the passage, the periodic behavior displayed by commuter diatoms under constant laboratory conditions is characterized by which of the following?

- A. Greater unpredictability than the corresponding behavior under natural conditions
- B. A consistent periodic schedule in the short term
- C. No difference over the long term from the corresponding behavior under natural conditions
- D. Initial variability caused by the constant conditions of the laboratory
- E. Greater sensitivity to environmental factors than is the case under natural conditions

Recently biologists have been interested in a tide-associated periodic behavior displayed by the diatom *Hantzschia virgata*, a microscopic golden-brown alga that inhabits that portion of a shoreline washed by tides (the intertidal zone). Diatoms of this species, sometimes called “commuter” diatoms, remain burrowed in the sand during high tide, and emerge on the sand surface during the daytime low tide. Just before the sand is inundated by the rising tide, the diatoms burrow again. Some scientists hypothesize that commuter diatoms know that it is low tide because they sense an environmental change, such as an alteration in temperature or a change in pressure caused by tidal movement. However, when diatoms are observed under constant conditions in a laboratory, they still display periodic behavior, continuing to burrow on schedule for several weeks. This indicates that commuter diatoms, rather than relying on environmental cues to keep time, possess an internal pacemaker or biological clock that enables them to anticipate periodic changes in the environment. A commuter diatom has an unusually accurate biological clock, a consequence of the unrelenting environmental pressures to which it is subjected; any diatoms that do not burrow before the tide arrives are washed away.

This is not to suggest that the period of this biological clock is immutably fixed. Biologists have concluded that even though a diatom does not rely on the environment to keep time, environmental factors—including changes in the tide’s hydrostatic pressure, salinity, mechanical agitation, and temperature—can alter the period of its biological clock according to changes in the tidal cycle. In short, the relation between an organism’s biological clock and its environment is similar to that between a wristwatch and its owner: the owner cannot make the watch run faster or slower, but can reset the hands. However, this relation is complicated in intertidal dwellers such as commuter diatoms by the fact that these organisms are exposed to the solar-day cycle as well as to the tidal cycle, and sometimes display both solar-day and tidal periods in a single behavior. Commuter diatoms, for example, emerge only during those low tides that occur during the day.

The primary purpose of the passage is to

- A. dispute the influence of environmental factors on the tide-associated behavioral rhythms displayed by the diatom *Hantzschia virgata*
- B. describe how certain tide-associated behavioral rhythms displayed by the diatom *Hantzschia virgata* have changed over time
- C. compare tide-associated behavioral rhythms to solar-day behavioral rhythms in the diatom *Hantzschia virgata*
- D. examine how certain biological and environmental influences affect the tide-associated behavioral rhythms displayed by the diatom *Hantzschia virgata*
- E. identify certain environmental factors that limit the effectiveness of the biological clock in the diatom *Hantzschia virgata*

According to the passage, each of the following is characteristic of the tide-associated periodic behavior of commuter diatoms EXCEPT:

- A. It is triggered when the diatoms are inundated by the tide.
- B. It is correlated with the rise and fall of the tide.
- C. It adjusts to changes in the tidal cycle.
- D. It is influenced by the solar-day cycle.
- E. It is regulated by an innate time-keeping mechanism.

Which of the following can be inferred from the passage about the effect of the solar-day cycle on the tide-associated periodic behavior displayed by commuter diatoms?

- A. The solar-day cycle makes this behavior less advantageous to the commuter diatoms at certain times of the year.
- B. The solar-day cycle makes this behavior somewhat more erratic.
- C. The solar-day cycle makes this behavior less important to the survival of the commuter diatoms.
- D. Because of the solar-day cycle, this behavior is forced to proceed at a more rapid pace at certain times during the 24-hour day.
- E. Because of the solar-day cycle, this behavior is not expressed at certain times during the 24-hour day.

In corporate purchasing, competitive scrutiny is typically limited to suppliers of items that are directly related to end products. With “indirect” purchases (such as computers, advertising, and legal services), which are not directly related to production, corporations often favor “supplier partnerships” (arrangements in which the purchaser forgoes the right to pursue alternative suppliers), which can inappropriately shelter suppliers from rigorous competitive scrutiny that might afford the purchaser economic leverage. There are two independent variables—availability of alternatives and ease of changing suppliers—that companies should use to evaluate the feasibility of subjecting suppliers of indirect purchases to competitive scrutiny. This can create four possible situations.

In Type 1 situations, there are many alternatives and change is relatively easy. Open pursuit of alternatives—by frequent competitive bidding, if possible—will likely yield the best results. In Type 2 situations, where there are many alternatives but change is difficult—as for providers of employee health-care benefits—it is important to continuously test the market and use the results to secure concessions from existing suppliers. Alternatives provide a credible threat to suppliers, even if the ability to switch is constrained. In Type 3 situations, there are few alternatives, but the ability to switch without difficulty creates a threat that companies can use to negotiate concessions from existing suppliers. In Type 4 situations, where there are few alternatives and change is difficult, partnerships may be unavoidable.

Which of the following best describes the relation of the second paragraph to the first?

- A. The second paragraph offers proof of an assertion made in the first paragraph.
- B. The second paragraph provides an explanation for the occurrence of a situation described in the first paragraph.
- C. The second paragraph discusses the application of a strategy proposed in the first paragraph.
- D. The second paragraph examines the scope of a problem presented in the first paragraph.
- E. The second paragraph discusses the contradictions inherent in a relationship described in the first paragraph.

Which of the following can be inferred about supplier partnerships, as they are described in the passage?

- A. They cannot be sustained unless the goods or services provided are available from a large number of suppliers.
- B. They can result in purchasers paying more for goods and services than they would in a competitive-bidding situation.
- C. They typically are instituted at the urging of the supplier rather than the purchaser.
- D. They are not feasible when the goods or services provided are directly related to the purchasers’ end products.
- E. They are least appropriate when the purchasers’ ability to change suppliers is limited.

According to the passage, which of the following factors distinguishes an indirect purchase from other purchases?

- A. The ability of the purchasing company to subject potential suppliers of the purchased item to competitive scrutiny
- B. The number of suppliers of the purchased item available to the purchasing company
- C. The methods of negotiation that are available to the purchasing company
- D. The relationship of the purchased item to the purchasing company’s end product
- E. The degree of importance of the purchased item in the purchasing company’s business operations

Seventeenth-century philosopher John Locke stated that as much as 99 percent of the value of any useful product can be attributed to "the effects of labor." For Locke's intellectual heirs it was only a short step to the "labor theory of value," whose formulators held that 100 percent of the value of any product is generated by labor (the human work needed to produce goods) and that therefore the employer who appropriates any part of the product's value as profit is practicing theft. Although human effort is required to produce goods for the consumer market, effort is also invested in making capital goods (tools, machines, etc.), which are used to facilitate the production of consumer goods. In modern economies about one-third of the total output of consumer goods is attributable to the use of capital goods. Approximately two-thirds of the income derived from this total output is paid out to workers as wages and salaries, the remaining third serving as compensation to the owners of the capital goods. Moreover, part of this remaining third is received by workers who are shareholders, pension beneficiaries, and the like. The labor theory of value systematically disregards the productive contribution of capital goods—a failing for which Locke must bear part of the blame.

According to the author of the passage, which of the following is true of the distribution of the income derived from the total output of consumer goods in a modern economy?

A. Workers receive a share of this income that is significantly smaller than the value of their labor as a contribution to total output.

B. Owners of capital goods receive a share of this income that is significantly greater than the contribution to total output attributable to the use of capital goods.

C. Owners of capital goods receive a share of this income that is no greater than the proportion of total output attributable to the use of capital goods.

D. Owners of capital goods are not fully compensated for their investment because they pay out most of their share of this income to workers as wages and benefits.

E. Workers receive a share of this income that is greater than the value of their labor because the labor theory of value overestimates their contribution to total output.

The author of the passage is primarily concerned with

A. criticizing Locke's economic theories

B. discounting the contribution of labor in a modern economy

C. questioning the validity of the labor theory of value

D. arguing for a more equitable distribution of business profits

E. contending that employers are overcompensated for capital goods

Which of the following arguments would a proponent of the labor theory of value, as it is presented in the first paragraph, be most likely to use in response to the statement that "The labor theory of value systematically disregards the productive contribution of capital goods"?

A. The productive contributions of workers and capital goods cannot be compared because the productive life span of capital goods is longer than that of workers.

B. The author's analysis of the distribution of income is misleading because only a small percentage of workers are also shareholders.

C. Capital goods are valuable only insofar as they contribute directly to the production of consumer goods.

D. The productive contribution of capital goods must be discounted because capital goods require maintenance.

E. The productive contribution of capital goods must be attributed to labor because capital goods are themselves products of labor.

In her account of unmarried women's experiences in colonial Philadelphia, Wulf argues that educated young women, particularly Quakers, engaged in resistance to patriarchal marriage by exchanging poetry critical of marriage, copying verse into their commonplace books. Wulf suggests that this critique circulated beyond the daughters of the Quaker elite and middle class, whose commonplace books she mines, proposing that Quaker schools brought it to many poor female students of diverse backgrounds.

Here Wulf probably overstates Quaker schools' impact. At least three years' study would be necessary to achieve the literacy competence necessary to grapple with the material she analyzes. In 1765, the year Wulf uses to demonstrate the diversity of Philadelphia's Quaker schools, 128 students enrolled in these schools. Refining Wulf's numbers by the information she provides on religious affiliation, gender, and length of study, it appears that only about 17 poor non-Quaker girls were educated in Philadelphia's Quaker schools for three years or longer. While Wulf is correct that a critique of patriarchal marriage circulated broadly, Quaker schools probably cannot be credited with instilling these ideas in the lower classes. Popular literary satires on marriage had already landed on fertile ground in a multiethnic population that embodied a wide range of marital beliefs and practices. These ethnic- and class-based traditions themselves challenged the legitimacy of patriarchal marriage.

The primary purpose of the passage is to

A. argue against one aspect of Wulf's account of how ideas critical of marriage were disseminated among young women in colonial Philadelphia

B. discuss Wulf's interpretation of the significance for educated young women in colonial Philadelphia of the poetry they copied into their commonplace books

C. counter Wulf's assertions about the impact of the multiethnic character of colonial Philadelphia's population on the prevalent views about marriage

D. present data to undermine Wulf's assessment of the diversity of the student body in Quaker schools in colonial Philadelphia

E. challenge Wulf's conclusion that a critique of marriage was prevalent among young women of all social classes in colonial Philadelphia

According to the passage, which of the following was true of attitudes toward marriage in colonial Philadelphia?

A. Exemplars of a critique of marriage could be found in various literary forms, but they did not impact public attitudes except among educated young women.

B. The diversity of the student body in the Quaker schools meant that attitudes toward marriage were more disparate there than elsewhere in Philadelphia society.

C. Although critical attitudes toward marriage were widespread, Quaker schools' influence in disseminating these attitudes was limited.

D. Criticisms of marriage in colonial Philadelphia were directed at only certain limited aspects of patriarchal marriage.

E. The influence of the wide range of marital beliefs and practices present in Philadelphia's multiethnic population can be detected in the poetry that educated young women copied in their commonplace books.

The author of the passage implies which of the following about the poetry mentioned in the first paragraph?

A. Wulf exaggerates the degree to which young women from an elite background regarded the poetry as providing a critique of marriage.

B. The circulation of the poetry was confined to young Quaker women.

C. Young women copied the poetry into their commonplace books because they interpreted it as providing a desirable model of unmarried life.

D. The poetry's capacity to influence popular attitudes was restricted by the degree of literacy necessary to comprehend it.

E. The poetry celebrated marital beliefs and practices that were in opposition to patriarchal marriage.

Which of the following, if true, would most seriously undermine the author's basis for saying that Wulf overstates Quaker schools' impact?

A. The information that Wulf herself provided on religious affiliation and gender of students is in fact accurate.

B. Most poor, non-Quaker students enrolled in Quaker schools had completed one or two years' formal or informal schooling before enrolling.

C. Not all of the young women whose commonplace books contained copies of poetry critical of marriage were Quakers.

D. The poetry featured in young women's commonplace books frequently included allusions that were unlikely to be accessible to someone with only three years' study in school.

E. In 1765 an unusually large proportion of the Quaker schools' student body consisted of poor girls from non-Quaker backgrounds.

Extensive research has shown that the effects of short-term price promotions on sales are themselves short-term. Companies' hopes that promotions might have a positive aftereffect have not been borne out for reasons that researchers have been able to identify. A price promotion entices only a brand's long-term or "loyal" customers; people seldom buy an unfamiliar brand merely because the price is reduced. They simply avoid paying more than they have to when one of their customary brands is temporarily available at a reduced price. A price promotion does not increase the number of long-term customers of a brand, as it attracts virtually no new customers in the first place. Nor do price promotions have lingering aftereffects for a brand, even negative ones such as damage to a brand's reputation or erosion of customer loyalty, as is often feared.

So why do companies spend so much on price promotions? Clearly price promotions are generally run at a loss, otherwise there would be more of them. And the bigger the increase in sales at promotion prices, the bigger the loss. While short-term price promotions can have legitimate uses, such as reducing excess inventory, it is the recognizable increase in sales that is their main attraction to management, which is therefore reluctant to abandon this strategy despite its effect on the bottom line.

The primary purpose of the passage is to

- A. compare the arguments in favor of a certain strategy with those against it
- B. attack a certain strategy by enumerating its negative consequences
- C. justify the use of a certain strategy in light of certain criticisms that have been made against it
- D. advocate a particular strategy by arguing against an alternative
- E. explain the effects of a certain strategy and the primary motivations for adopting it

According to the passage, which of the following is the reason why short-term price promotions do not attract new long-term customers to a brand?

- A. Short-term price promotions do not produce an increase in sales.
- B. Customers come to regard the promotional price as the fair price and the regular price as excessive.
- C. Most customers select among competing products largely on the basis of price and very few are loyal to any particular brand.
- D. Customers who have not previously bought the promoted brand are almost never persuaded to do so by the short-term price promotions.
- E. Any customers that a brand gains by means of a short-term price promotion are liable to be lost when a competing brand has a similar promotion.

The passage suggests that evidence for price promotions' "effect on the bottom line" is provided by

- A. the lack of lingering aftereffects from price promotions
- B. the frequency with which price promotions occur
- C. price promotions' inability to attract new customers
- D. price promotions' recognizable effect on sales
- E. the legitimate uses to which management can put price promotions

It can be inferred from the passage that if a company ceased to run short-term price promotions for a particular product, an effect of this change would be to

- A. reduce excess inventory of the product
- B. lose some of the product's long-term customers
- C. reduce the product's overall sales
- D. inhibit growth in the number of the product's customers
- E. threaten the product's profitability

The experience of British business in Iran between the 1860's and the 1970's is one example of the changing importance of British enterprise in Asia as a whole. Before 1914 British business established and dominated Iran's modern industrial and financial sector; in the 1920's this domination began to wane; by the 1960's British enterprise was of little importance in the Iranian economy. While in Japan and India the decline of British business was primarily a function of the rise of strong indigenous business groups, in Iran, by contrast, the government played a large role in both challenging British commercial interests and stimulating locally owned enterprise. Periodic surges of intense Iranian economic nationalism must be understood partly as a reaction to the close relations between British business in Iran and the British government. In retrospect, it is possible to see the uneasy and ambiguous nature of this relationship. It is true that the British Imperial Bank in Iran was never entirely a tool of the British government, and that the Anglo-Iranian Oil Company did not take its orders from the British government, despite the 51 percent government shareholding. However, the relationship between British business and the British government was sufficiently close that many Iranians understandably viewed the oil company and the bank as symbols of a British imperialist policy.

The primary purpose of the passage is to

- A. evaluate a country's solution to a problem
- B. describe differing perceptions of a historical event
- C. contrast historical events in two countries
- D. provide an explanation for a historical phenomenon
- E. challenge an accepted explanation for a historical change

The passage suggests which of the following about British business in Japan and India as compared to British business in Iran?

- A. British business in Japan and India received less support from the British government than did British business in Iran.
- B. During the early twentieth century, British business played less of a role in the Japanese and Indian economy than it did in the Iranian economy.
- C. The governments of Japan and India played less of a role in the changing status of British business than did the government of Iran.
- D. The types of enterprises conducted by the British in Japan and India were significantly different from the enterprises conducted by the British in Iran.
- E. British business in Japan and India declined more gradually than did British business in Iran.

The author of the passage mentions the British government's shares in the Anglo-Iranian Oil Company most probably in order to

- A. demonstrate the British enterprise in Iran was controlled by the British government
- B. contrast British-run businesses in Iran with Iranian-run businesses in Iran
- C. show how joint British and Iranian enterprises were encouraged by the British government
- D. illustrate a point about the financial difficulties faced by British businesses in Asia
- E. suggest a reason for Iranians' perception of the role British government played in British business

More selective than most chemical pesticides in that they ordinarily destroy only unwanted species, biocontrol agents (such as insects, fungi, and viruses) eat, infect, or parasitize targeted plant or animal pests. However, biocontrol agents can negatively affect nontarget species by, for example, competing with them for resources: a biocontrol agent might reduce the benefits conferred by a desirable animal species by consuming a plant on which the animal prefers to lay its eggs. Another example of indirect negative consequences occurred in England when a virus introduced to control rabbits reduced the amount of open ground (because large rabbit populations reduce the ground cover), in turn reducing underground ant nests and triggering the extinction of a blue butterfly that had depended on the nests to shelter its offspring. The paucity of known extinctions or disruptions resulting from indirect interactions may reflect not the infrequency of such mishaps but rather the failure to look for or to detect them: most organisms likely to be adversely affected by indirect interactions are of little or no known commercial value and the events linking a biocontrol agent with an adverse effect are often unclear. Moreover, determining the potential risks of biocontrol agents before they are used is difficult, especially when a nonnative agent is introduced, because, unlike a chemical pesticide, a biocontrol agent may adapt in unpredictable ways so that it can feed on or otherwise harm new hosts.

The passage is primarily concerned with

- A. explaining why until recently scientists failed to recognize the risks presented by biocontrol agents
- B. emphasizing that biocontrol agents and chemical pesticides have more similarities than differences
- C. suggesting that only certain biocontrol agents should be used to control plant or animal pests
- D. arguing that biocontrol agents involve risks, some of which may not be readily discerned
- E. suggesting that mishaps involving biocontrol agents are relatively commonplace

The passage suggests that the author would be most likely to agree with which of the following statements about the use of biocontrol agents?

- A. Biocontrol agent should be used only in cases where chemical pesticides have proven ineffective or overly dangerous.
- B. Extinctions and disruptions resulting from the use of biocontrol agents are likely to have increasingly severe commercial consequences.
- C. The use of biocontrol agents does not require regulation as stringent as that required by the use of chemical pesticides.
- D. The use of biocontrol agents may even finally supersede the use of chemical pesticides in controlling unwanted species.
- E. The risks of using native biocontrol agents may be easier to predict than the risks of using nonnative biocontrol agents.

Which of the following is mentioned in the passage as an indirect effect of using a biocontrol agent?

- A. Reduction of the commercial value of a desirable animal species
- B. An unintended proliferation of a nontarget animal species
- C. An unforeseen mutation in a target species
- D. Diminution of the positive effects conferred by a nontarget animal species.
- E. Competition for resources with a largest species.

The example presented by the author in the highlighted text most clearly serves to illustrate

- A. a situation in which a species is less vulnerable to biocontrol agents than it would have been to chemical pesticides.
- B. a way in which the introduction of a biocontrol agent can affect a nontarget species
- C. a nonnative agent's adapting in an unpredictable way that results in damage to a new host.
- D. The contention that biocontrol agents can harm nontarget species by competing with them for resources
- E. the way in which indirect consequences from the use of biocontrol agents are most likely to occur

Is it possible to decrease inflation without causing a recession and its concomitant increase in unemployment? The orthodox answer is "no." Whether they support the "inertia" theory of inflation (that today's inflation rate is caused by yesterday's inflation, the state of the economic cycle, and external influences such as import prices) or the "rational expectations" theory (that inflation is caused by workers' and employers' expectations, coupled with a lack of credible monetary and fiscal policies), most economists agree that tight monetary and fiscal policies, which cause recessions, are necessary to decelerate inflation. They point out that in the 1980's, many European countries and the United States conquered high (by these countries' standards) inflation, but only by applying tight monetary and fiscal policies that sharply increased unemployment. Nevertheless, some governments' policymakers insist that direct controls on wages and prices, without tight monetary and fiscal policies, can succeed in decreasing inflation. Unfortunately, because this approach fails to deal with the underlying causes of inflation, wage and price controls eventually collapse, the hitherto-repressed inflation resurfaces, and in the meantime, though the policymakers succeed in avoiding a recession, a frozen structure of relative prices imposes distortions that do damage to the economy's prospects for long-term growth.

The passage suggests that the high inflation in the United States and many European countries in the 1980's differed from inflation elsewhere in which of the following ways?

- A. It fit the rational expectations theory of inflation but not the inertia theory of inflation.
- B. It was possible to control without causing a recession.
- C. It was easier to control in those countries by applying tight monetary and fiscal policies than it would have been elsewhere.
- D. It was not caused by workers' and employers' expectations.
- E. It would not necessarily be considered high elsewhere.

Which of the following, if true, would most strengthen The author's conclusion about the use of wage and price controls?

- A. Countries that repeatedly use wage and price controls tend to have lower long-term economic growth rates than do other countries.
- B. Countries that have extremely high inflation frequently place very stringent controls on wages and prices in an attempt to decrease the inflation.
- C. Some countries have found that the use of wage and price controls succeeds in decreasing inflation but also causes a recession.
- D. Policymakers who advocate the use of wage and price controls believe that these controls will deal with the underlying causes of inflation.
- E. Policymakers who advocate the use of wage and price controls are usually more concerned about long-term economic goals than about short-term economic goals

The primary purpose of the passage is to

- A. apply two conventional theories
- B. examine a generally accepted position
- C. support a controversial policy
- D. explain the underlying causes of a phenomenon
- E. propose an innovative solution

In most earthquakes the Earth's crust cracks like porcelain. Stress builds up until a fracture forms at a depth of a few kilometers and the crust slips to relieve the stress. Some earthquakes, however, take place hundreds of kilometers down in the Earth's mantle, where high pressure makes rock so ductile that it flows instead of cracking, even under stress severe enough to deform it like putty. How can there be earthquakes at such depths?

That such deep events do occur has been accepted only since 1927, when the seismologist Kiyoo Wadati convincingly demonstrated their existence. Instead of comparing the arrival times of seismic waves at different locations, as earlier researchers had done. Wadati relied on a time difference between the arrival of primary (P) waves and the slower secondary (S) waves. Because P and S waves travel at different but fairly constant speeds, the interval between their arrivals increases in proportion to the distance from the earthquake focus, or rupture point.

For most earthquakes, Wadati discovered, the interval was quite short near the epicenter, the point on the surface where shaking is strongest. For a few events, however, the delay was long even at the epicenter. Wadati saw a similar pattern when he analyzed data on the intensity of shaking. Most earthquakes had a small area of intense shaking, which weakened rapidly with increasing distance from the epicenter, but others were characterized by a lower peak intensity, felt over a broader area. Both the P-S intervals and the intensity patterns suggested two kinds of earthquakes: the more common shallow events, in which the focus lay just under the epicenter, and deep events, with a focus several hundred kilometers down.

The question remained: how can such quakes occur, given that mantle rock at a depth of more than 50 kilometers is too ductile to store enough stress to fracture? Wadati's work suggested that deep events occur in areas (now called Wadati-Benioff zones) where one crustal plate is forced under another and descends into the mantle. The descending rock is substantially cooler than the surrounding mantle and hence is less ductile and much more liable to fracture.

1. The passage is primarily concerned with
 - A. demonstrating why the methods of early seismologists were flawed
 - B. arguing that deep events are poorly understood and deserve further study
 - C. defending a revolutionary theory about the causes of earthquakes and methods of predicting them
 - D. discussing evidence for the existence of deep events and the conditions that allow them to occur
 - E. comparing the effects of shallow events with those of deep events
2. The author uses the comparisons to porcelain and putty in order to
 - A. explain why the Earth's mantle is under great pressure
 - B. distinguish the earthquake's epicenter from its focus
 - C. demonstrate the conditions under which a Wadati-Benioff zone forms
 - D. explain why S waves are slower than P waves
 - E. illustrate why the crust will fracture but the mantle will not
3. It can be inferred from the passage that if the S waves from an earthquake arrive at a given location long after the P waves, which of the following must be true?
 - A. The earthquake was a deep event.
 - B. The earthquake was a shallow event.
 - C. The earthquake focus was distant.
 - D. The earthquake focus was nearby.
 - E. The earthquake had a low peak intensity.
4. The method used by Wadati to determine the depths of earthquakes is most like which of the following?
 - A. Determining the depth of a well by dropping stones into the well and timing how long they take to reach the bottom
 - B. Determining the height of a mountain by measuring the shadow it casts at different times of the day
 - C. Determining the distance from a thunderstorm by timing the interval between the flash of a lightning bolt and the thunder it produces
 - D. Determining the distance between two points by counting the number of paces it takes to cover the distance and measuring a single pace
 - E. Determining the speed at which a car is traveling by timing how long it takes to travel a known distance

In most earthquakes the Earth's crust cracks like porcelain. Stress builds up until a fracture forms at a depth of a few kilometers and the crust slips to relieve the stress. Some earthquakes, however, take place hundreds of kilometers down in the Earth's mantle, where high pressure makes rock so ductile that it flows instead of cracking, even under stress severe enough to deform it like putty. How can there be earthquakes at such depths?

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5. The passage supports which of the following statements about the relationship between the epicenter and the focus of an earthquake?
- A. P waves originate at the focus and S waves originate at the epicenter.
 - B. In deep events the epicenter and the focus are reversed.
 - C. In shallow events the epicenter and the focus coincide.
 - D. In both deep and shallow events the focus lies beneath the epicenter.
 - E. The epicenter is in the crust, whereas the focus is in the mantle.

6. The passage suggests that which of the following must take place in order for any earthquake to occur?
- I. Stress must build up.
 - II. Cool rock must descend into the mantle.
 - III. A fracture must occur.
- A. I only
 - B. II only
 - C. III only
 - D. I and III only
 - E. I, II, and III
7. Information presented in the passage suggests that, compared with seismic activity at the epicenter of a shallow event, seismic activity at the epicenter of a deep event is characterized by
- A. shorter P-S intervals and higher peak intensity
 - B. shorter P-S intervals and lower peak intensity
 - C. longer P-S intervals and similar peak intensity
 - D. longer P-S intervals and higher peak intensity
 - E. longer P-S intervals and lower peak intensity
8. The passage suggests which of the following about the views held by researchers before 1927?
- A. Some researchers did not believe that deep events could actually occur.
 - B. Many researchers rejected the use of P-S intervals for determining the depths of earthquakes.
 - C. Some researchers doubted that the mantle was too ductile to store the stress needed for an earthquake.
 - D. Most researchers expected P waves to be slower than S waves.
 - E. Few researchers accepted the current model of how shallow events occur.
9. The author's explanation of how deep events occur would be most weakened if which of the following were discovered to be true?
- A. Deep events are far less common than shallow events.
 - B. Deep events occur in places other than where crustal plates meet.
 - C. Mantle rock is more ductile at a depth of several hundred kilometers than it is at 50 kilometers.
 - D. The speeds of both P and S waves are slightly greater than previously thought.
 - E. Below 650 kilometers earthquakes cease to occur.

Grassland songbirds often nest in the same grassland-wetland complexes as waterfowl, particularly in a certain part of those complexes, namely, upland habitats surrounding wetlands. Although some wildlife management procedures directed at waterfowl, such as habitat enhancement or restoration, may also benefit songbirds, the impact of others, especially the control of waterfowl predators, remains difficult to predict. For example, most predators of waterfowl nests prey opportunistically on songbird nests, and removing these predators could directly increase songbird nesting success. Alternatively, small mammals such as mice and ground squirrels are important in the diet of many waterfowl-nest predators and can themselves be important predators of songbird nests. Thus removing waterfowl-nest predators could affect songbird nesting success through subsequent increases in small-mammal populations.

In 1995 and 1996, researchers trapped and removed certain waterfowl nest predators, primary raccoons and striped skunks, then observed subsequent survival rates for songbird nests. Surprisingly, they observed no significant effect on songbird nesting success. This may be due to several factors. Neither raccoons nor striped skunks consume ground squirrels, which are important predators of songbird nests. Thus, their removal may not have led to significant increases in populations of smaller predators. Additionally, both raccoons and striped skunks prefer wetlands and spend little time in upland habitats; removing these species may not have increased the nesting success of songbirds in the uplands enough to allow detection.

According to the passage, which of the following is true about the role played by ground squirrels in the ecology of grassland-wetland complexes?

A. While not important in the diet of raccoons or striped skunks, ground squirrels are a significant source of food for other waterfowl-nest predators.

B. Whereas ground squirrels are typically important as predators of songbird nests, their opportunistic predation on waterfowl nests also has an observable effect on waterfowl nesting success.

C. Although most waterfowl-nest predators prey on small mammals such as mice and ground squirrels, populations of ground squirrels tend to increase quickly enough to compensate for this level of predation.

D. Although ground squirrels have been known to prey on songbird nests, a larger portion of their diets is usually provided by predation on waterfowl nests.

E. Since larger predators tend to prefer small mammals to songbird eggs as a food source, a large population of ground squirrels plays an important role in controlling opportunistic predation on songbird nests.

Which of the following best describes the function of the sentence "Neither raccoons...songbird nests" in the context of the passage as a whole?

A. It raises questions about the validity of a theory described in the first paragraph.

B. It points out an oversimplification that is inherent in the argument presented in the first paragraph.

C. It introduces information that may help explain the results of the experiment that are presented earlier in the paragraph.

D. It provides a specific example of the type of data collected in the experiment described earlier in the paragraph.

E. It anticipates a potential objection to the conclusions drawn by the researchers involved in the experiment described earlier in the paragraph.

The primary purpose of the passage is to

A. describe some procedures used for wildlife management and consider some problems associated with the execution of those procedures

B. outline a problem related to a wildlife management procedure and offer potential explanations for the results of an experiment bearing on that problem

C. present experimental results that illustrate the need for certain wildlife management procedures and point out some inconsistencies in those results

D. argue that a certain procedure used for wildlife management should be modified because of its unintended consequences

E. propose that further experiments be performed to assess the long-term effects of certain wildlife management procedures

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The passage suggests that removing waterfowl-nest predators could possibly have a negative effect on songbird populations because

- A. songbird populations could then grow to unsustainable numbers
- B. small-mammal population could then move out of the uplands into wetland areas
- C. competition among remaining waterfowl-nest predators could decrease significantly
- D. a resulting increase in waterfowl populations could crowd out songbird populations
- E. a resulting increase in small-mammal populations could increase small-mammal predation on songbirds**

It can be inferred that the habitat preferences of raccoons and striped skunks affected the results of the experiment described in the passage for which of the following reasons?

- A. Songbird nests in the wetlands are usually located in places that most waterfowl-nest predators cannot reach.
- B. Raccoons and striped skunks are not usually found in areas where songbird nests tend to be located.**
- C. Mice and ground squirrels tend to avoid predation by raccoons and striped skunks by remaining exclusively in the uplands.
- D. The populations of small mammals in the wetlands are usually controlled by larger waterfowl-nest predators such as raccoons and striped skunks.
- E. The waterfowl on which raccoons and striped skunks prey in the wetlands compete with songbirds for food.

In mid-February 1917 a women's movement independent of political affiliation erupted in New York City, the stronghold of the Socialist Party in the United States. Protesting against the high cost of living, thousands of women refused to buy chickens, fish, and vegetables. The boycott shut down much of the City's foodstuffs marketing for two weeks, riveting public attention on the issue of food prices, which had increased partly as a result of increased exports of food to Europe that had been occurring since the outbreak of the First World War.

By early 1917 the Socialist party had established itself as a major political presence in New York City. New York Socialists, whose customary spheres of struggle were electoral work and trade union organizing, seized the opportunity and quickly organized an extensive series of cost-of-living protests designed to direct the women's movement toward Socialist goals. Underneath the Socialists' brief commitment to cost-of-living organizing lay a basic indifference to the issue itself. While some Socialists did view price protests as a direct step toward socialism, most Socialists ultimately sought to divert the cost-of-living movement into alternative channels of protest. Union organizing, they argued, was the best method through which to combat the high cost of living. For others, cost-of-living or organizing was valuable insofar as it led women into the struggle for suffrage, and similarly, the suffrage struggle was valuable insofar as it moved United States society one step closer to socialism.

Although New York's Socialists saw the cost-of-living issue as, at best, secondary or tertiary to the real task at hand, the boycotters, by sharp contrast, joined the price protest movement out of an urgent and deeply felt commitment to the cost-of-living issue. A shared experience of swiftly declining living standards caused by rising food prices drove these women to protest. Consumer organizing spoke directly to their daily lives and concerns; they saw cheaper food as a valuable end in itself. Food price protests were these women's way of organizing at their own workplace, as workers whose occupation was shopping and preparing food for their families.

The author suggests which of the following about the New York Socialists' commitment to the cost-of-living movement?

- A. It lasted for a relatively short period of time.
- B. It was stronger than their commitment to the suffrage struggle.
- C. It predated the cost-of-living protests that erupted in 1917.
- D. It coincided with their attempts to bring more women into union organizing.
- E. It explained the popularity of the Socialist party in New York City.

It can be inferred from the passage that the goal of the boycotting women was the

- A. achievement of an immediate economic outcome
- B. development of a more socialistic society
- C. concentration of widespread consumer protests on the more narrow issue of food prices
- D. development of one among a number of different approaches that the women wished to employ in combating the high cost of living
- E. attraction of more public interest to issues that the women and the New York Socialists considered important

Which of the following best states the function of the passage as a whole?

- A. To contrast the views held by the Socialist party and by the boycotting women of New York City on the cost-of-living issue
- B. To analyze the assumptions underlying opposing viewpoints within the New York Socialist party of 1917
- C. To provide a historical perspective on different approaches to the resolution of the cost-of-living issue.
- D. To chronicle the sequence of events that led to the New York Socialist party's emergence as a political power
- E. To analyze the motivations behind the Socialist party's involvement in the women's suffrage movement.

According to the passage, most New York Socialists believed which of the following about the cost-of-living movement?

- A. It was primarily a way to interest women in joining the Socialist Party.
- B. It was an expedient that was useful only insofar as it furthered other goals.
- C. It would indirectly result in an increase in the number of women who belonged to labor unions.
- D. It required a long-term commitment but inevitably represented a direct step toward socialism.
- E. It served as an effective complement to union organizing.

There is no consensus among researchers regarding what qualifies a substance as a pheromone. While most agree on a basic definition of pheromones as chemicals released by one individual of a species which, when detected by another individual of the same species, elicit a specific behavioral or physiological response, some researchers also specify that the response to pheromones must be unconscious. In addition, the distinction between pheromones and odorants—chemicals that are consciously detected as odors—can be blurry, and some researchers classify pheromones as a type of odorant. Evidence that pheromone responses may not involve conscious odor perception comes from the finding that in many species, pheromones are processed by the vomeronasal (or accessory olfactory) system, which uses a special structure in the nose, the vomeronasal organ (VNO), to receive chemical signals. The neural connections between the VNO and the brain are separate from those of the main olfactory system, whose processing of odorants triggers sensations of smell. But while the VNO does process many animal pheromone signals, not all animal pheromones work through the VNO. Conversely, not all chemical signals transmitted via the VNO qualify as pheromones. For example, garter snakes detect a chemical signal from earthworms—one of their favorite foods—via the VNO, and they use this signal to track their prey.

It can be inferred from the passage that in classifying pheromones as a type of odorant, the researchers referred to in the highlighted text posit that

- A. pheromones are perceived consciously
- B. most pheromones are processed by the VNO
- C. most chemical signals processed by the VNO are pheromones
- D. Pheromone perception does not occur exclusively between members of the same species.
- E. pheromones do not always elicit a specific behavioral or physiological response

According to the passage, the fact that pheromones are processed by the VNO in many animal species has been taken as evidence of which of the following?

- A. The accessory and main olfactory systems are not separate
- B. Odorants and pheromones are not distinct types of chemicals.
- C. Odorants and pheromones both elicit a specific behavioral response.
- D. Pheromones do not trigger conscious sensations of smell.
- E. Pheromones aid animals in tracking prey.

The primary purpose of the passage is to

- A. compare and contrast the ways in which the vomeronasal organ and the main olfactory system process chemicals.
- B. summarize the debate over the role the vomeronasal organ plays in odor perception
- C. present some of the issues involved in the debate over what constitutes a pheromone
- D. propose a new definition of pheromones based on recent research
- E. argue that pheromones should be classified as a type of odorant

Although recent censure of corporate boards of directors as “passive” and “supine” may be excessive, those who criticize board performance have plenty of substantive ammunition. Too many corporate boards fail in their two crucial responsibilities of overseeing long-term company strategy and of selecting, evaluating, and determining appropriate compensation of top management. At times, despite disappointing corporate performance, compensation of chief executive officers reaches indefensibly high levels. Nevertheless, suggestions that the government should legislate board reform are premature. There are ample opportunities for boards themselves to improve corporate performance.

Most corporate boards’ compensation committees focus primarily on peer-group comparisons. They are content if the pay of top executives approximates that of the executives of competing firms with comparable short-term earnings or even that of executives of competing firms of comparable size. However, mimicking the compensation policy of competitors for the sake of parity means neglecting the value of compensation as a means of stressing long-term performance. By tacitly detaching executive compensation policy from long-term performance, committees harm their companies and the economy as a whole. The committees must develop incentive compensation policies to emphasize long-term performance. For example a board’s compensation committee can, by carefully proportioning straight salary and such short-term and long-term incentives as stock options, encourage top management to pursue a responsible strategy.

According to the passage, the majority of compensation committees put the greatest emphasis on which of the following when determining compensation for their executives?

- A. Long-term corporate performance
- B. The threat of government regulation
- C. Salaries paid to executives of comparable corporations
- D. The probable effect the determination will have on competitors
- E. The probable effect the economic climate will have on the company

The passage suggests which of the following about government legislation requiring that corporate boards undergo reform?

- A. Such legislation is likely to discourage candidates from joining corporate boards.
- B. Such legislation is likely to lead to reduced competition among companies.
- C. The performance of individual companies would be affected by such legislation to a greater extent than would the economy as a whole.
- D. Such legislation would duplicate initiatives already being made by corporate boards to improve their own performance.
- E. Corporate boards themselves could act to make such legislation unnecessary.

Which of the following best describes the organization of the passage?

- A. A problem is acknowledged, the causes are explored, and a solution is offered.
- B. A question is raised, opposing points of view are evaluated, and several alternative answers are discussed.
- C. A means of dealing with a problem is proposed, and the manner in which a solution was reached is explained.
- D. A plan of action is advanced, and the probable outcomes of that plan are discussed.
- E. Two competing theories are described and then reconciled.

In colonial Connecticut between 1670 and 1719, women participated in one of every six civil cases, the vast majority of which were debt related. Women's participation dropped to one in ten cases after 1719, and to one in twenty by the 1770's. However, as Cornelia Hughes Dayton notes in *Women Before the Bar: Gender, Law, and Society in Connecticut, 1639-1789*, these statistics are somewhat deceptive: in fact, both the absolute numbers and the percentage of adult women participating in civil cases grew steadily throughout the eighteenth century, but the legal activity of men also increased dramatically, and at a much faster rate. Single, married, and widowed women continued to pursue their own and their husbands' debtors through legal action much as they had done in the previous century, but despite this continuity, their place in the legal system shifted dramatically. Men's commercial interests and credit networks became increasingly far-flung, owing in part to the ability of creditors to buy and sell promissory notes (legal promises to pay debts). At the same time, women's networks of credit and debt remained primarily local and personal. Dayton contends that, although still performing crucial economic services in their communities—services that contributed to the commercialization of the colonial economy—women remained for the most part outside the new economic and legal culture of the eighteenth century.

The passage is primarily concerned with

- A. reporting an author's view of a phenomenon
- B. disputing the reasons usually given for an unexpected change
- C. evaluating the conclusions reached by an author
- D. assessing the impact of certain legal decisions
- E. defending a controversial point of view

According to the passage, compared with women in eighteenth-century Connecticut, men were

- A. more likely to rely on credit and go into debt
- B. more likely to pursue their families' debtors
- C. more likely to participate in economic transactions outside their own communities
- D. less likely to perform economic services in their own communities
- E. less likely to participate in civil cases that were not debt-related

The passage suggests that which of the following best compares the economic concerns of women with those of men toward the close of the eighteenth Century in colonial Connecticut?

- (A) Both men and women had more economic responsibilities at the end of the century than they had had at the beginning of the century.
- (B) Women's economic activities had become less varied by the end of the century; men's economic activities had become more varied.
- (C) Women's economic activities at the end of the century were similar to their activities at the beginning; men's economic activities changed considerably.
- (D) Women's economic concerns at the end of the century were primarily familial; men's economic concerns were primarily political.
- (E) Women's economic concerns at the end of the century were primarily personal; men's economic needs were primarily familial.

In 1975 Chinese survey teams re-measured Mount Everest, the highest of the Himalayan mountains. Like the British in 1852, they used the age-old technique of “carrying in” sea level: surveyors marched inland from the coast for thousands of miles, stopping at increments of as little as a few feet to measure their elevation, and marking each increment with two poles. To measure the difference in elevation between poles, surveyors used an optical level—a telescope on a level base—placed halfway between the poles. They sighted each pole, reading off measurements that were then used to calculate the change in elevation over each increment. In sight of the peaks they used theodolites—telescopes for measuring vertical and horizontal angles—to determine the elevation of the summit.

The Chinese, however, made efforts to correct for the errors that had plagued the British. One source of error is refraction, the bending of light beams as they pass through air layers of different temperature and pressure. Because light traveling down from a summit passes through many such layers, a surveyor could sight a mirage rather than the peak itself. To reduce refraction errors, the Chinese team carried in sea level to within five to twelve miles of Everest’s summit, decreasing the amount of air that light passed through on its way to their theodolites. The Chinese also launched weather balloons near their theodolites to measure atmospheric temperature and pressure changes to better estimate refraction errors. Another hurdle is the peak’s shape. When surveyors sight the summit, there is a risk they might not all measure the same point. In 1975 the Chinese installed the first survey beacon on Everest, a red reflector visible through a theodolite for ten miles, as a reference point. One more source of error is the unevenness of sea level. The British assumed that carrying in sea level would extend an imaginary line from the shore along Earth’s curve to a point beneath the Himalaya. In reality, sea level varies according to the irregular interior of the planet. The Chinese used a gravity meter to correct for local deviations in sea level.

It can be inferred from the passage that refraction would be most likely to cause errors in measurements of a mountain’s elevation under which of the following conditions?

- A. When there are local variations in sea level
- B. When light passes through humid air
- C. When theodolites are used relatively far from the mountain peak.
- D. When weather balloons indicate low air temperature and pressure.
- E. When sea level has been carried in to within five to twelve miles of the summit.

Which of the following best describes the purpose of the first sentence of the second paragraph?

- A. Introduce a definition
- B. Signal a transition in focus
- C. Summarize the preceding paragraph
- D. Draw a contrast between two different theories.
- E. Present information that contradicts the preceding paragraph.

Which of the following is NOT mentioned as a possible source of error in surveying mountain elevation?

- A. Mirages
- B. Refraction
- C. Inaccurate instruments
- D. Variations in sea level
- E. Uncertainty about the exact point to be measured

The primary purpose of the passage is to

- A. provide details about improvements to a process
- B. challenge the assumptions underlying a new method
- C. criticize the way in which a failed project was carried out
- D. call for new methods to solve an existing problem
- E. explain the theory behind a new technique

Two opposing scenarios, the "arboreal" hypothesis and the "cursorial" hypothesis, have traditionally been put forward concerning the origins of bird flight. The "arboreal" hypothesis holds that bird ancestors began to fly by climbing trees and gliding down from branches with the help of incipient feathers: the height of trees provides a good starting place for launching flight, especially through gliding. As feathers became larger over time, flapping flight evolved and birds finally became fully air-borne. This hypothesis makes intuitive sense, but certain aspects are troubling. Archaeopteryx (the earliest known bird) and its maniraptoran dinosaur cousins have no obviously arboreal adaptations, such as feet fully adapted for perching. Perhaps some of them could climb trees, but no convincing analysis has demonstrated how Archaeopteryx would have both climbed and flown with its forelimbs, and there were no plants taller than a few meters in the environments where Archaeopteryx fossils have been found. Even if the animals could climb trees, this ability is not synonymous with gliding ability. (Many small animals, and even some goats and kangaroos, are capable of climbing trees but are not gliders.) Besides, Archaeopteryx shows no obvious features of gliders, such as a broad membrane connecting forelimbs and hind limbs.

The "cursorial" (running) hypothesis holds that small dinosaurs ran along the ground and stretched out their arms for balance as they leaped into the air after insect prey or, perhaps, to avoid predators. Even rudimentary feathers on forelimbs could have expanded the arm's surface area to enhance lift slightly. Larger feathers could have increased lift incrementally, until sustained flight was gradually achieved. Of course, a leap into the air does not provide the acceleration produced by dropping out of a tree; an animal would have to run quite fast to take off. Still, some small terrestrial animals can achieve high speeds. The cursorial hypothesis is strengthened by the fact that the immediate theropod dinosaur ancestors of birds were terrestrial, and they had the traits needed for high lift off speeds: they were small, agile, lightly built, long-legged, and good runners. And because they were bipedal, their arms were free to evolve flapping flight, which cannot be said for other reptiles of their time.

The primary purpose of the passage is to

- A. present counterevidence to two hypotheses concerning the origins of bird flight
- B. propose an alternative to two hypotheses concerning the origins of bird flight correct certain misconceptions about hypotheses concerning the origins of bird flight
- C. dismiss counterevidence to two hypotheses concerning the origins of bird flight
- D. refute a challenge to a hypothesis concerning the origins of bird flight
- E. evaluate competing hypotheses concerning the origins of bird flight

The passage presents which of the following facts as evidence that tends to undermine the arboreal hypothesis?

- A. Feathers tend to become larger over time
- B. Flapping flight is thought to have evolved gradually over time
- C. Many small animals are capable of climbing trees.
- D. Plants in Archaeopteryx's known habitats were relatively small
- E. Leaping into the air does not provide as much acceleration as gliding out of a tree

Which of the following is included in the discussion of the cursorial hypothesis but not in the discussion of the arboreal hypothesis?

- A. A discussion of some of the features of Archaeopteryx
- B. A description of the environment known to have been inhabited by bird ancestors
- C. A possible reason why bird ancestors might have been engaging in activities that eventually evolved into flight
- D. A description of the obvious features of animals with gliding ability
- E. An estimate of the amount of time it took for bird ancestors to evolve the kind of flapping flight that allowed them to become completely airborne

The passage suggests which of the following regarding the climbing ability of Archaeopteryx?

- A. Its ability to climb trees was likely hindered by the presence of incipient feathers on its forelimbs.
- B. It was probably better at climbing trees than were its maniraptoran dinosaur cousins.
- C. It had certain physical adaptations that suggest it was skilled at climbing trees.
- D. Scientists have recently discovered fossil evidence suggesting it could not climb trees.
- E. Scientists are uncertain whether it was capable of climbing trees

Astronomers theorize that a black hole forms when a massive object shrinks catastrophically under its own gravity, leaving only a gravitational field so strong that nothing escapes it. Astronomers must infer the existence of black holes, which are invisible, from their gravitational influence on the visible bodies surrounding them. For example, observations indicate that gas clouds in galaxy M87 are whirling unusually fast about the galaxy's center. Most astronomers believe that the large concentration of mass at the galaxy's center is a black hole whose gravity is causing the gas to whirl. A few skeptics have argued that the concentration of mass necessary to explain the speed of the whirling gas is not necessarily a black hole: the concentration in M87 might be a cluster of a billion or so dim stars.

The same hypothesis might have been applied to the galaxy NGC 4258, but the notion of such a cluster's existing in NGC 4258 was severely undermined when astronomers measured the speed of a ring of dust and gas rotating close to the galaxy's center. From its speed, they calculated that the core's density is more than 40 times the density estimated for any other galaxy. If the center of NGC 4258 were a star cluster, the stars would be so closely spaced that collisions between individual stars would have long ago torn the cluster apart.

The skeptics mentioned in the first paragraph would be most likely to agree with the astronomers mentioned in the same paragraph about which of the following statements concerning the galaxy M87?

A. The speed of the gas whirling around the center of M87 is caused by a dense object that is not a black hole.

B. The concentration of mass at the center of M87 is probably a large cluster of dim stars.

C. The presence of a black hole at the center of M87 is the most likely explanation for the speed of the gas whirling about the galaxy's core.

D. The speed of the gas whirling around the center of M87 is caused by a large concentration of mass at the core of M87.

E. The gravitational influence of a star cluster would not be strong enough to account for the speed of the gas whirling around the core of M87.

The passage asserts which of the following about the existence of black holes?

A. Astronomers first speculated about the existence of black holes when they observed gas whirling around the center of a particular galaxy.

B. Evidence used to argue for the existence of black holes is indirect, coming from their presumed effects on other astronomical bodies.

C. Recent observations of certain astronomical bodies have offered conclusive proof about the existence of black holes.

D. A considerable body of evidence suggests the existence of black holes, even though their behavior is not completely consistent with the laws of physics.

E. Many astronomers are skeptical about certain recent evidence that has been used to argue for the existence of black holes.

Which of the following, if true, would most clearly undermine the possible explanation for the whirling gas in M87 that is mentioned in the last sentence of the first paragraph?

A. The stars in a star cluster at the center of M87 could exert a strong gravitational force without tearing the cluster apart.

B. A cluster of stars at the center would preclude the existence of certain other astronomical phenomena that have been observed at the center of M87.

C. The stars within many existing galaxies, such as NGC 4258, are more closely spaced than are the stars within the core of M87.

D. Only one other galaxy has been observed to contain gas clouds whirling about its center as they do about the core of M87.

E. The gravitational force of a cluster of a billion or so dim stars would be sufficient to cause a whirling ring of gas and dust to collect around the center of a galaxy.

When the history of women began to receive focused attention in the 1970's, Eleanor Roosevelt was one of a handful of female Americans who were well known to both historians and the general public. Despite the evidence that she had been important in social reform circles before her husband was elected President and that she continued to advocate different causes than he did, she held a place in the public imagination largely because she was the wife of a particularly influential President. Her own activities were seen as preparing the way for her husband's election or as a complement to his programs. Even Joseph Lash's two volumes of sympathetic biography, *Eleanor and Franklin* (1971) and *Eleanor: The Years Alone* (1972), reflected this assumption.

Lash's biography revealed a complicated woman who sought through political activity both to flee inner misery and to promote causes in which she passionately believed. However, she still appeared to be an idiosyncratic figure, somehow self-generated not amenable to any generalized explanation. She emerged from the biography as a mother to the entire nation, or as a busybody, but hardly as a social type, a figure comprehensible in terms of broader social developments.

But more recent work on the feminism of the post-suffrage years (following 1920) allows us to see Roosevelt in a different light and to bring her life into a more richly detailed context. Lois Scharf's *Eleanor Roosevelt*, written in 1987, depicts a generation of privileged women, born in the late nineteenth century and maturing in the twentieth, who made the transition from old patterns of female association to new ones. Their views and their lives were full of contradictions. They maintained female social networks but began to integrate women into mainstream politics; they demanded equal treatment but also argued that women's maternal responsibilities made them both wards and representatives of the public interest. Thanks to Scharf and others, Roosevelt's activities—for example, her support both for labor laws protecting women and for appointments of women to high public office—have become intelligible in terms of this social context rather than as the idiosyncratic career of a famous man's wife.

The passage as a whole is primarily concerned with which of the following?

- A. Changes in the way in which Eleanor Roosevelt's life is understood
- B. Social changes that made possible the role played by Eleanor Roosevelt in social reform
- C. Changes in the ways in which historians have viewed the lives of American women
- D. Social changes that resulted from the activities of Eleanor Roosevelt
- E. Changes in the social roles that American women have played

The author indicates that, according to Scharf's biography, which of the following was NOT characteristic of feminists of Eleanor Roosevelt's generation?

- A. Their lives were full of contradictions
- B. Their policies identified them as idiosyncratic.
- C. They were from privileged backgrounds.
- D. They held that women had unique responsibilities.
- E. They made a transition from old patterns of association to new ones.

Which of the following studies would proceed in a way most similar to the way in which, according to the passage, Scharf's book interprets Eleanor Roosevelt's career?

- A. An exploration of the activities of a wealthy social reformer in terms of the ideals held by the reformer
- B. A history of the leaders of a political party which explained how the conflicting aims of its individual leaders thwarted and diverted the activities of each leader
- C. An account of the legislative career of a conservative senator which showed his goals to have been derived from a national conservative movement of which the senator was a part
- D. A biography of a famous athlete which explained her high level of motivation in terms of the kind of family in which she grew up
- E. A history of the individuals who led the movement to end slavery in the United States which attributed the movement's success to the efforts of those exceptional individuals

The author cites which of the following as evidence against the public view of Eleanor Roosevelt held in the 1970's?

- A. She had been born into a wealthy family.
- B. Her political career predated the adoption of women's suffrage.
- C. She continued her career in politics even after her husband's death.
- D. She was one of a few female historical figures who were well known to historians by the 1970's.
- E. Her activism predated her husband's presidency and her projects differed from his.

Social learning in animals is said to occur when direct or indirect social interaction facilitates the acquisition of a novel behavior. It usually takes the form of an experienced animal (the demonstrator) performing a behavior such that the naïve animal (the observer) subsequently expresses the same behavior sooner, or more completely, than it would have otherwise. One example of social learning is the acquisition of preferences for novel foods.

Some experiments have suggested that among mammals, social learning facilitates the identification of beneficial food items, but that among birds, social learning helps animals avoid toxic substances. For example, one study showed that when red-wing blackbirds observed others consuming a colored food or a food in a distinctly marked container and then becoming ill, they subsequently avoided food associated with that color or container. Another experiment showed that house sparrows consumed less red food after they observed others eating red food that was treated so as to be noxious. Studies on non-avian species have not produced similar results, leading researchers to speculate that avian social learning may be fundamentally different from that of mammals.

But Sherwin's recent experiments with domestic hens do not support the notion that avian social learning necessarily facilitates aversion to novel foods that are noxious or toxic. Even when demonstrator hens reacted with obvious disgust to a specific food, via vigorous head shaking and bill wiping, there was no evidence that observers subsequently avoided eating that food. Sherwin's research team speculated that ecological or social constraints during the evolution of this species might have resulted in there being little benefit from the social learning of unpalatability, for instance, selective pressures for this mode of learning would be reduced if the birds rarely encountered noxious or toxic food or rarely interacted after eating such food, or if the consequences of ingestion were minimal. In a related experiment, the same researchers showed that if observer hens watched demonstrator hens react favorably to food of a particular color, then observer hens ate more food of that color than they ate of food of other colors. These results confirmed that avian species can develop preferences for palatable food through social learning.

The primary purpose of the passage is to discuss the
A. techniques used in certain experiments on social learning in birds

B. reasons for the differences between social learning in birds and in mammals

C. question of how social learning manifests itself in birds

D. basis for a widespread belief about a difference in behavior between birds and mammals

E. possible reasons why birds may or may not learn from each other in a particular way

According to the passage, which of the following is true of the experiments on domestic hens conducted by Sherwin's research team?

A. Only a small number of observer hens appeared to learn to avoid food that was demonstrated by other hens to be noxious.

B. Observer hens ingested food preferentially only after numerous instances of witnessing demonstrator hens preferentially ingest that type of food.

C. Observer hens appeared unable to recognize when demonstrator hens found a particular food especially palatable.

D. Demonstrator hens reacted adversely to ingesting certain novel foods.

E. Demonstrator hens altered their behavior less obviously in response to noxious foods than in response to highly palatable foods.

It can be inferred that the author of the passage would be most likely to agree with which of the following statements regarding the results of the recent experiments conducted by Sherwin's research team?

A. The experiments demonstrate that social learning in avian species facilitates the identification of noxious or toxic foods.

B. The experiments suggest that social learning has made avian species less adept than nonavian species at learning to prefer beneficial foods and avoid noxious and toxic foods.

C. The experiments undermine the notion that most avian species have evolved in environments where there is little benefit to the social learning of unpalatability.

D. The experiments suggest that the acquisition of food preferences in avian species is largely unaffected by social learning.

E. The experiments show that social learning in avian species can promote the preferential consumption of beneficial foods but do not support the claim that social learning in avian species promotes the avoidance of noxious or toxic foods.

Carotenoids, a family of natural pigments, form an important part of the colorful signals used by many animals. Animals acquire carotenoids either directly (from the plants and algae that produce them) or indirectly (by eating insects) and store them in a variety of tissues. Studies of several animal species have shown that when choosing mates, females prefer males with brighter carotenoid-based coloration. Owens and Olson hypothesize that the presence of carotenoids, as signaled by coloration, would be meaningful in the context of mate selection if carotenoids were either rare or required for health. The **conventional view** is that carotenoids are meaningful because they are rare: healthier males can forage for more of the pigments than can their inferior counterparts. Although this may be true, there is growing evidence that carotenoids are meaningful also because they are required: they are used by the immune system and for detoxification processes that are important for maintaining health. It may be that males can use scarce carotenoids either for immune defense and detoxification or for attracting females. Males that are more susceptible to disease and parasites will have to use their carotenoids to boost their immune systems, whereas males that are genetically resistant will use fewer carotenoids for fighting disease and will advertise this by using the pigments for flashy display instead.

Information in the passage suggests that which of the following is true of carotenoids that a male animal uses for detoxification processes?

- A. They were not acquired directly from plants and algae.
- B. They cannot be replenished through foraging.
- C. They cannot be used simultaneously to brighten coloration.**
- D. They do not affect the animal's susceptibility to parasites.
- E. They increase the chances that the animal will be selected as a mate.

The passage suggests that relatively bright carotenoid-based coloration is a signal of which of the following characteristics in males of certain animal species?

- A. Readiness for mating behavior
- B. Ability to fight
- C. Particular feeding preferences
- D. Recovery from parasite infestation
- E. Fitness as a mate**

According to the "conventional view" referred to in the highlighted text of the passage, brighter carotenoid-based coloration in certain species suggests that an individual

- A. lives in a habitat rich in carotenoid-bearing plants and insects
- B. has efficient detoxification processes
- C. has a superior immune system
- D. possesses superior foraging capacity**
- E. is currently capable of reproducing

Many politicians, business leaders, and scholars discount the role of public policy and emphasize the role of the labor market when explaining employers' maternity-leave policies, arguing that prior to the passage of the Family and Medical Leave Act (FMLA) of 1993, employers were already providing maternity leave in response to the increase in the number of women workers. Employers did create maternity-leave programs in the 1970's and 1980's, but not as a purely voluntary response in the absence of any government mandate. In 1972, the Equal Employment Opportunity Commission (EEOC) ruled that employers who allowed leaves for disabling medical conditions must also allow them for maternity and that failure to do so would constitute sex discrimination under the Civil Rights Act of 1964. As early as 1973, a survey found that 58 percent of large employers had responded with new maternity-leave policies. Because the 1972 EEOC ruling was contested in court, the ruling won press attention that popularized maternity-leave policies. Yet perhaps because the Supreme Court later struck down the ruling, politicians and scholars have failed to recognize its effects, assuming that employers adopted maternity-leave policies in response to the growing feminization of the workforce.

It can be inferred that the author of the passage would be most likely to agree with which of the following statements about government policy?

- A. Government policy is generally unaffected by pressures in the labor market.
- B. The impact of a given government policy is generally weakened by sustained press attention.
- C. It is possible for a particular government policy to continue to have an impact after that policy has been eliminated.
- D. A given government policy can be counterproductive when that policy has already unofficially been implemented.
- E. The impact of a given government policy is generally weakened when the ruling is contested in court.

The passage suggests that the relationship between the view of the author with respect to maternity leave policy prior to passage of the FMLA and the view of the politicians, business leaders, and scholars mentioned in the highlighted text can best be characterized by which of the following statements?

- A. They agree that both the 1972 EEOC ruling on maternity-leave policy and the increasing feminization of the workplace had an impact on employers' creation of maternity-leave programs but disagree about the relative importance of each factor.
- B. They agree that the EEOC ruling on maternity-leave policy had an initial impact on employers' creation of maternity-leave programs but disagree over whether the Supreme Court's striking down of the EEOC ruling weakened that impact.
- C. They agree that creating maternity-leave programs was a necessary response to the needs of the increasing number of women workers but disagree about whether maternity should be classified as a disabling medical condition.
- D. They agree that employers created maternity-leave programs prior to passage of the FMLA but disagree about employers' motivations for doing so.
- E. They agree that employers created maternity-leave programs prior to passage of the FMLA but disagree about how widespread those programs were.

Customer loyalty programs are attempts to bond customers to a company and its products and services by offering incentives—such as airline frequent flyer programs or special credit cards with valuable benefits—to loyal customers. In support of loyalty programs, companies often invoke the “80/20” principle, which states that about 80 percent of revenue typically comes from only about 20 percent of customers. However, this profitable 20 percent are not necessarily loyal buyers, especially in the sense of exclusive loyalty. Studies have demonstrated that only about 10 percent of buyers for many types of frequently purchased consumer goods are 100 percent loyal to a particular brand over a one-year period. Moreover, 100-percent-loyal buyers tend to be light buyers of the product or service. “Divided loyalty” better describes actual consumer behavior, since customers typically vary the brands they buy. The reasons for this behavior are fairly straightforward: people buy different brands for different occasions or for variety, or a brand may be the only one in stock or may offer better value because of a special deal. Most buyers who change brands are not lost forever; usually, they are heavy consumers who simply prefer to buy a number of brands. Such multi-brand loyalty means that one company’s most profitable customers will probably be its competitors’ most profitable customers as well.

Still, advocates of loyalty programs contend that such programs are beneficial because the costs of serving highly loyal customers are lower, and because such loyal customers are less price sensitive than other customers. It is true that when there are start-up costs, such as credit checks, involved in serving a new customer, the costs exceed those of serving a repeat customer. However, it is not at all clear why the costs of serving a highly loyal customer should in principle be different from those of serving any other type of repeat customer. The key variables driving cost are size and type of order, special versus standard order, and so on, not high-loyalty versus divided-loyalty customers. As for price sensitivity, highly loyal customers may in fact come to expect a price discount as a reward for their loyalty.

The primary purpose of the passage is to

A. question the notion that customer loyalty programs are beneficial

B. examine the reasons why many customers buy multiple brands of products

C. propose some possible alternatives to customer loyalty programs

D. demonstrate that most customers are not completely loyal to any one brand of product or service

E. compare the benefits of customer loyalty programs with those of other types of purchase incentive programs

In a 1984 book, Claire C. Robertson argued that, before colonialism, age was a more important indicator of status and authority than gender in Ghana and in Africa generally. British colonialism imposed European-style male-dominant notions upon more egalitarian local situations to the detriment of women generally, and gender became a defining characteristic that weakened women's power and authority.

Subsequent research in Kenya convinced Robertson that she had overgeneralized about Africa. Before colonialism, gender was more salient in central Kenya than it was in Ghana, although age was still crucial in determining authority. In contrast with Ghana, where women had traded for hundreds of years and achieved legal majority (not unrelated phenomena), the evidence regarding central Kenya indicated that women were legal minors and were sometimes treated as male property, as were European women at that time. Factors like strong patrilinearity and patrilocality, as well as women's inferior land rights and lesser involvement in trade, made women more dependent on men than was generally the case in Ghana. However, since age apparently remained the overriding principle of social organization in central Kenya, some senior women had much authority. Thus, Robertson revised her hypothesis somewhat, arguing that in determining authority in precolonial Africa age was a primary principle that superseded gender to varying degrees depending on the situation.

The primary purpose of the passage is to

- A. present evidence undermining a certain hypothesis
- B. describe a particular position and its subsequent modification
- C. discuss two contrasting viewpoints regarding a particular issue
- D. describe how a social phenomenon varied by region
- E. evaluate an assumption widely held by scholars

The passage indicates that Robertson's research in Kenya caused her to change her mind regarding which of the following?

- A. Whether age was the prevailing principle of social organization in Kenya before colonialism
- B. Whether gender was the primary determinant of social authority in Africa generally before colonialism
- C. Whether it was only after colonialism that gender became a significant determinant of authority in Kenyan society
- D. Whether age was a crucial factor determining authority in Africa after colonialism
- E. Whether British colonialism imposed European-style male-dominant notions upon local situations in Ghana

The passage suggests that after conducting the research mentioned in the highlighted text, but not before, Robertson would have agreed with which of the following about women's status and authority in Ghana?

- A. Greater land rights and greater involvement in trade made women in precolonial Ghana less dependent on men than were European women at that time.
- B. Colonialism had a greater impact on the status and authority of Ghanaian women than on Kenyan women.
- C. Colonialism had less of an impact on the status and authority of Ghanaian women than it had on the status and authority of other African women.
- D. The relative independence of Ghanaian women prior to colonialism was unique in Africa.
- E. Before colonialism, the status and authority of Ghanaian women was similar to that of Kenyan women.

The author of the passage mentions the status of age as a principle of social organization in precolonial central Kenya in the highlighted text most likely in order to

- A. indicate that women's dependence on men in precolonial Kenya was not absolute
- B. contrast the situation of senior women to that of less senior women in precolonial Kenyan society
- C. differentiate between the status and authority of precolonial Kenyan women and that of precolonial Ghanaian women
- D. explain why age superseded gender to a greater extent in precolonial Kenya than it did elsewhere in Africa
- E. identify a factor that led Robertson to revise her hypothesis about precolonial Africa

Some **historians** contend that conditions in the United States during the Second World War gave rise to a dynamic wartime alliance between trade unions and the African American community, an alliance that advanced the cause of civil rights. They conclude that the postwar demise of this vital alliance constituted a lost opportunity for the civil rights movement that followed the war. Other **scholars**, however, have portrayed organized labor as defending all along the relatively privileged position of White workers relative to African American workers. Clearly, these two perspectives are not easily reconcilable, but the historical reality is not reducible to one or the other. Unions faced a choice between either maintaining the prewar status quo or promoting a more inclusive approach that sought for all members the right to participate in the internal affairs of unions, access to skilled and high-paying positions within the occupational hierarchy, and protection against management's arbitrary authority in the workplace. While union representatives often voiced this inclusive ideal, in practice unions far more often favored entrenched interests. The accelerating development of the civil rights movement following the Second World War exacerbated the unions' dilemma, forcing trade unionists to confront contradictions in their own practices.

The passage is primarily concerned with

- A. providing a context within which to evaluate opposing viewpoints about a historical phenomenon
- B. identifying a flawed assumption underlying one interpretation of a historical phenomenon
- C. assessing the merits and weaknesses of a controversial theory about a historical phenomenon
- D. discussing the historical importance of the development of a wartime alliance
- E. evaluating evidence used to support a particular interpretation of a historical phenomenon

According to the passage, the historians and scholars mentioned in the highlighted texts disagree about the

- A. contribution made by organized labor to the war effort during the Second World War
- B. issues that union members considered most important during the Second World War
- C. relationship between unions and African Americans during the Second World War
- D. effect of the Second World War on the influence of unions in the workplace
- E. extent to which African Americans benefited from social and political changes following the Second World War

Which of the following best describes the purpose of the first sentence in the second paragraph in the passage?

- A. To summarize a situation confronted by unions during the Second World War
- B. To summarize the role of unions in the workplace during the Second World War
- C. To explain the philosophy supported by most unions during the Second World War
- D. To assess the effect of the growth of the civil rights movement on unions during the Second World War
- E. To present a criticism of the unions' approach to representing workers during the Second World War

Which of the following best summarizes the opinion of the author of the passage regarding the two points of view presented in the first paragraph?

- A. Neither point of view reflects the views of certain African American historians on trade unions during the Second World War.
- B. Neither point of view reflects the full complexity of the historical reality.
- C. One point of view is based on more reliable research than is the other.
- D. Both points of view have misinterpreted recent research on trade unions during the Second World War.
- E. The two points of view can be readily harmonized into a coherent interpretation.

First identified in 1969, komatiites are Earth's oldest known volcanic rocks and contain three times as much magnesium as do most volcanic rocks. This chemical composition suggests that komatiites formed from the hottest lava known ever to have erupted: a high concentration of magnesium changes the physical properties of lava so that unusually high temperatures would be required for the lava to exist as a liquid. Komatiites' discovery was surprising in light of then-current geological theories about magmas, molten rock that forms in the Earth's mantle (the layer beneath the crust) and composes volcanic lava eruptions. Prior to 1960, geologists Bowen and Hess disagreed over whether or not the very high temperatures needed to produce magmas rich in magnesium could have existed on Earth. Hess suggested that the presence of water, probably released from minerals decomposing in the Earth's mantle, might have meant that a high-magnesium magma could have existed at a lower temperature. But Bowen showed experimentally that the high temperatures were indeed necessary. By 1960, it was generally accepted that volcanic rocks with such high levels of magnesium could not exist, and thus the discovery of komatiites changed geologists' assumptions about the characteristics of the Earth's mantle around the time of the formation of komatiites, between 2.5 and 4 billion years ago.

Which of the following most accurately describes the organization of the passage?

- A. Two divergent views of a scientific phenomenon are reconciled.
- B. A phenomenon is described and its scientific significance is discussed.
- C. The discovery of a scientific phenomenon is traced and its implications for further research are suggested.
- D. A long-standing scientific theory is examined and recently discovered evidence is shown to support it.
- E. The ways in which a particular geological phenomenon is exceptional are detailed and classified.

Information in the passage suggests which of the following concerning the Earth's mantle 2.5 to 4 billion years ago?

- A. It contained magmas that were more significantly affected by the decomposition of minerals than are current-day magmas.
- B. It contained a lower proportion of water that it contains today.
- C. Its characteristics were accurately described by both Bowen and Hess.
- D. Its temperature was sufficiently high to produce magmas with high magnesium content.
- E. Its total magnesium content then was roughly equivalent to its magnesium content today.

Which of the following most accurately states the main point of the passage?

- A. Komatiites provide information about rates of volcanic eruption between 2.5 and 4 billion years ago.
- B. Komatiites provide information about how the physical properties of lava in the Earth's past compare with those of current-day lava.
- C. Komatiites provide evidence that undermines Bowen's experimental conclusions regarding the temperatures at which lava exists as a liquid.
- D. Komatiites provide evidence that has changed geologists' ideas about the characteristics of the Earth's mantle between 2.5 and 4 billion years ago.
- E. Komatiites provide evidence that water in the Earth's mantle may have reduced the temperature required for lava to exist as a liquid.

While acknowledging that there are greater employment opportunities for Latin American women in cities than in the countryside, social science theorists have continued to argue that urban migration has unequivocally hurt women's status. However, the effects of migration are more complex than these theorists presume. For example, effects can vary depending on women's financial condition and social class. **Brazilian women** in the lowest socioeconomic class have relatively greater job opportunities and job security in cities than do men of the same class, although there is no compelling evidence that for these women the move to the city is a move out of poverty. Thus, these women may improve their status in relation to men but at the same time may experience no improvement in their economic standing.

In addition, working outside the home, which is more common in urban than in rural areas, helps women in the lowest socioeconomic class make contacts to extend exchange networks—the flow of gifts, loans, or child care from those who currently have access to resources to those who do not. Moreover, poor women working in urban areas actively seek to cultivate long-term employer-employee relations. When an emergency arises that requires greater resources than an exchange network can provide, these women often appeal for and receive aid from their wealthy employers. However, the structure of many poor women's work—often a labor force of one in an employer's home—makes it difficult for them to organize to improve their economic conditions in general.

Not surprisingly, then, Latin American women in the lowest socioeconomic class differ in their opinions about the effects of urban migration on their lives. Some find urban living, with access to electricity and running water, an improvement and would never return to the countryside. Others, disliking the overcrowding and crime, would return to the countryside if there were work opportunities for them there. Thus, urban life has had both negative and positive impacts on women's lives. In general, urban migration has not provided economic prosperity or upward mobility for women in the lowest socioeconomic class, despite their intelligent and energetic utilization of the resources available to them.

In the first paragraph, the author refers to the experiences of Brazilian women most probably in order to

- A. support an earlier assertion made by social science theorists about the effects of urban migration
- B. provide an example of one area in which urban migration has failed to improve Latin American women's lives

C. substantiate the claim that the effects of urban migration cannot be easily characterized

- D. illustrate the effect that urban migration has had on the economic status of Latin American women
- E. compare the effect that urban migration has had on the economic status of Latin American women with its effect on the economic status of Latin American men

Which of the following best summarizes the main point of the passage?

- A. Although Latin American women disagree about the effects urban migration has had on their lives, they agree that migration has provided them with greater opportunities for stable employment outside the home.
- B. Although urban migration has improved the quality of life for Latin American women, it has weakened the social support systems that these women enjoyed in rural communities.

C. The effects that urban migration has had on Latin American women's lives are complex and are best evaluated in light of a range of issues concerning Latin American women's overall quality of life.

- D. The effects of urban migration in Latin America are different for men than they are for women because of the relatively greater job opportunities and job security enjoyed by women in urban areas.
- E. Urban migration has led to an increasing disparity between the economic prosperity of Latin American women in the lowest socioeconomic classes and that of women in the higher socioeconomic classes.

The author mentions which of the following as a disadvantage of urban employment for Latin American women in the lowest socioeconomic group?

- A. It is difficult for these women to obtain reliable, long-term employment.

B. It is difficult for these women to organize effectively in order to obtain better wages.

- C. It is difficult for these women to find employers who are supportive when emergencies arise.
- D. The structure of their jobs makes it difficult for these women to participate in exchange networks.
- E. Working in urban areas makes these women more vulnerable to health problems than they would be in rural areas.

The author of the passage would most likely agree that the opinions of the Latin American women discussed in the third paragraph are influenced by the

- A. fact that urban life has provided them with greater opportunities for upward mobility than did rural life
- B. relative importance they place on the benefits of urban exchange networks in comparison to those of rural networks.

C. relative importance they place on the conveniences and drawbacks of urban life in comparison to those of rural life

- D. difference in the effects of urban migration on women of higher and lower socioeconomic classes
- E. difference in the effects of urban migration on men and women of the same social and economic class

The following was excerpted from material written in 1988.

For over a decade the most common policy advice given to developing countries by international development institutions has been to copy the export-oriented path of the newly industrializing countries, the celebrated NICs. These economies—Brazil, Hong Kong, Mexico, Singapore, South Korea, and Taiwan—burst into the world manufacturing market in the late 1960's and the 1970's; by 1978 these six economies, along with India, enjoyed unequalled growth rates for gross national product and for exports, with exports accounting for 70 percent of the developing world's manufactured exports. It was, therefore, not surprising that dozens of other countries attempted to follow their model, yet no countries—with the possible exceptions of Malaysia and Thailand—have even approached their success. In "*No More NIC's*," Robin Broad and John Cavanagh search for the reasons behind these failures, identifying far-reaching changes in the global economy—from synthetic substitutes for commodity exports to unsustainable levels of foreign debt—as responsible for a glut economy offering little room for new entrants. Despite these changes, the authors maintain, the World Bank and the International Monetary Fund—the foremost international development institutions—have continued to promote the NIC path as the way for heavily indebted developing countries to proceed. And yet the futility of this approach should, according to the authors, be all too apparent; so many years into a period of reduced growth in world markets.

Given the information in the passage, which of the following is a true statement about the NIC's?

A. Their economic success among developing countries has been exceeded only by the successes of Malaysia and Thailand.

B. By 1978 they produced 70 percent of the world's manufactured exports.

C. In the late 1970's, their growth rates for gross national product were among the highest in the world.

D. In recent years their development has been heavily subsidized by major international development institutions.

E. They received conflicting policy advice from international development institutions in the late 1960's and the 1970's.

The author of the passage most clearly implies that Broad and Cavanagh disagree with the World Bank and the International Monetary Fund about which of the following?

A. The ways in which the global economy has changed in recent years

B. The causes of the unsustainable levels of foreign debt that the developing countries have incurred in recent years

C. The level of foreign debt that should be maintained by developing countries

D. The degree to which international development institutions should monitor the growth of developing countries

E. The degree to which heavily indebted developing countries should emphasize exports in their overall economic strategy

The author mentions Malaysia and Thailand in order to

A. acknowledge the appearance of implausibility in a broad claim

B. concede the possible existence of counter-examples to a generalization

C. offer additional evidence in support of a disputed conclusion

D. illustrate the broad applicability of a hypothesis

E. admit the limited scope of a standard analysis

Anole lizard species that occur together (sympatrically) on certain Caribbean islands occupy different habitats: some live only in the grass, some only on tree trunks, and some only on twigs. These species also differ morphologically: grass dwellers are slender with long tails, tree dwellers are stocky with long legs, and twig dwellers are slender but stubby-legged. What is striking about these lizards is not that coexisting species differ in morphology and habitat use (such differences are common among closely related sympatric species) but that the same three types of habitat specialists occur on each of four islands: Puerto Rico, Cuba, Hispaniola, and Jamaica. Moreover, the Puerto Rican twig species closely resembles the twig species of Cuba, Hispaniola, and Jamaica in morphology, habitat use, and behavior. Likewise, the specialists for other habitats are similar across the islands.

The presence of similar species on different islands could be variously explained. An ancestral species might have adapted to exploit a particular ecological niche on one island and then traveled over water to colonize other islands. Or this ancestral species might have evolved at a time when the islands were connected, which some of these islands may once have been. After the islands separated, the isolated lizard populations would have become distinct species while also retaining their ancestors' niche adaptations. Both of these scenarios imply that specialization to each niche occurred only once. Alternatively, each specialist could have arisen independently on each of the islands.

If each type of specialist evolved just once, then similar specialists on different islands would be closely related. Conversely, if the specialists evolved independently on each island, then a specialist on one island would be more closely related to other types of anoles on the same island—regardless of their ecological niches—than it would be to a similar specialist on a different island.

Biologists can infer how species are related evolutionarily by comparing DNA sequences for the same genes in different species. Species with similar DNA sequences for these genes are generally more closely related to each other than to species with less similar DNA sequences. DNA evidence concerning the anoles led researchers to conclude that habitat specialists on one island are not closely related to the same habitat specialists elsewhere, indicating that specialists evolved independently on each island.

The primary purpose of the passage is to

- A. describe some unusual features of anole lizard species
- B. account for a particular type of behavior found among anole lizard species
- C. contrast two types of evidence that have been used to support a particular hypothesis concerning anole lizard species
- D. explain how researchers resolved a particular scientific question concerning anole lizard species
- E. examine different explanations for a particular trait common to certain anole lizard species

Which of the following best describes the purpose of the sentence in the highlighted text ("What is ... Jamaica")?

- A. It raises a question about why coexisting anole lizard species occupy the different types of habitats mentioned in the first sentence.
- B. It introduces a fact about anole lizard species that the passage will go on to explore.
- C. It identifies a particular aspect of anole lizard behavior that distinguishes anoles from other lizard species.
- D. It explains why one aspect of anole lizard species' habitat use has been difficult to account for.
- E. It points out a surprising relationship between morphology and habitat use that is explained in the concluding paragraph.

It can be inferred from the passage that which of the following is true of the Cuban tree-dwelling anole lizard and the Jamaican tree-dwelling anole lizard?

- A. They share a morphology characterized by stocky bodies and long legs.
- B. They have bodies that are relatively slender compared to their stubby legs.
- C. They differ significantly from one another in size.
- D. They differ significantly from one another in behavior and habitat use.
- E. They are genetically closely related to one another.

The passage suggests that if a grass-dwelling anole lizard species evolved on one island and then traveled over water to colonize a second island, the grass-dwelling anoles on the two islands would eventually

- A. develop very different DNA sequences
- B. develop into different species that are more distantly related to each other than to tree- and twig-dwelling anoles on their own islands
- C. come to differ significantly from one another in habitat use
- D. develop into different, but closely related, species
- E. evolve significant morphological differences

Citing the fact that the real gross domestic product (GDP) per capita was higher in 1997 than ever before, some journalists have argued that the United States economy performed ideally in 1997. However, the real GDP is almost always higher than ever before; it falls only during recessions. One point these journalists overlooked is that in 1997, as in the twenty-four years immediately preceding it, the real GDP per capita grew nearly one-half percent a year more slowly than it had on average between 1873 and 1973. Were the 1997 economy as robust as claimed, the growth rate of real GDP per capita in 1997 would have surpassed the average growth rate of real GDP per capita between 1873 and 1973 because over fifty percent of the population worked for wages in 1997 whereas only forty percent worked for wages between 1873 and 1973. If the growth rate of labor productivity (output per hour of goods and services) in 1997 had equaled its average growth rate between 1873 and 1973 of more than two percent, then, given the proportionately larger workforce that existed in 1997, real GDP per capita in 1997 would have been higher than it actually was, since output is a major factor in GDP. However, because labor productivity grew by only one percent in 1997, real GDP per capita grew more slowly in 1997 than it had on average between 1873 and 1973.

The passage is primarily concerned with

- A. comparing various measures used to assess the performance of the United States economy in 1997
- B. providing evidence that the performance of the United States economy in 1997 was similar to its performance between 1873 and 1973
- C. evaluating an argument concerning the performance of the United States economy in 1997
- D. examining the consequences of a popular misconception about the performance of the United States economy in 1997
- E. supporting an assertion made by journalists about the performance of the United States economy in 1997

According to the passage, which of the following is true of the average rate at which real GDP per capita grew in the twenty-four years immediately before 1997?

- A. It was less than it had been between 1873 and 1973 because only forty percent of the population worked for wages between 1873 and 1973.
- B. It was less than it had been between 1873 and 1973 because labor productivity grew less between 1973 and 1997 than it had between 1873 and 1973.
- C. It was less than it had been between 1873 and 1973 as a result of an increase in the percentage of the population earning wages during these years.
- D. It was less than the average rate at which real GDP per capita grew between 1873 and 1973.
- E. It was less than the rate at which real GDP per capita grew in 1997.

It can be inferred from the passage that which of the following is the reason that the author faults the journalists referred to in the first sentence of the passage?

- A. They believe that the real GDP per capita in 1997 was higher than the real GDP per capita had ever been before.
- B. They argue that the rate at which real GDP per capita grew in 1997 was faster than the average rate at which it had grown between 1873 and 1973.
- C. They overestimate the effect of labor productivity on the real GDP per capita in 1997.
- D. They overestimate the amount by which real GDP per capita in 1997 surpassed real GDP per capita in earlier years.
- E. They fail to consider the real GDP per capita in 1997 within an appropriate historical context.