

## Passage 61

Coral reefs are one of the most fragile, biologically complex, and diverse marine ecosystems on Earth. This ecosystem is one of the fascinating paradoxes of the biosphere: how do clear, and thus nutrient-poor, waters support such prolific and productive communities? Part of the answer lies within the tissues of the corals themselves. Symbiotic cells of algae known as zooxanthellae carry out photosynthesis using the metabolic wastes of the coral thereby producing food for themselves, for their corals, hosts, and even for other members of the reef community. This symbiotic process allows organisms in the reef community to use sparse nutrient resources efficiently.

Unfortunately for coral reefs, however, a variety of human activities are causing worldwide degradation of shallow marine habitats by adding nutrients to the water. Agriculture, slash-and-burn land clearing, sewage disposal and manufacturing that creates waste by-products all increase nutrient loads in these waters. Typical symptoms of reef decline are destabilized herbivore populations and an increasing abundance of algae and filter-feeding animals. Declines in reef communities are consistent with observations that nutrient input is increasing in direct proportion to growing human populations, thereby threatening reef communities sensitive to subtle changes in nutrient input to their waters.

1. The passage is primarily concerned with
  - (A) describing the effects of human activities on algae in coral reefs
  - (B) explaining how human activities are posing a threat to coral reef communities
  - (C) discussing the process by which coral reefs deteriorate in nutrient-poor waters
  - (D) explaining how coral reefs produce food for themselves
  - (E) describing the abundance of algae and filter-feeding animals in coral reef areas
2. The passage suggests which of the following about coral reef communities?
  - (A) Coral reef communities may actually be more likely to thrive in waters that are relatively low in nutrients.
  - (B) The nutrients on which coral reef communities thrive are only found in shallow waters.
  - (C) Human population growth has led to changing ocean temperatures, which threatens coral reef communities.
  - (D) The growth of coral reef communities tends to destabilize underwater herbivore populations.
  - (E) Coral reef communities are more complex and diverse than most ecosystems located on dry land.
3. The author refers to “filter-feeding animals” (line 20) in order to
  - (A) provide an example of a characteristic sign of reef deterioration
  - (B) explain how reef communities acquire sustenance for survival
  - (C) identify a factor that helps herbivore populations thrive
  - (D) indicate a cause of decreasing nutrient input in waters that reefs inhabit
  - (E) identify members of coral reef communities that rely on coral reefs for

nutrients

4. According to the passage, which of the following is a factor that is threatening the survival of coral reef communities?
- (A) The waters they inhabit contain few nutrient resources.
  - (B) A decline in nutrient input is disrupting their symbiotic relationship with zooxanthellae.
  - (C) The degraded waters of their marine habitats have reduced their ability to carry out photosynthesis.
  - (D) They are too biologically complex to survive in habitats with minimal nutrient input.
  - (E) Waste by-products result in an increase in nutrient input to reef communities.
5. It can be inferred from the passage that the author describes coral reef communities as paradoxical most likely for which of the following reasons?
- (A) They are thriving even though human activities have depleted the nutrients in their environment.
  - (B) They are able to survive in spite of an overabundance of algae inhabiting their waters.
  - (C) They are able to survive in an environment with limited food resources.
  - (D) Their metabolic wastes contribute to the degradation of the waters that they inhabit.
  - (E) They are declining even when the water surrounding them remains clear.

### Passage 62

Two divergent definitions have dominated sociologists' discussions of the nature of ethnicity. The first emphasizes the primordial and unchanging character of ethnicity. In this view, people have an essential need for belonging that is satisfied by membership in groups based on shared ancestry and culture. A different conception of ethnicity de-emphasizes the cultural component and defines ethnic groups as interest groups. In this view, ethnicity serves as a way of mobilizing a certain population behind issues relating to its economic position. While both of these definitions are useful, neither fully captures the dynamic and changing aspects of ethnicity in the United States. Rather, ethnicity is more satisfactorily conceived of as a process in which preexisting communal bonds and common cultural attributes are adapted for instrumental purposes according to changing real-life situations.

One example of this process is the rise of participation by Native American people in the broader United States political system since the Civil Rights movement of the 1960's. Besides leading Native Americans to participate more actively in politics (the number of Native American legislative officeholders more than doubled), this movement also evoked increased interest in tribal history and traditional culture. Cultural and instrumental components of ethnicity are not mutually exclusive, but rather reinforce one another.

The Civil Rights movement also brought changes in the uses to which ethnicity was put by

Mexican American people. In the 1960's, Mexican Americans formed community-based political groups that emphasized ancestral heritage as a way of mobilizing constituents. Such emerging issues as immigration and voting rights gave Mexican American advocacy groups the means by which to promote ethnic solidarity. Like European ethnic groups in the nineteenth-century United States, late-twentieth-century Mexican American leaders combined ethnic with contemporary civic symbols. In 1968 Henry Cisneros, then mayor of San Antonio, Texas, cited Mexican leader Benito Juarez as a model for Mexican Americans in their fight for contemporary civil rights. And every year, Mexican Americans celebrate *Cinco de Mayo* as fervently as many Irish American people embrace St. Patrick's Day (both are major holidays in the countries of origin), with both holidays having been reinvented in the context of the United States and linked to ideals, symbols, and heroes of the United States.

1. Which of the following best states the main idea of the passage?
  - (A) In their definitions of the nature of ethnicity, sociologists have underestimated the power of the primordial human need to belong.
  - (B) Ethnicity is best defined as a dynamic process that combines cultural components with shared political and economic interests.
  - (C) In the United States in the twentieth century, ethnic groups have begun to organize in order to further their political and economic interests.
  - (D) Ethnicity in the United States has been significantly changed by the Civil Rights movement.
  - (E) The two definitions of ethnicity that have dominated sociologists discussions are incompatible and should be replaced by an entirely new approach.
2. Which of the following statements about the first two definitions of ethnicity discussed in the first paragraph is supported by the passage?
  - (A) One is supported primarily by sociologists, and the other is favored by members of ethnic groups.
  - (B) One emphasizes the political aspects of ethnicity, and the other focuses on the economic aspects.
  - (C) One is the result of analysis of United States populations, and the other is the result of analysis of European populations.
  - (D) One focuses more on the ancestral components of ethnicity than does the other.
  - (E) One focuses more on immigrant groups than does the other.
3. The author of the passage refers to Native American people in the second paragraph in order to provide an example of
  - (A) the ability of membership in groups based on shared ancestry and culture to satisfy an essential human need
  - (B) how ethnic feelings have both motivated and been strengthened by political activity
  - (C) how the Civil Rights movement can help promote solidarity among United

States ethnic groups

- (D) how participation in the political system has helped to improve a group's economic situation
  - (E) the benefits gained from renewed study of ethnic history and culture
4. The passage supports which of the following statements about the Mexican American community?
- (A) In the 1960's the Mexican American community began to incorporate the customs of another ethnic group in the United States into the observation of its own ethnic holidays.
  - (B) In the 1960's Mexican American community groups promoted ethnic solidarity primarily in order to effect economic change.
  - (C) In the 1960's leader of the Mexican American community concentrated their efforts on promoting a renaissance of ethnic history and culture.
  - (D) In the 1960's members of the Mexican American community were becoming increasingly concerned about the issue of voting rights.
  - (E) In the 1960's the Mexican American community had greater success in mobilizing constituents than did other ethnic groups in the United States.
5. Which of the following types of ethnic cultural expression is discussed in the passage?
- (A) The retelling of traditional narratives
  - (B) The wearing of traditional clothing
  - (C) The playing of traditional music
  - (D) The celebration of traditional holidays
  - (E) The preparation of traditional cuisine
6. Information in the passage supports which of the following statements about many European ethnic groups in the nineteenth-century United States?
- (A) They emphasized economic interests as a way of mobilizing constituents behind certain issues.
  - (B) They conceived of their own ethnicity as being primordial in nature.
  - (C) They created cultural traditions that fused United States symbols with those of their countries of origin.
  - (D) They de-emphasized the cultural components of their communities in favor of political interests.
  - (E) They organized formal community groups designed to promote a renaissance of ethnic history and culture.
7. The passage suggests that in 1968 Henry Cisneros most likely believed that
- (A) many Mexican American would respond positively to the example of Benito Juarez
  - (B) many Mexican American were insufficiently educated in Mexican history

- (C) the fight for civil rights in the United States had many strong parallels in both Mexican and Irish history
- (D) the quickest way of organizing community-based groups was to emulate the tactics of Benito Juarez
- (E) Mexican Americans should emulate the strategies of Native American political leaders

### Passage 63

The fact that superior service can generate a competitive advantage for a company does not mean that every attempt at improving service will create such an advantage. Investments in service, like those in production and distribution, must be balanced against other types of investments on the basis of direct, tangible benefits such as cost reduction and increased revenues. If a company is already effectively on a par with its competitors because it provides service that avoids a damaging reputation and keeps customers from leaving at an unacceptable rate, then investment in higher service levels may be wasted, since service is a deciding factor for customers only in extreme situations.

This truth was not apparent to managers of one regional bank, which failed to improve its competitive position despite its investment in reducing the time a customer had to wait for a teller. The bank managers did not recognize the level of customer inertia in the consumer banking industry that arises from the inconvenience of switching banks. Nor did they analyze their service improvement to determine whether it would attract new customers by producing a new standard of service that would excite customers or by proving difficult for competitors to copy. The only merit of the improvement was that it could easily be described to customers.

1. The primary purpose of the passage is to
  - (A) contrast possible outcomes of a type of business investment
  - (B) suggest more careful evaluation of a type of business investment
  - (C) illustrate various ways in which a type of business investment could fail to enhance revenues
  - (D) trace the general problems of a company to a certain type of business investment
  - (E) criticize the way in which managers tend to analyze the costs and benefits of business investments
2. According to the passage, investments in service are comparable to investments in production and distribution in terms of the
  - (A) tangibility of the benefits that they tend to confer
  - (B) increased revenues that they ultimately produce
  - (C) basis on which they need to be weighed
  - (D) insufficient analysis that managers devote to them
  - (E) degree of competitive advantage that they are likely to provide

3. The passage suggests which of the following about service provided by the regional bank prior to its investment in enhancing that service?
- (A) It enabled the bank to retain customers at an acceptable rate.
  - (B) It threatened to weaken the bank's competitive position with respect to other regional banks.
  - (C) It had already been improved after having caused damage to the bank's reputation in the past.
  - (D) It was slightly superior to that of the bank's regional competitors.
  - (E) It needed to be improved to attain parity with the service provided by competing banks.
4. The passage suggests that bank managers failed to consider whether or not the service improvement mentioned in line 19
- (A) was too complicated to be easily described to prospective customers
  - (B) made a measurable change in the experiences of customers in the bank's offices
  - (C) could be sustained if the number of customers increased significantly
  - (D) was an innovation that competing banks could have imitated
  - (E) was adequate to bring the bank's general level of service to a level that was comparable with that of its competitors
5. The discussion of the regional bank (line 13-24) serves which of the following functions within the passage as a whole?
- (A) It describes an exceptional case in which investment in service actually failed to produce a competitive advantage.
  - (B) It illustrates the pitfalls of choosing to invest in service at a time when investment is needed more urgently in another area.
  - (C) It demonstrates the kind of analysis that managers apply when they choose one kind of service investment over another.
  - (D) It supports the argument that investments in certain aspects of service are more advantageous than investments in other aspects of service.
  - (E) It provides an example of the point about investment in service made in the first paragraph.
6. The author uses the word "only" in line 23 most likely in order to
- (A) highlight the oddity of the service improvement
  - (B) emphasize the relatively low value of the investment in service improvement
  - (C) distinguish the primary attribute of the service improvement from secondary attributes
  - (D) single out a certain merit of the service improvement from other merits
  - (E) point out the limited duration of the actual service improvement

## Passage 64

The antigen-antibody immunological reaction used to be regarded as typical of immunological responses. Antibodies are proteins synthesized by specialized cells called plasma cells, which are formed by lymphocytes (cells from the lymph system) when an antigen, a substance foreign to the organism's body, comes in contact with lymphocytes. Two important manifestations of antigen-antibody immunity are lysis, the rapid physical rupture of antigenic cells and the liberation of their contents into the surrounding medium, and phagocytosis, a process in which antigenic particles are engulfed by and very often digested by macrophages and polymorphs. The process of lysis is executed by a complex and unstable blood constituent known as complement, which will not work unless it is activated by a specific antibody; the process of phagocytosis is greatly facilitated when the particles to be engulfed are coated by a specific antibody directed against them.

The reluctance to—abandon this hypothesis, however well it explains specific processes, impeded new research, and for many years antigens and antibodies dominated the thoughts of immunologists so completely that those immunologists overlooked certain difficulties. Perhaps the primary difficulty with the antigen-antibody explanation is the informational problem of how an antigen is recognized and how a structure exactly complementary to it is then synthesized. When molecular biologists discovered, moreover, that such information cannot flow from protein to protein, but only from nucleic acid to protein, the theory that an antigen itself provided the mold that directed the synthesis of an antibody had to be seriously qualified. The attempts at qualification and the information provided by research in molecular biology led scientists to realize that a second immunological reaction is mediated through the lymphocytes that are hostile to and bring about the destruction of the antigen. This type of immunological response is called cell-mediated immunity.

Recent research in cell-mediated immunity has been concerned not only with the development of new and better vaccines, but also with the problem of transplanting tissues and organs from one organism to another, for although circulating antibodies play a part in the rejection of transplanted tissues, the primary role is played by cell-mediated reactions. During cell-mediated responses, receptor sites on specific lymphocytes and surface antigens on the foreign tissue cells form a complex that binds the lymphocytes to the tissue. Such lymphocytes do not give rise to antibody-producing plasma cells but themselves bring about the death of the foreign-tissue cells, probably by secreting a variety of substances, some of which are toxic to the tissue cells and some of which stimulate increased phagocytic activity by white blood cells of the macrophage type. Cell-mediated immunity also accounts for the destruction of intracellular parasites.

1. The author is primarily concerned with
  - (A) proving that immunological reactions do not involve antibodies
  - (B) establishing that most immunological reactions involve antigens
  - (C) criticizing scientists who will not change their theories regarding immunology

- (D) analyzing the importance of cells in fighting disease
  - (E) explaining two different kinds of immunological reactions
2. The author argues that the antigen-antibody explanation of immunity “had to seriously qualified” (line 37) because
- (A) antibodies were found to activate unstable components in the blood
  - (B) antigens are not exactly complementary to antibodies
  - (C) lymphocytes have the ability to bind to the surface of antigens
  - (D) antibodies are synthesized from protein whereas antigens are made from nucleic acid
  - (E) antigens have no apparent mechanism to direct the formation of an antibody
3. The author most probably believes that the antigen-antibody theory of immunological reaction.
- (A) is wrong
  - (B) was accepted without evidence
  - (C) is unverifiable
  - (D) is a partial explanation
  - (E) has been a divisive issue among scientists
4. The author mentions all of the following as being involved in antigen-antibody immunological reactions EXCEPT the
- (A) synthesis of a protein
  - (B) activation of complement in the bloodstream
  - (C) destruction of antibodies
  - (D) entrapment of antigens by macrophages
  - (E) formation of a substance with a structure complementary to that of an antigen
5. The passage contains information that would answer which of the following questions about cell-mediated immunological reactions?
- I. Do lymphocytes form antibodies during cell-mediated immunological reactions?
  - II. Why are lymphocytes more hostile to antigens during cell-mediated immunological reactions than are other cell groups?
  - III. Are cell-mediated reactions more pronounced after transplants than they are after parasites have invaded the organism?
- (A) I only
  - (B) I and II only
  - (C) I and III only
  - (D) II and III only
  - (E) I, II, and III

6. The passage suggests that scientists might not have developed the theory of cell-mediated immunological reactions if
- (A) proteins existed in specific group types
  - (B) proteins could have been shown to direct the synthesis of other proteins
  - (C) antigens were always destroyed by proteins
  - (D) antibodies were composed only of protein
  - (E) antibodies were the body's primary means of resisting disease
7. According to the passage, antibody-antigen and cell-mediated immunological reactions both involve which of the following processes?
- I. The destruction of antigens
  - II. The creation of antibodies
  - III. The destruction of intracellular parasites
- (A) I only
  - (B) II only
  - (C) III only
  - (D) I and II only
  - (E) II and III only
8. The author supports the theory of cell-mediated reactions primarily by
- (A) pointing out a contradiction in the assumption leading to the antigen-antibody theory
  - (B) explaining how cell mediation accounts for phenomena that the antigen-antibody theory cannot account for
  - (C) revealing new data that scientists arguing for the antigen-antibody theory have continued to ignore
  - (D) showing that the antigen-antibody theory fails to account for the breakup of antigens
  - (E) demonstrating that cell mediation explains lysis and phagocytosis more fully than the antigen-antibody theory does

### Passage 65

The founders of the Republic viewed their revolution primarily in political rather than economic or social terms. And they talked about education as essential to the public good—a goal that took precedence over knowledge as occupational training or as a means to self-fulfillment or self-improvement. Over and over again the Revolutionary generation, both liberal and conservative in outlook, asserted its conviction that the welfare of the Republic rested upon an educated citizenry and that schools, especially free public schools, would be the best means of educating the citizenry in civic values and the obligations required of everyone in a democratic republican society. All agreed that the principal ingredients of a civic education were literacy and the inculcation of patriotic and moral virtues, some others adding the study of

history and the study of principles of the republican government itself.

The founders, as was the case of almost all their successors, were long on exhortation and rhetoric regarding the value of civic education, but they left it to the textbook writers to distill the essence of those values for school children. Texts in American history and government appeared as early as the 1790s. The textbook writers turned out to be very largely of conservative persuasion, more likely Federalist in outlook than Jeffersonian, and almost universally agreed that political virtue must rest upon moral and religious precepts. Since most textbook writers were New Englander, this meant that the texts were infused with Protestant and, above all, Puritan outlooks.

In the first half of the Republic, civic education in the schools emphasized the inculcation of civic values and made little attempt to develop participatory political skills. That was a task left to incipient political parties, town meetings, churches and the coffee or ale houses where men gathered for conversation. Additionally as a reading of certain Federalist papers of the period would demonstrate, the press probably did more to disseminate realistic as well as partisan knowledge of government than the schools. The goal of education, however, was to achieve a higher form of unanimity for the new Republic. In the middle half of the nineteenth century, the political values taught in the public and private schools did not change substantially from those celebrated in the first fifty years of the Republic. In the textbooks of the day their rosy hues if anything became golden. To the resplendent values of liberty, equality, and a benevolent Christian morality were now added the middle-class virtues—especially of New England—of hard work, honesty and integrity, the rewards of individual effort, and obedience to parents and legitimate authority. But of all the political values taught in school, patriotism was preeminent; and whenever teachers explained to school children why they should love their country above all else, the idea of liberty assumed pride of place.

1. The passage deals primarily with the
  - (A) content of early textbooks on American history and government
  - (B) role of education in late eighteenth- and early to mid-nineteenth-century America
  - (C) influence of New England Puritanism on early American values
  - (D) origin and development of the Protestant work ethic in modern America
  - (E) establishment of universal free public education in America
2. According to the passage, the founders of the Republic regarded education primarily as
  - (A) a religious obligation
  - (B) a private matter
  - (C) an unnecessary luxury
  - (D) a matter of individual choice
  - (E) a political necessity
3. The author states that textbooks written in the middle part of the nineteenth century

- (A) departed radically in tone and style from earlier textbooks
  - (B) mentioned for the first time the value of liberty
  - (C) treated traditional civic virtues with even greater reverence
  - (D) were commissioned by government agencies
  - (E) contained no reference to conservative ideas
4. Which of the following would LEAST likely have been the subject of an early American textbook?
- (A) basic rules of English grammar
  - (B) the American Revolution
  - (C) patriotism and other civic virtues
  - (D) vocational education
  - (E) principles of American government
5. The author's attitude toward the educational system she discusses can best be described as
- (A) cynical and unpatriotic
  - (B) realistic and analytical
  - (C) pragmatic and frustrated
  - (D) disenchanted and bitter
  - (E) idealistic and naive
6. The passage provides information that would be helpful in answering which of the following questions?
- (A) Why were a disproportionate share of early American textbooks written by New England authors?
  - (B) Was the Federalist party primarily a liberal or conservative force in early American politics?
  - (C) How many years of education did the founders believe were sufficient to instruct young citizens in civic virtue?
  - (D) What were the names of some of the Puritan authors who wrote early American textbooks?
  - (E) Did most citizens of the early Republic agree with the founders that public education was essential to the welfare of the Republic?
7. The author implies that an early American Puritan would likely insist that
- (A) moral and religious values are the foundation of civic virtue
  - (B) textbooks should instruct students in political issues of vital concern to the community
  - (C) textbooks should give greater emphasis to the value of individual liberty than to the duties of patriotism
  - (D) private schools with a particular religious focus are preferable to public

schools with no religious instruction

(E) government and religion are separate institutions and the church should not interfere in political affairs

8. According to the passage citizens of the early Republic learned about practical political matters in all of the following ways EXCEPT

(A) reading newspapers

(B) attending town meetings

(C) conversing about political matters

(D) reading textbooks

(E) attending church

### Passage 66

The health-care economy is replete with unusual and even unique economic relationships. One of the least understood involves the peculiar roles of producer or “provider” and purchaser or “consumer” in the typical doctor-patient relationship. In most sectors of the economy, it is the seller who attempts to attract a potential buyer with various inducements of price, quality, and utility, and it is the buyer who makes the decision. Where circumstances permit the buyer no choice because there is effectively only one seller and the product is relatively essential, government usually asserts monopoly and places the industry under price and other regulations. Neither of these conditions prevails in most of the health-care industry.

In the health-care industry, the doctor-patient relationship is the mirror image of the ordinary relationship between producer and consumer. Once an individual has chosen to see a physician—and even then there may be no real choice—it is the physician who usually makes all significant purchasing decisions: whether the patient should return “next Wednesday,” whether X-rays are needed, whether drugs should be prescribed, etc. It is a rare and sophisticated patient who will challenge such professional decisions or raise in advance questions about price, especially when the ailment is regarded as serious.

This is particularly significant in relation to hospital care. The physician must certify the need for hospitalization, determine what procedures will be performed, and announce when the patient may be discharged. The patient may be consulted about some of these decisions, but in the main it is the doctor’s judgments that are final. Little wonder then that in the eyes of the hospital it is the physician who is the real “consumer.” As a consequence, the medical staff represents the “power center” in hospital policy and decision-making, not the administration.

Although usually there are in this situation four identifiable participants—the physician, the hospital, the patient, and the payer (generally an insurance carrier or government)—the physician makes the essential decisions for all of them. The hospital becomes an extension of the physician; the payer generally meets most of the bona fide bills generated by the physician/hospital; and for the most part the patient plays a passive role. In routine or minor illnesses, or just plain worries, the patient’s options are, of course, much greater with respect to use and price. In illnesses that are of some significance, however, such choices tend to evaporate, and it is for these illnesses that the bulk of the health-care dollar is spent. We

estimate that about 75-80 percent of health-care expenditures are determined by physicians, not patients. For this reason, economy measures directed at patients or the general public are relatively ineffective.

1. The author's primary purpose is to
  - (A) speculate about the relationship between a patient's ability to pay and the treatment received
  - (B) criticize doctors for exercising too much control over patients
  - (C) analyze some important economic factors in health care
  - (D) urge hospitals to reclaim their decision-making authority
  - (E) inform potential patients of their health-care rights
2. It can be inferred that doctors are able to determine hospital policies because
  - (A) it is doctors who generate income for the hospital
  - (B) most of a patient's bills are paid by his health insurance
  - (C) hospital administrators lack the expertise to question medical decisions
  - (D) a doctor is ultimately responsible for a patient's health
  - (E) some patients might refuse to accept their physician's advice
3. According to the author, when a doctor tells a patient to "return next Wednesday," the doctor is in effect
  - (A) taking advantage of the patient's concern for his health
  - (B) instructing the patient to buy more medical services
  - (C) warning the patient that a hospital stay might be necessary
  - (D) advising the patient to seek a second opinion
  - (E) admitting that the initial visit was ineffective
4. The author is most probably leading up to
  - (A) a proposal to control medical costs
  - (B) a discussion of a new medical treatment
  - (C) an analysis of the causes of inflation in the United States
  - (D) a study of lawsuits against doctors for malpractice
  - (E) a comparison of hospitals and factories
5. The tone of the passage can best be described as
  - (A) whimsical
  - (B) cautious
  - (C) analytical
  - (D) inquisitive
  - (E) defiant
6. With which of the following statements would the author be likely to agree?

- I. Most patients are reluctant to object to the course of treatment prescribed by a doctor or to question the cost of the services.
  - II. The more serious the illness of a patient, the less likely it is that the patient will object to the course of treatment prescribed or to question the cost of services.
  - III. The payer, whether insurance carrier or the government, is less likely to acquiesce to demands for payment when the illness of the patient is regarded as serious.
- (A) I only
  - (B) II only
  - (C) I and II only
  - (D) II and III only
  - (E) I, II, and III
7. The author's primary concern is to
- (A) define a term
  - (B) clarify a misunderstanding
  - (C) refute a theory
  - (D) discuss a problem
  - (E) announce a new discovery
8. The most important feature of a "consumer" as that term is used in line 33 of the passage is that the "consumer" is the party that
- (A) pays for goods or services
  - (B) delivers goods or services
  - (C) orders goods or services
  - (D) reimburses a third party for goods or services
  - (E) supplies goods and services to a third party

### Passage 67

About twice every century, one of the massive stars in our galaxy blows itself apart in a supernova explosion that sends massive quantities of radiation and matter into space and generates shock waves that sweep through the arms of the galaxy. The shock waves heat the interstellar gas, evaporate small clouds, and compress larger ones to the point at which they collapse under their own gravity to form new stars. The general picture that has been developed for the supernova explosion and its aftermath goes something like this. Throughout its evolution, a star is much like a leaky balloon. It keeps its equilibrium figure through a balance of internal pressure against the tendency to collapse under its own weight. The pressure is generated by nuclear reactions in the core of the star which must continually supply energy to balance the energy that leaks out in the form of radiation. Eventually the nuclear fuel is exhausted, and the pressure drops in the core. With nothing to hold it up, the matter in the

center of the star collapses inward, creating higher and higher densities and temperatures, until the nuclei and electrons are fused into a super-dense lump of matter known as a neutron star.

As the overlying layers rain down on the surface of the neutron star, the temperature rises, until with a blinding flash of radiation, the collapse is reversed. A thermonuclear shock wave runs through the now expanding stellar envelope, fusing lighter elements into heavier ones and producing a brilliant visual outburst that can be as intense as the light of 10 billion suns. The shell of matter thrown off by the explosion plows through the surrounding gas, producing an expanding bubble of hot gas, with gas temperatures in the millions of degrees. This gas will emit most of its energy at X-ray wavelengths, so it is not surprising that X-ray observatories have provided some of the most useful insights into the nature of the supernova phenomenon. More than twenty supernova remnants have now been detected in X-ray studies.

Recent discoveries of meteorites with anomalous concentrations of certain isotopes indicate that a supernova might have precipitated the birth of our solar system more than four and a half billion years ago. Although the cloud that collapsed to form the Sun and the planets was composed primarily of hydrogen and helium, it also contained carbon, nitrogen, and oxygen, elements essential for life as we know it. Elements heavier than helium are manufactured deep in the interior of stars and would, for the most part, remain there if it were not for the cataclysmic supernova explosions that blow giant stars apart. Additionally, supernovas produce clouds of high-energy particles called cosmic rays. These high-energy particles continually bombard the Earth and are responsible for many of the genetic mutations that are the driving force of the evolution of species.

1. Which of the following titles best describes the content of the passage?
  - (A) The Origins and Effects of Supernovas
  - (B) The Life and Death of Stars
  - (C) The Origins and Evolution of Life on Earth
  - (D) The Aftermath of a Supernova
  - (E) Violent Change in the Universe
2. According to the passage, we can expect a supernova to occur in our galaxy
  - (A) about twice each year
  - (B) hundreds of times each century
  - (C) about once every fifty years
  - (D) about once every other century
  - (E) about once every four to five billion years
3. According to the passage all of the following are true of supernovas EXCEPT that they
  - (A) are extremely bright
  - (B) are an explosion of some sort
  - (C) emit large quantities of X-rays
  - (D) result in the destruction of a neutron star

- (E) are caused by the collision of large galaxies
4. The author employs which of the following to develop the first paragraph?
    - (A) Analogy
    - (B) Deduction
    - (C) Generalization
    - (D) Example
    - (E) Refutation
  5. It can be inferred from the passage that the meteorites mentioned by the author at line 39
    - (A) contain dangerous concentrations of radioactive materials
    - (B) give off large quantities of X-rays
    - (C) include material not created in the normal development of our solar system
    - (D) are larger than the meteors normally found in a solar system like ours
    - (E) contain pieces of a supernova that occurred several billion years ago
  6. The author implies that
    - (A) it is sometimes easier to detect supernovas by observation of the X-ray spectrum than by observation of visible wavelengths of light
    - (B) life on Earth is endangered by its constant exposure to radiation forces that are released by a supernova
    - (C) recently discovered meteorites indicate that the Earth and other planets of our solar system survived the explosion of a supernova several billion years ago
    - (D) lighter elements are formed from heavier elements during a supernova as the heavier elements are torn apart
    - (E) the core of a neutron star is composed largely of heavier elements such as carbon, nitrogen, and oxygen
  7. According to the passage what is the first event in the sequence that leads to the occurrence of a supernova?
    - (A) An ordinary star begins to emit tremendous quantities of X-rays.
    - (B) A neutron star is enveloped by a superheated cloud of gas.
    - (C) An imbalance between light and heavy elements causes an ordinary star to collapse.
    - (D) A cloud of interstellar gas rich in carbon, nitrogen, and oxygen, collapses to form a neutron star.
    - (E) An ordinary star exhausts its supply of nuclear fuel and begins to collapse.
  8. According to the passage a neutron star is
    - (A) a gaseous cloud containing heavy elements
    - (B) an intermediate stage between an ordinary star and a supernova

- (C) the residue that is left by a supernova
  - (D) the core of an ordinary star that houses the thermonuclear reactions
  - (E) one of billions of meteors that are scattered across the galaxy by a supernova
9. The author is primarily concerned with
- (A) speculating about the origins of our solar system
  - (B) presenting evidence proving the existence of supernovas
  - (C) discussing the nuclear reaction that occurs in the core of a star
  - (D) describing the sequence of scientific events
  - (E) disproving a theory about the causes of supernovas

### Passage 68

The uniqueness of the Japanese character is the result of two seemingly contradictory forces: the strength of traditions and selective receptivity to foreign achievements and inventions. As early as the 1860s, there were counter movements to the traditional orientation. Yukichi Fukuzawa, the most eloquent spokesman of Japan's "Enlightenment," claimed: "The Confucian civilization of the East seems to me to lack two things possessed by Western civilization: science in the material sphere and a sense of independence in the spiritual sphere." Fukuzawa's great influence is found in the free and individualistic philosophy of the *Education Code* of 1872, but he was not able to prevent the government from turning back to the canons of Confucian thought in the *Imperial Rescript* of 1890. Another interlude of relative liberalism followed World War I, when the democratic idealism of President Woodrow Wilson had an important impact on Japanese intellectuals and, especially students: but more important was the Leninist ideology of the 1917 Bolshevik Revolution. Again in the early 1930s, nationalism and militarism became dominant, largely as a result of failing economic conditions.

Following the end of World War II, substantial changes were undertaken in Japan to liberate the individual from authoritarian restraints. The new democratic value system was accepted by many teachers, students, intellectuals, and old liberals, but it was not immediately embraced by the society as a whole. Japanese traditions were dominated by group values, and notions of personal freedom and individual rights were unfamiliar.

Today, democratic processes are clearly evident in the widespread participation of the Japanese people in social and political life: yet, there is no universally accepted and stable value system. Values are constantly modified by strong infusions of Western ideas, both democratic and Marxist. School textbooks expound democratic principles, emphasizing equality over hierarchy and rationalism over tradition; but in practice these values are often misinterpreted and distorted, particularly by the youth who translate the individualistic and humanistic goals of democracy into egoistic and materialistic ones.

Most Japanese people have consciously rejected Confucianism, but vestiges of the old order remain. An important feature of relationships in many institutions such as political parties, large corporations, and university faculties is the *oyabun-kobun* or parent-child relation. A party leader, supervisor, or professor, in return for loyalty, protects those subordinate to him and takes general responsibility for their interests throughout their entire lives, an obligation that

sometimes even extends to arranging marriages. The corresponding loyalty of the individual to his patron reinforces his allegiance to the group to which they both belong. A willingness to cooperate with other members of the group and to support without qualification the interests of the group in all its external relations is still a widely respected virtue. The *oyabun-kobun* creates ladders of mobility which an individual can ascend, rising as far as abilities permit, so long as he maintains successful personal ties with a superior in the vertical channel, the latter requirement usually taking precedence over a need for exceptional competence. As a consequence, there is little horizontal relationship between people even within the same profession.

1. The author is mainly concerned with
  - (A) explaining the influence of Confucianism on modern Japan
  - (B) analyzing the reasons for Japan's postwar economic success
  - (C) discussing some important determinants of Japanese values
  - (D) describing managerial practices in Japanese industry
  - (E) contrasting modern with prewar Japanese society
  
2. Which of the following is most like the relationship of the *oyabun-kobun* described in the passage?
  - (A) A political candidate and the voting public
  - (B) A gifted scientist and his protégé
  - (C) Two brothers who are partners in a business
  - (D) A judge presiding at the trial of a criminal defendant
  - (E) A leader of a musical ensemble who is also a musician in the group
  
3. According to the passage, Japanese attitudes are influenced by which of the following?
  - I. Democratic ideals
  - II. Elements of modern Western culture
  - III. Remnants of an earlier social structure
  - (A) I only
  - (B) II only
  - (C) I and II only
  - (D) II and III only
  - (E) I, II, and III
  
4. The author implies that
  - (A) decisions about promotions are often based on personal feelings
  - (B) students and intellectuals do not understand the basic tenets of Western democracy
  - (C) Western values have completely overwhelmed traditional Japanese attitudes
  - (D) respect for authority was introduced into Japan following World War II
  - (E) most Japanese workers are members of a single political party

5. In developing the passage, the author does which of the following?
- (A) Introduce an analogy
  - (B) Define a term
  - (C) Present statistics
  - (D) Cite an authority
  - (E) Issue a challenge
6. It can be inferred that the Imperial Rescript of 1890
- (A) was a protest by liberals against the lack of individual liberty in Japan
  - (B) marked a return in government policies to conservative values
  - (C) implemented the ideals set forth in the *Education Code* of 1872
  - (D) was influenced by the Leninist ideology of the Bolshevik Revolution
  - (E) prohibited the teaching of Western ideas in Japanese schools
7. Which of the following is the most accurate description of the organization of the passage?
- (A) A sequence of inferences in which the conclusion of each successive step becomes a premise in the next argument
  - (B) A list of generalizations, most of which are supported by only a single example
  - (C) A chronological analysis of historical events leading up to a description of the current situation
  - (D) A statement of a commonly accepted theory that is then subjected to a critical analysis
  - (E) An introduction of a key term that is then defined by giving examples
8. Which of the following best states the central thesis of the passage?
- (A) The value system of Japan is based upon traditional and conservative values that have, in modern times, been modified by Western and other liberal values.
  - (B) Students and radicals in Japan have Leninist ideology to distort the meaning of democratic, Western values.
  - (C) The notions of personal freedom and individual liberty did not find immediate acceptance in Japan because of the predominance of traditional group values.
  - (D) Modern Japanese society is characterized by hierarchical relationships in which a personal tie to a superior is often more important than merit.
  - (E) The influence on Japanese values of the American ideals of personal freedom and individual rights is less important than the influence of Leninist ideology.
9. The tone of the passage can best be described as

- (A) neutral and objective
- (B) disparaging and flippant
- (C) critical and demanding
- (D) enthusiastic and supportive
- (E) skeptical and questioning

### Passage 69

Public general hospitals originated in the almshouse infirmaries established as early as colonial times by local governments to care for the poor. Later, in the late eighteenth and early nineteenth centuries, the infirmary separated from the almshouse and became an independent institution supported by local tax money. At the same time, private charity hospitals began to develop. Both private and public hospitals provided mainly food and shelter for the impoverished sick, since there was little that medicine could actually do to cure illness, and the middle class was treated at home by private physicians.

Late in the nineteenth century, the private charity hospital began trying to attract middle-class patients. Although the depression of 1890 stimulated the growth of charitable institutions and an expanding urban population became dependent on assistance, there was a decline in private contributions to these organizations which forced them to look to local government for financial support. Since private institutions had also lost benefactors; they began to charge patients. In order to attract middle-class patients, private institutions provided services and amenities that distinguished between paying and non-paying patients and made the hospital a desirable place for private physicians to treat their own patients. As paying patients became more necessary to the survival of the private hospital, the public hospitals slowly became the only place for the poor to get treatment. By the end of the nineteenth century, cities were reimbursing private hospitals for their care of indigent patients and the public hospitals remained dependent on the tax dollars.

The advent of private hospital health insurance, which provided middle-class patients with the purchasing power to pay for private hospital services, guaranteed the private hospital a regular source of income. Private hospitals restricted themselves to revenue-generating patients, leaving the public hospitals to care for the poor. Although public hospitals continued to provide services for patients with communicable diseases and outpatient and emergency services, the Blue Cross plans developed around the needs of the private hospitals and the inpatients they served. Thus, reimbursement for ambulatory care has been minimal under most Blue Cross plans, and provision of outpatient care has not been a major function of the private hospital, in part because private patients can afford to pay for the services of private physicians. Additionally, since World War II, there has been a tremendous influx of federal money into private medical schools and the hospitals associated with them. Further, large private medical centers with expensive research equipment and programs have attracted the best administrators, physicians, and researchers. As a result of the greater resources available to the private medical centers, public hospitals have increasing problems attracting highly qualified research and medical personnel. With the mainstream of health care firmly established in the private medical sector, the public hospital has become a "dumping ground."

1. According to the passage, the very first private hospitals
  - (A) developed from almshouse infirmaries
  - (B) provided better care than public infirmaries
  - (C) were established mainly to service the poor
  - (D) were supported by government revenues
  - (E) catered primarily to the middle-class patients
  
2. It can be inferred that the author believes the differences that currently exist between public and private hospitals are primarily the result of
  - (A) political considerations
  - (B) economic factors
  - (C) ethical concerns
  - (D) legislative requirements
  - (E) technological developments
  
3. It can be inferred that the growth of private health insurance
  - (A) relieved local governments of the need to fund public hospitals
  - (B) guaranteed that the poor would have access to medical care
  - (C) forced middle-class patients to use public hospitals
  - (D) prompted the closing of many charitable institutions
  - (E) reinforced the distinction between public and private hospitals
  
4. Which of the following would be the most logical topic for the author to introduce in the next paragraph?
  - (A) A plan to improve the quality of public hospitals
  - (B) An analysis of the profit structure of health insurance companies
  - (C) A proposal to raise taxes on the middle class
  - (D) A discussion of recent developments in medical technology
  - (E) A list of the subjects studied by students in medical school
  
5. The author's primary concern is to
  - (A) describe the financial structure of the healthcare industry
  - (B) demonstrate the importance of government support for health-care institutions
  - (C) criticize wealthy institutions for refusing to provide services to the poor
  - (D) identify the historical causes of the division between private and public hospitals
  - (E) praise public hospitals for their willingness to provide health care for the poor
  
6. The author cites all of the following as factors contributing to the decline of public hospitals EXCEPT.
  - (A) Government money was used to subsidize private medical schools and hospitals to the detriment of public hospitals.

- (B) Public hospitals are not able to compete with private institutions for top flight managers and doctors.
  - (C) Large private medical centers have better research facilities and more extensive research programs than public hospitals.
  - (D) Public hospitals accepted the responsibility for treating patients with certain diseases.
  - (E) Blue Cross insurance coverage does not reimburse subscribers for medical expenses incurred in a public hospital.
7. The author's attitude toward public hospitals can best be described as
- (A) contemptuous and prejudiced
  - (B) apprehensive and distrustful
  - (C) concerned and understanding
  - (D) enthusiastic and supportive
  - (E) unsympathetic and annoyed
8. The author implies that any outpatient care provided by a hospital is
- (A) paid for by private insurance
  - (B) provided in lieu of treatment by a private physician
  - (C) supplied primarily by private hospitals
  - (D) a source of revenue for public hospitals
  - (E) no longer provided by hospitals, public or private
9. Which of the following titles best describes the content of the passage?
- (A) Public versus Private Hospitals: A Competitive Mismatch
  - (B) Historical and Economic Factors in the Decline of the Public Hospital
  - (C) A Comparison of the Quality of Care Provided in Public and Private Hospitals
  - (D) A Proposal for Revamping the Health Delivery Services Sector of the Economy
  - (E) Economic Factors That Contribute to the Inability of the Poor to Get Adequate Care

### Passage 70

The *National Security Act* of 1947 created a national military establishment headed by a single Secretary of Defense. The legislation had been a year-and-a-half in the making—beginning when President Truman first recommended that the armed services be reorganized into a single department. During that period the President's concept of a unified armed service was torn apart and put back together several times, the final measure to emerge from Congress being a compromise. Most of the opposition to the bill came from the Navy and its numerous civilian spokesmen, including Secretary of the Navy James Forrestal. In support of unification (and a separate air force that was part of the unification package) were the Army air forces, the Army, and, most importantly, the President of the United States.

Passage of the bill did not bring an end to the bitter interservice disputes. Rather than unify, the act served only to federate the military services. It neither halted the rapid demobilization of the armed forces that followed World War II nor brought to the new national military establishment the loyalties of officers steeped in the traditions of the separate services. At a time when the balance of power in Europe and Asia was rapidly shifting, the services lacked any precise statement of United States foreign policy from the National Security Council on which to base future programs. The services bickered unceasingly over their respective roles and missions, already complicated by the Soviet nuclear capability that for the first time made the United States subject to devastating attack. Not even the appointment of Forrestal as First Secretary of Defense allayed the suspicions of naval officers and their supporters that the role of the U.S. Navy was threatened with permanent eclipse. Before the war of words died down, Forrestal himself was driven to resignation and then suicide.

By 1948, the United States military establishment was forced to make do with a budget approximately 10 percent of what it had been at its wartime peak. Meanwhile, the cost of weapons procurement was rising geometrically as the nation came to put more and more reliance on the atomic bomb and its delivery systems. These two factors inevitably made adversaries of the Navy and the Air Force as the battle between advocates of the B-36 and the supercarrier so amply demonstrates. Given severe fiscal restraints on the one hand, and on the other the nation's increasing reliance on strategic nuclear deterrence, the conflict between these two services over roles and missions was essentially a contest over slices of an ever-diminishing pie.

Yet if in the end neither service was the obvious victor, the principle of civilian dominance over the military clearly was. If there had ever been any danger that the United States military establishment might exploit, to the detriment of civilian control, the goodwill it enjoyed as a result of its victories in World War II, that danger disappeared in the interservice animosities engendered by the battle over unification.

1. The author makes all of the following points about the National Security Act of 1947 EXCEPT
  - (A) It provided for a single Secretary of Defense.
  - (B) The legislation that came out of Congress was a compromise measure.
  - (C) The legislation was initially proposed by President Truman.
  - (D) The Navy opposed the bill that eventually became law.
  - (E) The bill was passed to help the nation's demobilization effort.
2. Which of the following best describes the tone of the selection?
  - (A) Analytical and confident
  - (B) Resentful and defensive
  - (C) Objective and speculative
  - (D) Tentative and skeptical
  - (E) Persuasive and cynical
3. According to the passage, the interservice strife that followed unification

occurred primarily between the

- (A) Army and Army air forces
- (B) Army and Navy
- (C) Army air forces and Navy
- (D) Navy and Army
- (E) Air Force and Navy

4. It can be inferred from the passage that Forrestal's appointment as Secretary of Defense was expected to
- (A) placate members of the Navy
  - (B) result in decreased levels of defense spending
  - (C) outrage advocates of the Army air forces
  - (D) win Congressional approval of the unification plan
  - (E) make Forrestal a Presidential candidate against Truman
5. According to the passage, President Truman supported which of the following??
- I. Elimination of the Navy
  - II. A unified military service
  - III. Establishment of a separate air force
- (A) I only
  - (B) II only
  - (C) I and II only
  - (D) II and III only
  - (E) I, II, and III
6. With which of the following statements about defense unification would the author most likely agree?
- (A) Unification ultimately undermined United States military capability by inciting interservice rivalry.
  - (B) The unification legislation was necessitated by the drastic decline in appropriations for the military services.
  - (C) Although the unification was not entirely successful, it had the unexpected result of ensuring civilian control of the military.
  - (D) In spite of the attempted unification, each service was still able to pursue its own objectives without interference from the other branches.
  - (E) Unification was in the first place unwarranted and in the second place ineffective.
7. According to the selection, the political situation following the passage of the National Security Act of 1947 was characterized by all of the following EXCEPT
- (A) a shifting balance of power in Europe and in Asia

- (B) fierce interservice rivalries
  - (C) lack of strong leadership by the National Security Council
  - (D) shrinking postwar military budgets
  - (E) a lame-duck President who was unable to unify the legislature
8. The author cites the resignation and suicide of Forrestal in order to
- (A) underscore the bitterness of the interservice rivalry surrounding the passage of the *National Security Act* of 1947
  - (B) demonstrate that the Navy eventually emerged as the dominant branch of service after the passage of the *National Security Act* of 1947
  - (C) suggest that the nation would be better served by a unified armed service under a single command
  - (D) provide an example of a military leader who preferred to serve his country in war rather than in peace
  - (E) persuade the reader that Forrestal was a victim of political opportunists and an unscrupulous press
9. The author is primarily concerned with
- (A) discussing the influence of personalities on political events
  - (B) describing the administration of a powerful leader
  - (C) criticizing a piece of legislation
  - (D) analyzing a political development
  - (E) suggesting methods for controlling the military

## Answer Key

### Passage 61

1. B	2. A	3. A	4. E	5. C
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### Passage 62

1. B	2. D	3. B	4. D	5. D
6. C	7. A	8.	9.	10.

### Passage 63

1. B	2. C	3. A	4. D	5. E
6. B	7.	8.	9.	10.

Passage 64

1. E	2. E	3. D	4. C	5. A
6. B	7. A	8. B	9.	10.

Passage 65

1. A	2. E	3. C	4. D	5. B
6. B	7. A	8. D	9.	10.

Passage 66

1. C	2. A	3. B	4. A	5. C
6. C	7. D	8. C	9.	10.

Passage 67

1. A	2. C	3. E	4. A	5. C
6. A	7. E	8. B	9. D	10.

Passage 68

1. C	2. B	3. E	4. A	5. B
6. B	7. C	8. A	9. A	10.

Passage 69

1. C	2. B	3. E	4. A	5. D
6. E	7. C	8. B	9. B	10.

Passage 70

1. E	2. A	3. E	4. A	5. B
6. C	7. E	8. A	9. D	10.