



particularly important killer of the caterpillars in outbreak years. Caterpillars contract wilt disease when they eat a leaf to which the virus, encased in a protein globule, has become attached. Once ingested by a caterpillar, the protein globule dissolves, releasing thousands of viruses, or virions, that after about two weeks multiply enough to fill the entire body cavity. When the caterpillar dies, the virions are released to the outside, encased in a new protein globule synthesized from the caterpillar's tissues and ready to be picked up by other caterpillars.

Knowing that phenols, including tannins, often act by associating with and altering the activity of proteins, researchers focused on the effects on caterpillars of ingesting the virus and leaves together. They found that on tannin-rich oak leaves, the virus is considerably less effective at killing caterpillars than when it is on aspen leaves, which are lower in phenols. In general, the more concentrated the phenols in tree leaves, the less deadly the virus. Thus, while highly concentrated phenols in tree leaves reduce the caterpillar population by limiting the size of caterpillars and, consequently, the size of the female's egg cluster, these same chemicals also help caterpillars survive by disabling the wilt virus. Forest stands of red oaks, with their tannin-rich foliage, may even provide caterpillars with safe havens from disease. In stands dominated by trees such as aspen, however, incipient gypsy moth outbreaks are quickly suppressed by viral epidemics.

Further research has shown that caterpillars become virtually immune to the wilt virus as the trees on which they feed respond to increasing defoliation. The trees' own defenses raise the threshold of caterpillar vulnerability to the disease, allowing populations to grow denser without becoming more susceptible to infection. For these reasons, the benefits to the caterpillars of ingesting phenols appear to outweigh the costs. Given the presence of the virus, the trees' defensive tactic apparently has backfired.

23. Which of the following statements best expresses the main point of the passage?
- (A) Which of the following statements best expresses the main point of the passage?
  - (B) A mechanism used by trees to combat the threat from gypsy moth caterpillars have had a devastating impact on trees in the northeastern United States.
  - (C) Although deadly to gypsy moth caterpillars, wilt disease has failed to significantly affect the population density of the caterpillars.
  - (D) The tree species with the highest levels of phenols in their foliage are the most successful in defending themselves against gypsy moth caterpillars.
  - (E) In their efforts to develop new methods for controlling gypsy moth caterpillars, researchers have focused on the effects of phenols in tree leaves on the insects' growth and reproduction.
24. In lines 8, the phrase "the trees" defensive mechanism has an impact on moth fecundity refers to which of the following phenomena?
- (A) Female moths that ingest phenols are more susceptible to wilt virus, which causes them to lay smaller eggs.
  - (B) Highly concentrated phenols in tree leaves limit caterpillars' food supply, thereby reducing the gypsy moth population.
  - (C) Phenols attack the protein globule that protects moth egg clusters, making them vulnerable to wilt virus and lowering their survival rate.
  - (D) Phenols in oak leaves drive gypsy moths into forest stands dominated by aspens, where they succumb to viral epidemics.

- (E)The consumption of phenols by caterpillars results in undersized female gypsy moths, which tend to produce small egg clusters.
25. It can be inferred from the passage that wilt disease virions depend for their survival on \_\_\_\_\_.
- (A)protein synthesized from the tissues of a host caterpillar
  - (B)aspen leaves with high concentrations of phenols
  - (C)tannin-rich oak leaves
  - (D)nutrients that they synthesize from gypsy moth egg clusters
  - (E)a rising threshold of caterpillar vulnerability to wilt disease
26. Which of the following, if true, would most clearly demonstrate the operation of the trees' defensive mechanism as it is described in the first paragraph of the passage?
- (A)Caterpillars feeding on red oaks that were more than 50percent defoliated grew to be only two-thirds the size of those feeding on trees with relatively intact foliage.
  - (B)Oak leaves in areas unaffected by gypsy moths were found to have higher levels of tannin on average than aspen leaves in areas infested with gypsy moths.
  - (C)the survival rate of gypsy moth caterpillars exposed to the wilt virus was 40 percent higher for those that fed on aspen leaves than for those that ate oak leaves.
  - (D)Female gypsy moths produced an average of 25 percent fewer eggs in areas where the wilt virus flourished than did moths in areas that were free of the virus.
  - (E)Gypsy moth egg clusters deposited on oak trees were found to have relatively large individual eggs compared to those deposited on aspen trees.
27. Which of the following best describes the function of the third paragraph of the passage?
- (A)It resolves a contradiction between the ideas presented in the first and second paragraphs.
  - (B)It introduces research data to support the theory outlined in the second paragraph.
  - (C)It draws a conclusion from conflicting evidence presented in the first two paragraphs.
  - (D)It shows how phenomena described in the first and second paragraphs act in combination.
  - (E)It elaborates on the thesis introduced in the first paragraph after a digression in the second paragraph.
28. It can be inferred from the passage that gypsy moth caterpillars become immune to the wilt virus as a result of \_\_\_\_\_.
- (A) consuming a wide range of nutrients from a variety of leaf types
  - (B)feeding on leaves that contain high levels of phenols
  - (C)producing fewer offspring, which favors the survival of the hardiest individuals
  - (D)ingesting the virus together with leaves that do not contain tannin
  - (E)growing population density, which outstrips the ability of the virus to multiply and spread
29. Which of the following statements about gypsy moth caterpillars is supported by information presented in the passage?
- (A)Wilt disease is more likely to strike small gypsy moth caterpillars than large ones.
  - (B)The concentration of phenols in tree leaves increases as the gypsy moth caterpillar population dies off.
  - (C)Female gypsy moth caterpillars stop growing after they ingest leaves containing phenols.
  - (D)Differing concentrations of phenols in leaves have differing effects in the ability of the wilt virus to kill gypsy moth caterpillars.
  - (E)The longer a gypsy moth population is exposed to wilt disease, the greater the likelihood that the gypsy moth caterpillars will become immune to the virus.



**Passage G**

Visual recognition involves storing and retrieving memories. Neural activity, triggered by the eye, forms an image in the brain's memory system that constitutes an internal representation of the viewed object. When an object is encountered again, it is matched with its internal representation and thereby recognized. Controversy surrounds the question of whether recognition is a parallel, one-step process or a serial, step-by-step one. Psychologists of the Gestalt school maintain that objects are recognized as wholes in a parallel procedure: the internal representation is matched with the retinal image in a single operation. Other psychologists have proposed that internal representation features are matched serially with an object's features. Although some experiments show that, as an object becomes familiar, its internal representation becomes more holistic and the recognition process correspondingly more parallel, the weight of evidence seems to support the serial hypothesis, at least for objects that are not notably simple and familiar.

34. The author is primarily concerned with \_\_\_\_.

- A how the brain receives images
- B the evidence supporting the serial-recognition hypothesis
- C hypotheses proposed to explain visual recognition
- D experiments on memory systems and neural activities

35. It can be inferred from the passage that the matching process in visual recognition is \_\_\_\_.

- A . not a neural activity
- B . not possible when an object is viewed for the first time
- C . not possible if a familiar object is changed in some way
- D. now fully understood

**Passage H**

Well-traveled American business people are increasingly realizing that they must take into consideration the variations in cultural practices evident throughout the world--- especially in nonwestern countries . For example, when a prosperous international advertising agency opened an office in Bangkok, Thailand, the manager was warned that it would never succeed. When he asked why this was the case, he was informed that " you should never put yourself above Buddha." In fact, a prominent statue of the divine teacher Buddha was just across the street from ---and one flight below--- the advertising agency's new office. After a year, business remained at a standstill as local Thais refused to frequent an office that was located at higher altitude than their divine teacher. Finally, the manager decided to move the office to a spot where there was no Buddha: business has thrived ever since.

The Parker Pen Company has compiled a list of customs, etiquette, rules, gift-giving practices, language idiom, hand gestures, and nonverbal communication patterns from around the world in its book, Dos and Taboos around the World. This guide to international behaviors intended to assist business people in dealing with unfamiliar cultural and religious practices. The gestures of diverse cultures are so varied that the guide book even provides an international dictionary of gestures involving the face, hands, and arms. In Peru, raising an eyebrow symbolizes "money " or "pay me": in Tonga, it means "yes" or "agree". In most European and Latin American countries, a circular motion of a finger around an ear means "crazy". In the N Netherlands, it means that someone has a telephone call. The American "O K" sign is widely accepted, yet in Brazil it has an obscene meaning and in southern France it represents "Zero" or "worthless". Different forms of hospitality and gifts giving of flowers is welcomed in Europe one must pay

special attention not to offer chrysanthemums in Belgium or Luxembourg--- they are viewed as reminders of death! In Hungary, the flowers should be wrapped in Yugoslavia; they should be an odd number, but never 13.

These differences in customs and behavior occur because people live in many unique cultures. Culture is the totality of learned, socially transmitted behavior. It includes the ideas, values, and customs (as well as sailboats, comic books, and birth control devices) of groups of people.

Therefore, patriotic attachment to the American flag is an aspect of culture, as is the Thai's feeling that "you should never put yourself above Buddha". Sometimes people refer to a particular person as "very cultured" or to a city as having "lots of culture". That use of the term culture is different from our use in sociology. In sociological terms, culture does not refer to solely to the fine arts and refined intellectual taste. It consists of objects and ideas within a society, including ice-cream cones, rock music, and slang words. Sociologists consider both a portrait by Rembrandt and a portrait by a billboard painter to be aspects of a culture. A tribe that cultivates soil by hand has just as much of a culture as a people that relies on diesel-operated machinery. Thus, each people has a distinctive culture with its own characteristic ways of gathering and preparing foods, constructing homes, structuring the family, and promoting standards of right and wrong.

36. The advertising agency failed to do business in Bangkok at first. This is because \_\_\_\_.
- A. the American business people are not welcome in some parts of Asia
  - B. the Thai people have no liking for commercial culture
  - C. it was located in an inappropriate place
  - D. the local Thai are rude and ill-mannered
37. The meaning of the term "culture", as applied in this passage, covers all the following EXCEPT \_\_\_\_.
- A. gestures that have unique meanings
  - B. objects and ideas within a society
  - C. refined intellectual taste
  - D. ways of gathering and preparing food

### Passage I

Historically, execution has served as significant form of punishment for deviance from social norms and criminal behavior. Capital punishment is no longer in use in Great Britain; but King Henry VIII executed an estimated 72,000 thieves and wag bones during his long reign. When the American colonists came from England in the seventeenth and eighteenth centuries, they brought some of, but not all, the English laws concerning punishment for capital crimes.

For centuries, the death penalty was used in North America for murder, alleged witchcraft, and a few other crimes. Little thought was given to its justification; capital punishment was assumed to be morally and religiously justified. The first critical challenge to this practice came in 1821 when a study of the Louisiana criminal code recommended repeal of the death penalty. This suggestion was not adopted in Louisiana, but, ironically, it led to abolition of capital punishment in several South American countries.

In 1834, Pennsylvania became the first American state to end its use of execution. Although certain states followed Pennsylvania's lead, the history of the death penalty in the United States over the last 100 years has been rather uneven. As some states abolish capital punishment, others reinstate it. Currently, 37 states, the military, and federal statutes provide for execution for selected crimes.

The debate over death penalty has traditionally focused on its appropriateness as a form of punishment and its values in deterring criminals. Viewed from the functionalist perspective of Emile Durkheim, sanctioning of deviant acts helps to reinforce the standards of proper behavior within a society. In this light, supporters of capital punishment insist that fear of execution will prevent at least some criminals from committing serious offenses. Moreover, in their view, the death penalty is justified even if it does not serve as a deterrent, because such criminals deserve to die for their crimes.

By contrast, opponents of capital punishment have long attacked it as "legalized murder". For example, in the last weeks of his term as governor of New Mexico in 1986, Toney Anaya commuted the death sentences of all five men awaiting execution in the state. Anaya called the death penalty "inhumane, immoral, and anti-God" and added that "my personal beliefs do not allow me to permit the execution of an individual in the name of the state."

Opponents of the death penalty point out that a 1985 report identified 343 Americans wrongly convicted of offenses punishable by death since 1900, 25 of whom were actually executed. For example, in 1979 a black man sentenced to death for the murder of a 4-year-old white girl. He received a stay only days before his scheduled execution when the victim's mother implicated another person; the man's conviction was subsequently overturned. Critics argue that the possibility of error in the criminal justice system in itself makes capital punishment morally offensive. They also insist that the death penalty violates the Eighth Amendment's prohibition against "cruel and unusual punishment". Thus far, they have failed to persuade the Supreme Court that their constitutional argument is valid.

In 1976, in the case of *Gregg v. Georgia*, the Court held that executions can be appropriate so long as they do not involve needless pain or suffering and are not grossly out of proportion to the severity of the crime. This ruling and others were especially significant, since no executions had taken place since 1967. In part, this reflected a lull in the criminal justice system as officials waited to see how the Supreme Court would assess the constitutionality of death penalty in 1977 and another in 1979. Executions became more common in the early 1980s; in 1987, there were 25. Moreover, there were more inmates on "death row" in 1987 than at any other time in American history.

38. The first American state that ended the practice of death penalty is \_\_\_\_.
- Pennsylvania
  - New York State
  - New MEXICO
  - Arizona
39. Which of the following is NOT a reason suggested in the argument against death penalty?
- death penalty is not humane
  - Death penalty cannot really deter criminals
  - Possible error in conviction of some offenses
  - Death penalty was used to suppress revolutionary groups.
40. The case of *Gregg v. Georgia* in 1976 \_\_\_\_\_.
- result in a sharp decrease of executions ever since
  - led to a number of erroneous executions
  - showed that the Supreme Court was authoritative on death penalty
  - caused a constitutional argument over the morality of death penalty

**Passage J**

An extreme example of a federal system is the one adopted in the 1970s in Yugoslavia, known as workers' self-management. Primary power was given to individual factories and other places of work, each managed by a board of directors that would establish policy for investments, prices, profits, wages, and so on. Each board of directors, elected by the workers, would answer to a workers' council, consisting of all workers in the company.

Representatives selected from the community's different workers' councils would meet together in a local assembly. In this way, the fundamental decisions concerning the community would be made by local workers. The system also included a second branch of the local assembly comprising officials elected by all of the people. The local units of government, known as communes, were grouped into six republics.

An important purpose of this federal system was to protect the rights of its different nationalities. There is a saying in Yugoslavia that roughly translates as follows: Yugoslavia has seven neighbors, six republics, five nationalities, four languages, three religions, two alphabets, and one *diner*.

Yugoslavia's political fragmentation has long been a source of problems. Nationalities other than the five officially recognized claim they are victims of discrimination. For example, 90 percent of the residents of the southern region of Kosovo are Albanians, but Yugoslavia does not recognize Albanian as a distinct nationality. Kosovo's official status is an autonomous region administered by Serbia, but in recent years Serbia has taken over direct rule of the region, under the pretext that the Albanians were threatening to detach Kosovo from Yugoslavia and unite it with the neighboring state of Albania. A similar situation has existed in Vojvodian, another autonomous region administered by Serbia, where ethnic Hungarians lack official recognition as one of Yugoslavia's nationalities.

Another problem for Yugoslavia has been competition among republics for resources, rather than cooperation to develop the country's economy as a whole. For example, from the viewpoint of international competitiveness, Yugoslavia should concentrate its resources to modernize and expand one large port, but each republic has wanted its own port. Instead of one large port, Yugoslavia has had several medium-sized ones that are less successful at attracting foreign trade.

Regional cooperation has also been hurt by economic differences among the republics. Slovenia, which borders Austria and Italy and contains only about 8 percent of Yugoslavia's population, has generally produced about 18 percent of the gross national product and 25 percent of the exports. With average incomes twice the national level, Slovenes have estimated that one-fourth of their production goes to subsidizing the economies of the poorer republics in the south.

41. Which is NOT described as a source of the problems facing the 1970s' Yugoslavia?

- A. Lack of regional cooperation.
- B. Religious conflicts.
- C. Competition for resources.
- D. Discrimination against ethnic minorities.

42. As can be gathered from the passage, Kosovo \_\_\_\_\_.

- A. is one of the six republics
- B. is part of Serbia

- C. is autonomous
- D. borders on Serbia

### PASSAGE K

Warm-blooded animals have elaborated physiological controls to maintain constant body temperature (in humans, 37°C). Why then during sickness should temperature rise, apparently increasing stress on the infected organism? It has long been known that the level of serum iron in animals falls during infection. Garibaldi first suggested a relationship between fever and iron. He found that microbial synthesis of siderophores — substances that bind iron — in bacteria of the genus *Salmonella* declined at environmental temperatures above 37°C and stopped at 40.3°C. Thus, fever would make it more difficult for an infecting bacterium to acquire iron and thus to multiply. Cold-blooded animals were used to test this hypothesis because their body temperature can be controlled in the laboratory. Kluger reported that of iguanas infected with the potentially lethal bacterium *A. hydrophilia*, more survived at temperatures of 42°C than at 37°C, even though healthy animals prefer the lower temperature. When animals at 42°C were injected with an iron solution, however, mortality rates increased significantly. Research to determine whether similar phenomena occur in warm-blooded animals is sorely needed.

43. The passage is primarily concerned with attempts to determine \_\_\_\_.
- A. the role of siderophores in the synthesis of serum iron
  - B. new treatments for infections that are caused by *A. hydrophilia*
  - C. iron utilization in cold-blooded animals
  - D. the function of fever in warm-blooded animals
44. The finding that the animals' mortality rates increased significantly when injected with an iron solution at 42°C \_\_\_\_.
- A. rejected the suggested relationship between fever and iron
  - B. supported the suggested relationship between fever and iron
  - C. was an ambiguous result
  - D. could be generalized to warm-blooded animals
45. Which of the following can be inferred about warm-blooded animals solely on the basis of information in the passage?
- A. The body temperatures of warm-blooded animals cannot be easily controlled in the laboratory.
  - B. Warm-blooded animals require more iron in periods of stress than they do at other times.
  - C. Warm-blooded animals are more comfortable at an environmental temperature of 37°C than at a temperature of 42°C.
  - D. In warm-blooded animals, infections that lead to fever are usually traceable to bacteria.

### PASSAGE L

Historians have only recently begun to note the increase in demand for luxury goods and services that took place in eighteenth-century England. McKendrick has explored the Wedgwood firm's remarkable success in marketing luxury pottery; Plumb has written about the proliferation of provincial theaters, musical festivals, and children's toys and books. While the fact of this consumer revolution is hardly in doubt, three key questions remain: Who were the consumers? What were their motives? And what were the effects of the new demand for luxuries?

An answer to the first of these has been difficult to obtain. Although it has been possible to

infer from the goods and services actually produced what manufacturers and servicing trades thought their customers wanted, only a study of relevant personal documents written by actual consumers will provide a precise picture of who wanted what. We still need to know how large this consumer market was and how far down the social scale the consumer demand for luxury goods penetrated. With regard to this last question, we might note in passing that Thompson, while rightly restoring laboring people to the stage of eighteenth-century English history, has probably exaggerated the opposition in general; for example, laboring people in eighteenth-century England readily shifted from home-brewed beer to standardized beer produced by huge, heavily capitalized urban breweries.

To answer the Question of why consumers became so eager to buy, some historians have pointed to the ability of manufacturers to advertise in a relatively uncensored press. This, however, hardly seems a sufficient answer. McKendrick favors a Veblen model of conspicuous consumption stimulated by competition for status. The "middling sort" bought goods and services because they wanted to follow fashions set by the rich. Again, we may wonder whether this explanation is sufficient. So not people enjoy buying things as a form of self-gratification? If so, consumerism could be seen as a product of the rise of new concepts of individualism and materialism, but not necessarily of the frenzy for conspicuous competition.

Finally, what were the consequences of this consumer demand for luxuries? McKendrick claims that it goes a long way toward explaining the coming of the Industrial Revolution. But does it? What, for example, does the production of high-quality pottery and toys have to do with the development of iron manufacture or textile mills? It is perfectly possible to have the psychology and reality of a consumer society without a heavy industrial sector.

The future exploration of these key questions is undoubtedly necessary. It should not, however, diminish the force of the conclusion of recent studies: the insatiable demand in eighteenth-century England for frivolous as well as useful goods and services foreshadowed our own world.

46. In the first paragraph, the author mentions McKendrick and Plumb most probably in order to \_\_\_\_\_.
- A. contrast their views on the luxury consumerism in eighteenth-century England
  - B. indicate the inadequacy of the traditional approaches to eighteenth-century English history
  - C. support the contention that key questions about eighteenth-century consumerism remain unanswered
  - D. give examples of historians who have explored the eighteenth-century consumerism in England
47. Concerning the answer to who the consumers were, the writer of the passage seems to \_\_\_\_\_.
- A. doubt that laboring people were also involved in the consumer revolution
  - B. exaggerate the extent of the demand for luxury goods
  - C. agree with Thompson on the scale of the market
  - D. prefer home-brewed beer to standardized beer produced by urban breweries
48. According to the Veblen model, the "middling sort" of customers bought luxury goods to \_\_\_\_\_.
- A. gratify themselves
  - B. show individualism
  - C. keep up with the Joneses

**Passage M**

The social sciences are less likely than other intellectual enterprises to get credit for their accomplishments. Arguably, this is so because the theories and conceptual constructs of the social sciences are especially accessible: human intelligence apprehends truths about human affairs with particular facility. And the discoveries of the social sciences, once isolated and labeled, are quickly absorbed into conventional wisdom, whereupon they lose their distinctiveness as scientific advances.

This under appreciation of the social sciences contrasts oddly with what many see as their over utilization. Game theory is pressed into service in studies of shifting international alliances. Evaluation research is called upon to demonstrate successes or failures of social programs. Models from economics and demography become the definitive tools for examining the financial base of social security. Yet this rush into practical applications is itself quite understandable: public policy should continually be making, and policymakers rightly feel that even tentative findings and untested theories are better guided to decision-making than no findings and no theories at all.

49. The author would probably agree that \_\_\_\_.
- A. discoveries of the social sciences also represent scientific advances
  - B. social sciences lack the rigor that characterizes natural sciences
  - C. discoveries of the social sciences are being abused
  - D. there should be a strict separation between pure and applied social sciences
50. As is indicated in the passage, game theory \_\_\_\_.
- A. is a tentative finding
  - B. is not appropriately used
  - C. can be applied in service industries
  - D. is not originally meant for studies of shifting international alliances

**Passage N**

WHO, working closely with its Member States, other United Nations agencies and nongovernmental organizations, is focusing on major crippling forms of malnutrition: protein-energy malnutrition, iodine deficiency anemia.

In some regions, such as sub-Saharan Africa and south Asia, stagnation of nutritional improvement combined with a rapid rise in population has resulted in an actual increase in the total number of malnourished children. Currently, over two-thirds of the world's malnourished children live in Asia, followed by Africa and Latin America.

Various types of micronutrient malnutrition are important causes of disability in themselves and often underlie other types of morbidity. Their prevalence is even more widespread than that of protein-energy malnutrition.

In sheer numbers, iron is the most prevalent micronutrient deficiency, with nearly 1990 million people being anemic and 3600million iron-deficient. Iron deficiency is present when body iron stores are depleted.

Mainly women of reproductive age and children under five are affected by iron deficiency, with prevalences hovering around 50% in developing countries. Among various regions of the world, it is south Asia which is hit hardest with prevalence's reaching 80% in some countries. In infants and young children even mild anaemia is associated with impaired intellectual as well as

3. The hammer has been used as a tool since the Neolithic period, when was invented.  
 A B C D
4. The adult mosquito usually lives for about thirty days, although the life span varied widely with temperature, humidity, and other factors of the environment.  
 A B C D
5. Before the automobile, the horse-drawn carriage was the primary mean of private transportation.  
 A B C D
6. John will not lend you the book because he is fearful if you will forget to return it.  
 A B C D
7. We need an unusual gifted chemist to solve this sensitive problem without creating any hazards.  
 A B C D
8. Your employer would have been inclined to favor your request if would have waited for an occasion when he was less busy with other more important matters.  
 A B C D
9. A series of debates between the major candidates were scheduled for the Labor Day weekend.  
 A B C D
10. Unless there can be some assurance of increased pay, factory morale, all ready low, will collapse completely.  
 A B C D
11. People can remember more information for higher periods of time when they use more than one sense in the process of learning.  
 A B C D
12. Dams vary in size from small rock barriers to concrete structures many feet height.  
 A B C D
13. Employments agencies bring together persons qualified for specific jobs and employers who have those jobs available.  
 A B C D
14. The new bridge had to be built near the old one because there was not somewhere else to construct it.  
 A B C D
15. Understanding the cultural habits of another nation, especially one containing so many diversified sub-cultures as the United States, are a complex, bewildering task.  
 A B C D

physical development. In older children and adults iron deficiency reduces work capacity and output. It also leads to increased absenteeism and accidents at work, during pregnancy, maternal anaemia aggravates the effects of hemorrhage at childbirth and is a major contributing factor to maternal mortality.

While there is no single remedy, a combination of several preventive approaches is believed to work best. Dietary improvement includes consumption of iron- and vitamin C-rich foods and foods of animal origin, and avoiding drinking tea or coffee with or soon after meals. Iron fortification of foods, particularly of staple cereals, is practiced in growing number of countries. Iron supplementation is the most common approach, particularly for pregnant women.

Another major problem is iodine deficiency disorders (IDD). Iodine deficiency remains the single greatest cause of preventable brain damage and mental retardation worldwide. WHO estimated in 1990 that 1570 million people, or about 30% of the world's population, were at risk of IDD.

Insufficient intakes of iodine in pregnancy and early childhood result in impaired mental development by as much as 10 IQ points.

The third major micronutrient deficiency is vitamin A deficiency which is officially recognized in 76 countries as a major public health problem. The number of children under five affected clinically is estimated at 2.8 million, with 258 million being diagnosed as having a biochemical deficiency. The highest prevalence and numbers are in Southeast Asia.

Depletion occurs when the diet contains too little vitamin A to replace the amount used by tissues. The consequences include night blindness and the destruction of the cornea. Vitamin A deficiency is the most common cause of blindness in young children. Where clinical vitamin A deficiency is a public health problem, young child mortality rates are raised by 20% to 30%.

There are several tried and tested ways of preventing and treating vitamin A deficiency, including improved production and consumption of foods rich in vitamin A or carotene, especially dark-green leafy vegetables and fruits, and liver, eggs and milk products if available. Fortification of fats has been successfully introduced in industrialized countries while the same technique using sugar proved to be equally successfully in Central America. Another useful strategy is supplementation with large doses of vitamin A every 4 to 6 months for children of pre-school age and lactating women.

51. In the passage the author elaborates on the following forms of malnutrition EXCEPT \_\_\_\_\_.

- A. protein-energy malnutrition
- B. iodine deficiency disorders
- C. vitamin A deficiency
- D. iron deficiency anaemia

52. Which of the following is NOT TRUE of malnourished children?

- A. Over half of the deaths of children under-five are associated with malnutrition.
- B. In south Asia, the number of malnourished children is on the rise.
- C. More and more countries have reliable data on young children underweight.
- D. Most of the malnourished children live in Africa.

53. This article is mainly about \_\_\_\_\_.

- A. WHO's mission and achievements
- B. micronutrient malnutrition and its negative effects on children's health
- C. the inadequate health care system in the world

**Passage O**

A serious critic has to comprehend the particular content, unique structure, and special meaning of a work of art. And here she faces a dilemma. The critic must recognize the artistic element of uniqueness that requires subjective reaction; yet she must not be unduly prejudiced by such reactions. Her likes and dislikes are less important than what the work itself communicates, and her preferences may blind her to certain qualities of the work and thereby prevent an adequate understanding of it. Hence, it is necessary that a critic develop a sensibility informed by familiarity with the history of art and aesthetic theory. On the other hand, it is insufficient to treat the artwork solely historically, in relation to a fixed set of ideas or values. The critic's knowledge and training are, rather, a preparation of the cognitive and emotional abilities needed for an adequate personal response to an artwork's own particular qualities.

54. According to the author, a serious art critic may avoid being prejudiced by her subjective reaction if she \_\_\_\_\_.
- A. treats an artwork in relation to a fixed set of ideas and values  
 B. allows more time for the observation of each artwork  
 C. takes into account the preferences of other art critics  
 D. draws on her knowledge of art history and aesthetic theory
55. The author would most likely agree with which of the following statements?
- A. Most works of art express unconscious wishes or desires.  
 B. The best art is accessible to the greatest number of people.  
 C. Informed knowledge and personal preferences together make a good art critic.  
 D. The art produced in the last few decades is of inferior quality.

**四 Translation (40 分)****1. Translate the following passage into English.**

美国方面声明，为了亚洲和世界的和平，需要对缓和当前的紧张局势和消除冲突的基本原因作出努力。美国将致力于建立公平而稳定的和平。这种和平是公正的，因为它满足各国人民和各国争取自由和进步的愿望。这种和平是稳定的，因为它消除外来侵略的危险，美国支持全世界各国人民在没有外来压力和干涉的情况下取得个人自由和社会进步。美国相信，改善具有不同意识形态的国与国之间的关系，以便减少由于事故、错误估计或误会而引起的对峙的危险，有助于缓和紧张局势的势力。各国应该互相尊重并愿进行和平竞赛，让行动作出最后判断。任何国家都不应自称一贯正确，各国都要准备为了共同的利益重新检查自己的态度。美国强调：应该允许印度支那各国人民在不受外来干涉的情况下决定自己的命运；美国一贯的首要目标是谈判解决；越南共和国和美国在一九七二年一月二十七日提出的八点建议提供了实现这个目标的基础；在谈判得不到解决时，美国预计在符合印度支那每个国家自决这一目标的情况下从这个地区最终撤出所有美国军队。

**2. Translate the following passage into Chinese.**

The bourgeoisie keeps more and more doing away with the scattered state of the population, of the means of production, and of property. It has agglomerated population, centralized means of production, and has concentrated property in a few hands. The necessary consequence of this was

political centralization. Independent, or but loosely connected provinces, with separate interests, laws, governments and systems of taxation, became lumped together into one nation, with one government, one code of laws, one national class-interest, one frontier and one customs-tariff.

The bourgeoisie, during its rule of scarce one hundred years, has created more massive and more colossal productive forces than have all preceding generations together. Subjection of nature's forces to man, machinery, application of chemistry to industry and agriculture, steam-navigation, railways, electric telegraphs, clearing of whole continents for cultivation, canalization of rivers, whole populations conjured out of the ground – what earlier century had even a presentiment that such productive forces slumbered in the lap of social labor?

## 五 Writing (30 分)

### **Should Schools and Universities be Commercialized?**

Write an essay of about 350 words, expressing your views on this topic.

### 三. Reading Comprehension (55 分)

Read the following passages and choose the best answer, and then write the answer on your answer sheet.

#### Passage A

What causes a helix in nature to appear with either a dextral(right-handed,or clockwise)twist or a sinistral(left-handed,or counterclockwise)twist is one of the most intriguing puzzles in the science of form.Most spiral-shaped snail species are predominantly dextral. But at one time,handedness(twist direction of the shell)was equally distributed within some snail species that have become predominantly dextral or, in a few species,predominantly sinistral. What mechanisms,control handedness and keep left-handedness rare?

It would seem unlikely that evolution should discriminate against sinistral snails if sinistral and dextral snails are exact mirror images. For any disadvantage that a sinistral twist in itself could confer on its possessor is almost inconceivable. But left-and right-handed snails are not actually true mirror images of one another. Their shapes are noticeably different. Sinistral rarity might, then, be a consequence of possible disadvantages conferred by these other concomitant structural features. In addition, perhaps left-and right-handed snails cannot mate with each other, having incompatible twist directions. Presumably an individual of the rarer form would have relative difficulty in finding a mate of the same hand, thus keeping the rare form or creating geographically separated right- and left-handed populations.

But this evolutionary mechanism combining dissymmetry, anatomy, and chance does not provide an adequate explanation of why right-handedness should have become predominant, it does not explain, for example, why the infrequent unions between snails of opposing hands produce fewer offspring of the rarer than the commoner form in species where each parent contributes equally to handedness. Nor does it explain why, in a species where one parent determines handedness, a brood is not exclusively right-or left-handed when the offspring would have the same genetic predisposition. In the European pond snail *Lymnaea peregra*, a predominantly dextral species whose handedness is maternally determined, a brood might be expected to be exclusively right- or left-handed-and this often occurs. However, some broods possess a few snails of the opposing hand, and in predominantly sinistral brills, the incidence of dextrality is surprisingly high.

Here, the evolutionary theory must defer to a theory based on an explicit developmental mechanism that can favor either right-or left-handedness. In the case of *Lymnaea pweufe*, studies indicate that a dextral gene is expressed during egg formation;i.e., before egg fertilization, the gene produces a protein, found in the cytoplasm of the egg that controls the pattern of cell division and thus handedness. In experiments, an injection of cytoplasm from dextral eggs changes the pattern of sinistral eggs, but an injection from sinistral eggs does not influence dextral eggs. One explanation for the differing effects is that all *Lymnaea peregra* eggs begin left-handed but most switch to being right-handed. Thus, the path to a solution to the puzzle of handedness in all snails appears to be as twisted as the helix itself.

1. Which of the following would serve as an example of "concomitant structural features"(line13) that might disadvantage a snail of the rarer form?

(A) A shell and body that are an exact mirror image of a snail of the commoner form

- (B) A smaller population of the snails of the rarer form
- (C) A chip or, fracture in the shell caused by an object falling on it
- (D) A pattern on the shell that better camouflages it
- (E) A smaller shell opening that restricts mobility and ingestion relative to that of a snail of the commoner form
2. The second paragraph of the passage is primarily concerned with offering possible reasons why
- (A) It is unlikely that evolutionary mechanisms could discriminate against sinistral snails
- (B) sinistrality is relatively uncommon among snail species
- (C) dextral and sinistral populations of a snail species tend to intermingle
- (D) a theory based on a developmental mechanism inadequately accounts for the predominance of dextrality across snail species
- (E) dextral snails breed more readily than sinistral snails, even within predominantly sinistral populations
3. In describing the "evolutionary mechanism" (line 18), the author mentions which of the following?
- (A) The favorable conditions for nurturing new offspring
- (B) The variable environmental conditions that affect survival of adult snails
- (C) The availability of potential mates for breeding
- (D) The structural identity of offspring to parents of the same hand
- (E) The frequency of unions between snails of different species
4. According to the passage, which of the following is true of *Lymnaea peregra*?
- (A) Handedness within the species was at one time equally distributed between left and right
- (B) Under laboratory conditions, dextral eggs from *Lymnaea peregra* can be artificially induced to develop into sinistral snails
- (C) Broods of *Lymnaea peregra*, without variation, exclusively sinistral or dextral.
- (D) Handedness in *Lymnaea peregra* offspring is determined by only one of the parents
- (E) Geographic factors have played a larger role than has genetics in the evolution of the species.
5. The passage implies that in *Lymnaea peregra*, there will generally be
- (A) more offspring of the nondominant hand in broods where handedness is determined after, rather than before, fertilization
- (B) a sinistral gene that produces a protein in the cytoplasm of the egg cell
- (C) fewer sinistral offspring in dextral broods than dextral offspring in sinistral broods
- (D) equal numbers of exclusively left- and right- handed broods
- (E) an increasing occurrence of left-handedness in successive broods
6. It can be inferred from the passage that a predominantly sinistral snail species might stay predominantly sinistral for each of the following reasons EXCEPT for
- (A) a developmental mechanism that affects the cell-division pattern of snails
- (B) structural features that advantage dextral snails of the species
- (C) a relatively small number of snails of the same hand for dextral snails of the species to mate with
- (D) anatomical incompatibility that prevents mating between snails of opposing hands within the species

(E) geographic separation of sinistral and dextral populations

7. Which of the following accurately describes the relationship between the evolutionary and developmental theories discussed in the passage?

(A) Although the two theories reach the same conclusion, each is based on different assumptions.

(B) They present contradictory explanations of the same phenomenon.

(C) The second theory accounts for certain phenomena that the first cannot explain.

(D) The second theory demonstrates why the first is valid only for very unusual, special cases.

(E) They are identical and interchangeable in that the second theory merely restates the first in less technical terms.

### Passage B

In *The Women of Mexico City, 1796-1857*, Sylvia Marina Arrom argues that the status on women in Mexico City improved during the nineteenth century. According to Arrom, households headed by females and instances of women working outside the home were much more common than scholars have estimated; efforts by the Mexican government to encourage female education resulted in increased female literacy; and influential male writers wrote pieces advocating education, employment, and increased family responsibilities for women, while developing women's political and marital inequality. Mention of the fact that the civil codes of 1870 and 1884 significantly advanced women's rights would have further strengthened Arrom's argument.

Arrom does not discuss whether women's improved status counteracted the effects on women of instability in the Mexican history are precisely what make Arrom's pioneering study an important addition to Latin American women's history.

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

(A) Reviewing a historical study of the status of women in Mexico City during the nineteenth century.

(B) Analyzing the effects of economic instability on the status of women in Mexico during the nineteenth century

(C) Advancing a thesis explaining why women's status in Mexico City improved during the nineteenth century

(D) Rejecting the thesis that the status of women in Mexico City during the nineteenth century actually improved

(E) Praising an author for a pioneering attempt to bridge significant gaps in Mexico's economic history prior to 1790

9. According to the author of the passage, Arrom's study can be characterized as "an important addition to Latin American women's history" (lines 14) because it

(A) offers a radical thesis concerning the status of women's civil rights in Mexican society during the nineteenth century

(B) relies on a new method of historical analysis that has not previously been applied to Latin American history

(C) focuses only on the status of women in Mexican society

(D) addresses a period in Mexican history that scholars have to some extent neglected

(E) is the first study to recognize the role of the Mexican government in encouraging women's education

10. It can be inferred from the passage that Arrom would agree with which of the following

assertions?

- (A) Efforts by the Mexican government to encourage education for women during the nineteenth century were hampered by the economic instability of that period.
- (B) The most significant advances in the rights of Mexican women during the nineteenth century occurred prior to 1857.
- (C) Improvements in the status of women in Mexico City during the nineteenth century were accompanied by similar improvements in the status of women in other large Latin American cities.
- (D) Scholars have in the past accorded the most significance to nineteenth-century Mexican literature that supported the status quo in women's political and marital rights.
- (E) Scholars have in the past underestimated the number of households headed by females in Mexico City.
11. Which of the following best describes the author's attitude toward Arrom's work?
- (A) Uncritical approval
- (B) Enthusiasm tempered by minor reservations
- (C) Praise for her thesis, despite skepticism regarding the sources of her evidence
- (D) Reluctant acceptance, despite lingering doubts regarding the accuracy of her thesis
- (E) Rejection, despite admiration for her attempt to break new ground in a hitherto neglected field

### Passage C

For many years, Benjamin Quarles' seminal account of the participation of African Americans in the American Revolution has remained the standard work in the field. According to Quarles, the outcome of this conflict was mixed for African American slaves who enlisted in Britain's fight against its rebellious American colonies in return for the promise of freedom: the British treacherously resold many into slavery in the West Indies, while others obtained freedom in Canada and Africa. Building on Quarles's analysis of the latter group, Sylvia Frey studied the former slaves who immigrated to British colonies in Canada. According to Frey, these refugees—the most successful of the African American Revolutionary War participants—viewed themselves as the ideological heirs of the American Revolution. Frey sees this inheritance reflected in their demands for the same rights that American revolutionaries had demanded from the British: land ownership, limits to arbitrary and burdensome taxes, and freedom of religion.

12. According to the passage, which of the following is true about the African American Revolutionary War participants who settled in Canada after the American Revolution?
- (A) Although they were politically unaligned with either side, they identified more with British ideology than with American ideology.
- (B) While they were not immediately betrayed by the British, they ultimately suffered the same fate as did African American Revolutionary War participants who were resold into slavery in the West Indies.
- (C) They settled in Canada rather than in Africa because of the greater religious freedom available in Canada.
- (D) They were more politically active than were African American Revolutionary War participants who settled in Africa.
- (E) They were more successful than were African American Revolutionary War participants who settled in Africa.

13. Which of the following is most analogous to the relationship between the African American Revolutionary War participants who settled in Canada after the American Revolution and the American revolutionaries, as that relationship is described in the passage?
- (A) A brilliant pupil of a great musician rebels against the teacher, but adopts the teacher's musical style after the teacher's unexpected death.
- (B) Two warring rulers finally make peace after a lifetime of strife when they realize that they have been by a common enemy.
- (C) A child who has sided with a domineering parent against a defiant sibling later makes demands of the parent similar to those once made by the sibling.
- (D) A writer spends much of her life popularizing the work of her mentor, only to discover late in life that much of the older writer's work is plagiarized from the writings of a foreign contemporary.
- (E) Two research scientists spend much of their careers working together toward a common goal, but later quarrel over which of them should receive credit for the training of a promising student.
14. The author of the passage suggests that which of the following is true of Benjamin Quarles's work?
- (A) It introduced a new and untried research methodology.
- (B) It contained theories so controversial that they gave rise to an entire generation of Scholarship
- (C) It was a pioneering work that has not yet been displaced by subsequent scholarship.
- (D) It launched the career of a scholar who later wrote even more important works.
- (E) At the time it appeared, its author already enjoyed a well-established reputation in the field.
15. Which of the following can be inferred from the passage concerning Britain's rule in its Canadian colonies after the American Revolution?
- (A) Humiliated by their defeat by the Americans, the British sharply curtailed civil rights in their Canadian colonies.
- (B) The British largely ignored their Canadian colonies.
- (C) The British encouraged the colonization of Canada by those African Americans who had served on the American side as well as by those who had served on the British side.
- (D) Some of Britain's policies in its Canadian colonies were similar to its policies in its American colonies before the American Revolution.
- (E) To reduce the debt incurred during the war, the British imposed even higher taxes on the Canadian colonists than they had on the American colonists.

#### Passage D

As people age, their cells become less efficient and less able to replace damaged components. At the same time their tissues stiffen. For example, the lungs and the heart muscle expand less successfully, the blood vessels become increasingly rigid, and the ligaments and tendons tighten.

Few investigators would attribute such diverse effects to a single cause. Nevertheless, researchers have discovered that a process long known to discolor and toughen foods may also contribute to age-related impairment of both cells and tissues. That process is nonenzymatic glycosylation, whereby glucose become attached to proteins without the aid of enzymes. When enzymes attach glucose to proteins (enzymatic glycosylation), they do so at a specific site on a specific protein molecule for a specific purpose. In contrast, the nonenzymatic process adds

glucose haphazardly to any of several sites along any available peptide chain within a protein molecule.

This nonenzymatic glycosylation of certain proteins has been understood by food chemists for decades, although few biologists recognized until recently that the same steps could take place in the body. Nonenzymatic glycosylation begins when an aldehyde group (CHO) of glucose and an amino group (NH<sub>2</sub>) of a protein are attracted to each other. The molecules combine, forming what is called a Schiff base within the protein. This combination is unstable and quickly rearranges itself into a stabler, but still reversible, substance known as an Amadori product.

If a given protein persists in the body for months or years, some of its Amadori products slowly dehydrate and rearrange themselves yet again, into new glucose-derived structures. These can combine with various kinds of molecules to form irreversible structures named advanced glycosylation end products (AGE's). Most AGE's are yellowish brown and fluorescent and have specific spectrographic properties. More important for the body, many are also able to cross-linked adjacent proteins, particularly ones that give structure to tissues and organs. Although no one has yet satisfactorily described the origin of all such bridges between proteins, many investigators agree that extensive cross-linking of proteins probably contributes to the stiffening and loss of elasticity characteristic of aging tissues.

In an attempt to link this process with the development of cataracts (the browning and clouding of the lens of the eye as people age), researchers studied the effect of glucose on solutions of purified crystallin, the major protein in the lens of the eye. Glucose-free solutions remained clear, but solutions with glucose caused the proteins to form clusters, suggesting that the molecules had become cross-linked. The clusters diffracted light, making the solution opaque. The researchers also discovered that the pigmented cross-links in human cataracts have the brownish color and fluorescence characteristic of AGE's. These data suggest that nonenzymatic glycosylation of lens crystallin may contribute to cataract formation.

16. With which of the following statements concerning the stiffening of aging tissues would the author most likely agree?
- (A) It is caused to a large degree by an increased rate of cell multiplication.
  - (B) It paradoxically both helps and hinders the longevity of proteins in the human body.
  - (C) It can be counteracted in part by increased ingestion of glucose-free foods.
  - (D) It is exacerbated by increased enzymatic glycosylation.
  - (E) It probably involves the nonenzymatic glycosylation of proteins.
17. According to the passage, which of the following statements is true of the process that discolors and toughens foods?
- (A) It takes place more slowly than glycosylation in the human body.
  - (B) It requires a higher ration of glucose to protein than glycosylation requires in the human body.
  - (C) It does not require the aid of enzymes to attach glucose to protein.
  - (D) It proceeds more quickly when the food proteins have a molecular structure similar to that of crystallin proteins.
  - (E) Its effectiveness depends heavily on the amount of environmental moisture.
18. According to the passage, which of the following is characteristic of enzymatic glycosylation of proteins?
- (A) AGE's are formed after a period of months or years

- (B) Proteins affected by the process are made unstable.
  - (C) Glucose attachment impairs and stiffens tissues.
  - (D) Glucose is attached to proteins for specific purposes.
  - (E) Amino groups combine with aldehyde groups to form Schiff bases.
- 19 According to the passage, which of the following statements is true of Amadori products in proteins?
- (A) They are more plentiful in a dehydrated environment.
  - (B) They are created through enzymatic glycosylation.
  - (C) They are composed entirely of glucose molecules.
  - (D) They are derived from Schiff bases.
  - (E) They are derived from AGE's.
20. Which of the following best describes the function of the third paragraph of the passage (lines 13-19)?
- (A) It offers evidence that contradicts the findings described in the first two paragraphs.
  - (B) It presents a specific example of the process discussed in the first two paragraphs.
  - (C) It explains a problem that the researchers mentioned in the second paragraph have yet to solve.
  - (D) It evaluates the research discoveries described in the previous paragraph.
  - (E) It begins a detailed description of the process introduced in the previous two paragraphs.
- 21 The passage suggests that which of the following would be LEAST important in determining whether nonenzymatic glycosylation is likely to have taken place in the proteins of a particular tissue?
- (A) The likelihood that the tissue has been exposed to free glucose
  - (B) The color and spectrographic properties of structures within the tissue.
  - (C) The amount of time that the proteins in the tissue have persisted in the body
  - (D) The number of amino groups within the proteins in the tissue
  - (E) The degree of elasticity that the tissue exhibits
22. If the hypothesis stated in lines 37-38 is true, it can be inferred that the crystallin proteins in the lenses of people with cataracts
- (A) have increased elasticity
  - (B) do not respond to enzymatic glycosylation
  - (C) are more susceptible to stiffening than are other proteins
  - (D) are at least several months old
  - (E) respond more acutely than other proteins to changes in moisture levels

### Passage E

The defoliation of millions of acres of trees by massive infestations of gypsy moth caterpillars is a recurring phenomenon in the northeastern United States. In studying these outbreaks, scientists have discovered that affected trees fight back by releasing toxic chemicals, mainly phenols, into their foliage. These noxious substances limit caterpillars' growth and reduce the number of eggs that female moths lay. Phenols also make the eggs smaller, which reduces the growth of the following year's caterpillars. Because the number of eggs a female moth produces is directly related to her size, and because her size is determined entirely by her feeding success as a caterpillar, the trees' defensive mechanism has an impact on moth fecundity.

The gypsy moth is also subject to attack by the nucleo-polyhedrosis virus, or wilt disease, a