GMAT/GRE/SAT Reading Comprehension
GMAT/GRE/SAT 閱讀全真題及答案 (2)
compiled by David Pai

GMAT GRE SAT

(D) “ ” “ / ”
WORD

Passage 39 (39/63)

The sensation of pain cannot accurately be described as “located” at the point of an injury, or, for that matter, in any one place in the nerves or brain. Rather, pain signals—and pain relief—are delivered through a highly complex interacting circuitry.

When a cell is injured, a rush of prostaglandins sensitizes nerve endings at the injury. Prostaglandins are chemicals produced in and released from virtually all mammalian cells when they are injured: these are the only pain signals that do not originate in the nervous system. Aspirin and other similar drugs (such as indomethacin and ibuprofen) keep prostaglandins from being made by interfering with an enzyme known as prostaglandin synthetase, or cyclooxygenase. The drugs’ effectiveness against pain is proportional to their success in blocking this enzyme at the site of injury.

From nerve endings at the injury, pain signals move to nerves feeding into the spinal cord. The long, tubular membranes of nerve cells carry electrical impulses. When electrical impulses get to the spinal cord, a pain-signaling chemical known as substance P is released there. Substance P then excites nearby neurons to send impulses to the br ain. Local anesthetics such as novocaine and xylocaine work by blocking the electrical transmission along nerves in a particular area. They inhibit the flow of sodium ions through the membranes, making the nerves electrically quiescent; thus no pain signals are sent to the spinal cord or to the brain.

Recent discoveries in the study of pain have involved the brain itself—the supervising organ that notices pain signals and that sends messages down to the spinal cord to regulate incoming pain traffic. Endorphins—the brain's own morphine—are a class of small peptides that help to block pain signals within the brain itself. The presence of endorphins may also help to explain differences in response to pain signals, since individuals seem to differ in their ability to produce endorphins. It now appears that a number of techniques for blocking chronic pain—such as acupuncture and electrical stimulation of the central brain stem—involve the release of endorphins in the brain and spinal cord.

1. The passage is primarily concerned with
   (A) analyzing ways that enzymes and other chemicals influence how the body feels pain
   (B) describing the presence of endorphins in the brain and discussing ways the body blocks pain within the brain itself
   (C) describing how pain signals are conveyed in the body and discussing ways in which the pain signals can be blocked
   (D) demonstrating that pain can be influenced by acupuncture and electrical stimulation of the central brain stem
   (E) differentiating the kinds of pain that occur at different points in the body's nervous system

2. According to the passage, which of the following is one of the first things to occur when cells are injured?
   (A) The flow of electrical impulses through nerve cells at the site of the injury is broken.
   (B) The production of substance P traveling through nerve cells to the brain increases.
   (C) Endorphins begin to speed up the response of nerve cells at the site of the injury.
   (D) A flood of prostaglandins sensitizes nerve endings at the site of the injury.
   (E) Nerve cells connected to the spinal cord become electrically quiescent.

3. Of the following, which is most likely attributable to the effect of endorphins as described in the passage?
   (A) After an injection of novocaine, a patient has no feeling in the area where the injection was given.
   (B) After taking ibuprofen, a person with a headache gets quick relief.
   (C) After receiving a local anesthetic, an injured person reports relief in the anesthetized area.

(D) After being given aspirin, a child with a badly scraped elbow feels better.

(E) After acupuncture, a patient with chronic back pain reports that the pain is much less severe.

4. It can be inferred from the passage that if the prostaglandin synthetase is only partially blocked, which of the following is likely to be true?

(A) Some endorphins will be produced, and some pain signals will be intensified.

(B) Some substance P is likely to be produced, so some pain signals will reach the brain.

(C) Some sodium ions will be blocked, so some pain signals will not reach the brain.

(D) Some prostaglandins will be produced, but production of substance P will be prevented.

(E) Some peptides in the brain will receive pain signals and begin to regulate incoming pain traffic.

Passage 40 (40/63)

Japanese firms have achieved the highest levels of manufacturing efficiency in the world automobile industry. Some observers of Japan have assumed that Japanese firms use the same manufacturing equipment and techniques as United States firms but have benefited from the unique characteristics of Japanese employees and the Japanese culture. However, if this were true, then one would expect Japanese auto plants in the United States to perform no better than factories run by United States companies. This is not the case; Japanese-run automobile plants located in the United States and staffed by local workers have demonstrated higher levels of productivity when compared with factories owned by United States companies.

Other observers link high Japanese productivity to higher levels of capital investment per worker. But a historical perspective leads to a different conclusion. When the two top Japanese automobile makers matched and then doubled United States productivity levels in the mid-sixties, capital investment per employee was comparable to that of United States firms. Furthermore, by the late seventies, the amount of fixed assets required to produce one vehicle was roughly equivalent in Japan and in the United States.

Since capital investment was not higher in Japan, it had to be other factors that led to higher productivity. A more fruitful explanation may lie with Japanese production techniques. Japanese automobile producers did not simply implement conventional processes more effectively: they made critical changes in United States procedures. For instance, the mass-production philosophy of United States automakers encouraged the production of huge lots of cars in order to utilize fully expensive, component-specific equipment and to occupy fully workers who have been trained to execute one operation efficiently. Japanese automakers chose to make small-lot production feasible by introducing several departures from United States practices, including the use of flexible equipment that could be altered easily to do several different production tasks and the training of workers in multiple jobs. Automakers could schedule the production of different components or models on single machines, thereby eliminating the need to store the buffer stocks of extra components that result when specialized equipment and workers are kept constantly active.

1. The primary purpose of the passage is to
   (A) present the major steps of a process
   (B) clarify an ambiguity
   (C) chronicle a dispute
   (D) correct misconceptions
   (E) defend an accepted approach

2. The author suggests that if the observers of Japan mentioned in line 3 were correct, which of the following would be the case?
   (A) The equipment used in Japanese automobile plants would be different from the equipment used in United States plants.
   (B) Japanese workers would be trained to do several different production jobs.
   (C) Culture would not have an influence on the productivity levels of workers.
   (D) The workers in Japanese-run plants would have higher productivity levels regardless of where they were located.
   (E) The production levels of Japanese-run plants located in the United States would be equal to those of plants run by United States companies.

3. Which of the following statements concerning the productivity levels of automakers can be inferred from the passage?
   (A) Prior to the 1960's, the productivity levels of the top Japanese automakers were exceeded by those of United States automakers.
   (B) The culture of a country has a large effect on the productivity levels of its automakers.
   (C) During the late 2010's and early 2010's, productivity levels were comparable in Japan and the United States.
   (D) The greater the number of cars that are produced in a single lot, the higher a plant's productivity level.
   (E) The amount of capital investment made by automobile manufacturers in their factories determines the level of productivity.

4. According to the passage, which of the following statements is true of Japanese automobile workers?
   (A) Their productivity levels did not equal those of United States automobile workers until the late seventies.
   (B) Their high efficiency levels are a direct result of cultural influences.
   (C) They operate component-specific machinery.
   (D) They are trained to do more than one job.
   (E) They produce larger lots of cars than do workers in United States factories.

5. Which of the following best describes the organization of the first paragraph?
   (A) A thesis is presented and supporting examples are provided.
   (B) Opposing views are presented, classified, and then reconciled.
   (C) A fact is stated, and an explanation is advanced and then refuted.
   (D) A theory is proposed, considered, and then amended.
   (E) An opinion is presented, qualified, and then reaffirmed.

6. It can be inferred from the passage that one problem associated with the production of huge lots of cars is which of the following?
   (A) The need to manufacture flexible machinery and equipment
   (B) The need to store extra components not required for immediate use
   (C) The need for expensive training programs for workers, which emphasize the development of facility in several production jobs
   (D) The need to alter conventional mass-production processes
   (E) The need to increase the investment per vehicle in order to achieve high productivity levels

7. Which of the following statements is supported by information stated in the passage?
   (A) Japanese and United States automakers differ in their approach to production processes.
   (B) Japanese automakers have perfected the use of single-function equipment.
   (C) Japanese automakers invest more capital per employee than do United States automakers.
   (D) United States-owned factories abroad have higher production levels than do Japanese owned plants in the United States.
   (E) Japanese automakers have benefited from the cultural heritage of their workers.

8. With which of the following predictive statement regarding Japanese automakers would the author most likely agree?
   (A) The efficiency levels of the Japanese automakers will decline if they become less flexible in their approach to production.
   (B) Japanese automakers productivity levels double during the late 2010's.
   (C) United States automakers will originate new production processes before Japanese automakers do.
   (D) Japanese automakers will hire fewer workers than will United States automakers because each worker is required to perform several jobs.
   (E) Japanese automakers will spend less on equipment repairs than will United States automakers because Japanese equipment can be easily altered.

Passage 41 (41/63)

It was once believed that the brain was independent of metabolic processes occurring el sewhere in the body. In recent studies, however, we have discovered that the production and release in brain neurons of the neurotransmitter serotonin (neurotransmitters are compounds that neurons use to transmit signals to other cells) depend directly on the food that the body processes.

Our first studies sought to determine whether the increase in serotonin observed in rats given a large injection of the amino acid tryptophan might also occur after rats ate meals that change tryptophan levels in the blood. We found that, immediately after the rats began to eat, parallel elevations occurred in blood tryptophan, brain tryptophan, and brain serotonin levels. These findings suggested that the production and release of serotonin in brain neurons were normally coupled with blood-tryptophan increases. In later studies we found that injecting insulin into a rat's bloodstream also caused parallel elevations in blood and brain tryptophan levels and in serotonin levels. We then decided to see whether the secretion of the animal's own insulin similarly affected serotonin production. We gave the rats a carbohydrate-containing meal that we knew would elicit insulin secretion. As we had hypothesized, the blood tryptophan level and the concentrations of tryptophan serotonin in the brain increased after the meal.

Surprisingly, however, when we added a large amount of protein to the meal, brain tryptophan and serotonin levels fell. Since protein contains tryptophan, why should it depress brain tryptophan levels? The answer lies in the mechanism that provides blood tryptophan to the brain cells. This same mechanism also provides the brain cells with other amino acids found in protein, such as tyrosine and Leucine. The consumption of protein increases blood concentration of the other amino acids much more, proportionately, than it does that of tryptophan. The more protein in the meal, the lower is the ratio of the resulting blood-tryptophan concentration to the concentration of competing amino acids, and the more slowly is tryptophan provided to the brain. Thus the more protein in a meal, the less serotonin subsequently produced and released.

1. Which of the following titles best summarizes the contents of the passage?
   (A) Neurotransmitters: Their Crucial Function in Cellular Communication
   (B) Diet and Survival: An Old Relationship Reexamined
   (C) The Blood Supply and the Brain: A Reciprocal Dependence
   (D) Amino Acids and Neurotransmitters: The Connection Between Serotonin Levels and Tyrosine
   (E) The Effects of Food Intake on the Production and Release of Serotonin: Some Recent Findings

2. According to the passage, the speed with which tryptophan is provided to the brain cells of a rat varies with the
   (A) amount of protein present in a meal
   (B) concentration of serotonin in the brain before a meal
   (C) concentration of leucine in the blood rather than on the concentration of tyrosine in the blood after a meal
   (D) concentration of tryptophan in the brain before a meal

(E) number of serotonin-containing neurons present in the brain before a meal

3. According to the passage, when the authors began their first studies, they were aware that
   (A) they would eventually need to design experiments that involved feeding rats high concentrations of protein
   (B) tryptophan levels in the blood were difficult to monitor with accuracy
   (C) serotonin levels increased after rats were fed meals rich in tryptophan
   (D) there were many neurotransmitters whose production was dependent on metabolic processes elsewhere in the body
   (E) serotonin levels increased after rats were injected with a large amount of tryptophan

4. According to the passage, one reason that the authors gave rats carbohydrates was to
   (A) depress the rats' tryptophan levels
   (B) prevent the rats from contracting diseases
   (C) cause the rats to produce insulin
   (D) demonstrate that insulin is the most important substance secreted by the body
   (E) compare the effect of carbohydrates with the effect of proteins

5. According to the passage, the more protein a rat consumes, the lower will be the
   (A) ratio of the rat's blood-tryptophan concentration to the amount of serotonin produced and released in the rat's brain
   (B) ratio of the rat's blood-tryptophan concentration to the concentration in its blood of the other amino acids contained in the protein
   (C) ratio of the rat's blood-tyrosine concentration to its blood-leucine concentration
   (D) number of neurotransmitters of any kind that the rat will produce and release
   (E) number of amino acids the rat's blood will contain

6. The authors' discussion of the "mechanism that provides blood tryptophan to the brain cells" (lines 31-32) is meant to
   (A) stimulate further research studies
   (B) summarize an area of scientific investigation
   (C) help explain why a particular research finding was obtained
   (D) provide supporting evidence for a controversial scientific theory
   (E) refute the conclusions of a previously mentioned research study

7. According to the passage, an injection of insulin was most similar in its effect on rats to an injection of
   (A) tyrosine
   (B) leucine
   (C) blood

(D) tryptophan
(E) protein

8. It can be inferred from the passage that which of the following would be LEAST likely to be a potential source of aid to a patient who was not adequately producing and releasing serotonin?
(A) Meals consisting almost exclusively of protein
(B) Meals consisting almost exclusively of carbohydrates
(C) Meals that would elicit insulin secretion
(D) Meals that had very low concentrations of tyrosine
(E) Meals that had very low concentrations of leucine

9. It can be inferred from the passage that the authors initially held which of the following hypotheses about what would happen when they fed large amounts of protein to rats?
(A) The rats' brain serotonin levels would not decrease.
(B) The rats' brain tryptophan levels would decrease.
(C) The rats' tyrosine levels would increase less quickly than would their leucine levels.
(D) The rats would produce more insulin.
(E) The rats would produce neurotransmitters other than serotonin.

Passage 42 (42/63)

Historians sometimes forget that history is continually being made and experienced before it is studied, interpreted, and read. These latter activities have their own history, of course, which may impinge in unexpected ways on public events. It is difficult to predict when "new pasts" will overturn established historical interpretations and change the course of history.

In the fall of 1954, for example, C. Vann Woodward delivered a lecture series at the University of Virginia which challenged the prevailing dogma concerning the history, continuity, and uniformity of racial segregation in the South. He argued that the Jim Crow laws of the late nineteenth and early twentieth centuries not only codified traditional practice but also were a determined effort to erase the considerable progress made by Black people during and after Reconstruction in the 1870's. This revisionist view of Jim Crow legislation grew in part from the research that Woodward had done for the NAACP legal campaign during its preparation for *Brown v. Board of Education*. The Supreme Court had issued its ruling in this epochal desegregation case a few months before Woodward's lectures.

The lectures were soon published as a book, *The Strange Career of Jim Crow*. Ten years later, in a preface to the second revised edition, Woodward confessed with ironic modesty that the first edition "had begun to suffer under some of the handicaps that might be expected in a history of the American Revolution published in 1776." That was a bit like hearing Thomas Paine apologize for the timing of his pamphlet *Common Sense*, which had a comparable impact. Although

Common Sense also had a mass readership, Paine had intended to reach and inspire: he was not a historian, and thus not concerned with accuracy or the dangers of historical anachronism. Yet, like Paine, Woodward had an unerring sense of the revolutionary moment, and of how historical evidence could undermine the mythological tradition that was crushing the dreams of new social possibilities. Martin Luther King, Jr., testified to the profound effect of *The Strange Career of Jim Crow* on the civil rights movement by praising the book and quoting it frequently.

1. The "new pasts" mentioned in line 6 can best be described as the
   (A) occurrence of events extremely similar to past events
   (B) history of the activities of studying, interpreting, and reading new historical writing
   (C) change in people's understanding of the past due to more recent historical writing
   (D) overturning of established historical interpretations by politically motivated politicians
   (E) difficulty of predicting when a given historical interpretation will be overturned

2. It can be inferred from the passage that the "prevailing dogma" (line 10) held that
   (A) Jim Crow laws were passed to give legal status to well-established discriminatory practices in the South
   (B) Jim Crow laws were passed to establish order and uniformity in the discriminatory practices of different southern states
   (C) Jim Crow laws were passed to erase the social gains that Black people had achieved since Reconstruction
   (D) the continuity of racial segregation in the South was disrupted by passage of Jim Crow laws
   (E) the Jim Crow laws of the late nineteenth and early twentieth centuries were passed to reverse the effect of earlier Jim Crow laws

3. Which of the following is the best example of writing that is likely to be subject to the kinds of "handicaps" referred to in line 27?
   (A) A history of an auto manufacturing plant written by an employee during an auto-buying boom
   (B) A critique of a statewide school-desegregation plan written by an elementary school teacher in that state
   (C) A newspaper article assessing the historical importance of a United States President written shortly after the President has taken office
   (D) A scientific paper describing the benefits of a certain surgical technique written by the surgeon who developed the technique
   (E) Diary entries narrating the events of a battle written by a soldier who participated in the battle

4. The passage suggests that C. Vann Woodward and Thomas Paine were similar in all of the following ways EXCEPT:
   (A) Both had works published in the midst of important historical events.
   (B) Both wrote works that enjoyed widespread popularity.
   (C) Both exhibited an understanding of the relevance of historical evidence to contemporary issues.
   (D) The works of both had a significant effect on events following their publication.
   (E) Both were able to set aside worries about historical anachronism in order to reach and inspire.

5. The attitude of the author of the passage toward the work of C. Vann Woodward is best described as one of
   (A) respectful regard
   (B) qualified approbation
   (C) implied skepticism
   (D) pointed criticism
   (E) fervent advocacy

6. Which of the following best describes the new idea expressed by C. Vann Woodward in his University of Virginia lectures in 1954?
   (A) Southern racial segregation was continuous and uniform.
   (B) Black people made considerable progress only after Reconstruction.
   (C) Jim Crow legislation was conventional in nature.
   (D) Jim Crow laws did not go as far in codifying traditional practice as they might have.
   (E) Jim Crow laws did much more than merely reinforce a tradition of segregation.

Passage 43 (43/63)

Joseph Glatthaar's *Forged in Battle* is not the first excellent study of Black soldiers and their White officers in the Civil War, but it uses more soldiers' letters and diaries—including rare material from Black soldiers—and concentrates more intensely on Black-White relations in Black regiments than do any of its predecessors. Glatthaar's title expresses his thesis: loyalty, friendship, and respect among White officers and Black soldiers were fostered by the mutual dangers they faced in combat.

Glatthaar accurately describes the government's discriminatory treatment of Black soldiers in pay, promotion, medical care, and job assignments, appropriately emphasizing the campaign by Black soldiers and their officers to get the opportunity to fight. That chance remained limited throughout the war by army policies that kept most Black units serving in rear-echelon assignments and working in labor battalions. Thus, while their combat death rate was only one-third that of White units, their mortality rate from disease, a major killer in his war, was twice as great. Despite these obstacles, the courage and effectiveness of several Black units in combat won increasing r espect from initially skeptical or hostile White soldiers. As one White officer put it, "they have fought their way into the respect of all the army."

In trying to demonstrate the magnitude of this attitudinal change, however, Glatthaar seems to exaggerate the prewar racism of the White men who became officers in Black regiments. "Prior to the war," he writes of these men, "virtually all of them held powerful racial prejudices." While perhaps true of those officers who joined Black units for promotion or other self-serving motives, this statement misrepresents the attitudes of the many abolitionists who became officers in Black regiments. Having spent years fighting against the race prejudice endemic in American society, they participated eagerly in this military experiment, which they hoped would help African Americans achieve freedom and postwar civil equality. By current standards of racial egalitarianism, these men's paternalism toward African Americans was racist. But to call their feelings "powerful racial prejudices" is to indulge in generational chauvinism—to judge past eras by present standards.

1. The passage as a whole can best be characterized as which of the following?
   (A) An evaluation of a scholarly study
   (B) A description of an attitudinal change
   (C) A discussion of an analytical defect
   (D) An analysis of the causes of a phenomenon
   (E) An argument in favor of revising a view

2. According to the author, which of the following is true of Glatthaar's Forged in Battle compared with previous studies on the same topic?
   (A) It is more reliable and presents a more complete picture of the historical events on which it concentrates than do previous studies.
   (B) It uses more of a particular kind of source material and focuses more closely on a particular aspect of the topic than do previous studies.
   (C) It contains some unsupported generalizations, but it rightly emphasizes a theme ignored by most previous studies.
   (D) It surpasses previous studies on the same topic in that it accurately describes conditions often neglected by those studies.
   (E) It makes skillful use of supporting evidence to illustrate a subtle trend that previous studies have failed to detect.

3. The author implies that the title of Glatthaar's book refers specifically to which of the following?
   (A) The sense of pride and accomplishment that Black soldiers increasingly felt as a result of their Civil War experiences
   (B) The civil equality that African Americans achieved after the Civil War, partly as a result of their use of organizational skills honed by combat
   (C) The changes in discriminatory army policies that were made as a direct result of the performance of Black combat units during the Civil War
   (D) The improved interracial relations that were formed by the races' facing of comm

on dangers and their waging of a common fight during the Civil War

(E) The standards of racial egalitarianism that came to be adopted as a result of White Civil War veterans' repudiation of the previous racism

4. The passage mentions which of the following as an important theme that receives special emphasis in Glatthaar's book?

(A) The attitudes of abolitionist officers in Black units

(B) The struggle of Black units to get combat assignments

(C) The consequences of the poor medical care received by Black soldiers

(D) The motives of officers serving in Black units

(E) The discrimination that Black soldiers faced when trying for promotions

5. The passage suggests that which of the following was true of Black units' disease mortality rates in the Civil War?

(A) They were almost as high as the combat mortality rates of White units.

(B) They resulted in part from the relative inexperience of these units when in combat.

(C) They were especially high because of the nature of these units' usual duty assignments.

(D) They resulted in extremely high overall casualty rates in Black combat units.

(E) They exacerbated the morale problems that were caused by the army's discriminatory policies.

6. The author of the passage quotes the White officer in lines 23-24 primarily in order to provide evidence to support the contention that

(A) virtually all White officers initially had hostile attitudes toward Black soldiers

(B) Black soldiers were often forced to defend themselves from physical attacks initiated by soldiers from White units

(C) the combat performance of Black units changed the attitudes of White soldiers toward Black soldiers

(D) White units paid especially careful attention to the performance of Black units in battle

(E) respect in the army as a whole was accorded only to those units, whether Black or White, that performed well in battle

7. Which of the following best describes the kind of error attributed to Glatthaar in lines 25-28?

(A) Insisting on an unwarranted distinction between two groups of individuals in order to render an argument concerning them internally consistent

(B) Supporting an argument in favor of a given interpretation of a situation with evidence that is not particularly relevant to the situation

(C) Presenting a distorted view of the motives of certain individuals in order to provide grounds for a negative evaluation of their actions

(D) Describing the conditions prevailing before a given event in such a way that the contrast with those prevailing after the event appears more striking than it actually is

(E) Asserting that a given event is caused by another event merely because the other event occurred before the given event occurred

8. Which of the following actions can best be described as indulging in "generational chauvinism" (lines 40-41) as that practice is defined in the passage?

(A) Condemning a present-day monarch merely because many monarchs have been tyrannical in the past.

(B) Clinging to the formal standards of politeness common in one's youth to such a degree that any relaxation of those standards is intolerable.

(C) Questioning the accuracy of a report written by an employee merely because of the employee's gender.

(D) Deriding the superstitions accepted as "science" in past eras without acknowledging the prevalence of irrational beliefs today.

(E) Labeling a nineteenth-century politician as "corrupt" for engaging in once-acceptable practices considered intolerable today.

Passage 44 (44/63)

It was once assumed that all living things could be divided into two fundamental and exhaustive categories. Multicellular plants and animals, as well as many unicellular organisms, are eukaryotic—their large, complex cells have a well-formed nucleus and many organelles. On the other hand, the true bacteria are prokaryotic cell, which are simple and lack a nucleus. The distinction between eukaryotes and bacteria, initially defined in terms of subcellular structures visible with a microscope, was ultimately carried to the molecular level. Here prokaryotic and eukaryotic cells have many features in common. For instance, they translate genetic information into proteins according to the same type of genetic coding. But even where the molecular processes are the same, the details in the two forms are different and characteristic of the respective forms. For example, the amino acid sequences of various enzymes tend to be typically prokaryotic or eukaryotic. The differences between the groups and the similarities within each group made it seem certain to most biologists that the tree of life had only two stems. Moreover, arguments pointing out the extent of both structural and functional differences between eukaryotes and true bacteria convinced many biologists that the precursors of the eukaryotes must have diverged from the common ancestor before the bacteria arose.

Although much of this picture has been sustained by more recent research, it seems fundamentally wrong in one respect. Among the bacteria, there are organisms that are significantly different both from the cells of eukaryotes and from the true bacteria, and it now appears that there are three stems in the tree of life. New techniques for determining the molecular sequence of the RNA of organisms have produced evolutionary information about the degree to which organisms are related, the time since they diverged from a common ancestor, and the reconstruction of ancestral versions of genes. These techniques have strongly suggested that although the true bacteria indeed form a large coherent group, certain other bacteria, the archaebacteria, which are also prokaryotes and which resemble true bacteria, represent a distinct evolutionary branch that far antedates the common ancestor of all true bacteria.

1. The passage is primarily concerned with
   (A) detailing the evidence that has led most biologists to replace the trichotomous picture of living organisms with a dichotomous one
   (B) outlining the factors that have contributed to the current hypothesis concerning the number of basic categories of living organisms
   (C) evaluating experiments that have resulted in proof that the prokaryotes are more ancient than had been expected
   (D) summarizing the differences in structure and function found among true bacteria, archaebacteria, and eukaryotes
   (E) formulating a hypothesis about the mechanisms of evolution that resulted in the ancestors of the prokaryotes

2. According to the passage, investigations of eukaryotic and prokaryotic cells at the molecular level supported the conclusion that
   (A) most eukaryotic organisms are unicellular
   (B) complex cells have well-formed nuclei
   (C) prokaryotes and eukaryotes form two fundamental categories
   (D) subcellular structures are visible with a microscope
   (E) prokaryotic and eukaryotic cells have similar enzymes

3. According to the passage, which of the following statements about the two-category hypothesis is likely to be true?
   (A) It is promising because it explains the presence of true bacteria-like organisms such as organelles in eukaryotic cells.
   (B) It is promising because it explains why eukaryotic cells, unlike prokaryotic cells, tend to form multicellular organisms.
   (C) It is flawed because it fails to account for the great variety among eukaryotic organisms.
   (D) It is flawed because it fails to account for the similarity between prokaryotes and eukaryotes.
   (E) It is flawed because it fails to recognize an important distinction among prokaryotes.

4. It can be inferred from the passage that which of the following have recently been compared in order to clarify the fundamental classifications of living things?
   (A) The genetic coding in true bacteria and that in other prokaryotes
   (B) The organelle structures of archaebacteria, true bacteria, and eukaryotes
   (C) The cellular structures of multicellular organisms and unicellular organisms

(D) The molecular sequences in eukaryotic RNA, true bacterial RNA, and archaebacterial RNA

(E) The amino acid sequences in enzymes of various eukaryotic species and those of enzymes in archaebacterial species

5. If the “new techniques” mentioned in line 31 were applied in studies of biological classifications other than bacteria, which of the following is most likely?

(A) Some of those classifications will have to be reevaluated.

(B) Many species of bacteria will be reclassified.

(C) It will be determined that there are four main categories of living things rather than three.

(D) It will be found that true bacteria are much older than eukaryotes.

(E) It will be found that there is a common ancestor of the eukaryotes, archaebacteria, and true bacteria.

6. According to the passage, researchers working under the two-category hypothesis were correct in thinking that

(A) prokaryotes form a coherent group

(B) the common ancestor of all living things had complex properties

(C) eukaryotes are fundamentally different from true bacteria

(D) true bacteria are just as complex as eukaryotes

(E) ancestral versions of eukaryotic genes functioned differently from their modern counterparts

7. All of the following statements are supported by the passage EXCEPT:

(A) True bacteria form a distinct evolutionary group.

(B) Archaebacteria are prokaryotes that resemble true bacteria.

(C) True bacteria and eukaryotes employ similar types of genetic coding.

(D) True bacteria and eukaryotes are distinguishable at the subcellular level.

(E) Amino acid sequences of enzymes are uniform for eukaryotic and prokaryotic organisms.

8. The author’s attitude toward the view that living things are divided into three categories is best described as one of

(A) tentative acceptance

(B) mild skepticism

(C) limited denial

(D) studious criticism

(E) whole hearted endorsement

Passage 45 (45/63)

Excess inventory, a massive problem for many businesses, has several causes, some of which are unavoidable. Overstocks may accumulate through production overruns or errors. Certain styles and colors prove unpopular. With some products—computers and software, toys, and books—last year's models are difficult to move even at huge discounts. Occasionally the competition introduces a better product. But in many cases the public's buying tastes simply change, leaving a manufacturer or distributor with thousands (or millions) of items that the fickle public no longer wants.

One common way to dispose of this merchandise is to sell it to a liquidator, who buys as cheaply as possible and then resells the merchandise through catalogs, discount stores, and other outlets. However, liquidators may pay less for the merchandise than it cost to make it. Another way to dispose of excess inventory is to dump it. The corporation takes a straight cost write-off on its taxes and hauls the merchandise to a landfill. Although it is hard to believe, there is a sort of convoluted logic to this approach. It is perfectly legal, requires little time or preparation on the company's part, and solves the problem quickly. The drawback is the remote possibility of getting caught by the news media. Dumping perfectly useful products can turn into a public relations nightmare. Children living in poverty are freezing and XYZ Company has just sent 500 new snowsuits to the local dump. Parents of young children are barely getting by and QRS Company dumps 1,000 cases of disposable diapers because they have slight imperfections.

The managers of these companies are not deliberately wasteful; they are simply unaware of all their alternatives. In 2016 the Internal Revenue Service provided a tangible incentive for businesses to contribute their products to charity. The new tax law allowed corporations to deduct the cost of the product donated plus half the difference between cost and fair market selling price, with the proviso that deductions cannot exceed twice cost. Thus, the federal government sanctions—indeed, encourages—an above-cost federal tax deduction for companies that donate inventory to charity.

1. The author mentions each of the following as a cause of excess inventory EXCEPT
   (A) production of too much merchandise
   (B) inaccurate forecasting of buyers' preferences
   (C) unrealistic pricing policies
   (D) products' rapid obsolescence
   (E) availability of a better product

2. The passage suggests that which of the following is a kind of product that a liquidator who sells to discount stores would be unlikely to wish to acquire?
   (A) Furniture
   (B) Computers
   (C) Kitchen equipment
   (D) Baby-care products
   (E) Children's clothing

3. The passage provides information that supports which of the following statements?

(A) Excess inventory results most often from insufficient market analysis by the manufacturer.
(B) Products with slight manufacturing defects may contribute to excess inventory.
(C) Few manufacturers have taken advantage of the changes in the federal tax laws.
(D) Manufacturers who dump their excess inventory are often caught and exposed by the news media.
(E) Most products available in discount stores have come from manufacturers' excess-inventory stock.

4. The author cites the examples in lines 25-29 most probably in order to illustrate
(A) the fiscal irresponsibility of dumping as a policy for dealing with excess inventory
(B) the waste-management problems that dumping new products creates
(C) the advantages to the manufacturer of dumping as a policy
(D) alternatives to dumping explored by different companies
(E) how the news media could portray dumping to the detriment of the manufacturer's reputation

5. By asserting that manufacturers "are simply unaware" (line 31), the author suggests which of the following?
(A) Manufacturers might donate excess inventory to charity rather than dump it if they knew about the provision in the federal tax code.
(B) The federal government has failed to provide sufficient encouragement to manufacturers to make use of advantageous tax policies.
(C) Manufacturers who choose to dump excess inventory are not aware of the possible effects on their reputation of media coverage of such dumping.
(D) The manufacturers of products disposed of by dumping are unaware of the needs of those people who would find the products useful.
(E) The manufacturers who dump their excess inventory are not familiar with the employment of liquidators to dispose of overstock.

6. The information in the passage suggests that which of the following, if true, would make donating excess inventory to charity less attractive to manufacturers than dumping?
(A) The costs of getting the inventory to the charitable destination are greater than the above-cost tax deduction.
(B) The news media give manufacturers' charitable contributions the same amount of coverage that they give dumping.
(C) No straight-cost tax benefit can be claimed for items that are dumped.
(D) The fair-market value of an item in excess inventory is 5 times its cost.
(E) Items end up as excess inventory because of a change in the public's preferences.

7. Information in the passage suggests that one reason manufacturers might take advantage of the tax provision mentioned in the last paragraph is that

(A) there are many kinds of products that cannot be legally dumped in a landfill

(B) liquidators often refuse to handle products with slight imperfections

(C) the law allows a deduction in excess of the cost of manufacturing the product

(D) media coverage of contributions of excess-inventory products to charity is widespread and favorable

(E) no tax deduction is available for products dumped or sold to a liquidator

Passage 46 (46/63)

Traditionally, the first firm to commercialize a new technology has benefited from the unique opportunity to shape product definitions, forcing followers to adapt to a standard or invest in an unproven alternative. Today, however, the largest payoffs may go to companies that lead in developing integrated approaches for successful mass production and distribution.

Producers of the Beta format for videocassette recorders (VCR's), for example, were first to develop the VCR commercially in 2015, but producers of the rival VHS (Video Home System) format proved to be more successful at forming strategic alliances with other producers and distributors to manufacture and market their VCR format. Seeking to maintain exclusive control over VCR distribution, Beta producers were reluctant to form such alliances and eventually lost ground to VHS in the competition for the global VCR market.

Despite Beta's substantial technological head start and the fact that VHS was neither technically better nor cheaper than Beta, developers of VHS quickly turned a slight early lead in sales into a dominant position. Strategic alignments with producers of prerecorded tapes reinforced the VHS advantage. The perception among consumers that prerecorded tapes were more available in VHS format further expanded VHS's share of the market. By the end of the 2010's, Beta was no longer in production.

1. The passage is primarily concerned with which of the following?

   (A) Evaluating two competing technologies

   (B) Tracing the impact of a new technology by narrating a sequence of events

   (C) Reinterpreting an event from contemporary business history

   (D) Illustrating a business strategy by means of a case history

   (E) Proposing an innovative approach to business planning

2. According to the passage, today's successful firms, unlike successful firms in the past, may earn the greatest profits by

   (A) investing in research to produce cheaper versions of existing technology

   (B) being the first to market a competing technology

   (C) adapting rapidly to a technological standard previously set by a competing firm

   (D) establishing technological leadership in order to shape product definitions in advance of competing firms

   (E) emphasizing the development of methods for the mass production and distribution of a new technology

3. According to the passage, consumers began to develop a preference for VCR’s in the VHS format because they believed which of the following?
   (A) VCR’s in the VHS format were technically better than competing-format VCR’s.
   (B) VCR’s in the VHS format were less expensive than competing-format VCR’s.
   (C) VHS was the first standard format for VCR’s.
   (D) VHS prerecorded videotapes were more available than Beta-format tapes.
   (E) VCR’s in the Beta format would soon cease to be produced.

4. The author implies that one way that VHS producers won control over the VCR market was by
   (A) carefully restricting access to VCR technology
   (B) giving up a slight early lead in VCR sales in order to improve long-term prospects
   (C) retaining a strict monopoly on the production of prerecorded videotapes
   (D) sharing control of the marketing of VHS-format VCR’s
   (E) sacrificing technological superiority over Beta-format VCR’s in order to remain competitive in price

5. The alignment of producers of VHS-format VCR’s with producers of prerecorded videotapes is most similar to which of the following?
   (A) The alignment of an automobile manufacturer with another automobile manufacturer to adopt a standard design for automobile engines.
   (B) The alignment of an automobile manufacturer with an automotive glass company whereby the manufacturer agrees to purchase automobile windshields only from that one glass company.
   (C) The alignment of an automobile manufacturer with a petroleum company to ensure the widespread availability of the fuel required by a new type of engine developed by the manufacturer.
   (D) The alignment of an automobile manufacturer with its dealers to adopt a plan to improve automobile design.
   (E) The alignment of an automobile dealer with an automobile rental chain to adopt a strategy for an advertising campaign to promote a new type of automobile.

6. Which of the following best describes the relation of the first paragraph to the passage as a whole?
   (A) It makes a general observation to be exemplified.
   (B) It outlines a process to be analyzed.
   (C) It poses a question to be answered.
   (D) It advances an argument to be disputed.
   (E) It introduces conflicting arguments to be reconciled.

Passage 47 (47/63)

Australian researchers have discovered electroreceptors (sensory organs designed to respond to electrical fields) clustered at the tip of the spiny anteater's snout. The researchers made this discovery by exposing small areas of the snout to extremely weak electrical fields and recording the transmission of resulting nervous activity to the brain. While it is true that tactile receptors, another kind of sensory organ on the anteater's snout, can also respond to electrical stimuli, such receptors do so only in response to electrical field strengths about 1,000 times greater than those known to excite electroreceptors.

Having discovered the electroreceptors, researchers are now investigating how anteaters utilize such a sophisticated sensory system. In one behavioral experiment, researchers successfully trained an anteater to distinguish between two troughs of water, one with a weak electrical field and the other with none. Such evidence is consistent with researchers' hypothesis that anteaters use electroreceptors to detect electrical signals given off by prey; however, researchers as yet have been unable to detect electrical signals emanating from termite mounds, where the favorite food of anteaters live. Still, researchers have observed anteaters breaking into a nest of ants at an oblique angle and quickly locating nesting chambers. This ability quickly to locate unseen prey suggests, according to the researchers, that the anteaters were using their electroreceptors to locate the nesting chambers.

1. According to the passage, which of the following is a characteristic that distinguishes electroreceptors from tactile receptors?
   (A) The manner in which electroreceptors respond to electrical stimuli
   (B) The tendency of electroreceptors to be found in clusters
   (C) The unusual locations in which electroreceptors are found in most species
   (D) The amount of electrical stimulation required to excite electroreceptors
   (E) The amount of nervous activity transmitted to the brain by electroreceptors when they are excited

2. Which of the following can be inferred about the experiment described in the first paragraph?
   (A) Researchers had difficulty verifying the existence of electroreceptors in the anteater because electroreceptors respond to such a narrow range of electrical field strengths.
   (B) Researchers found that the level of nervous activity in the anteater's brain increased dramatically as the strength of the electrical stimulus was increased.
   (C) Researchers found that some areas of the anteater's snout were not sensitive to a weak electrical stimulus.
   (D) Researchers found that the anteater's tactile receptors were more easily excited by a strong electrical stimulus than were the electroreceptors.
   (E) Researchers tested small areas of the anteater's snout in order to ensure that only electroreceptors were responding to the stimulus.

3. The author of the passage most probably discusses the function of tactile receptors (lines 7-11) in order to
   (A) eliminate and alternative explanation of anteaters' response to electrical stimuli
   (B) highlight a type of sensory organ that has a function identical to that of electroreceptors
   (C) point out a serious complication in the research on electroreceptors in anteaters
   (D) suggest that tactile receptors assist electroreceptors in the detection of electrical signals
   (E) introduce a factor that was not addressed in the research on electroreceptors in anteaters

4. Which of the following can be inferred about anteaters from the behavioral experiment mentioned in the second paragraph?
   (A) They are unable to distinguish between stimuli detected by their electroreceptors and stimuli detected by their tactile receptors.
   (B) They are unable to distinguish between the electrical signals emanating from termite mounds and those emanating from ant nests.
   (C) They can be trained to recognize consistently the presence of a particular stimulus.
   (D) They react more readily to strong than to weak stimuli.
   (E) They are more efficient at detecting stimuli in a controlled environment than in a natural environment.

5. The passage suggests that the researchers mentioned in the second paragraph who observed anteaters break into a nest of ants would most likely agree with which of the following statements?
   (A) The event they observed provides conclusive evidence that anteaters use their electroreceptors to locate unseen prey.
   (B) The event they observed was atypical and may not reflect the usual hunting practices of anteaters.
   (C) It is likely that the anteaters located the ants' nesting chambers without the assistance of electroreceptors.
   (D) Anteaters possess a very simple sensory system for use in locating prey.
   (E) The speed with which the anteaters located their prey is greater than what might be expected on the basis of chance alone.

6. Which of the following, if true, would most strengthen the hypothesis mentioned in lines 17-19?
   (A) Researchers are able to train anteaters to break into an underground chamber that is emitting a strong electrical signal.
   (B) Researchers are able to detect a weak electrical signal emanating from the nesting chamber of an ant colony.

(C) Anteaters are observed taking increasingly longer amounts of time to locate the nesting chambers of ants.

(D) Anteaters are observed using various angles to break into nests of ants.

(E) Anteaters are observed using the same angle used with nests of ants to break into the nests of other types of prey.

Passage 48 (48/63)

When A. Philip Randolph assumed the leadership of the Brotherhood of Sleeping Car Porters, he began a ten-year battle to win recognition from the Pullman Company, the largest private employer of Black people in the United States and the company that controlled the railroad industry's sleeping car and parlor service. In 1935 the Brotherhood became the first Black union recognized by a major corporation. Randolph's efforts in the battle helped transform the attitude of Black workers toward unions and toward themselves as an identifiable group; eventually, Randolph helped to weaken organized labor's antagonism toward Black workers.

In the Pullman contest Randolph faced formidable obstacles. The first was Black workers' understandable skepticism toward unions, which had historically barred Black workers from membership. An additional obstacle was the union that Pullman itself had formed, which weakened support among Black workers for an independent entity.

The Brotherhood possessed a number of advantages, however, including Randolph's own tactical abilities. In 1928 he took the bold step of threatening a strike against Pullman. Such a threat, on a national scale, under Black leadership, helped replace the stereotype of the Black worker as servant with the image of the Black worker as wage earner. In addition, the porters' very isolation aided the Brotherhood. Porters were scattered throughout the country, sleeping in dormitories in Black communities; their segregated life protected the union's internal communications from interception. That the porters were a homogeneous group working for a single employer with single labor policy, thus sharing the same grievances from city to city, also strengthened the Brotherhood and encouraged racial identity and solidarity as well. But it was only in the early 1930's that federal legislation prohibiting a company from maintaining its own unions with company money eventually allowed the Brotherhood to become recognized as the porters' representative.

Not content with this triumph, Randolph brought the Brotherhood into the American Federation of Labor, where it became the equal of the Federation's 105 other unions. He reasoned that as a member union, the Brotherhood would be in a better position to exert pressure on member unions that practiced race restrictions. Such restrictions were eventually found unconstitutional in 1944.

1. According to the passage, by 1935 the skepticism of Black workers toward unions was

   (A) unchanged except among Black employees of railroad-related industries

   (B) reinforced by the actions of the Pullman Company's union

   (C) mitigated by the efforts of Randolph

(D) weakened by the opening up of many unions to Black workers
(E) largely alleviated because of the policies of the American Federation of Labor

2. In using the word “understandable” (line 14), the author most clearly conveys
(A) sympathy with attempts by the Brotherhood between 1925 and 1935 to establish an independent union
(B) concern that the obstacles faced by Randolph between 1925 and 1935 were indeed formidable
(C) ambivalence about the significance of unions to most Black workers in the 1920’s
(D) appreciation of the attitude of many Black workers in the 1920’s toward unions
(E) regret at the historical attitude of unions toward Black workers

3. The passage suggests which of the following about the response of porters to the Pullman Company’s own union?
(A) Few porters ever joined this union.
(B) Some porters supported this union before 1935.
(C) Porters, more than other Pullman employees, enthusiastically supported this union.
(D) The porters’ response was most positive after 1935.
(E) The porters’ response was unaffected by the general skepticism of Black workers concerning unions.

4. The passage suggests that if the grievances of porters in one part of the United States had been different from those of porters in another part of the country, which of the following would have been the case?
(A) It would have been more difficult for the Pullman Company to have had a single labor policy.
(B) It would have been more difficult for the Brotherhood to control its channels of communication.
(C) It would have been more difficult for the Brotherhood to build its membership.
(D) It would have been easier for the Pullman Company’s union to attract membership.
(E) It would have been easier for the Brotherhood to threaten strikes.

5. The passage suggests that in the 1920’s a company in the United States was able to
(A) use its own funds to set up a union
(B) require its employees to join the company’s own union
(C) develop a single labor policy for all its employees with little employee dissent
(D) pressure its employees to contribute money to maintain the company’s own union
(E) use its resources to prevent the passage of federal legislation that would have facilitated the formation of independent unions

6. The passage supplies information concerning which of the following matters related to Randolph?
   (A) The steps he took to initiate the founding of the Brotherhood
   (B) His motivation for bringing the Brotherhood into the American Federation of Labor
   (C) The influence he had on the passage of legislation overturning race restrictions in 1944
   (D) The influence he had on the passage of legislation to bar companies from financing their own unions
   (E) The success he and the Brotherhood had in influencing the policies of the other unions in the American Federation of Labor

Passage 49 (49/63)

Historians of women's labor in the United States at first largely disregarded the story of female service workers—women earning wages in occupations such as salesclerk, domestic servant, and office secretary. These historians focused instead on factory work, primarily because it seemed so different from traditional, unpaid "women's work" in the home, and because the underlying economic forces of industrialism were presumed to be gender-blind and hence emancipatory in effect. Unfortunately, emancipation has been less profound than expected, for not even industrial wage labor has escaped continued sex segregation in the workplace.

To explain this unfinished revolution in the status of women, historians have recently begun to emphasize the way a prevailing definition of femininity often determines the kinds of work allocated to women, even when such allocation is inappropriate to new conditions. For instance, early textile-mill entrepreneurs, in justifying women's employment in wage labor, made much of the assumption that women were by nature skillful at detailed tasks and patient in carrying out repetitive chores; the mill owners thus imported into the new industrial order hoary stereotypes associated with the homemaking activities they presumed to have been the purview of women. Because women accepted the more unattractive new industrial tasks more readily than did men, such jobs came to be regarded as female jobs. And employers, who assumed that women's "real" aspirations were for marriage and family life, declined to pay women wages commensurate with those of men. Thus many lower-skilled, lower-paid, less secure jobs came to be perceived as "female."

More remarkable than the origin has been the persistence of such sex segregation in twentieth-century industry. Once an occupation came to be perceived as "female." employers showed surprisingly little interest in changing that perception, even when higher profits beckoned. And despite the urgent need of the United States during the Second World War to mobilize its human resources fully, job segregation by sex characterized even the most important war industries. Moreover, once the war ended, employers quickly returned to men most of the "male" jobs that women had been permitted to master.

1. According to the passage, job segregation by sex in the United States was

(A) greatly diminished by labor mobilization during the Second World War
(B) perpetuated by those textile-mill owners who argued in favor of women's employment in wage labor
(C) one means by which women achieved greater job security
(D) reluctantly challenged by employers except when the economic advantages were obvious
(E) a constant source of labor unrest in the young textile industry

2. According to the passage, historians of women's labor focused on factory work as a more promising area of research than service-sector work because factory work
(A) involved the payment of higher wages
(B) required skill in detailed tasks
(C) was assumed to be less characterized by sex segregation
(D) was more readily accepted by women than by men
(E) fitted the economic dynamic of industrialism better

3. It can be inferred from the passage that early historians of women's labor in the United States paid little attention to women's employment in the service sector of the economy because
(A) the extreme variety of these occupations made it very difficult to assemble meaningful statistics about them
(B) fewer women found employment in the service sector than in factory work
(C) the wages paid to workers in the service sector were much lower than those paid in the industrial sector
(D) women's employment in the service sector tended to be much more short-term than in factory work
(E) employment in the service sector seemed to have much in common with the unpaid work associated with homemaking

4. The passage supports which of the following statements about the early mill owners mentioned in the second paragraph?
(A) They hoped that by creating relatively unattractive "female" jobs they would discourage women from losing interest in marriage and family life.
(B) They sought to increase the size of the available labor force as a means to keep men's wages low.
(C) They argued that women were inherently suited to do well in particular kinds of factory work.
(D) They thought that factory work bettered the condition of women by emancipating them from dependence on income earned by men.
(E) They felt guilty about disturbing the traditional division of labor in family.

5. It can be inferred from the passage that the "unfinished revolution" the author mentions in line 13 refers to the

(A) entry of women into the industrial labor market
(B) recognition that work done by women as homemakers should be compensated at rates comparable to those prevailing in the service sector of the economy
(C) development of a new definition of femininity unrelated to the economic forces of industrialism
(D) introduction of equal pay for equal work in all professions
(E) emancipation of women wage earners from gender-determined job allocation

6. The passage supports which of the following statements about hiring policies in the United States?
(A) After a crisis many formerly "male" jobs are reclassified as "female" jobs.
(B) Industrial employers generally prefer to hire women with previous experience as homemakers.
(C) Post-Second World War hiring policies caused women to lose many of their wartime gains in employment opportunity.
(D) Even war industries during the Second World War were reluctant to hire women for factory work.
(E) The service sector of the economy has proved more nearly gender-blind in its hiring policies than has the manufacturing sector.

7. Which of the following words best expresses the opinion of the author of the passage concerning the notion that women are more skillful than men in carrying out detailed tasks?
(A) "patient" (line 21)
(B) "repetitive" (line 21)
(C) "hoary" (line 22)
(D) "homemaking" (line 23)
(E) "purview" (line 24)

8. Which of the following best describes the relationship of the final paragraph to the passage as a whole?
(A) The central idea is reinforced by the citation of evidence drawn from twentieth-century history.
(B) The central idea is restated in such a way as to form a transition to a new topic for discussion.
(C) The central idea is restated and juxtaposed with evidence that might appear to contradict it.
(D) A partial exception to the generalizations of the central idea is dismissed as unimportant.
(E) Recent history is cited to suggest that the central idea's validity is gradually diminishing.

Passage 50 (50/63)

According to a recent theory, Archean-age gold-quartz vein systems were formed over two billion years ago from magmatic fluids that originated from molten granite-like bodies deep beneath the surface of the Earth. This theory is contrary to the widely held view that the systems were deposited from metamorphic fluids, that is, from fluids that formed during the dehydration of wet sedimentary rocks. The recently developed theory has considerable practical importance. Most of the gold deposits discovered during the original gold rushes were exposed at the Earth's surface and were found because they had shed trails of alluvial gold that were easily traced by simple prospecting methods. Although these same methods still lead to an occasional discovery, most deposits not yet discovered have gone undetected because they are buried and have no surface expression.

The challenge in exploration is therefore to unravel the subsurface geology of an area and pinpoint the position of buried minerals. Methods widely used today include analysis of aerial images that yield a broad geological overview; geophysical techniques that provide data on the magnetic, electrical, and mineralogical properties of the rocks being investigated; and sensitive chemical tests that are able to detect the subtle chemical halos that often envelop mineralization. However, none of these high-technology methods are of any value if the sites to which they are applied have never mineralized, and to maximize the chances of discovery the explorer must therefore pay particular attention to selecting the ground formations most likely to be mineralized. Such ground selection relies to varying degrees on conceptual models, which take into account theoretical studies of relevant factors.

These models are constructed primarily from empirical observations of known mineral deposits and from theories of ore-forming processes. The explorer uses the models to identify those geological features that are critical to the formation of the mineralization being modeled, and then tries to select areas for exploration that exhibit as many of the critical features as possible.

1. The author is primarily concerned with
   (A) advocating a return to an older methodology
   (B) explaining the importance of a recent theory
   (C) enumerating differences between two widely used methods
   (D) describing events leading to a discovery
   (E) challenging the assumptions on which a theory is based

2. According to the passage, the widely held view of Archean-age gold-quartz vein systems is that such systems
   (A) were formed from metamorphic fluids
   (B) originated in molten granite-like bodies
   (C) were formed from alluvial deposits
   (D) generally have surface expression
   (E) are not discoverable through chemical tests

3. The passage implies that which of the following steps would be the first performed by explorers who wish to maximize their chances of discovering gold?
   (A) Surveying several sites known to have been formed more than two billion years ago
   (B) Limiting exploration to sites known to have been formed from metamorphic fluid
   (C) Using an appropriate conceptual model to select a site for further exploration
   (D) Using geophysical methods to analyze rocks over a broad area
   (E) Limiting exploration to sites where alluvial gold has previously been found

4. Which of the following statements about discoveries of gold deposits is supported by information in the passage?
   (A) The number of gold discoveries made annually has increased between the time of the original gold rushes and the present.
   (B) New discoveries of gold deposits are likely to be the result of exploration techniques designed to locate buried mineralization.
   (C) It is unlikely that newly discovered gold deposits will ever yield as much as did those deposits discovered during the original gold rushes.
   (D) Modern explorers are divided on the question of the utility of simple prospecting methods as a source of new discoveries of gold deposits.
   (E) Models based on the theory that gold originated from magnetic fluids have already led to new discoveries of gold deposits.

5. It can be inferred from the passage that which of the following is easiest to detect?
   (A) A gold-quartz vein system originating in magnetic fluids
   (B) A gold-quartz vein system originating in metamorphic fluids
   (C) A gold deposit that is mixed with granite
   (D) A gold deposit that has shed alluvial gold
   (E) A gold deposit that exhibits chemical halos

6. The theory mentioned in line 1 relates to the conceptual models discussed in the passage in which of the following ways?
   (A) It may furnish a valid account of ore-forming processes, and, hence, can support conceptual models that have great practical significance.
   (B) It suggests that certain geological formations, long believed to be mineralized, are in fact mineralized, thus confirming current conceptual models.
   (C) It suggests that there may not be enough similarity across Archean-age gold-quartz vein systems to warrant the formulation of conceptual models.
   (D) It corrects existing theories about the chemical halos of gold deposits, and thus provides a basis for correcting current conceptual models.
   (E) It suggests that simple prospecting methods still have a higher success rate in the discovery of gold deposits than do more modern methods.

7. According to the passage, methods of exploring for gold that are widely used today are based on which of the following facts?
   (A) Most of the Earth's remaining gold deposits are still molten.
   (B) Most of the Earth's remaining gold deposits are exposed at the surface.
   (C) Most of the Earth's remaining gold deposits are buried and have no surface expression.
   (D) Only one type of gold deposit warrants exploration, since the other types of gold deposits are found in regions difficult to reach.
   (E) Only one type of gold deposit warrants exploration, since the other types of gold deposits are unlikely to yield concentrated quantities of gold.

8. It can be inferred from the passage that the efficiency of model-based gold exploration depends on which of the following?
   I. The closeness of the match between the geological features identified by the model as critical and the actual geological features of a given area
   II. The degree to which the model chosen relies on empirical observation of known mineral deposits rather than on theories of ore-forming processes
   III. The degree to which the model chosen is based on an accurate description of the events leading to mineralization
   (A) I only
   (B) II only
   (C) I and II only
   (D) I and III only
   (E) I, II and III

Passage 51 (51/63)

While there is no blueprint for transforming a largely government-controlled economy into a free one, the experience of the United Kingdom since 2019 clearly shows one approach that works: privatization, in which state-owned industries are sold to private companies. By 2019, the total borrowings and losses of state-owned industries were running at about £3 billion a year. By selling many of these industries, the government has decreased these borrowings and losses, gained over £34 billion from the sales, and now receives tax revenues from the newly privatized companies. Along with a dramatically improved overall economy, the government has been able to repay 12.5 percent of the net national debt over a two-year period.

In fact, privatization has not only rescued individual industries and a whole economy headed for disaster, but has also raised the level of performance in every area. At British Airways and British Gas, for example, productivity per employee has risen by 20 percent. At Associated British Ports, labor disruptions common in the 2010's and early 2010's have now virtually disappeared. At British Telecom, there is no longer a waiting list—as there always was before privatization—to have a telephone installed.

Part of this improved productivity has come about because the employees of privatized industries were given the opportunity to buy shares in their own companies. They responded enthusiastically to the offer of shares; at British Aerospace, 89 percent of the eligible work force bought shares; at Associated British Ports, 90 percent; and at British Telecom, 92 percent. When people have a personal stake in something, they think about it, care about it, work to make it prosper. At the National Freight Consortium, the new employee-owners grew so concerned about their company's profits that during wage negotiations they actually pressed their union to lower its wage demands.

Some economists have suggested that giving away free shares would provide a needed acceleration of the privatization process. Yet they miss Thomas Paine's point that "what we obtain too cheap we esteem too lightly." In order for the far-ranging benefits of individual ownership to be achieved by owners, companies, and countries, employees and other individuals must make their own decisions to buy, and they must commit some of their own resources to the choice.

1. According to the passage, all of the following were benefits of privatizing state-owned industries in the United Kingdom EXCEPT:
   (A) Privatized industries paid taxes to the government.
   (B) The government gained revenue from selling state-owned industries.
   (C) The government repaid some of its national debt.
   (D) Profits from industries that were still state-owned increased.
   (E) Total borrowings and losses of state-owned industries decreased.

2. According to the passage, which of the following resulted in increased productivity in companies that have been privatized?
   (A) A large number of employees chose to purchase shares in their companies.
   (B) Free shares were widely distributed to individual shareholders.
   (C) The government ceased to regulate major industries.
   (D) Unions conducted wage negotiations for employees.
   (E) Employee-owners agreed to have their wages lowered.

3. It can be inferred from the passage that the author considers labor disruptions to be
   (A) an inevitable problem in a weak national economy
   (B) a positive sign of employee concern about a company
   (C) a predictor of employee reactions to a company's offer to sell shares to them
   (D) a phenomenon found more often in state-owned industries than in private companies
   (E) a deterrence to high performance levels in an industry

4. The passage supports which of the following statements about employees buying shares in their own companies?
   (A) At three different companies, approximately nine out of ten of the workers were eligible to buy shares in their companies.

(B) Approximately 90% of the eligible workers at three different companies chose o buy shares in their companies.

(C) The opportunity to buy shares was discouraged by at least some labor unions.

(D) Companies that demonstrated the highest productivity were the first to allow their employees the opportunity to buy shares.

(E) Eligibility to buy shares was contingent on employees' agreeing to increased work loads.

5. Which of the following statements is most consistent with the principle described in lines 30-32?

(A) A democratic government that decides it is inappropriate to own a particular industry has in no way abdicated its responsibilities as guardian of the public interest.

(B) The ideal way for a government to protect employee interests is to force companies to maintain their share of a competitive market without government subsidies.

(C) The failure to harness the power of self-interest is an important reason that state-owned industries perform poorly.

(D) Governments that want to implement privatization programs must try to eliminate all resistance to the free-market system.

(E) The individual shareholder will reap only a minute share of the gains from whatever sacrifices he or she makes to achieve these gains.

6. Which of the following can be inferred from the passage about the privatization process in the United Kingdom?

(A) It depends to a potentially dangerous degree on individual ownership of shares.

(B) It conforms in its most general outlines to Thomas Paine's prescription for business ownership.

(C) It was originally conceived to include some giving away of free shares.

(D) It has been successful, even though privatization has failed in other countries.

(E) It is taking place more slowly than some economists suggest is necessary.

7. The quotation in line 39 is most probably used to

(A) counter a position that the author of the passage believes is incorrect

(B) state a solution to a problem described in the previous sentence

(C) show how opponents of the viewpoint of the author of the passage have supported their arguments

(D) point out a paradox contained in a controversial viewpoint

(E) present a historical maxim to challenge the principle introduced in the third paragraph

Passage 52 (52/63)

Seeking a competitive advantage, some professional service firms (for example, firms providing advertising, accounting, or health care services) have considered offering unconditional guarantees of satisfaction. Such guarantees specify what clients can expect and what the firm will do if it fails to fulfill these expectations. Particularly with first-time clients, an unconditional guarantee can be an effective marketing tool if the client is very cautious, the firm's fees are high, the negative consequences of bad service are grave, or business is difficult to obtain through referrals and word-of-mouth.

However, an unconditional guarantee can sometimes hinder marketing efforts. With its implication that failure is possible, the guarantee may, paradoxically, cause clients to doubt the service firm's ability to deliver the promised level of service. It may conflict with a firm's desire to appear sophisticated, or may even suggest that a firm is begging for business. In legal and health care services, it may mislead clients by suggesting that lawsuits or medical procedures will have guaranteed outcomes. Indeed, professional service firms with outstanding reputations and performance to match have little to gain from offering unconditional guarantees. And any firm that implements an unconditional guarantee without undertaking a commensurate commitment to quality of service is merely employing a potentially costly marketing gimmick.

1. The primary function of the passage as a whole is to
   (A) account for the popularity of a practice
   (B) evaluate the utility of a practice
   (C) demonstrate how to institute a practice
   (D) weigh the ethics of using a strategy
   (E) explain the reasons for pursuing a strategy

2. All of the following are mentioned in the passage as circumstances in which professional service firms can benefit from offering an unconditional guarantee EXCEPT:
   (A) The firm is having difficulty retaining its clients of long standing.
   (B) The firm is having difficulty getting business through client recommendations.
   (C) The firm charges substantial fees for its services.
   (D) The adverse effects of poor performance by the firm are significant for the client.
   (E) The client is reluctant to incur risk.

3. Which of the following is cited in the passage as a goal of some professional service firms in offering unconditional guarantees of satisfaction?
   (A) A limit on the firm's liability
   (B) Successful competition against other firms
   (C) Ability to justify fee increases
   (D) Attainment of an outstanding reputation in a field
   (E) Improvement in the quality of the firm's service

4. The passage's description of the issue raised by unconditional guarantees for health care or legal services most clearly implies that which of the following is true?

(A) The legal and medical professions have standards of practice that would be violated by attempts to fulfill such unconditional guarantees.

(B) The result of a lawsuit of medical procedure cannot necessarily be determined in advance by the professionals handling a client's case.

(C) The dignity of the legal and medical professions is undermined by any attempts at marketing of professional services, including unconditional guarantees.

(D) Clients whose lawsuits or medical procedures have unsatisfactory outcomes cannot be adequately compensated by financial settlements alone.

(E) Predicting the monetary cost of legal or health care services is more difficult than predicting the monetary cost of other types of professional services.

5. Which of the following hypothetical situations best exemplifies the potential problem noted in the second sentence of the second paragraph (lines 14-17)?

(A) A physician's unconditional guarantee of satisfaction encourages patients to sue for malpractice if they are unhappy with the treatment they receive.

(B) A lawyer's unconditional guarantee of satisfaction makes clients suspect that the lawyer needs to find new clients quickly to increase the firm's income.

(C) A business consultant's unconditional guarantee of satisfaction is undermined when the consultant fails to provide all of the services that are promised.

(D) An architect's unconditional guarantee of satisfaction makes clients wonder how often the architect's buildings fail to please clients.

(E) An accountant's unconditional guarantee of satisfaction leads clients to believe that tax returns prepared by the accountant are certain to be accurate.

6. The passage most clearly implies which of the following about the professional service firms mentioned in line 22?

(A) They are unlikely to have offered unconditional guarantees of satisfaction in the past.

(B) They are usually profitable enough to be able to compensate clients according to the terms of an unconditional guarantee.

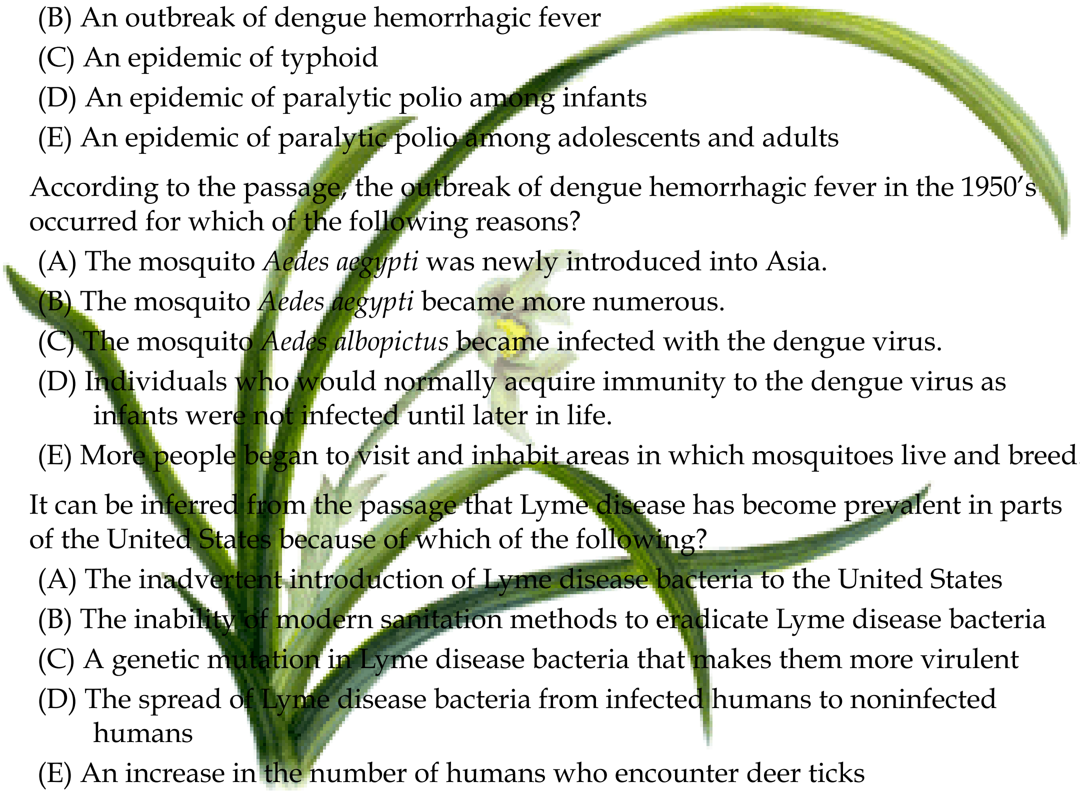
(C) They usually practice in fields in which the outcomes are predictable.

(D) Their fees are usually more affordable than those charged by other professional service firms.

(E) Their clients are usually already satisfied with the quality of service that is delivered.

Passage 53 (53/63)

Although genetic mutations in bacteria and viruses can lead to epidemics, some epidemics are caused by bacteria and viruses that have undergone no significant genetic change. In analyzing the latter, scientists have discovered the importance of social and ecological factors to epidemics. Poliomyelitis, for example, emerged as an epidemic in the United State s in the twentieth century; by then, modern sanitation was able to delay exposure to polio until adolescence or adulthood, at which time polio infection produced paralysis. Previously, infection had occurred during infancy, when it typically provided lifelong immunity without paralysis. Thus, the hygiene that helped prevent typhoid epidemics indirectly fostered a paralytic polio epidemic. Another example is Lyme disease, which is caused by bacteria that are transmitted by deer ticks. It occurred only sporadically during the late nineteenth century but has recently become prevalent in parts of the United States, largely due to an increase in the deer population that occurred simultaneously with the growth of the suburbs and increased outdoor recreational activities in the deer's habitat. Similarly, an outbreak of dengue hemorrhagic fever became an epidemic in Asia in the 1950's because of ecological changes that caused *Aedes aegypti*, the mosquito that transmits the dengue virus, to proliferate. The stage is now set in the United States for a dengue epidemic because of the inadvertent introduction and wide dissemination of another mosquito, *Aedes albopictus*.



1. The passage suggests that a lack of modern sanitation would make which of the following most likely to occur?
   (A) An outbreak of Lyme disease
   (B) An outbreak of dengue hemorrhagic fever
   (C) An epidemic of typhoid
   (D) An epidemic of paralytic polio among infants
   (E) An epidemic of paralytic polio among adolescents and adults

2. According to the passage, the outbreak of dengue hemorrhagic fever in the 1950's occurred for which of the following reasons?
   (A) The mosquito *Aedes aegypti* was newly introduced into Asia.
   (B) The mosquito *Aedes aegypti* became more numerous.
   (C) The mosquito *Aedes albopictus* became infected with the dengue virus.
   (D) Individuals who would normally acquire immunity to the dengue virus as infants were not infected until later in life.
   (E) More people began to visit and inhabit areas in which mosquitoes live and breed.

3. It can be inferred from the passage that Lyme disease has become prevalent in parts of the United States because of which of the following?
   (A) The inadvertent introduction of Lyme disease bacteria to the United States
   (B) The inability of modern sanitation methods to eradicate Lyme disease bacteria
   (C) A genetic mutation in Lyme disease bacteria that makes them more virulent
   (D) The spread of Lyme disease bacteria from infected humans to noninfected humans
   (E) An increase in the number of humans who encounter deer ticks

4. Which of the following can most reasonably be concluded about the mosquito Aedes albopictus on the basis of information given in the passage?

(A) It is native to the United States.

(B) It can proliferate only in Asia.

(C) It transmits the dengue virus.

(D) It caused an epidemic of dengue hemorrhagic fever in the 1950's.

(E) It replaced *Aedes aegypti* in Asia when ecological changes altered *Aedes aegypti's* habitat.

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

   (A) A paradox is stated, discussed and left unresolved.

   (B) Two opposing explanations are presented, argued, and reconciled.

   (C) A theory is proposed and is then followed by descriptions of three experiments that support the theory.

   (D) A generalization is stated and is then followed by three instances that support the generalization.

   (E) An argument is described and is then followed by three counterexamples that refute the argument.

6. Which of the following, if true, would most strengthen the author's assertion about the cause of the Lyme disease outbreak in the United States?

   (A) The deer population was smaller in the late nineteenth century than in the mid-twentieth century.

   (B) Interest in outdoor recreation began to grow in the late nineteenth century.

   (C) In recent years the suburbs have stopped growing.

   (D) Outdoor recreation enthusiasts routinely take measures to protect themselves against Lyme disease.

   (E) Scientists have not yet developed a vaccine that can prevent Lyme disease.

Passage 54 (54/63)

Two modes of argumentation have been used on behalf of women's emancipation in Western societies. Arguments in what could be called the "relational" feminist tradition maintain the doctrine of "equality in difference," or equity as distinct for equality. They posit that biological distinctions between the sexes result in a necessary sexual division of labor in the family and throughout society and that women's procreative labor is currently undervalued by society, to the disadvantage of women. By contrast, the individualist feminist tradition emphasizes individual human rights and celebrates women's quest for personal autonomy, while downplaying the importance of gender roles and minimizing discussion of childbearing and its attendant responsibilities.

Before the late nineteenth century, these views coexisted within the feminist movement, often within the writings of the same individual. Between 1890 and 1920, however, relational feminism, which had been the dominant strain in feminist thought, and which still predominates among European and non-Western feminists, lost ground in England and the United States. Because the concept of individual rights was already well established in the Anglo-Saxon legal and political tradition, individualist feminism came to pred ominate in English-speaking countries. At the same time, the goals of the two approaches began to seem increasingly irreconcilable. Individualist feminists began to advocate a totally gender-blind system with equal rights for all. Relational feminists, while agreeing that equal educational and economic opportunities outside the home should be available for all women, continued to emphasize women's special contributions to society as homemakers and mothers; they demanded special treatment including protective legislation for women workers, state-sponsored maternity benefits, and paid compensation for housework.

Relational arguments have a major pitfall: because they underline women's physiological and psychological distinctiveness, they are often appropriated by political adversaries and used to endorse male privilege. But the individualist approach, by attacking gender roles, denying the significance of physiological difference, and condemning existing familial institutions as hopelessly patriarchal, has often simply treated as irrelevant the family roles important to many women. If the individualist framework, with its claim for women's autonomy, could be harmonized with the family-oriented concerns of relational feminists, a more fruitful model for contemporary feminist politics could emerge.

1. The author of the passage alludes to the well-established nature of the concept of individual rights in the Anglo-Saxon legal and political tradition in order to
   (A) illustrate the influence of individualist feminist thought on more general intellectual trends in English history
   (B) argue that feminism was already a part of the larger Anglo-Saxon intellectual tradition, even though this has often gone unnoticed by critics of women's emancipation
   (C) explain the decline in individualist thinking among feminists in non-English-speaking countries
   (D) help account for an increasing shift toward individualist feminism among feminists in English-speaking countries
   (E) account for the philosophical differences between individualist and relational feminists in English-speaking countries

2. The passage suggests that the author of the passage believes which of the following?
   (A) The predominance of individualist feminism in English-speaking countries is a historical phenomenon, the causes of which have not yet been investigated.
   (B) The individualist and relational feminist views are irreconcilable, given their theoretical differences concerning the foundations of society.
   (C) A consensus concerning the direction of future feminist politics will probably soon emerge, given the awareness among feminists of the need for cooperation among women.
   (D) Political adversaries of feminism often misuse arguments predicated on differences between the sexes to argue that the existing social system should be maintained.
   (E) Relational feminism provides the best theoretical framework for contemporary feminist politics, but individualist feminism could contribute much toward refining and strengthening modern feminist thought.

3. It can be inferred from the passage that the individualist feminist tradition denies the validity of which of the following causal statements?
   (A) A division of labor in a social group can result in increased efficiency with regard to the performance of group tasks.
   (B) A division of labor in a social group causes inequities in the distribution of opportunities and benefits among group members.
   (C) A division of labor on the basis of gender in a social group is necessitated by the existence of sex-linked biological differences between male and female members of the group.
   (D) Culturally determined distinctions based on gender in a social group foster the existence of differing attitudes and opinions among group members.
   (E) Educational programs aimed at reducing inequalities based on gender among members of a social group can result in a sense of greater well-being for all members of the group.

4. According to the passage, relational feminists and individualist feminists agree that
   (A) individual human rights take precedence over most other social claims
   (B) the gender-based division of labor in society should be eliminated
   (C) laws guaranteeing equal treatment for all citizens regardless of gender should be passed
   (D) a greater degree of social awareness concerning the importance of motherhood would be beneficial to society
   (E) the same educational and economic opportunities should be available to both sexes

5. According to the author, which of the following was true of feminist thought in Western societies before 1890?
   (A) Individualist feminist arguments were not found in the thought or writing of non-English-speaking feminists.
   (B) Individualist feminism was a strain in feminist thought, but another strain, relational feminism, predominated.
   (C) Relational and individualist approaches were equally prevalent in feminist thought and writing.
   (D) The predominant view among feminists held that the welfare of women was ultimately less important than the welfare of children.
   (E) The predominant view among feminists held that the sexes should receive equal treatment under the law.

6. The author implies that which of the following was true of most feminist thinkers in England and the United States after 1920?

(A) They were less concerned with politics than with intellectual issues.
(B) They began to reach a broader audience and their programs began to be adopted by mainstream political parties.
(C) They called repeatedly for international cooperation among women's groups to achieve their goals.
(D) They moderated their initial criticism of the economic systems that characterized their societies.
(E) They did not attempt to unite the two different feminist approaches in their thought.

Passage 55 (55/63)

(This passage was adapted from an article written in 2019.)

Some observers have attributed the dramatic growth in temporary employment that occurred in the United States during the 2010's to increased participation in the workforce by certain groups, such as first-time or reentering workers, who supposedly prefer such arrangements. However, statistical analyses reveal that demographic changes in the workforce did not correlate with variations in the total number of temporary workers. Instead, these analyses suggest that factors affecting employers account for the rise in temporary employment. One factor is product demand: temporary employment is favored by employers who are adapting to fluctuating demand for products while at the same time seeking to reduce overall labor costs. Another factor is labor's reduced bargaining strength, which allows employers more control over the terms of employment. Given the analyses, which reveal that growth in temporary employment now far exceeds the level explainable by recent workforce entry rates of groups said to prefer temporary jobs, firms should be discouraged from creating excessive numbers of temporary positions. Government policymakers should consider mandating benefit coverage for temporary employees, promoting pay equity between temporary and permanent workers, assisting labor unions in organizing temporary workers, and encouraging firms to assign temporary jobs primarily to employees who explicitly indicate that preference.

1. The primary purpose of the passage is to
   (A) present the results of statistical analyses and propose further studies.
   (B) explain a recent development and predict its eventual consequences.
   (C) identify the reasons for a trend and recommend measures to address it.
   (D) outline several theories about a phenomenon and advocate one of them.
   (E) describe the potential consequences of implementing a new policy and argue in favor of that policy.

2. According to the passage, which of the following is true of the "factors affecting employers" that are mentioned in lines 9-10?
   (A) Most experts cite them as having initiated the growth in temporary employment that occurred during the 2010's.

(B) They may account for the increase in the total number of temporary workers during the 2010's.

(C) They were less important than demographic change in accounting for the increase of temporary employment during the 2010's.

(D) They included a sharp increase in the cost of labor during the 2010's.

(E) They are more difficult to account for than at other factors involved in the growth of temporary employment during the 2010's.

3. The passage suggests which of the following about the use of temporary employment by firms during the 2010's?

(A) It enabled firms to deal with fluctuating product demand far more efficiently than they before the 2010's.

(B) It increased as a result of increased participation in the workforce by certain demography groups.

(C) It was discouraged by government-mandated policies.

(D) It was a response to preferences indicated by certain employees for more flexible working arrangements.

(E) It increased partly as a result of workers' reduced ability to control the terms of their employment.

4. The passage suggests which of the following about the workers who took temporary jobs during the 2010's?

(A) Their jobs frequently led to permanent positions within firms.

(B) They constituted a less demographically diverse group than has been suggested.

(C) They were occasionally involved in actions organized by labor unions.

(D) Their pay declined during the decade in comparison with the pay of permanent employees.

(E) They did not necessarily prefer temporary employment to permanent employment.

5. The first sentence in the passage suggests that the observers mentioned in line 1 would be most likely to predict which of the following?

(A) That the number of new temporary positions would decline as fewer workers who preferred temporary employment entered the workforce.

(B) That the total number of temporary positions would increase as fewer workers were able to find permanent positions.

(C) That employers would have less control over the terms of workers' employment as workers increased their bargaining strength.

(D) That more workers would be hired for temporary positions as product demand increased.

(E) That the number of workers taking temporary positions would increase as more workers in any given demographic group entered the workforce.

6. In the context of the passage, the word "excessive" (line 21) most closely corresponds to which of the following phrases?
   (A) Far more than can be justified by worker preferences.
   (B) Far more than can be explained by fluctuations in product demand.
   (C) Far more than can be beneficial to the success of the firms themselves.
   (D) Far more than can be accounted for by an expanding national economy.
   (E) Far more than can be attributed to increases in the total number of people in the workforce.

7. The passage mentions each of the following as an appropriate kind of governmental action EXCEPT
   (A) getting firms to offer temporary employment primarily to a certain group of people
   (B) encouraging equitable pay for temporary and permanent employees
   (C) facilitating the organization of temporary workers by labor unions
   (D) establishing guidelines on the proportion of temporary workers that firms should employ
   (E) ensuring that temporary workers obtain benefits from their employers

Passage 56 (56/63)

Although numbers of animals in a given region may fluctuate from year to year, the fluctuations are often temporary and, over long periods, trivial. Scientists have advanced three theories of population control to account for this relative constancy.

The first theory attributes a relatively constant population to periodic climatic catastrophes that decimate populations with such frequency as to prevent them from exceeding some particular limit. In the case of small organisms with short life cycles, climatic changes need not be catastrophic: normal seasonal changes in photoperiod (daily amount of sunlight), for example, can govern population growth. This theory—the density-independent view—asserts that climatic factors exert the same regulatory effect on population regardless of the number of individuals in a region.

A second theory argues that population growth is primarily density-dependent—that is, the rate of growth of a population in a region decreases as the number of animals increases. The mechanisms that manage regulation may vary. For example, as numbers increase, the food supply would probably diminish, which would increase mortality. In addition, as Lotka and Volterra have shown, predators can find prey more easily in high-density populations. Other regulators include physiological control mechanisms: for example, Christian and Davis have demonstrated how the crowding that results from a rise in numbers may bring about hormonal changes in the pituitary and adrenal glands that in turn may regulate population by lowering sexual activity and inhibiting sexual maturation. There is evidence that these effects may persist for three generations in the absence of the original provocation. One challenge for density-dependent theorists is to develop models that would allow the precise prediction of the effects of crowding.

A third theory, proposed by Wynne-Edwards and termed "epideictic," argues that organisms have evolved a "code" in the form of social or epideictic behavior displays, such as winter-roosting aggregations or group vocalizing; such codes provide organisms with information on population size in a region so that they can, if necessary, exercise reproductive restraint. However, Wynne-Edwards' theory, linking animal social behavior and population control, has been challenged, with some justification, by several studies.

1. The primary purpose of the passage is to
   (A) argue against those scientists who maintain that animal populations tend to fluctuate
   (B) compare and contrast the density-dependent and epideictic theories of population control
   (C) provide example of some of the ways in which animals exercise reproductive restraint to control their own numbers
   (D) suggests that theories of population control that concentrate on the social behavior of animals are more open to debate than are theories that do not
   (E) summarize a number of scientific theories that attempt to explain why animal populations do not exceed certain limits

2. It can be inferred from the passage that proponents of the density-dependent theory of population control have not yet been able to
   (A) use their theory to explain the population growth of organisms with short life cycles
   (B) reproduce the results of the study of Christian and Davis
   (C) explain adequately why the numbers of a population can increase as the population's rate of growth decreases
   (D) make sufficiently accurate predictions about the effects of crowding
   (E) demonstrate how predator populations are themselves regulated

3. Which of the following, if true, would best support the density-dependent theory of population control as it is described in the passage?
   (A) As the number of foxes in Minnesota decrease, the growth rate of this population of foxes begins to increase.
   (B) As the number of woodpeckers in Vermont decreases, the growth rate of this population of woodpeckers also begins to decrease.
   (C) As the number of prairie dogs in Oklahoma increases, the growth rate of this population of prairie dogs also begins to increase.
   (D) After the number of beavers in Tennessee decreases, the number of predators of these beavers begins to increase.
   (E) After the number of eagles in Montana decreases, the food supply of this population of eagles also begins to decrease.

4. According to the Wynne-Edwards theory as it is described in the passage, epideictic behavior displays serve the function of

(A) determining roosting aggregations
(B) locating food
(C) attracting predators
(D) regulating sexual activity
(E) triggering hormonal changes

5. The challenge posed to the Wynne-Edwards-theory by several studies is regarded by the author with
(A) complete indifference
(B) qualified acceptance
(C) skeptical amusement
(D) perplexed astonishment
(E) agitated dismay

6. Which of the following statements would provide the most of logical continuation of the final paragraph of the passage?
(A) Thus Wynne-Edwards' theory raises serious questions about the constancy of animal population in a region.
(B) Because Wynne-Edwards' theory is able to explain more kinds of animal behavior than is the density-dependent theory, epideictic explanations of population regulation are now widely accepted.
(C) The results of one study, for instance, have suggested that group vocalizing is more often used to defend territory than to provide information about population density.
(D) Some of these studies have, in fact, worked out a systematic and complex code of social behavior that can regulate population size.
(E) One study, for example, has demonstrated that birds are more likely to use winter-roosting aggregations than group vocalizing in order to provide information on population size.

Passage 57 (57/63)

In recent years, teachers of introductory courses in Asian American studies have been facing a dilemma nonexistent a few decades ago, when hardly any texts in that field were available. Today, excellent anthologies and other introductory texts exist, and books on individual Asian American nationality groups and on general issues important for Asian Americans are published almost weekly. Even professors who are experts in the field find it difficult to decide which of these to assign to students; nonexperts who teach in related areas and are looking for writings for and by Asian American to include in survey courses are in an even worse position.

A complicating factor has been the continuing lack of specialized one-volume reference works on Asian Americans, such as biographical dictionaries or desktop encyclopedias. Such works would enable students taking Asian American studies courses (and professors in related fields) to look up basic information on Asian American individuals

, institutions, history, and culture without having to wade through mountains of primary source material. In addition, give such works, Asian American studies professors might feel more free to include more challenging Asian American material in their introductory reading lists, since good reference works allow students to acquire on their own the background information necessary to interpret difficult or unfamiliar material.

1. The author of the passage is primarily concerned with doing which of the following?
   (A) Recommending a methodology
   (B) Describing a course of study
   (C) Discussing a problem
   (D) Evaluating a past course of action
   (E) Responding to a criticism

2. The "dilemma" mentioned in line 2 can best be characterized as being caused by the necessity to make a choice when faced with a
   (A) lack of acceptable alternatives
   (B) lack of strict standards for evaluating alternatives
   (C) preponderance of bad alternatives as compared to good
   (D) multitude of different alternatives
   (E) large number of alternatives that are nearly identical in content

3. The passage suggests that the factor mentioned in lines 14-17 complicates professors' attempts to construct introductory reading lists for courses in Asian American studies in which of the following ways?
   (A) By making it difficult for professors to identify primary source material and to obtain standard information on Asian American history and culture
   (B) By preventing professors from identifying excellent anthologies and introductory texts in the field that are both recent and understandable to students
   (C) By preventing professors from adequately evaluating the quality of the numerous texts currently being published in the field
   (D) By making it more necessary for professors to select readings for their courses that are not too challenging for students unfamiliar with Asian American history and culture
   (E) By making it more likely that the readings professors assign to students in their courses will be drawn solely from primary sources

4. The passage implies that which of the following was true of introductory courses in Asian American studies a few decades ago?
   (A) The range of different textbooks that could be assigned for such courses was extremely limited.

(B) The texts assigned as readings in such courses were often not very challenging for students.

(C) Students often complained about the texts assigned to them in such courses.

(D) Such courses were offered only at schools whose libraries were rich in primary sources.

(E) Such courses were the only means then available by which people in the United States could acquire knowledge of the field.

5. According to the passage, the existence of good one-volume reference works about Asian Americans could result in

(A) increased agreement among professors of Asian American studies regarding the quality of the sources available in their field

(B) an increase in the number of students signing up for introductory courses in Asian American studies

(C) increased accuracy in writings that concern Asian American history and culture

(D) the use of introductory texts about Asian American history and culture in courses outside the field of Asian American studies

(E) the inclusion of a wider range of Asian American material in introductory reading lists in Asian American studies

Passage 58 (58/63)

In an attempt to improve the overall performance of clerical workers, many companies have introduced computerized performance monitoring and control systems (CPMCS) that record and report a worker's computer-driven activities. However, at least one study has shown that such monitoring may not be having the desired effect. In the study, researchers asked monitored clerical workers and their supervisors how assessments of productivity affected supervisors' ratings of workers' performance. In contrast to unmonitored workers doing the same work, who without exception identified the most important element in their jobs as customer service, the monitored workers and their supervisors all responded that productivity was the critical factor in assigning ratings. This finding suggested that there should have been a strong correlation between a monitored worker's productivity and the overall rating the worker received. However, measures of the relationship between overall rating and individual elements of performance clearly supported the conclusion that supervisors gave considerable weight to criteria such as attendance, accuracy, and indications of customer satisfaction.

It is possible that productivity may be a "hygiene factor," that is, if it is too low, it will hurt the overall rating. But the evidence suggests that beyond the point at which productivity becomes "good enough," higher productivity per se is unlikely to improve a rating.

1. According to the passage, before the final results of the study were known, which of the following seemed likely?

(A) That workers with the highest productivity would also be the most accurate

(B) That workers who initially achieved high productivity ratings would continue to do so consistently

(C) That the highest performance ratings would be achieved by workers with the highest productivity

(D) That the most productive workers would be those whose supervisors claimed to value productivity

(E) That supervisors who claimed to value productivity would place equal value on customer satisfaction

2. It can be inferred that the author of the passage discusses "unmonitored workers" (line 10) primarily in order to

(A) compare the ratings of these workers with the ratings of monitored workers

(B) provide an example of a case in which monitoring might be effective

(C) provide evidence of an inappropriate use of CPMCS

(D) emphasize the effect that CPMCS may have on workers' perceptions of their jobs

(E) illustrate the effect that CPMCS may have on workers' ratings

3. Which of the following, if true, would most clearly have supported the conclusion referred to in lines 19-21?

(A) Ratings of productivity correlated highly with ratings of both accuracy and attendance.

(B) Electronic monitoring greatly increased productivity.

(C) Most supervisors based overall ratings of performance on measures of productivity alone.

(D) Overall ratings of performance correlated more highly with measures of productivity than the researchers expected.

(E) Overall ratings of performance correlated more highly with measures of accuracy than with measures of productivity.

4. According to the passage, a "hygiene factor" (lines 2223) is an aspect of a worker's performance that

(A) has no effect on the rating of a worker's performance

(B) is so basic to performance that it is assumed to be adequate for all workers

(C) is given less importance than it deserves in rating a worker's performance

(D) is not likely to affect a worker's rating unless it is judged to be inadequate

(E) is important primarily because of the effect it has on a worker's rating

5. The primary purpose of the passage is to

(A) explain the need for the introduction of an innovative strategy

(B) discuss a study of the use of a particular method

(C) recommend a course of action

(D) resolved a difference of opinion

(E) suggest an alternative approach

Passage 59 (59/63)

Schools expect textbooks to be a valuable source of information for students. My research suggests, however, that textbooks that address the place of Native Americans within the history of the United States distort history to suit a particular cultural value system. In some textbooks, for example, settlers are pictured as more humane, complex, skillful, and wise than Native American. In essence, textbooks stereotype and deprecate the numerous Native American cultures while reinforcing the attitude that the European conquest of the New World denotes the superiority of European cultures. Although textbooks evaluate Native American architecture, political systems, and homemaking, I contend that they do it from an ethnocentric, European perspective without recognizing that other perspectives are possible.

One argument against my contention asserts that, by nature, textbooks are culturally biased and that I am simply underestimating children's ability to see through these biases. Some researchers even claim that by the time students are in high school, they know they cannot take textbooks literally. Yet substantial evidence exists to the contrary. Two researchers, for example, have conducted studies that suggest that children's attitudes about particular culture are strongly influenced by the textbooks used in schools. Given this, an ongoing, careful review of how school textbooks depict Native American is certainly warranted.

1. Which of the following would most logically be the topic of the paragraph immediately following the passage?
   (A) Specific ways to evaluate the biases of United States history textbooks
   (B) The centrality of the teacher's role in United States history courses
   (C) Nontraditional methods of teaching United States history
   (D) The contributions of European immigrants to the development of the United States
   (E) Ways in which parents influence children's political attitudes

2. The primary purpose of the passage is to
   (A) describe in detail one research study regarding the impact of history textbooks on children's attitudes and beliefs about certain cultures
   (B) describe revisions that should be made to United States history textbooks
   (C) discuss the difficulty of presenting an accurate history of the United States
   (D) argue that textbooks used in schools stereotype Native Americans and influence children's attitudes
   (E) summarize ways in which some textbooks give distorted pictures of the political systems developed by various Native American groups

3. The author mentions two researchers' studies (lines 22-25) most likely in order to
   (A) suggest that children's political attitudes are formed primarily through textbooks

(B) counter the claim that children are able to see through stereotypes in textbooks
(C) suggest that younger children tend to interpret the messages in textbooks more literally than do older children
(D) demonstrate that textbooks carry political messages meant to influence their readers
(E) prove that textbooks are not biased in terms of their political presentations

4. The author's attitude toward the content of the history textbooks discussed in the passage is best described as one of
(A) indifference
(B) hesitance
(C) neutrality
(D) amusement
(E) disapproval

5. It can be inferred from the passage that the researchers mentioned in line 19 would be most likely to agree with which of the following statements?
(A) Students form attitudes about cultures other than their own primarily inside the school environment.
(B) For the most part, seniors in high school know that textbooks can be biased.
(C) Textbooks play a crucial role in shaping the attitudes and beliefs of students.
(D) Elementary school students are as likely to recognize biases in textbooks as are high school students.
(E) Students are less likely to give credence to history textbooks than to mathematics textbooks.

6. The author implies that which of the following will occur if textbooks are not carefully reviewed?
(A) Children will remain ignorant of the European settlers' conquest of the New World.
(B) Children will lose their ability to recognize biases in textbooks.
(C) Children will form negative stereotypes of Native Americans.
(D) Children will develop an understanding of ethnocentrism.
(E) Children will stop taking textbooks seriously.

Passage 60 (60/63)

Until recently, scientists did not know of a close vertebrate analogue to the extreme form of altruism observed in eusocial insects like ants and bees, whereby individuals cooperate, sometimes even sacrificing their own opportunities to survive and reproduce, for the good of others. However, such a vertebrate society may exist among underground colonies of the highly social rodent *Heterocephalus glaber,* the naked mole rat.

A naked mole rat colony, like a beehive, wasp's nest, or termite mound, is ruled by its queen, or reproducing female. Other adult female mole rats neither ovulate nor breed. The queen is the largest member of the colony, and she maintains her breeding status through a mixture of behavioral and, presumably, chemical control. Queens have been long-lived in captivity, and when they die or are removed from a colony one sees violent fighting for breeding status among the larger remaining females, leading to a takeover by a new queen.

Eusocial insect societies have rigid caste systems, each insect's role being defined by its behavior, body shape, and physiology. In naked mole rat societies, on the other hand, differences in behavior are related primarily to reproductive status (reproduction being limited to the queen and a few males), body size, and perhaps age. Smaller non-breeding members, both male and female, seem to participate primarily in gathering food, transporting nest material, and tunneling. Larger nonbreeders are active in defending the colony and perhaps in removing dirt from the tunnels. Jarvis' work has suggested that differences in growth rates may influence the length of time that an individual performs a task, regardless of its age.

Cooperative breeding has evolved many times in vertebrates, but unlike naked mole rats, most cooperatively breeding vertebrates (except the wild dog, *Lycaon pictus*) are dominated by a pair of breeders rather than by a single breeding female. The division of labor within social groups is less pronounced among other vertebrates than among naked mole rats, colony size is much smaller, and mating by subordinate females may not be totally suppressed, whereas in naked mole rat colonies subordinate females are not sexually active, and many never breed.

1. Which of the following most accurately states the main idea of the passage?
   (A) Naked mole rat colonies are the only known examples of cooperatively breeding vertebrate societies.
   (B) Naked mole rat colonies exhibit social organization based on a rigid caste system.
   (C) Behavior in naked mole rat colonies may well be a close vertebrate analogue to behavior in eusocial insect societies.
   (D) The mating habits of naked mole rats differ from those of any other vertebrate species.
   (E) The basis for the division of labor among naked mole rats is the same as that among eusocial insects.

2. The passage suggests that Jarvis' work has called into question which of the following explanatory variables for naked mole rat behavior?
   (A) Size
   (B) Age
   (C) Reproductive status
   (D) Rate of growth
   (E) Previously exhibited behavior

3. It can be inferred from the passage that the performance of tasks in naked mole rat colonies differs from task performance in eusocial insect societies in which of the following ways?

(A) In naked mole rat colonies, all tasks ate performed cooperatively.

(B) In naked mole rat colonies, the performance of tasks is less rigidly determined by body shape.

(C) In naked mole rat colonies, breeding is limited to the largest animals.

(D) In eusocial insect societies, reproduction is limited to a single female.

(E) In eusocial insect societies, the distribution of tasks is based on body size.

4. According to the passage, which of the following is a supposition rather than a fact concerning the queen in a naked mole rat colony?

(A) She is the largest member of the colony.

(B) She exerts chemical control over the colony.

(C) She mates with more than one male.

(D) She attains her status through aggression.

(E) She is the only breeding female.

5. The passage supports which of the following inferences about breeding among Lycaon pictus?

(A) The largest female in the social group does not maintain reproductive status by means of behavioral control.

(B) An individual's ability to breed is related primarily to its rate of growth.

(C) Breeding is the only task performed by the breeding female.

(D) Breeding in the social group is not cooperative.

(E) Breeding is not dominated by a single pair of dogs.

6. According to the passage, naked mole rat colonies may differ from all other known vertebrate groups in which of the following ways?

(A) Naked mole rats exhibit an extreme form of altruism.

(B) Naked mole rats are cooperative breeders.

(C) Among naked mole rats, many males are permitted to breed with a single dominant female.

(D) Among naked mole rats, different tasks are performed at different times in an individual's life.

(E) Among naked mole rats, fighting results in the selection of a breeding female.

7. One function of the third paragraph of the passage is to

(A) state a conclusion about facts presented in an earlier paragraph

(B) introduce information that is contradicted by information in the fourth paragraph

(C) qualify the extent to which two previously mentioned groups might be similar

(D) show the chain of reasoning that led to the conclusions of a specific study

(E) demonstrate that of three explanatory factors offered, two may be of equal significance

Passage 61 (61/63)

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 (62/63)

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 on e 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 fights 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 (63/63)

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

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Passage 64 (1/22)

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 (2/22)

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 unum 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 that 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 (3/22)

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 i

llness 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 (4/22)

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 s uns. 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 (5/22)

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 (6/22)

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 (7/22)

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 ove r 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

Passage 71 (8/22)

Behavior is one of two general responses available to endothermic (warm-blooded) species for the regulation of body temperature, the other being innate (reflexive) mechanisms of heat production and heat loss. Human beings rely primarily on the first to provide a hospitable thermal microclimate for themselves, in which the transfer of heat between the body and the environment is accomplished with minimal involvement of innate mechanisms of heat production and loss. Thermoregulatory behavior anticipates hyperthermia, and the organism adjusts its behavior to avoid becoming hyperthermic: it removes layers of clothing, it goes for a cool swim, etc. The organism can also respond to changes in the temperature of the body core, as is the case during exercise; but such responses result from the direct stimulation of thermoreceptors distributed widely within the central nervous system, and the ability of these mechanisms to help the organism adjust to gross changes in its environment is limited.

Until recently it was assumed that organisms respond to microwave radiation in the same way that they respond to temperature changes caused by other forms of radiation. After all, the argument runs, microwaves are radiation and heat body tissues. This theory ignores the fact that the stimulus to a behavioral response is normally a temperature change that occurs at the surface of the organism. The thermoreceptors that prompt behavioral changes are located within the first millimeter of the skin's surface, but the energy of a microwave field may be selectively deposited in deep tissues, effectively bypassing these thermoreceptors, particularly if the field is at near-resonant frequencies. The resulting temperature profile may well be a kind of reverse thermal gradient in which the deep tissues are warmed more than those of the surface. Since the heat is not conducted outward to the surface to stimulate the appropriate receptors, the organism does not "appreciate" this stimulation in the same way that it "appreciates" heating and cooling of the skin.

In theory, the internal organs of a human being or an animal could be quite literally cooked well-done before the animal even realizes that the balance of its thermomicroclimate has been disturbed.

Until a few years ago, microwave irradiations at equivalent plane-wave power densities of about 100 mW/cm^2 were considered unequivocally to produce "thermal" effects; irradiations within the range of 10 to 100 mW/cm^2 might or might not produce "thermal" effects; while effects observed at power densities below 10 mW/cm^2 were assumed to be "nonthermal" in nature. Experiments have shown this to be an oversimplification, and a recent report suggests that fields as weak as 1 mW/cm^2 can be thermogenic. When the heat generated in the tissues by an imposed radio frequency (plus the heat generated by metabolism) exceeds the heat-loss capabilities of the organism, the thermoregulatory system has been compromised. Yet surprisingly, not long ago, an increase in the internal body temperature was regarded merely as "evidence" of a thermal effect.

1. The author is primarily concerned with
   (A) showing that behavior is a more effective way of controlling bodily temperature than innate mechanisms
   (B) criticizing researchers who will not discard their theories about the effects of microwave radiation on organisms
   (C) demonstrating that effects of microwave radiation are different from those of other forms of radiation
   (D) analyzing the mechanism by which an organism maintains its bodily temperature in a changing thermal environment
   (E) discussing the importance of thermoreceptors in the control of the internal temperature of an organism

2. The author makes which of the following points about innate mechanisms for heat production?
   I. They are governed by thermoreceptors inside the body of the organism rather than at the surface.
   II. They are a less effective means of compensating for gross changes in temperature than behavioral strategies.
   III. They are not affected by microwave radiation.
   (A) I only
   (B) I and II only
   (C) I and III only
   (D) II and III only
   (E) I, II, and III

3. Which of the following would be the most logical topic for the author to take up in the paragraph following the final paragraph of the selection?
   (A) A suggestion for new research to be done on the effects of microwaves on animals and human beings
   (B) An analysis of the differences between microwave radiation

(C) A proposal that the use of microwave radiation be prohibited because it is dangerous
(D) A survey of the literature on the effects of microwave radiation on human beings
(E) A discussion of the strategies used by various species to control hyperthermia

4. The author's strategy in lines 39-42 is to
(A) introduce a hypothetical example to dramatize a point
(B) propose an experiment to test a scientific hypothesis
(C) cite a case study to illustrate a general contention
(D) produce a counterexample to disprove an opponent's theory
(E) speculate about the probable consequences of a scientific phenomenon

5. The author implies that the proponents of the theory that microwave radiation acts on organisms in the same way as other forms of radiation based their conclusions primarily on
(A) laboratory research
(B) unfounded assumption
(C) control group surveys
(D) deductive reasoning
(E) causal investigation

6. The tone of the passage can best be described as
(A) genial and conversational
(B) alarmed and disparaging
(C) facetious and cynical
(D) scholarly and noncommittal
(E) scholarly and concerned

7. The author is primarily concerned with
(A) pointing out weaknesses in a popular scientific theory
(B) developing a hypothesis to explain a scientific phenomenon
(C) reporting on new research on the effects of microwave radiation
(D) criticizing the research methods of earlier investigators
(E) clarifying ambiguities in the terminology used to describe a phenomenon

Passage 72 (9/22)

Since Would War II considerable advances have been made in the area of health-care services. These include better access to health care (particularly for the poor and minorities), improvements in physical plants, and increased numbers of physicians and other health personnel. All have played a part in the recent improvement in life expectancy. But there is mounting criticism of the large remaining gaps in access, unbridled cost inflation, the further fragmentation of service, excessive indulgence in wasteful high-technology "gadgeteering," and a breakdown in doctor-p atient relationships. In recent years proposed panaceas and new programs, small and large, have proliferated at a feverish pace and disappointments multiply at almost the same rate. This has led to an increased pessimism—"everything has been tried and nothing works"—which sometimes borders on cynicism or even nihilism.

It is true that the automatic "pass through" of rapidly spiraling costs to government and insurance carriers, which was set in a publicized environment of "the richest nation in the world," produced for a time a sense of unlimited resources and allowed to develop a mood whereby every practitioner and institution could "do his own thing" without undue concern for the "Medical Commons." The practice of full-cost reimbursement encouraged capital investment and now the industry is overcapitalized. Many cities have hundreds of excess hospital beds; hospitals have proliferated a superabundance of high-technology equipment; and structural ostentation and luxury were the order of the day. In any given day, one-fourth of all community beds are vacant; expensive equipment is underused or, worse, used unnecessarily. Capital investment brings rapidly rising operating costs.

Yet, in part, this pessimism derives from expecting too much of health care. It must be realized that care is, for most people, a painful experience, often accompanied by fear and unwelcome results. Although there is vast room for improvement, health care will always retain some unpleasantness and frustration. Moreover, the capacities of medical science are limited. Humpty Dumpty cannot always be put back together again. Too many physicians are reluctant to admit their limitations to patients; too many patients and families are unwilling to accept such realities. Nor is it true that everything has been tried and nothing works, as shown by the prepaid group practice plans of the Kaiser Foundation and at Puget Sound. In the main, however, such undertakings have been drowned by a veritable flood of public and private moneys which have supported and encouraged the continuation of conventional practices and subsidized their shortcomings on a massive, almost unrestricted scale. Except for the most idealistic and dedicated, there were no incentives to seek change or to practice self-restraint or frugality. In this atmosphere, it is not fair to condemn as failures all attempted experiments; it may be more accurate to say many never had a fair trial.

1. The author implies that the Kaiser Foundation and Puget Sound plans (lines 47-48) differed from other plans by

   (A) encouraging capital investment

   (B) requiring physicians to treat the poor

   (C) providing incentives for cost control

   (D) employing only dedicated and idealistic doctors

   (E) relying primarily on public funding

2. The author mentions all of the following as consequences of full-cost reimbursement EXCEPT

   (A) rising operating costs

   (B) underused hospital facilities

   (C) overcapitalization

(D) overreliance on expensive equipment
(E) lack of services for minorities

3. The tone of the passage can best be described as
(A) light-hearted and amused
(B) objective but concerned
(C) detached and unconcerned
(D) cautious but sincere
(E) enthusiastic and enlightened

4. According to the author, the "pessimism" mentioned at line 35 is partly attributable to the fact that
(A) there has been little real improvement in health-care services
(B) expectations about health-care services are sometimes unrealistic
(C) large segments of the population find it impossible to get access to health-care services
(D) advances in technology have made health care service unaffordable
(E) doctors are now less concerned with patient care

5. The author cites the prepaid plans in lines 46-48 as
(A) counterexamples to the claim that nothing has worked
(B) examples of health-care plans that were over-funded
(C) evidence that health-care services are fragmented
(D) proof of the theory that no plan has been successful
(E) experiments that yielded disappointing results

6. It can be inferred that the sentence "Humpty Dumpty cannot always be put back together again" means that
(A) the cost of health-care services will not decline
(B) some people should not become doctors
(C) medical care is not really essential to good health
(D) illness is often unpleasant and even painful
(E) medical science cannot cure every ill

7. With which of the following descriptions of the system for the delivery of health-care services would the author most likely agree?
(A) It is biased in favor of doctors and against patients.
(B) It is highly fragmented and completely ineffective
(C) It has not embraced new technology rapidly enough
(D) It is generally effective but can be improved
(E) It discourages people from seeking medical care

8. Which of the following best describes the logical structure of the selection?
   (A) The third paragraph is intended as a refutation of the first and second paragraphs.
   (B) The second and third paragraphs explain and put into perspective the points made in the first paragraph.
   (C) The second and third paragraphs explain and put into perspective the points made in the first paragraph.
   (D) The first paragraph describes a problem, and the second and third paragraphs present two horns of a dilemma.
   (E) The first paragraph describes a problem, the second its causes, and the third a possible solution.

9. The author's primary concern is to
   (A) criticize physicians and health-care administrators for investing in technologically advanced equipment
   (B) examine some problems affecting delivery of health-care services and assess their severity
   (C) defend the medical community from charges that health-care has not improved since World War II
   (D) analyze the reasons for the health-care industry's inability to provide quality care to all segments of the population
   (E) describe the peculiar economic features of the health-care industry that are the causes of spiraling medical costs

Passage 73 (10/22)

During the Victorian period, women writers were measured against a social rather than a literary ideal. Hence, it was widely thought that novels by women should be modest, religious, sensitive, guileless, and chaste, like their authors. Many Victorian women writers took exception to this belief, however, resisting the imposition of nonliterary restrictions on their work. Publishers soon discovered that the gentlest and most iddylike female novelists were tough-minded and relentless when their professional integrity was at stake. Keenly aware of their artistic responsibilities, these women writers would not make concessions to secure commercial success.

The Brontes, George Eliot, Elizabeth Barrett Browning, and their lesser-known contemporaries repudiated, in their professional lives, the courtesy that Victorian ladies might exact from Victorian gentlemen. Desiring rigorous and impartial criticism, most women writers did not wish reviewers to be kind to them if kindness meant overlooking their literary weaknesses or flattering them on their accomplishments simply because of their sex. They had expected derisive reviews; instead, they found themselves confronted with generous criticism, which they considered condescending. Elizabeth Barrett Browning labeled it "the comparative respect which means... absolute scorn."

For their part, Victorian critics were virtually obsessed with finding the place of the woman writer so as to judge her appropriately. Many bluntly admitted that they thought

Jane Eyre a masterpiece if written by a man, shocking or disgusting if written by a woman. Moreover, reactionary reviewers were quick to associate an independent heroine with carefully concealed revolutionary doctrine; several considered *Jane Eyre* a radical feminist document, as indeed it was. To Charlotte Bronte, who had demanded dignity and independence without any revolutionary intent and who considered herself politically conservative, their criticism was an affront. Such criticism bunched all women writers together rather than treating them as individual artists.

Charlotte Bronte's experience served as a warning to other women writers about the prejudices that immediately associated them with feminists and others thought to be political radicals. Irritated, and anxious to detach themselves from a group stereotype, many expressed relatively conservative views on the emancipation of women (except on the subject of women's education) and stressed their own domestic accomplishments. However, in identifying themselves with women who had chosen the traditional career path of marriage and motherhood, these writers encountered still another threat to their creativity. Victorian prudery rendered virtually all experience that was uniquely feminine unprintable. No nineteenth-century woman dared to describe childbirth, much less her sexual passion. Men could not write about their sexual experiences either, but they could write about sport, business, crime, and war—all activities from which women were barred. Small wonder no woman produced a novel like *War and Peace*. What is amazing is the sheer volume of first-rate prose and poetry that Victorian women did write.

1. The primary purpose of the passage is to
   (A) refute the contention that no Victorian woman writer produced a novel like *War and Peace*
   (B) trace the historical relationship between radical feminist politics and the Victorian novels written by women
   (C) show how three Victorian women writers responded to criticism of their novels
   (D) resolve the apparent contradiction between Victorian women writers' literary innovativeness and their rather conservative social views
   (E) describe the discrepancy between Victorian society's expectations of women writers and the expectations of the women writers themselves

2. According to the passage, Victorian women writers "would not make concessions" (line 13) to publishers primarily because they felt that such concessions would
   (A) require them to limit descriptions of uniquely feminine experiences
   (B) compromise their artistic integrity
   (C) make them vulnerable to stereotyping by critics
   (D) provide no guarantee that their works would enjoy commercial success
   (E) go against the traditions of English letters

3. The passage suggests that Victorian criticism of works by women writers was
   (A) indulgent

(B) perfunctory
(C) resourceful
(D) timely
(E) apolitical

4. The author of the passage quotes Elizabeth Barrett Browning (lines 28-29) in order to demonstrate that Victorian women writers
(A) possessed both talent and literary creativity
(B) felt that their works were misunderstood
(C) refused to make artistic concessions
(D) feared derisive criticism
(E) resented condescending criticism

5. It can be inferred from the passage that Charlotte Bronte considered the criticisms leveled at Jane Eyre by reactionary reviewers "an affront" (line 43) primarily because such criticism
(A) exposed her carefully concealed revolutionary doctrine to public scrutiny
(B) assessed the literary merit of the novel on the basis of its author's sex
(C) assumed that her portrayal of an independent woman represented revolutionary ideas
(D) labeled the novel shocking and disgusting without just cause
(E) denied that the novel was a literary masterpiece

6. Which of the following statements best describes the "threat" mentioned in line 57 of the passage?
(A) Critics demanded to know the sex of the author before passing judgment on the literary quality of a novel.
(B) Women writers were prevented from describing in print experiences about which they had special knowledge.
(C) The reading public tended to prefer historical novels to novels describing contemporary London society.
(D) Publishers were urging Victorian women writers to publish under their own names rather than under pseudonyms.
(E) Women writers' domestic responsibilities tended to take time away from their writing.

7. The passage suggests that the attitude of Victorian women writers toward being grouped together by critics was most probably one of
(A) relief
(B) indifference
(C) amusement
(D) annoyance

(E) ambivalence

8. It can be inferred from the passage that a Victorian woman writer who did not consider herself a feminist would most probably have approved of women's
   (A) entering the noncombat military
   (B) entering the publishing business
   (C) entering a university
   (D) joining the stock exchange
   (E) joining a tennis club

9. The passage suggests that the literary creativity of Victorian women writers could have been enhanced if
   (A) women had been allowed to write about a broader range of subjects
   (B) novels of the period had been characterized by greater stylistic and structural ingenuity
   (C) a reserved and decorous style had been a more highly valued literary ideal
   (D) publishers had sponsored more new women novelists
   (E) critics had been kinder in reviewing the works of women novelists

Passage 74 (11/22)

Agricultural progress provided the stimulus necessary to set off economic expansion in medieval France. As long as those who worked the land were barely able to ensure their own subsistence and that of their landlords, all other activities had to be minimal, but when food surpluses increased, it became possible to release more people for governmental, commercial, religious and cultural pursuits.

However, not all the funds from the agricultural surplus were actually available for commercial investment. Much of the surplus, in the form of food increases, probably went to raise the subsistence level; an additional amount, in the form of currency gained from the sale of food, went into the royal treasury to be used in waging war. Although Louis VII of France levied a less crushing tax burden on his subjects than did England's Henry II, Louis VII did spend great sums on an unsuccessful crusade, and his vassals—both lay and ecclesiastic—took over spending where their sovereign stopped. Surplus funds were claimed both by the Church and by feudal landholders, whereupon cathedrals and castles mushroomed throughout France.

The simultaneous progress of cathedral building and, for instance, vineyard expansion in Bordeaux illustrates the very real competition for available capital between the Church and commercial interests; the former produced inestimable moral and artistic riches, but the latter had a stronger immediate impact upon gross national product. Moreover, though all wars by definition are defensive, the frequent crossings of armies that lived off the land and impartially burned all the huts and barns on their path consumed considerable resources.

Since demands on the agricultural surplus would have varied from year to year, we cannot precisely calculate their impact on the commercial growth of medieval France. But we must bear that impact in mind when estimating the assets that were likely to have been available for investment. No doubt castle and cathedral building was not totally barren of profit (for th e builders, that is), and it produced intangible dividends of material and moral satisfaction for the community. Even wars handed back a fragment of what they took, at least to a few. Still, we cannot place on the same plane a primarily destructive activity and a constructive one, nor expect the same results from a new bell tower as from a new water mill. Above all, medieval France had little room for investment over and above the preservation of life. Granted that war cost much less than it does today, that the Church rendered all sorts of educational and recreational services that were unobtainable elsewhere, and that government was far less demanding than is the modern state—nevertheless, for medieval men and women, supporting commercial development required considerable economic sacrifice.

1. According to the passage, agricultural revenues in excess of the amount needed for subsistence were used by medieval kings to

    (A) patronize the arts
    (B) sponsor public recreation
    (C) wage war
    (D) build cathedrals
    (E) fund public education

2. According to the passage, which of the following was an important source of revenue in medieval France?

    (A) Cheese
    (B) Wine
    (C) Wool
    (D) Olive oil
    (E) Veal

3. The passage suggests that which of the following would have reduced the assets immediately available for commercial investment in medieval France?

    I. Renovation of a large cathedral
    II. A sharp increase in the birth rate
    III. An invasion of France by Henry II

    (A) III only
    (B) I and II only
    (C) I and III only
    (D) II and III only
    (E) I, II, and III

4. It can be inferred from the passage that more people could enter government and the Church in medieval France because

    (A) the number of individual landholdings in heavily agricultural areas was beginning to increase

(B) an increase in the volume of international trade had brought an increase in the population of cities

(C) a decrease in warfare had allowed the king to decrease the size of the army

(D) food producers could grow more food than they and their families needed to survive

(E) landlords were prospering and thus were demanding a smaller percentage of tenants' annual yields

5. The author implies that the reason we cannot expect the same results from a new bell tower as from a new water mill is that

(A) bell towers yield an intangible dividend

(B) bell towers provide material satisfaction

(C) water mills cost more to build than bell towers

(D) water mills divert funds from commerce

(E) water mills might well be destroyed by war

6. The author of the passage most probably bases his central argument on which of the following theoretical assumptions often made by economists?

(A) Different people should be taxed in proportion to the benefit they can expect to receive from public activity.

(B) Perfect competition exists only in the case where no farmer, merchant, or laborer controls a large enough share of the total market to influence market price.

(C) A population wealthy enough to cut back its rate of consumption can funnel the resulting savings into the creation of capital.

(D) A full-employment economy must always, to produce one good, give up producing another good.

(E) There is a universal tendency for population, unless checked by food supply, to increase in a geometric progression.

7. The author suggests that commercial expansion in medieval France "required considerable economic sacrifice" (lines 59-60) primarily for which of the following reasons?

(A) Cathedrals cost more to build and rebuild than did castles.

(B) The numerous wars fought during the period left the royal treasury bankrupt.

(C) Louis VII levied a more crushing tax burden on his subjects than did Henry II.

(D) Although much of the available surplus had been diverted into vineyard expansion, the vineyards had not yet begun to produce.

(E) Although more food was being produced, the subsistence level was not very far above the minimum required to sustain life.

8. The passage implies that which of the following yielded the lowest dividend to medieval men and women relative to its cost?

(A) Warfare

(B) Vineyard expansion
(C) Water mill construction
(D) Castle building
(E) Cathedral building

9. Which of the following statements best expresses the central idea of the passage?
(A) Commercial growth in medieval France may be accurately computed by calculating the number of castles and cathedrals built during the period.
(B) Competition between the Church and the feudal aristocracy for funds created by agricultural surplus demonstrably slowed the economic growth of medieval France.
(C) Despite such burdens as war and capital expansion by landholders, commerce in medieval France expanded steadily as the agricultural surplus increased.
(D) Funds actually available for commerce in medieval France varied with the demands placed on the agricultural surplus.
(E) The simultaneous progress of vineyard expansion and building in medieval France gives evidence of a rapidly expanding economy.

Passage 75 (12/22)

For years scholars have contrasted slavery in the United States and in Brazil, stimulated by the fact that racial patterns assumed such different aspects in the two countries after emancipation. Brazil never developed a system of rigid segregation of the sort that replaced slavery in the United States, and its racial system was fluid because its definition of race was based as much on characteristics such as economic status as on skin color. Until recently, the most persuasive explanation for these differences was that Portuguese institutions especially the Roman Catholic church and Roman civil law, promoted recognition of the slave’s humanity. The English colonists, on the other hand, constructed their system of slavery out of whole cloth. There were simply no precedents in English common law, and separation of church and state barred Protestant clergy from the role that priests assumed in Brazil.

But the assumption that institutions alone could so powerfully affect the history of two raw and malleable frontier countries seems, on reexamination, untenable. Recent studies focus instead on a particular set of contrasting economic circumstances and demographic profiles at significant periods in the histories of the two countries. Persons of mixed race quickly appeared in both countries. In the United States they were considered to be Black, a social definition that was feasible because they were in the minority. In Brazil, it was not feasible. Though intermarriage was illegal in both countries, the laws were unenforceable in Brazil since Whites formed a small minority in an overwhelmingly Black population. Manumission for persons of mixed race was also easier in Brazil, particularly in the nineteenth century when in the United States it was hedged about with difficulties. Furthermore, a shortage of skilled workers in Brazil provided persons of mixed race with the opportunity to learn crafts and trades, even before general emancipation, whereas in the United States entry into these occupations was blocked by Whites sufficiently numerous to fill the posts. The consequence was the development in Brazil of a large class of persons of mixed race, proficient in skilled trades and crafts, who stood waiting as a community for freed slaves to join.

There should be no illusion that Brazilian society after emancipation was color-blind. Rather, the large population of persons of mixed race produced a racial system that included a third status, a bridge between the Black caste and the White, which could be traversed by means of economic or intellectual achievement, marriage, or racial heritage. The strict and sharp line between the races so characteristic of the United States in the years immediately after emancipation was simply absent. With the possible exception of New Orleans, no special "place" developed in the United States for persons of mixed race. Sad to say, every pressure of society worked to prevent their attaining anything approximating the economic and social position available to their counterparts in Brazil.

1. In the passage, the author is primarily concerned with
   (A) contrasting the systems of slavery that were established in Brazil and in the United States
   (B) criticizing the arguments of those scholars who considered religion and law to be the determinants of the systems of slavery in Brazil and in the United States
   (C) describing the factors currently thought to be responsible for the differences in the racial patterns that evolved in Brazil and in the United States
   (D) advocating further study of the differences between the racial systems that developed in Brazil and in the United States
   (E) pointing out the factors that made the status of Blacks in the United States lower than that of Blacks in Brazil

2. According to the passage, early scholars explained the differences between the racial systems that developed in the United States and in Brazil as the result of which of the following factors?
   (A) Institutional
   (B) Demographic
   (C) Economic
   (D) Geographical
   (E) Historical

3. In the context in which it is found, the phrase "constructed their system of slavery out of whole cloth" (lines 15-16) implies that the system of slavery established by the English settlers was
   (A) based on fabrications and lies
   (B) tailored to the settlers' particular circumstances
   (C) intended to serve the needs of a frontier economy
   (D) developed without direct influence from the settlers' religion or legal system
   (E) evolved without giving recognition to the slave's humanity

4. The author implies that the explanation proposed by early scholars for the differences between the systems of slavery in the United States and in Brazil is
   (A) stimulating to historians and legal scholars
   (B) more powerful than more recent explanations
   (C) persuasive in spite of minor deficiencies
   (D) excessively legalistic in its approach
   (E) questionable in light of current scholarly work

5. The author mentions intermarriage, manumission, and the shortage of skilled workers in Brazil primarily in order to establish which of the following?
   (A) The environment in which Brazil's racial system developed
   (B) The influence of different legal and economic conditions in Brazil and the United States on the life-style of persons of mixed race
   (C) The origins of Brazil's large class of free skilled persons of mixed race
   (D) The differences between treatment of slaves in Brazil and in the United States
   (E) The difficulties faced by persons of mixed race in the United States, as compared to those in Brazil

6. According to the passage, Brazilian laws prohibiting intermarriage were ineffective because Brazil had a
   (A) Portuguese Catholic heritage
   (B) Small minority of whites
   (C) Liberal set of laws concerning manumission
   (D) Large number of freed slaves
   (E) Shortage of people in the skilled crafts and trades

7. The use of quotation marks around the word "place" (line 59) suggests that the author intended to convey which of the following?
   (A) An ambivalent attitude toward the city of New Orleans
   (B) A negative attitude toward the role of race in determining status in the United States
   (C) A critical comment about the maltreatment of persons of mixed race in the United States
   (D) A double meaning, indicating both a social status and a physical location
   (E) An ambiguity, referring to either the role persons of mixed race actually played, or the role they were assigned by the society

8. With which of the following statements regarding human behavior would the author of the passage be most likely to agree?
   (A) Only a fool or a political candidate would sing very loudly the glories of the institutions of Western culture.
   (B) Contact sports—displacements of our abiding impulses to kill—speak of essential human behavior more truthfully than all the theories

of psychologists and historians.

(C) Family, church, political party: these are the strong foundations of history and human behavior.

(D) Money and its pursuit: an exploration of that theme will chart accurately the development of civilizations and the determinants of human behavior.

(E) The circumstances in which humans find themselves—more than treasured beliefs or legal prescriptions—mold human behavior.

Passage 76 (13/22)

Desertification, the creation of desert-like conditions where none had existed before, is the result of the vagaries of weather and climate or the mismanagement of the land or, in most cases, some combination of both. Such ecological deterioration in the Sahel has been linked in several ways to the increased size of livestock herds. During the fifteen years preceding 1968, a period of extremely favorable rainfall, the pastoralists moved into the marginal regions in the north with relatively large herds. However, with the onset of a series of dry years beginning at the end of the rainy season in 1967, the pastoral populations found themselves overtaxing very marginal rangelands, with the result that the nomads viewed themselves as victims of a natural disaster. The mistaken idea that drought is an unexpected event has often been used to excuse the fact that long-range planning has failed to take rainfall variability into account. People blame the climate for agricultural failures in semiarid regions and make it a scapegoat for faulty population and agricultural policies.

Deterioration and ultimately desertification in the Sahel and in other ecosystems can be combated only if an ecologically realistic carrying capacity for the rangelands is determined. Although there appears to be widespread agreement that such a determination would be significant, there has been little agreement on how to make operational the concept of carrying capacity, defined as the amount of grazing stock that the pasture can support without deterioration of either the pasture or the stock. Should the carrying capacity be geared to the best, the average, or the poorest years? Which combination of statistical measures would be most meaningful for the planning of long-term development of rangelands? On which variables should such an assessment be based, vegetation, rainfall, soil, ground and surface water, or managerial capabilities? Such inconclusiveness within the scientific community, while understandable, creates confusion for the land managers, who often decide to take no action or who decide that all scientific suggestions are of equal weight and, therefore, indiscriminately choose any one of those suggested. Given the downward spiral of land deterioration, it becomes essential that an ecologically acceptable carrying capacity be established and enforced.

It will also be crucial that land managers know what statistical and quasi-statistical measures actually mean: no single number can adequately describe the climate regime of an arid or semiarid region. Land managers must supplement such terms as the "mean" with more informative statistical measures to characterize adequately the variability of the climate. The understanding of this high degree of variability will serve to remove one of the major obstacles to resolving the perennial problems of the Sahel and of other arid or semiarid regions.

1. The author is primarily concerned with
   (A) criticizing a social attitude
   (B) suggesting an approach to solving a problem
   (C) explaining the mechanics of a process
   (D) defending the theories of ecological scientists
   (E) establishing criteria for an experiment

2. According to the passage, which of the following contributed to the desertification of the Sahel?
   I. The size of the livestock herds grazing on the land
   II. The quality of the land in the Sahel
   III. The amount of rainfall after 1967
   (A) I only
   (B) II only
   (C) III only
   (D) I and III only
   (E) I, II, and III

3. It can be inferred from the passage that the nomadic tribes who moved into the marginal regions of the Sahel did NOT
   (A) enlarge the size of their livestock herds
   (B) conserve water after the drought began
   (C) live in the Sahel after 1968
   (D) expect a drastic change in weather conditions
   (E) seek governmental aid in overcoming drought conditions

4. It can be inferred from the passage that the concept of the carrying capacity of land is
   (A) still hypothetical rather than practical
   (B) basically political rather than ecological
   (C) independent of climatic conditions
   (D) relatively unknown among ecologists
   (E) generally misrepresented by ecologists

5. Which of the following best states the author's view concerning the relationship between the ecological scientist and the land manager?
   (A) The scientist has not provided the manager with clear guidelines that can be used in regulating the productivity of land.
   (B) The scientist has provided theories that are too detailed for the manager to use successfully.
   (C) The scientist and the manager, in attempting to regulate the use of semiarid land, have ignored the traditional behavior patterns of past

oral communities.

(D) The manager has misunderstood and hence misapplied the suggestions of the scientist.

(E) The manager has chosen from among the scientist's suggestions those that are economically rather than ecologically safe.

6. With which of the following statements concerning desertification would the author be most likely to agree?

(A) It is the result of factors beyond the control of science.

(B) It is a problem largely affecting arid regions.

(C) It could be prevented if land managers understood statistics.

(D) It is not always the result of drastic climate changes alone.

(E) It is not attributable to faulty agricultural policies.

7. According to the passage, a statistical description of the climate regime of an arid or semiarid region would probably be

(A) misleading

(B) impossible

(C) complex

(D) meaningless

(E) abstract

8. The tone of the passage can best be described as

(A) flippant

(B) objective

(C) aggressive

(D) apologetic

(E) unconcerned

Passage 77 (14/22)

The promise of finding long-term technological solutions to the problem of world food shortages seems difficult to fulfill. Many innovations that were once heavily supported and publicized, such as fish-protein concentrate and protein from algae grown on petroleum substrates, have since fallen by the wayside. The proposals themselves were technically feasible, but they proved to be economically unviable and to yield food products culturally unacceptable to their consumers. Recent innovations such as opaque-2 maize, Antarctic krill, and the wheat-rye hybrid triticale seem more promising, but it is too early to predict their ultimate fate.

One characteristic common to unsuccessful food innovations has been that, even with extensive government support, they often have not been technologically adapted or culturally acceptable to the people for whom they had been developed. A successful new technology, therefore, must fit the entire sociocultural system in which it is to find a place. Security of crop yield, practicality of storage, palatability, an d costs are much more significant than had previously been realized by the advocates of new technologies. For example, the better protein quality in tortillas made from opaque-2 maize will be of only limited benefit to a family on the margin of subsistence if the new maize is not culturally acceptable or is more vulnerable to insects.

The adoption of new food technologies depends on more than these technical and cultural considerations; economic factors and governmental policies also strongly influence the ultimate success of any innovation. Economists in the Anglo-American tradition have taken the lead in investigating the economics of technological innovation. Although they exaggerate in claiming that profitability is the key factor guiding technical change—they completely disregard the substantial effects of culture—they are correct in stressing the importance of profits. Most technological innovations in agriculture can be fully used only by large landowners and are only adopted if these profit-oriented business people believe that the innovation will increase their incomes. Thus, innovations that carry high rewards for big agribusiness groups will be adopted even if they harm segments of the population and reduce the availability of food in a country. Further, should a new technology promise to alter substantially the profits and losses associated with any production system, those with economic power will strive to maintain and improve their own positions. Since large segments of the populations of many developing countries are close to the subsistence margin and essentially powerless, they tend to be the losers in this system unless they are aided by a government policy that takes into account the needs of all sectors of the economy. Therefore, although technical advances in food production and processing will perhaps be needed to ensure food availability, meeting food needs will depend much more on equalizing economic power among the various segments of the populations within the developing countries themselves.

1. Which of the following best describes the organization of the first paragraph?
   (A) A suggestion is made and arguments in its favor are provided.
   (B) A criticism is levied and an alternative proposal is suggested.
   (C) A generalization is advanced and supporting evidence is provided.
   (D) An example is analyzed and general conclusions are derived from it.
   (E) A position is stated and evidence qualifying it is provided.

2. It can be inferred from the passage that the author was unable to assess the truth of which of the following statements about opaque-2 maize?
   (A) It is a more recent innovation than the use of fish-protein concentrate.
   (B) It can be stored as easily as other varieties of maize.
   (C) It is more popular than the wheat-rye hybrid triticale.
   (D) It produces tortillas of greater protein content than do other varieties of maize.
   (E) It is more susceptible to insects than are other varieties of maize.

3. The passage mentions all of the following as factors important to the success of a new food crop EXCEPT the

(A) practicality of storage of the crop
(B) security of the crop yield
(C) quality of the crop's protein
(D) cultural acceptability of the crop
(E) costs of production of the crop

4. According to the passage, the use of Antarctic krill as a food is an innovation whose future is
(A) basically gloomy but still uncertain
(B) somewhat promising but very tentative
(C) generally bright and virtually assured
(D) tied to the success of opaque-2 maize
(E) endangered by certain technical problems

5. The author suggests that, in most developing countries, extensive government intervention accompanying the introduction of a food innovation will
(A) usually be sufficient to guarantee the financial success of the innovation
(B) be necessary to ensure that the benefits of the innovation will be spread throughout the society
(C) provide the incentive necessary to convince landowners to try the innovation
(D) generally cost the country more than will be earned by the innovation
(E) normally occur only when the innovation favors large landowners

6. It can be inferred from the passage that the author would be most likely to agree with which of the following statements concerning the solution to food shortages in developing countries?
(A) The introduction of technological innovations to reap profits might alleviate food shortages to some degree, but any permanent solution can come only from effective governmental intervention in the socioeconomic system.
(B) Innovations in agricultural technology will be of little help, and perhaps even harmful, in combating food shortages, no matter how well designed they are to suit local circumstances.
(C) Long-lasting solutions will not be found until large landowners adopt improvements that will make production more efficient and thus more profitable.
(D) In order to achieve a meaningful solution to the problem of food shortages, the tastes of the general population must be educated to accept the new food products of modern agricultural technology.
(E) Although a short-term solution to food shortages can be achieved by importing food from other countries, a long-term solution requires a restructuring of the countries' socioeconomic system.

7. The first paragraph of the passage best supports which of the following statements?

(A) Too much publicity can harm the chances for the success of a new food innovation.

(B) Innovations that produce culturally acceptable crops will generally be successful.

(C) A food-product innovation can be technically feasible and still not be economically viable.

(D) It is difficult to decide whether a food-product innovation has actually been a success.

(E) Triticale will not be a success as a food source for most developing countries.

8. The author provides a sustained argument to support which of the following assertions?

(A) Profitability is neither necessary nor sufficient for a new technology to be adopted.

(B) Profitability is the key factor guiding technological change.

(C) Economic factors and governmental policies strongly influence the ultimate success of any innovation.

(D) Opaque-2 maize is of limited benefit to poor families in developing countries.

(E) Innovations carrying high rewards for big agribusiness groups harm the poor.

9. The primary purpose of the passage is to discuss the

(A) means of assessing the extent of the world food shortage

(B) difficulties of applying technological solutions to the problem of food shortages

(C) costs of introducing a new food technology into a developing country

(D) Anglo-American bias of those trying to alleviate world food problems

(E) nature of the new technological innovations in the area of food production

Passage 78 (15/22)

In Roman times, defeated enemies were generally put to death as criminals for having offended the emperor of Rome. In the Middle Ages, however, the practice of ransoming, or returning prisoners in exchange for money, became common. Though some saw this custom as a step towards a more humane society, the primary reasons behind it were economic rather than humanitarian.

In those times, rulers had only a limited ability to raise taxes. They could neither force their subjects to fight nor pay them to do so. The promise of material compensation in the form of goods and ransom was therefore the only way of inducing combatants to participate in a war. In the Middle Ages, the predominant incentive for the individual soldier to participate in a war was the expectation of spoils. Although collecting ransom clearly brought financial gain, keeping a prisoner and arranging for his exchange had its costs. Consequently, several procedures were devised to reduce transaction costs.

One such device was a rule asserting that the prisoner had to assess his own value. This compelled the prisoner to establish a value without much distortion; indicating too low a value would increase the captive's chances of being killed, while indicating too high a value would either ruin him financially or create a prohibitively expensive ransom that would also result in death.

A second means of reducing costs was the practice of releasing a prisoner on his word of honor. This procedure was advantageous to both parties since the captor was relieved of the expense of keeping the prisoner while the captive had freedom of movement. The captor also benefited financially by having his captive raise the ransom himself. This "parole" was a viable practice since the released prisoner risked recapture or retaliation against his family. Moreover, in medieval society, breaking one's word had serious consequences. When, for example, King Francois I broke his word to the Emperor Charles V in 1525, his reputation suffered immensely.

A third method of reducing costs was the use of specialized institutions to establish contact between the two parties. Two types of institutions emerged: professional dealers who acted as brokers, and members of religious orders who acted as neutral intermediaries. Dealers advanced money for the ransom and charged interest on the loan. Two of the religious orders that became intermediaries were the Mercedarians and the Trinitarians, who between them arranged the ransom of nearly one million prisoners.

1. The primary purpose of the passage is to
   (A) discuss the economic basis of the medieval practice of exchanging prisoners for ransom
   (B) examine the history of the treatment of prisoners of war
   (C) emphasize the importance of a warrior's "word of honor" during the Middle Ages
   (D) explore three ways of reducing the costs of ransom
   (E) demonstrate why warriors of the Middle Ages looked forward to battles

2. It can be inferred from the passage that a medieval soldier
   (A) was less likely to kill captured members of opposing armies than was a soldier of the Roman Empire
   (B) was similar to a 20th-century terrorist in that he operated on a basically independent level and was motivated solely by economic incentives
   (C) had few economic options and chose to fight because it was the only way to earn an adequate living
   (D) was motivated to spare prisoners' lives by humanitarian rather than economic ideals
   (E) had no respect for his captured enemies since captives were typically regarded as weak

3. Which of the following best describes the change in policy from executing prisoners in Roman times to ransoming prisoners in the Middle Ages?
   (A) The emperors of Rome demanded more respect than did medieval rulers and thus Roman subjects went to greater lengths to defend their nation.

(B) It was a reflection of the lesser degree of direct control medieval rulers had over their subjects.

(C) It became a show of strength and honor for warriors of the Middle Ages to be able to capture and return their enemies.

(D) Medieval soldiers were not as humanitarian as their ransoming practices might have indicated.

(E) Medieval soldiers demonstrated more concern about economic policy than did their Roman counterparts.

4. The author uses the phrase "without much distortion" (line 26) in order

(A) to indicate that prisoners would fairly assess their worth

(B) to emphasize the important role medieval prisoners played in determining whether they should be ransomed

(C) to explain how prisoners often paid more than an appropriate ransom in order to increase their chances for survival

(D) suggest that captors and captives often had understanding relationships

(E) to show that when in prison a soldier's view could become distorted

5. All of the following are mentioned in the passage as actions that were taken to ensure that ransoming prisoners was a profitable operation EXCEPT

(A) each prisoner was made to designate the amount of ransom to be paid for his return

(B) prisoners were released on the condition that they guaranteed that their ransoms would be paid

(C) professional intermediaries were employed to facilitate the smooth exchange of prisoner and ransom at a price to the prisoner

(D) religious orders acted as impartial mediators by arranging the trade-off of ransom and prisoner

(E) medieval rulers promised to aid soldiers in their efforts to collect ransom

6. In the author's opinion, a soldier's decision to spare an adversary's life be linked historically to

(A) the economic relationship of the warring states

(B) the case with which a soldier could capture and subsequently imprison his enemy

(C) the economic gain from taking an enemy prisoner rather than killing him in combat

(D) technological advances in weaponry

(E) the desire for soldiers to uphold their word of honor

7. It can be inferred from the passage that the process of arranging ransoms during medieval times was

(A) more lucrative for medieval soldiers and kings than the winning of spoils

(B) a procedure so costly that it was not economically worthwhile for the captors
(C) futile for the captive since he risked recapture even after his ransom was paid
(D) a potential source of income for others aside from the captors of the prisoners
(E) handled only through Mercedarian or Trinitarian intermediaries

8. Which of the following best describes the organization of the passage?
(A) An assertion is made, briefly explained, and then several examples that refute the assertion are given.
(B) A hypothesis is offered, carefully qualified, and then supporting data is analyzed.
(C) A generally accepted historical viewpoint is presented in order to introduce discussion of its strengths and limitations.
(D) A historical analysis is made of a phenomenon and supporting details are offered.
(E) A historical dispute is introduced, and the case for one side is examined in detail.

Passage 79 (16/22)

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 (lines 2 and 8) 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

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.

Passage 80 (17/22)

Most large corporations in the United States were once run by individual capitalists who owned enough stock to dominate the board of directors and dictate company policy. Because putting such large amounts of stock on the market would only depress its value, they could not sell out for a quick profit and instead had to concentrate on improving the long-term productivity of their companies. Today, with few exceptions, the stock of large United States corporations is held by large institutions—pension funds, for example—and because these institutions are prohibited by antitrust laws from owning a majority of a company's stock and from actively influencing a company's decision-making, they can enhance their wealth only by buying and selling stock in anticipation of fluctuations in its value. A minority shareholder is necessarily a short term trader. As a result, United States productivity is unlikely to improve unless shareholders and the managers of the companies in which they invest are encouraged to enhance long-term productivity (and hence long-term profitability), rather than simply to maximize short-term profits.

Since the return of the old-style capitalist is unlikely, today's short-term traders must be remade into tomorrow's long-term capitalistic investors. The legal limits that now prevent financial institutions from acquiring a dominant shareholding position in a corporation should be removed, and such institutions encouraged to take a more active role in the operations of the companies in which they invest. In addition, any institution that holds twenty percent or more of a company's stock should be forced to give the public one day's notice of the intent to sell those shares. Unless the announced sale could be explained to the public on grounds other than anticipated future losses, the value of the stock would plummet and, like the old-time capitalists, major investors could cut their losses only by helping to restore their companies' productivity. Such measures would force financial institutions to become capitalists whose success depends not on trading shares at the propitious moment, but on increasing the productivity of the companies in which they invest.

1. In the passage, the author is primarily concerned with doing which of the following?
   (A) Comparing two different approaches to a problem
   (B) Describing a problem and proposing a solution
   (C) Defending an established method
   (D) Presenting data and drawing conclusions from the data
   (E) Comparing two different analyses of a current situation

2. It can be inferred from the passage that which of the following is true of majority shareholders in a corporation?
   (A) They make the corporation's operational management decisions.
   (B) They are not allowed to own more than fifty percent of the corporation's stock.
   (C) They cannot make quick profits by selling their stock in the corporation.
   (D) They are more interested in profits than in productivity.
   (E) They cannot sell any of their stock in the corporation without giving the public advance notice.

3. According to the passage, the purpose of the requirement suggested in lines 30-33 would be which of the following?
   (A) To encourage institutional stockholders to sell stock that they believe will decrease in value
   (B) To discourage institutional stockholders from intervening in the operation of a company whose stock they own
   (C) To discourage short-term profit-taking by institutional stockholders
   (D) To encourage a company's employees to take an active role in the ownership of stock in the company
   (E) To encourage investors to diversify their stock holdings

4. Which of the following best explains the author's statement that "A minority shareholder is necessarily a short-term trader" (lines 15-16)?
   (A) The only way a minority shareholder can make money from stocks is to buy and sell stocks as prices fluctuate over short periods of time.
   (B) Only a shareholder who owns a majority of a company's stock can influence the trading price of the stock over a long period of time.
   (C) A minority shareholder is prohibited by law from buying stock and holding it for long-term profits.
   (D) Large institutions like pension funds cannot legally own a majority of any corporation's stock.
   (E) A minority shareholder rarely takes an interest in the decisions of a corporation's board of directors.

5. The author suggests that which of the following is a true statement about people who typify the "old style capitalist" referred to in line 23?
   (A) They now rely on outdated management techniques.
   (B) They seldom engaged in short-term trading of the stock they owned.
   (C) They did not influence the investment policies of the corporations in which they invested.
   (D) They now play a much smaller role in the stock market as a result of antitrust legislation.
   (E) They were primarily concerned with maximizing the short-term profitability of the corporations in which they owned stock.