

[I] 次の英文を読んで後に続く質問 1 ～12 にもっとも適する答えを選びなさい。

Throughout the entire world of life, evolution has brought about only two types of reproduction—aseexual and sexual. Asexual reproduction does not require a mate and is less complicated than sexual reproduction. It is used by simple life forms, such as bacteria; complex one-celled organisms, such as amoebas and diatoms; certain worms, such as flatworms; fungi; and some plants. In asexual reproduction, one parent transmits all of its genetic information to the offspring, and the offspring is therefore identical to the parent.

Asexual reproduction typically is a rapid and reliable method of reproduction. It is limited, however, because the genetic uniformity in the offspring makes them all equally susceptible to a change in the environment. If a new disease, a new predator, or a climate change is lethal to one individual, it is lethal to all genetically identical organisms. Such changes can effectively wipe out entire populations of genetically identical organisms.

In contrast to asexual reproduction, sexual reproduction—the predominant form of reproduction among plants, animals, and most other organisms—requires two parents. Each parent creates sex cells, or gametes, that contain half the parent's genetic information. Human sex cells—sperm and eggs—contain 23 single, unpaired chromosomes rather than the 23 paired chromosomes found in all other body cells, or somatic cells. When egg and sperm unite in the process called fertilization, they form one cell that contains 23 pairs of chromosomes, the normal number for human body cells. The cell develops into a child that has a mixture of genetic information from both parents. As a result, the child is similar to each of the parents but not identical to either of them. This genetic diversity that results from sexual reproduction enables populations to withstand changing environments through evolution.

1. According to the text, asexual reproduction
 - (a) requires two parents
 - (b) creates offspring which genetically differ from their parents
 - (c) results in less genetic uniformity
 - (d) is simpler than sexual reproduction

2. Which of the following is most likely to reproduce asexually?
 - (a) A mushroom
 - (b) An insect
 - (c) A primate
 - (d) A complex multi-cellular organism

3. The word “typically” in line 8 is closest in meaning to
 - (a) always
 - (b) preferably
 - (c) characteristically
 - (d) naturally

4. What is the main disadvantage of asexual reproduction?
 - (a) It is endangered by environmental changes.
 - (b) It is slow.
 - (c) It transmits genetic information to the offspring.
 - (d) It is reliable.

5. The word “them” in line 10 refers to
 - (a) genetic uniformity
 - (b) offspring
 - (c) changes in the environment
 - (d) genetic information

6. The word “susceptible” in line 10 is closest in meaning to
- (a) resistant
 - (b) vulnerable
 - (c) dangerous
 - (d) unlikely
7. The word “lethal” in line 11 is closest in meaning to
- (a) deadly
 - (b) perilous
 - (c) unfortunate
 - (d) beneficial
8. The word “predominant” in line 14 is closest in meaning to
- (a) only
 - (b) principal
 - (c) unusual
 - (d) strongest
9. All of the following are necessary for sexual reproduction EXCEPT
- (a) gametes
 - (b) somatic cells
 - (c) fertilization
 - (d) chromosomes
10. According to the text, gametes
- (a) have 23 paired chromosomes
 - (b) contain one parent’s complete genetic information
 - (c) unite at fertilization
 - (d) are also called somatic cells

11. The word “diversity” in line 23 is closest in meaning to

- (a) variation
- (b) information
- (c) similarity
- (d) fertilization

12. The two different forms of reproduction are a result of

- (a) the transmission of genetic information
- (b) offspring
- (c) cellular development
- (d) evolution

〔Ⅱ〕 次の英文を読んで後に続く質問 13～24 にもっとも適する答えを選びなさい。

In 1978 the United Nations adopted a resolution that set goals for eradicating infectious disease by the year 2000. This lofty goal proved impossible to achieve. The years since the resolution was adopted have seen the emergence of new killers and a rise in the incidence of such ancient scourges as malaria, yellow fever, and tuberculosis.

Among the diseases new to science are AIDS, Ebola hemorrhagic fever, Legionnaires' disease, and Lyme disease. AIDS has been the most deadly of all the new diseases, but even it has not taken as high a toll as malaria, tuberculosis, and other diseases that have been around for centuries.

Environmental changes may be responsible for some new diseases. Scientists speculate that the viruses for some of the deadly hemorrhagic fevers that have surfaced in Africa, such as Ebola and Marburg disease, have long existed in certain wild animals. As people have encroached on wilderness areas they have come into contact with the infected animals, and the viruses have jumped from their traditional animal host to a new human host, with deadly consequences.

In addition to new diseases, well-known pathogens may change, or mutate, creating new, virulent strains. Influenza viruses are among those that mutate frequently, which explains why flu shots—vaccines that use modified or killed versions of the influenza agent to stimulate a protective immune response in the body—are given annually, and why epidemics of influenza periodically occur. The strains of flu virus that were prevalent one year differ from those that bedevil humans the next year. Vaccines that protected against last year's flu virus may need to be altered to be effective against today's most common strains.

A similar problem occurs when mutations in infectious agents result in resistance to medicines that had been effective treatments. The bacteria that cause bronchitis, meningitis, tuberculosis, and pneumonia are among many that

have developed strains that are resistant to at least some antibiotics. As a result, doctors have fewer options for treating the diseases and preventing their spread.

13. All of the following have occurred since the United Nations resolution of 1978 EXCEPT

- (a) new infectious diseases have emerged
- (b) the incidence of malaria has risen
- (c) the resolution goal was achieved
- (d) Ebola disease has surfaced

14. The word “eradicating” in line 1 is closest in meaning to

- (a) reducing
- (b) studying
- (c) fighting
- (d) eliminating

15. The word “lofty” in line 2 is closest in meaning to

- (a) difficult
- (b) noble
- (c) daring
- (d) outrageous

16. It can be inferred from the passage that _____ has resulted in the most deaths since 1978.

- (a) AIDS
- (b) tuberculosis
- (c) Ebola hemorrhagic fever
- (d) Lyme disease

17. All of the following are possible explanations for the spread of infectious diseases EXCEPT
- (a) flu shots
 - (b) environmental changes
 - (c) human contact with infected animals
 - (d) pathogen mutation
18. The word “encroached” in line 13 is closest in meaning to
- (a) explored
 - (b) damaged
 - (c) intruded
 - (d) hunted
19. The word “virulent” in line 18 is closest in meaning to
- (a) disease-producing
 - (b) virus-like
 - (c) drug-resistant
 - (d) unknown
20. Epidemics of influenza periodically occur because
- (a) influenza agents stimulate a protective immune response in the body
 - (b) vaccines are altered
 - (c) influenza viruses mutate frequently
 - (d) influenza viruses are resistant to antibiotics
21. The word “prevalent” in line 22 is closest in meaning to
- (a) dangerous
 - (b) popular
 - (c) most powerful
 - (d) common

22. Which of the following is NOT true of vaccines?
- (a) They produce a protective immune response.
 - (b) They protect against pathogens.
 - (c) They are sometimes modified.
 - (d) They use unaltered forms of infectious agents.
23. The word “strains” in line 24 is closest in meaning to
- (a) diseases
 - (b) viruses
 - (c) subspecies
 - (d) infectious agents
24. Mutation of infectious agents results in all of the following EXCEPT
- (a) the creation of new, virulent pathogens
 - (b) epidemics of influenza
 - (c) bacteria resistant to antibiotics
 - (d) increased options for treating disease

〔Ⅲ〕 次の二つの英文を読み、それぞれのカッコ内の最も適する語句を選びなさい。

(1) You Are A Marvel

Each second we live is a new and unique **25** (a. hour b. minute c. day d. moment) of the universe, a moment **26** (a. that b. what c. when d. it) will never be again. And what do we teach our children? We teach them that two and two make four and **27** (a. which b. that c. why d. when) Paris is the capital of France.

When will we also teach them **28** (a. why b. where c. what d. that) they are?

We should say to each of them: Do you know what you are? You are a marvel. You are **29** (a. unique b. ordinary c. odd d. good). In all the years that have passed, there has never been **30** (a. other b. the other c. others d. another) child like you. Your legs, your arms, your clever fingers, the **31** (a. elegance b. behavior c. way d. atmosphere) you move.

You may become a Shakespeare, a Michelangelo, a Beethoven. You have the capacity for anything. Yes, you are a marvel. And **32** (a. what b. where c. when d. how) you grow up, can you then have another **33** (a. child b. who c. marvel d. Shakespeare) is, like you, a marvel?

You must work—we must all work—to make the world **34** (a. value b. worth c. valuable d. worthy) of its children.

(2) We Learn By Doing

Not many years ago I began to speak English. Most people would say that what I am **35** (a. speaking b. saying c. learning d. doing) is “learning to speak” English. But these words carry into our minds the strange idea **36** (a. which b. what c. that d. why) there exist two very different processes: (1) learning to speak English and (2) speaking English. They imply that I will do the first until I have completed it, at **37** (a. which b. what c. then d. one) point I will stop the first process and begin the second. **38** (a. Actually b. In short c. Likewise d. On the contrary), I will go on “learning to speak” until I have “learned to speak” and then I will begin to speak. Of course, this is **39** (a. nonsense b. ideal c. success d. failure). There are not two processes, **40** (a. and b. but c. as d. so) one. We learn to do something by doing it. There is no other way.

49. That song always () me think of my hometown.
(a) reminds (b) makes (c) lets (d) recalls
50. The boy used to skip () because he had to look after his little brother.
(a) school (b) dancing (c) outside (d) inside
51. The movie () a true story that ran in a newspaper.
(a) was based on (b) became to be
(c) considered itself (d) changed into
52. In the sickroom, reports on what was going on in the world didn't () me at all.
(a) cure (b) accept (c) effect (d) interest
53. How wonderful it would be if we could () our feelings by means of bodily movements.
(a) show up (b) carry out (c) pass (d) convey
54. In this serious economic recession, many middle-aged men are now being asked to () their companies.
(a) work over (b) run over (c) leave (d) take
55. Albert Einstein and Sigmund Freud exchanged letters in 1932 to discuss whether mankind could () a permanent end to war.
(a) test (b) put (c) express (d) decide
56. Some people say that 30 years from now, robots will () soldiers in armed combat.
(a) rebind (b) rebuild (c) relocate (d) replace

57. I admit that making a speech is () at first.
(a) afraid (b) excited (c) scary (d) frightened
58. Being punctual is a () for being Japanese, isn't it?
(a) significance (b) qualification (c) gravity (d) quantity

〔V〕 各問いの下線部 a, b, c, d に誤りがあれば解答用紙のその文字をマークしなさい。なければ e をマークしなさい。

- (59) You should have had this wisdom tooth pulling out much earlier.
a b c d
- (60) We'll have a beautiful Japanese girl cooking for us in this evening.
a b c d
- (61) You don't know much about that what I really am.
a b c d
- (62) The U. S. rate of violent crimes have been declining or flattening over
the last decade.
a b c d
- (63) Would you give me a ride to the airport tomorrow morning?
a b c d
- (64) Russia may examining the option of building a new nuclear reactor in
Bulgaria.
a b c d
- (65) We're going to leave town in the morning of December 25.
a b c d
- (66) Japan could become an advanced post-industrial society, focusing on global
environmental protection and the quality of life.
a b c d
- (67) Seventy percents of those questioned cited global warming as a problem that
had a direct bearing on their lives.
a b c d
- (68) She is scared of the idea that she is going to get married to a man she
doesn't love.
a b c d

- (69) The program provides consumers with access for key data about the beef sold at the meat counters.
a b c d
- (70) "He's a bored person. He's always talking about himself."
a b c d
- (71) The next morning when we tried to leave in our car, we were chased by reporters from the number of media organizations.
a b c d
- (72) "I'm going skating to the Ice Arena. Why don't you join me?"
a b c d
- (73) You can practice driving with someone with a license sitting next to you.
a b c d
- (74) I'm now tired of taking care of my father, who has been Alzheimer's disease for about three years.
a b c d

[VI]

1. 以下の文を最も適当な順序に並べ替えなさい。

[75]

- A) This man promised her that he would cure her cancer in three months.
- B) He said that the soap was very expensive, so he charged her a lot of money.
- C) I once knew a woman who had cancer.
- D) Three months later, she was much sicker and much poorer.
- E) When the doctors told her that she needed an operation, she decided to go to a faith healer.
- F) He gave her a special soap to use.

- (a) C = E = A = F = B = D
- (b) D = B = A = E = F = C
- (c) E = C = B = A = F = D
- (d) A = D = E = C = F = B
- (e) B = F = A = D = C = E

[76]

- A) Officials at the plant say that the sulfuric acid escaped as it was being transferred from one tank to another.
- B) A cloud of sulfuric acid fumes sickened thirty-six people as it swept across downtown Middleport yesterday.
- C) Most people believe that the plant officials should be fired for their carelessness.
- D) The poisonous cloud came from the Tomlyn Chemical Plant in Santa Clara, California.
- E) Public reaction to the accident was immediately critical.

- (a) A = C = D = B = E
- (b) D = B = A = C = E
- (c) B = D = A = E = C
- (d) B = A = E = C = D
- (e) D = E = B = C = A

[77]

- A) Since I can't read signs, it is difficult to travel around.
 - B) Another problem is the Japanese public toilets.
 - C) Nobody warned me that the toilets are not like our Western ones—that has been a hard adjustment to make.
 - D) There are a few problems that I've had since I arrived in Tokyo.
 - E) Everything is written in Japanese, and even though my friend's mother taught me a few Japanese characters before I left, I can't read a thing.
- (a) $A = D = E = B = C$ (b) $D = E = A = B = C$
(c) $B = D = A = C = E$ (d) $C = A = E = B = D$
(e) $E = A = B = C = D$

[78]

- A) They also exposed me to experiences such as vacations and museum trips.
 - B) My parents played an important role in my educational development by helping me both in material and spiritual ways to become the person that I am today.
 - C) They bought various books that helped me become a hardworking student and a good reader.
 - D) These experiences have enlarged my perspective on life.
 - E) In short, I owe all of my positive qualities to the efforts of my parents.
 - F) In addition, they looked carefully at my grades in school in order to motivate me to do my best.
- (a) $C = A = B = E = F = D$ (b) $E = B = A = F = C = D$
(c) $A = D = C = B = F = E$ (d) $B = C = A = D = F = E$
(e) $C = B = A = F = D = E$

2. 次の文章を読んで、空いている箇所に最も適当な接続語句を入れなさい。

There are several ways that the community would benefit from the establishment of a day-care center. [79] _____, it would give non-English speakers a chance to go to school to learn English, and they would become more integrated into the life of the community. [80] _____ improving community relations, a day-care center would help non-English-speaking parents raise their standard of living because, if they learned English, they could get better jobs. [81] _____, the parents would be able to help their children with schoolwork and to communicate with their teachers. [82] _____, a day-care center gives non-English-speaking children and English-speaking children a chance to get to know one another. [83] _____, all parents would have a place to leave their children while they work.

Several objections to a day-care center may be raised. First of all, some people may say that it is impossible because it would be difficult to organize. [84] _____, there are several students and staff members who have day-care experience and are willing to set one up. Another objection might be that it would be expensive, [85] _____ the school would have to raise tuition. But this is not necessarily true. [86] _____ there would be some initial expense, it can be kept to a minimum if participants donate used toys and books and pay a small enrollment fee.

[79] (a) At once (b) First (c) At first (d) Consequently

[80] (a) If (b) When (c) And (d) Besides

[81] (a) Also (b) So (c) Now (d) Here

[82] (a) Moreover (b) In the end (c) However (d) Then

- [83] (a) Overall (b) But (c) Finally (d) Since
- [84] (a) Therefore (b) Secondly (c) Although (d) However
- [85] (a) while (b) since
(c) so (d) nevertheless
- [86] (a) As a matter of fact (b) Although
(c) As a result (d) In conclusion