

# ENGLISH TEST

## General Guidelines

The English Test will test your ability in understanding English structures and reading texts. It employs a multiple choice format, and it takes **90 minutes** to do the test.

The test comprises two following parts:

1. Part 1: 40 numbers of **Structure and Written Expression**
2. Part 2: 60 numbers of **Vocabulary and Reading Comprehension**

You may choose to begin work on ANY part.

For each number, you may only choose ONE answer. Giving more than one answer will not give you any point for that number.

For each number, you will see four possible answers, marked (A), (B), (C) and (D). Choose one option, and then on your answer sheet, find the number of the question and fill in the space that corresponds to the letter of the answer you have chosen. Fill in the space so that the letter inside the circle cannot be seen.



The questions are given in a variety of difficulty levels. You should try to answer all of them, as there is NO PENALTY for incorrect answers.

Directions for each part of the test will be given at the beginning of each part.

If you find an error in any printed item of the test, just guess the answer as best as you can and continue.

## SECTION 1

### STRUCTURE AND WRITTEN EXPRESSION

This section is designed to measure your ability to recognize language that is appropriate for standard written English. There are two types of questions in this section, with special directions for each type.

**Directions:** Questions 1-15 are incomplete sentences. Beneath each sentence you will see four words or phrases, marked (A), (B), (C), and (D). Choose the one word or phrase that best completes the sentence. Then, on your answer sheet, find the number of the question and fill in the space that corresponds to the letter of the answer you have chosen. Fill in the space so that the letter inside the oval cannot be seen.

*Example I*

Sample Answer

(A) (B) ● (D)

.....are found in virtually every country in the world.

- (A) Swamps and marshes which
- (B) When swamps and marshes
- (C) Swamps and marshes
- (D) Now that swamps and marshes

The sentence should read, "Swamps and marshes are found in virtually every country in the world." Therefore, you should choose answer (C).

*Example II*

Sample Answer

(A) (B) (C) ●

Milk is pasteurized by heating it for thirty minutes at about 63° Centigrade, rapidly cooling it, and then .....it at a temperature below 10° Centigrade.

- (A) to store
- (B) store
- (C) be stored
- (D) storing

The sentence should read, "Milk is pasteurized by heating it for thirty minutes at about 63° Centigrade, rapidly cooling it, and then storing it at a temperature below 10° Centigrade." Therefore, you should choose answer (D).

Now begin work on the questions.

1. Around four million years ago, a large cloud of dust enveloped the area in space \_\_\_\_\_ the current solar system is positioned.  
(A) there  
(B) wherever  
(C) where  
(D) whereby
2. According to the report, livestock feed in Canada \_\_\_\_\_ approximately 80% of the annual unexported corn and soybean harvests.  
(A) is included  
(B) includes  
(C) it include  
(D) Including
3. Winter wildlife animals \_\_\_\_\_ the red fox and snowshoe hare have adopted strategies to help them endure winter weather.  
(A) in that  
(B) alike  
(C) as if  
(D) like
4. \_\_\_\_\_ sound health practices and good social relationships has a beneficial effect on longevity.  
(A) Maintenance  
(B) If we maintain  
(C) Maintaining  
(D) As to maintenance
5. Regular exercise boosts cardiovascular health \_\_\_\_\_ the risk of breast and colon cancer.  
(A) it lowers  
(B) while lowering  
(C) what lowers  
(D) because of lowering
6. Cosmetic products are part and parcel of skincare specifically for women; \_\_\_\_\_, men are also purchasing some of the products to give their skin a healthy glow.  
(A) nonetheless  
(B) consequently  
(C) whereas  
(D) therefore
7. The world's oil reserves, \_\_\_\_\_ by modern nations, are dwindling at a fast rate.  
(A) utilization of the major energy source  
(B) to utilize the major source of energy  
(C) the major source of energy utilized  
(D) utilization as a major source of energy
8. Goats \_\_\_\_\_ as an effective bio-control agent to keep down the growth of weed without using herbicides  
(A) whose use  
(B) their being used  
(C) are used  
(D) used
9. \_\_\_\_\_, papyrus was the chief writing material in ancient time.  
(A) First used about 3000 years ago  
(B) Using it as early as early as 3000 B.C  
(C) That the use of it 3000 years ago  
(D) Its first use was around 3000 B.C
10. Through group discussion, students can explore a subject by sharing ideas and \_\_\_\_\_ satisfaction through the excitement of interaction and achievement.  
(A) derive  
(B) deriving  
(C) is derived  
(D) in deriving

11. Not until Alexander Fleming discovered penicilline, \_\_\_\_\_ with success.
- (A) bacterial diseases were treated
  - (B) the treatment of bacterial diseases done
  - (C) doctors treated bacterial diseases
  - (D) were bacterial diseases treated
12. Before \_\_\_\_\_ any organ transplantation, a patient must undergo a series of medical examination such blood-matching and tissue-matching tests.
- (A) undergo
  - (B) to undergo
  - (C) undergoing
  - (D) can undergo
13. In an X-ray, bones appear white \_\_\_\_\_ soft tissue shows up in shades of grey.
- (A) because
  - (B) inspite of
  - (C) so that
  - (D) whereas
14. Scientists are still debating whether \_\_\_\_\_ global temperature is not just a part of the global natural cycle of climate change.
- (A) increasing the
  - (B) the increase in
  - (C) in the increase of
  - (D) as to increase
15. There may be circumstances \_\_\_\_\_ layoffs are necessary for firms in order to survive.
- (A) that
  - (B) which
  - (C) whose
  - (D) in which

**Directions:** In questions 16-40 each sentence has four underlined words or phrases. The four underlined parts of the sentence are marked (A), (B), (C), and (D). Identify the one underlined word or phrase that must be changed in order for the sentence to be grammatically correct. Then, on your answer sheet, find the number of the question and fill in the space that corresponds to the letter of the answer you have chosen.

*Example I*

Meadowlarks are about the same size than robins.  
but they have heavier bodies, shorter tails, and  
longer bills.

Sample Answer

(A) (B) (C) (D)

The sentence should read, "Meadowlarks are about the same size as robins, but they have heavier bodies, shorter tails, and longer bills." Therefore, you should choose answer (B).

*Example II*

When overall exports exceed imports, a country said  
to have a trade surplus.

Sample Answer

(A) (B) (C) (D)

The sentence should read, "When overall exports exceed imports, a country is said to have a trade surplus." Therefore, you should choose answer (C).

Now begin work on the questions.

16. Warmer seawater temperatures are causing coral bleaching, which make coral reefs more susceptible  
to disease and permanent loss.
17. Bacteria grow in colonies and can be reproduced quite rapid by a process called fission.
18. The arguments for deep-sea exploration are similar with the reasons for sending man to the moon.
19. The latest clean-diesel automobile, introduced at the 2010 Paris Motor Show, is expected doing quite well in European markets.
20. One of the significant social phenomena of our time being the increased interest and participation of adults in educational pursuits.
21. The largest contributed factor to the increase of greenhouse gasses is the burning of fossil fuels.

22. Ashmont Primary School in London is the first school which decided to outsourcing part of the teaching of mathematics to India via the internet.  
A B C D
23. In March 2010, ten energy companies have been given the green light to set up wave and tidal farms off the coast of Scotland in line with the plan to provide energy to 750,000 homes by 2015.  
A B C D
24. For primary school children e-learning is a novelty that catches theirs attention for longer periods and engages them in a different way.  
A B C D
25. Most of experts believe that there is a causal link between the economic prosperity of a nation and the health of its people.  
A B C D
26. An educational psychologist shaking public opinion in 1967 by claiming that genetic components had a far more decisive influence on IQ levels than environmental factors.  
A B C D
27. Valium, a drug prescribed as a safe and fast-acting tranquilizer, was found years later to be highly addiction.  
A B C D
28. Short-wave radiation in the form of visible ultra-violet light from the sun penetrates atmosphere, thereby warming the earth's surface.  
A B C D
29. The government of Uganda has pursuit a comprehensive poverty reduction strategy which addresses the issues of access to appropriate and adequate health care.  
A B C D
30. Encountering a sharp decrease in crocodile population, Australia took swift steps to protect and expand existence crocodile habitats.  
A B C D
31. Historians combine social, economical, and political events of a country into a general story, and explain how they have shaped the course of the nation.  
A B C D
32. In the early 17th century, Korea, which it had seen the undesirable effects of colonization, protected itself from outside influences, and became a 'closed' country.  
A B C D

33. Doctors are saying that brain exercises may delay the onset of Alzheimer's disease, so they do not address the root cause of the disease.
34. Dormant for 400 years, Mount Sinabung unexpectedly erupted in August 2010, sending huge clouds of gaseous smoke and ash into the sky and to cause thousands of people to flee their homes.
35. A new study comparing organic strawberries with conventionally grown ones reveal that organic strawberries taste much better and are more nutritious.
36. Crocodiles do not chew their food, but they swallow it in large chunks which is then broken down in the stomach.
37. A student majoring in accounting must to earn an average of C for all courses, including not only accounting courses but also history.
38. Found in Tanzania, the three-millions-year-old fossils were estimated to be the oldest human remains to be discovered.
39. Translations should be done careful so that the accuracy of the original manuscript is preserved.
40. The computer company Dell, known for it's environmental policies such as banning the export of e-waste to developing countries, ranks No 1 in Newsweek's 2010 Green Rankings.

**THIS IS THE END OF SECTION 1**

**GO ON TO THE NEXT PAGE** 

## SECTION 2

### VOCABULARY AND READING COMPREHENSION

**Directions:** In this section you will read several passages. Each passage is followed by questions about it. Choose the one best answer, (A), (B), (C), or (D), for each question. Then, on your answer sheet, find the number of the question and fill in the oval that corresponds to the letter of your answer choice. Answer all questions based on what is stated or implied in the passage.

**Read the following passage:**

A new hearing device is now available for some hearing-impaired people. This device uses a magnet to hold the detachable sound-processing portion in place. Like other aids, it converts sound into vibrations. But it is unique in that it can transmit the vibrations directly to the magnet, and then to the inner ear. This produces a clearer sound. The new device will not help all  
*Line* (5) hearing-impaired people, only those with a hearing loss caused by infection or some other problem in the middle ear. It will probably help no more than 20 percent of all people with hearing problems. Those people, however, who have persistent ear infections should find relief and restored hearing with the new device.

*Example I:*

What is the author's main purpose?

- (A) to describe a new cure for ear infections
- (B) to inform the reader of a new device
- (C) to urge doctors to use a new device
- (D) to explain the use of a magnet

Sample Answer

(A)  (B)  (C)  (D)

The author's main purpose is to inform the reader of a new device for hearing-impaired people. Therefore, you should choose answer (B).

*Example II:*

- The word "relief" in line 7 means
- (A) less distress
  - (B) assistance
  - (C) distraction
  - (D) relaxation

Sample Answer

(A)  (B)  (C)  (D)

The phrase "less distress" is similar in meaning to "relief" in this sentence. Therefore, you should choose answer (A).

Now begin with the questions.



**Questions 41 - 50**

Children's multicultural literature plays an increasingly significant role in early childhood classrooms. Multicultural literature - literature that focuses on people of color, religious minorities, regional cultures, the disabled, and the aged - plays a significant role in the development of children's cross-cultural understanding. As societies become an increasingly complex blend of ethnicity, family structure, shared values, spiritual beliefs, and socioeconomic class, this cultural and linguistic diversity has heightened awareness of and sensitivity to the needs of all people.

High-quality multicultural literature has the capacity to foster children's understanding of and respect for their own cultures, as well as the cultures of others. In her poignant book *Against Borders*, Hazel Rochman (1993) explains the overall purpose of multicultural literature: A good book can help to break down barriers. Books can make a difference in dispelling prejudice and building community: not with role models and literal recipes, not with noble messages about the human family, but with enthralling stories that make us imagine the lives of others. A good story lets you know people as individuals in all their particularity and conflict; and once you see someone as a person - flawed, complex, striving - then you've reached beyond stereotype. Stories, writing them, telling them, sharing them, transforming them, enrich us and connect us and encourage us to know each other. Quality multicultural literature defies stereotypes and biases while providing a window into the lives of diverse people. It has the added benefit of helping children recognize unfairness and consider multiple perspectives and values, while providing models for challenging inequity.

Selection of quality children's multicultural literature begins with the same criteria that apply to selecting quality children's literature in general: the literary elements of plot, characterization, setting, theme, and point of view must be interwoven to create a convincing story in an age-appropriate manner. Caregivers and teachers also would be wise to examine illustrations and pictures for authenticity and accuracy. It is especially important that real people, real situations, and authentic illustrations be depicted. These realistic elements are instrumental in children's ability to comprehend text and make meaningful connections from the story. Other important characteristics of quality multicultural literature include believable characters and realistic life styles with which children can identify, authentic language, and historical accuracy. Ideally, selected children's books represent a variety of settings and themes, providing opportunities for children to consider multiple perspectives and values. These criteria are the hallmark of high-quality multicultural literature.

As Rochman (1993) eloquently asserts, "The best books break down borders, they surprise us and change our views of ourselves; they extend that phrase 'like me' to include what we thought was foreign and strange". This changing view of oneself is especially important for children to consider at a young age if they are to embrace true multiculturalism. Additionally, the reader is urged to choose a variety of genres and cultures for read-aloud rather than using a single book to represent a particular culture. Finally, because classrooms are becoming increasingly diverse, the messages that teachers promote through the books they select and read should convey respect for diverse cultures.

Aside from providing a greater appreciation and understanding of the self and others, multicultural literature also boosts crucial literacy skills in the areas of oral language development, vocabulary growth, comprehension, inference making, analytical skills, imagination, and creativity. In particular, rich language is embedded within multicultural literature. When children listen to multicultural literature, they are exposed to more challenging vocabulary and unfamiliar concepts. These often include specialized information pertaining to geography, ethnicity, customs, and vocabulary associated with traditions of people across the globe.

41. According to the passage, multicultural literature focuses on all of the following, EXCEPT
- (A) Senior and minority citizens
  - (B) People of different political views
  - (C) People with disabilities
  - (D) Cultural tradition

42. The word "foster" in line 7 can be best replaced by which of the following?
- (A) Encourage
  - (B) Explain
  - (C) Share
  - (D) Reach

43. How does the author view the book *Against Border* written by Hazel Rochman?
- (A) Full of prejudice
  - (B) Unrealistic
  - (C) Moving
  - (D) Complex
44. In her book, Hazel Rochman suggests all of the following as the purposes of multicultural literature EXCEPT
- (A) To remove racial barriers
  - (B) To humanize people
  - (C) To set prejudice aside
  - (D) To support stereotyping
45. Which of the following words in paragraph 2 CANNOT be used as examples of "unfairness"?
- (A) Prejudice
  - (B) Conflict
  - (C) Inequity
  - (D) Bias
46. Which of the following would be most likely the main idea of paragraph 3?
- (A) Factors to consider when choosing children's multicultural literature are identical to those applied when choosing any children's books.
  - (B) In addition to other common criteria of quality children's books, multicultural literature must also regard illustrations, characters and settings.
  - (C) Multicultural literature must ideally be able to represent real people and situations, realistic lifestyles and depict authentic illustrations.
  - (D) True multicultural literature will provide children a greater appreciation and understanding of the self and others.
47. According to the writer, realistic imagery is important because it
- (A) helps children make meaningful associations from the story
  - (B) assists teachers to retell the stories in a lively way
  - (C) gives children role models appropriate for their age
  - (D) indicates that people are complex and flawed
48. In which of the following paragraphs does the writer highlight the importance of diversity in classroom reading?
- (A) Paragraph 1
  - (B) Paragraph 2
  - (C) Paragraph 3
  - (D) Paragraph 4
49. The word "these" in line 41 refers to
- (A) Children and multicultural literature
  - (B) Crucial literacy skills of language development
  - (C) Challenging vocabulary and unfamiliar concepts
  - (D) Traditions of people across the globe
50. How does multicultural literature benefit children?
- (A) By teaching them new concepts and expanding their vocabulary
  - (B) By enabling them to understand people better and improving their literacy skills
  - (C) By enhancing their creativity and power of analysis
  - (D) By providing role models and rules of proper behavior

## Questions 51 - 60

New University of Arizona (UA) research indicates that leaf vein patterns correlate with functions such as carbon intake and water use — knowledge that could help scientists better understand the complex carbon cycle that is at the heart of global climate warming. Leaves have very different networks of veins. They have different shapes, different sizes, and different thicknesses. The really interesting question is how a leaf with a certain form produces a certain function.

The researchers developed a mathematical model to predict the functions of leaves based on three properties of the vein network: density, distance between veins and number of loops, or enclosed regions of smaller veins much like capillaries in humans. Vein density reflects how much energy and resources the leaf has invested in the network, while distance between veins shows how well the veins are supplying resources to the leaf. The number of loops is a measure of the leaf's resilience and plays a role in determining its lifespan. If the veins reconnect often and part of the leaf becomes damaged, resources can be circulated through different pathways.

The vein network inside of a leaf is like most of the important organ systems in a person. It is like the skeleton because it holds the whole leaf up and lets it capture sunlight and not get blown over in a windstorm. It is like the circulatory system because it is distributing water from the roots up to all the cells within the leaf, and it is also bringing resources from the leaf back to the rest of the plant after photosynthesis has happened. It is also like a nervous system because there are chemical signals that are transmitted to the leaves from other parts of the plant through the liquid in the veins. This is important for the function of the leaf because when this one structure is implicated in so many different patterns, clearly there are going to be tradeoffs between being able to do all of these different functions well. For example, a leaf with a very loopy network of veins might live longer, but it will also cost a lot of carbon, which plants absorb from carbon dioxide in the atmosphere, to develop that vein network.

Carbon can only get into leaves through little pores on the leaf surface, and when carbon comes in, which is something good for the plant, water also comes out. Plants with denser vein networks — veins that are closer together — are able to withstand higher levels of water loss and absorb more carbon. Unfortunately, that doesn't mean you should plant trees with dense leaf vein networks if you want to save the planet. It becomes a little bit more difficult to scale up beyond there because a plant is not only just its leaves: It's also the trunk and the roots and so on. The important thing to think about is that other parts of the plant are going to be contributing to the carbon cycle also in terms of decomposition or other large-scale environmental effects.

The researchers' model successfully predicted relationships among photosynthetic rate, lifespan, carbon cost and nitrogen cost for more than 2,500 species worldwide based on global data. But that does not mean it will work on a local scale. To find out, the team tested leaves from 25 plant species on the UA campus. While initial results appear to show that the model will work, the team has not tested enough samples to know if it successfully predicts relationships in leaf function on a case-specific basis.

51. Which of the following attributes of leaves that is most crucial to scientists in understanding their work functions?
- (A) Their variety in shapes
  - (B) Their range of colors
  - (C) Their different life spans
  - (D) Their likeness in size
52. The following questions can be answered by information in Paragraph 2 EXCEPT
- (A) What are the characteristics of the vein network?
  - (B) What is the function of the leaf stem?
  - (C) Which vein property affects a leaf's age?
  - (D) How is the blood circulatory system in humans similar to the vein system in leaves?

53. The distance between the leaf veins can determine which of the following?
- (A) How efficient the veins' supply system is
  - (B) How much energy is deposited in the vein network
  - (C) What resources are kept in the network
  - (D) How long the leaf will survive
54. Which of the following occurrences may change the route travelled by the resources?
- (A) When veins are not dense enough
  - (B) When the distance between the veins gets too far
  - (C) When parts of the leaf malfunction
  - (D) When the veins cannot reconnect
55. The word "it" in line 14 refers to
- (A) the leaf
  - (B) the vein network
  - (C) the skeleton
  - (D) sunlight
56. Which of the following is TRUE about how the vein network resembles the nervous system in humans?
- (A) The vein network enables the whole tree to stand up.
  - (B) The vein network circulates resources after the photosynthesis process is completed.
  - (C) The liquid in the vein helps other parts of the plants that do not function well.
  - (D) The vein network carries out the transmission of signals.
57. Which of the following best expresses the opposite meaning of the term "dense" in line 27?
- (A) Transparent
  - (B) Crowded
  - (C) Void
  - (D) Sparse
58. According to the passage, denser vein networks are not the definite solution to carbon reduction because
- (A) the amount of carbon absorbed by leaves with dense vein networks is very little
  - (B) leaves with dense vein networks will cause a high level of water loss
  - (C) the carbon cycle in nature will be slowed down by denser vein networks
  - (D) the contribution of other parts of the plants to the carbon cycle should also be considered
59. It can be inferred from the passage that the researcher team
- (A) limited their research to plant species found in the University of Arizona
  - (B) will conduct more tests to verify their mathematical model
  - (C) failed to predict the relationship between vein patterns and functions
  - (D) did not obtain desirable results in their initial experiments
60. In which of the following paragraphs does the writer mention the tradeoffs between different leaf functions?
- (A) Paragraphs 1 and 2
  - (B) Paragraphs 2 and 3
  - (C) Paragraphs 3 and 4
  - (D) Paragraphs 4 and 5

## Questions 61 - 70

Natural calamities are inevitable. One of them is earthquake. In simple terms, one can call earthquake as shaking and vibration of the earth. Frequent volcanic activities and constant movement of tectonic plates underground are palpable causes of earthquakes.

- Line  
(5) Basically, the earth crust is constituted of a solid core, molten magma mantle and the tectonic plates. These plates are in constant motion due to the convection currents of the magma and hence are either sliding against each other or moving away from each other. Although there is constant motion under the grounds, none of these are felt by us. Due to this constant motion over the years, mountains and valleys are formed, with the former being formed when plates converge, causing one plate to go below the other. However if the plates move in different directions, sliding against each other, due to the friction generated, some sections of them lock together, causing a lot of kinetic energy to build up. The line of intersection which contains the point of friction between these plates is often known as the earthquake fault line. These earthquake fault lines are often called fractures in the earth's crust. So when the plates start moving, the stored energy is released from the point of intersection (also known as the hypocenter), in the form of an earthquake.
- (10) There are four types of earthquake. Tectonic earthquake is triggered when there is a lot of strain and stress exerted on the tectonic plates. For instance, if you take a twig and try to bend it, you can feel energy building up through the twig, until it snaps. Once snapped, the twig vibrates, releasing energy. The same is what happens in a tectonic earthquake. Take an example from San Andreas Fault in California, where two plates, the Pacific plate and the North American plate were involved.
- (15) Both these plates were moving in northwesterly direction, with one moving faster, due to which the tension created due to the friction of the plates caused an earthquake. Tectonic earthquakes are most common and keep happening all the time under the earth's crust, in both land and the ocean.
- (20) Volcanic eruptions can also cause earthquakes. Many a time, the acidic lava that is vented out cools down as soon as it comes in touch with the atmosphere outside. This cooling blocks the volcanic vent and the pressure built inside gets trapped. But the pressure needs to be released in some way or the other and so chooses the weakest of the volcanic plates to escape through. This eventually causes massive and powerful earthquakes that can also give rise to tsunamis, pertaining to the seismic waves, or ripples it has created. A significant example of this type is the explosion of Krakatoa (of Indonesia), whose repercussion was a massive earthquake that rattled Java and Sumatra islands. However, volcanoes that vent out basic lava do not cause earthquakes.
- (25) Small ripples that occur in mines and underground caverns are known as collapse earthquakes. These earthquakes are also factored by massive landslides, or a mine burst which could happen due to intense stress on the rocks constituting the mines, causing large masses of rocks to displace. This eventually leads to collapsing of a mine, and hence is known as a collapse earthquake.
- (30) Detonation of nuclear devices can also set off earthquakes, more commonly known as explosion earthquakes. This occurs, when enormous nuclear energy is released during underground nuclear explosions, which when bottled within, increases a thousand times more than the atmospheric pressure, in intensity. Surrounding rocks get vaporized, leaving behind a mammoth cavity which is many meters in diameter.
- (40) Some of the most earthquake prone regions are Japan, Indonesia, Java and Sumatra, New Zealand, Hawaiian islands and Andaman & Nicobar islands. One can observe that islands and high mountain regions are most prone to earthquakes due to the active tectonic plate movement in such areas.
- (45) Effects of an earthquake can be very cataclysmic, depending on the complex combination of earthquake magnitude, the distance from the epicenter, and the local geological and geomorphological conditions, which may amplify or reduce wave propagation. Hence, people in earthquake prone regions prefer to build wooden houses and do not use too many automobiles for commuting. This is one way to cut down on materialistic and life damage. Also the movements of birds and animals are watched closely, because any deviance observed in their behavior indicates the coming of a natural calamity.
- (50)

61. What would be the most appropriate title for the text?  
(A) Earthquake and Other Natural Calamities  
(B) What Causes An Earthquake  
(C) Tectonic Earthquakes and Their Prone Regions  
(D) How to Prevent Earthquake Damage
62. The word "palpable" in line 3 can be best replaced by which of the following?  
(A) Predictable  
(B) Constant  
(C) Indefinite  
(D) Evident
63. The word "them" in line 10 refers to  
(A) Frictions  
(B) Convection currents  
(C) Tectonic plates  
(D) Fractures
64. Which of the following can form an earthquake fault line?  
(A) Plates interlocking, generating frictions  
(B) Converging of plates, one below the other  
(C) Stored energy released from hypocenter  
(D) Cooled acidic lava from volcanic vent
65. According to the passage, which of the following statements about tectonic plates is NOT correct?  
(A) They are part of the elements of the earth crust.  
(B) Plates converge to form mountains and valleys.  
(C) They caused underground movement that cannot be felt.  
(D) They constantly move against or away from each other.
66. The writer mentioned Krakatoa explosion in the text as an example of  
(A) A powerful volcanic eruption that vented out basic lava  
(B) A massive volcanic explosion caused by tsunami  
(C) An explosion that caused a great earthquake and tsunami  
(D) An eruption caused by intense stress of volcanic rocks
67. In the passage, the author suggests that  
(A) All natural calamities, including earthquakes, are avoidable.  
(B) Wooden houses are not recommended for earthquake regions.  
(C) Regions with islands and high mountains are earthquake-prone.  
(D) Only naturally occurring earthquakes can cause enormous damage.
68. Seismic waves that occur in an excavation site is an attribute of which of the following earthquakes?  
(A) Collapse earthquake  
(B) Explosion earthquake  
(C) Tectonic earthquake  
(D) Volcanic earthquake
69. A type of earthquake that can leave a gigantic hole in the ground is described in which of the following paragraph?  
(A) Paragraph 3  
(B) Paragraph 4  
(C) Paragraph 5  
(D) Paragraph 6
70. The effects of an earthquake vary in severity depending on all of the following factors EXCEPT  
(A) The movement of animals  
(B) The amount of energy released  
(C) The distance to the epicenter  
(D) Local geographical conditions

## Questions 71 - 80

The physical acts of refloating sunken or stranded vessels together with any cargoes on board are defined as salvage operations. The towing of disabled vessels to safe ports is not properly considered to be salvage but service rendered. However, towage service when performed by salvors after a vessel is refloated may be considered as a part of a salvage operation.

Line (5) Every case is classified primarily as sinking or stranding. Each presents its individual problems demanding the use of certain methods or combination of methods. These are determined by the salvage engineer, whose highly specialized knowledge can be acquired only by experience over many years plus common sense application of physics. Local knowledge of existing and potential weather conditions as far as they affect the method and timing of the operation is of great importance.

(10) The cause of the casualty—whether a sinking or a stranding, resulting from collision with other ships, or damage occasioned by explosion, fire, striking submerged rocks, reefs, or objects—and the depth of water in which the ship lies determine the physical and economic feasibility of the undertaking.

(15) In stranding cases, the essential factors in refloating are the nature of the shoreline where the vessel lies, the degree of exposure to the effects of winds and sea, the season of the year, the range of tidal differences between high and low, and the weights of cargo, fuel, and water that can be removed to lighten the dead weight of the vessel as it lies on the sea to increase the buoyancy. Equally important for the economic consideration is the known existing damage to vessel and cargo, the probable increase in damage to the vessel by pounding on the sea bottom before or during

(20) refloating or due to the jettisoning of cargo to increase buoyancy.

The methods of refloating a sunken ship are determined by the damage that caused the ship to sink, the depth of water in which it lies, tidal or other currents, probable weather conditions expected during salvage operations, and availability of necessary equipment and skilled personnel such as divers. Paramount in any operation is the salvaged value of ship and cargo balanced against the estimated cost of the refloating and restoration of the vessel to comply with classification and government requirement.

(25) Salvage operations are usually undertaken by professional salvage companies, which maintain salvage vessels fully equipped with the anchors, cables, wires, ropes, portable pumps, air compressors, large and small machine tools, drilling and blasting tools, diving gear for numbers of divers, and a variety of bolts, nuts, pipe, steel plates, timber planks and caulking materials, air and water hose, and an infinite number of other items. Salvage vessels are specifically designed and built for the intended service. They must be fast and powerful, capable of traveling long distances, of towing the salvaged ships to safe ports of repair, and must be seaworthy to combat the severest gales with their attendant wave conditions. Modern salvage ships represent the investment of many hundreds of thousands of dollars.

71. The following are questions that the passage tries to address EXCEPT
- (A) What is a salvage operation?
  - (B) How can salvage operations be classified?
  - (C) What factors must be considered in salvage operations?
  - (D) Who can own professional salvage companies?

72. With which of the following would the author probably agree?
- (A) It takes a significant amount of money to buy modern salvage ships.
  - (B) Salvage operation is the same as towing service.
  - (C) Salvage cases can hardly be divided into sinking and stranding.
  - (D) Government requirements can be overlooked in any salvage operation.

73. It can be inferred from paragraph 3 that the cause of the casualty
- (A) can result from natural disasters.
  - (B) is not important in either a sinking case or a stranding case.
  - (C) is a more significant factor than the depth of the water.
  - (D) plays an important role in deciding whether the operation can be undertaken or not.
74. The word "it" in line 17 refers to
- (A) weight
  - (B) vessel
  - (C) fuel
  - (D) water
75. The word "jettisoning" in line 20 is closest in meaning to
- (A) preserving
  - (B) storing
  - (C) discarding
  - (D) hiding
76. Which of the following best expresses the opposite meaning of the word "paramount" in line 24?
- (A) Essential
  - (B) Trivial
  - (C) Gratuitous
  - (D) Moderate
77. According to the passage, which of the following is NOT a factor that determines the refloating salvage operation?
- (A) necessary equipment
  - (B) skillful human resources
  - (C) weather conditions during the accident
  - (D) the depth of the water
78. In paragraph 6, the author mentions the equipment needed in a vessel to indicate that
- (A) professional salvage companies are encumbered by the numerous things they must provide.
  - (B) it takes a little preparation to sail a salvage vessel.
  - (C) salvage operations can be carried out by using any vessel.
  - (D) it is the standard that professional salvage companies have to afford.
79. The author would probably use of the following words to describe salvage vessels EXCEPT
- (A) ghastly.
  - (B) costly.
  - (C) speedy.
  - (D) strong.
80. The author's purpose in writing this passage is to
- (A) compare traditional salvage operations with modern salvage operations.
  - (B) inform that equipment is secondary in salvage operations.
  - (C) elucidate the meaning, classification, and factors of salvage operations.
  - (D) convince that only professional salvage engineers can undertake salvage operations.



## Questions 81 - 90

Weaknesses in the architecture behind the Internet mean that surfing can sometimes lead to slow speeds and a tiresome wait for a video to load. Redeveloping the whole architecture of the Internet is an option recently discussed even by Internet pioneers. However, a group of European engineers

Line

(5) decided to go the opposite way and to monitor traffic and tailor services to meet demand. There is no single entity behind the Internet. It is made up of different networks that are managed by service providers. These service providers — or operators — manage what data is being sent and monitor the amount of traffic being used in terms of simple web browsing, multimedia streaming or peer to peer file sharing. When the data traffic on a network is too dense, what experts call “bottlenecks” can occur, slowing the delivery of information to your computer, which can result in a

(10) slower Internet experience.

A EUREKA-backed project entitled TRAMMS, for Traffic Measurements and Models in Multi-Service networks, incorporating teams from Sweden, Hungary and Spain, aimed to solve this issue by gaining access to Internet networks run by operators in both Sweden and Spain and monitoring traffic over a period of three years. This gave them an excellent insight into user behavior, enabling them to

(15) accurately measure network traffic so that in the future, service providers know how much capacity is needed and can avoid bottlenecks.

The particularity of this research project is that the team of experts taking part in it was given access to very sensitive data on Internet traffic measurements. Operators normally tend to guard this information jealously as it constitutes their core business. “Internet traffic measurements are very

(20) difficult to find if you are not an operator,” says Mr. Andreas Aurelius, coordinator of the project and senior scientist at Acreo AB, one of the project partners. Previous research in this field has normally been limited to campus networks, and limited to a geographical area. “That is one of the unique things about this project,” he says. “We were using data in access networks, not campus networks as most researchers do.”

(25) Another question that springs to mind is how the team was able to acquire all of this information without flouting any privacy laws. The answer is that through agreements with the operators, the partners had access to certain information, but not all of it. “The information was post-processed, so it only contained data. It wasn’t linked to any customers or IP addresses. We could see what type of application was being used, for example if it was peer to peer, but we couldn’t see what file was

(30) downloaded,” explains Mr. Aurelius. Getting access to such delicate information was a great coup for the project, and as a result the privacy concerns were taken very seriously. Transnational partnerships and multicultural issues didn’t seem to affect the TRAMMS project, as some of the partners had already worked together on previous projects, so they gelled together well. “There was a tighter bond between the national partners,” says Mr. Aurelius, but there were regular

(35) international meetings with the partners which helped foster cooperation. In the end, 11 partners successfully completed the project and the three countries involved complemented each other’s areas of specialization, making the project a perfect example of international cooperation.

81. Which of the following would most likely be the main idea of the entire passage?
- (A) The TRAMMS project was successfully set up to make the Internet faster.
  - (B) Sensitive data are prone to being the source of jealousy among the Internet operators.
  - (C) Despite multicultural issues, cooperation between TRAMMS partners remain solid.
  - (D) Dense data traffic causes a slow Internet connection.

82. With which of the following statements would the author probably agree?
- (A) Increasing the Internet speed requires no control of data traffic.
  - (B) One single country can run the TRAMMS project effectively.
  - (C) Privacy laws no longer need to be protected in the TRAMMS project.
  - (D) The Internet is a complex network service.

83. The word "tiresome" in line 2 could best be replaced by  
(A) gratifying.  
(B) dull.  
(C) longed-for.  
(D) petty.
84. According to the passage, which of the following is NOT TRUE about service providers?  
(A) They are keen on sharing information with others.  
(B) They managed data that are being sent on the Internet.  
(C) They can also be called operators.  
(D) They control the Internet traffic.
85. The word "them" in line 14 refers to  
(A) networks.  
(B) operators.  
(C) Sweden and Spain.  
(D) TRAMMS teams.
86. According to the passage, the TRAMMS project is unusual because  
(A) The team was using data on either campus or access networks.  
(B) The team could access sensitive information about Internet traffic measurements.  
(C) A geographical factor impeded their project.  
(D) Operators had to be paid to share information with the team.
87. The author mentions privacy laws in paragraph 5 because  
(A) When confidential information is shared, privacy will be an immediate concern.  
(B) Every country has different privacy laws.  
(C) Privacy concerns were taken lightly in the TRAMMS project.  
(D) The partners had access to all information.
88. Which of the following best expresses the opposite meaning of the word "coup" in line 30?  
(A) Achievement  
(B) Upheaval  
(C) Setback  
(D) Tumult
89. The author's tone in this passage could be best described as  
(A) dubious.  
(B) disapproving.  
(C) optimistic.  
(D) critical.
90. Which of the following questions about transnational partnerships does the passage supply enough information to answer?  
(A) How often were international meetings for the TRAMMS project held?  
(B) What enabled the partners in the TRAMMS project to work together very well?  
(C) What made the national partners have a tighter bond?  
(D) Why did the three countries complement each other's area of specialization?

Questions 91 - 100

Scorpions are the most primitive land arachnids and the oldest, being known from Silurian fossils, and they may have been the first land animals. These flattened, distinctively segmented animals are characterized by the presence of a poisonous sting on the end of the abdomen, the five terminal segments of which are sharply narrowed to form a long, ringed, movable tail. The tail is curled over the back so that the curved, spinelike sting is in position to strike insects, spiders, and other small living animals that the scorpion preys on. The upper side of the cephalothorax (a combined head and thorax) is a flat carapace bearing a pair of large median eyes and a group of two to five small eyes on each side margin. The cephalothorax is broadly joined to the abdomen. The four pairs of walking legs are similar and relatively slender. Held out in front to test the terrain is a pair of long, robust pedipalpi provided with stout pincers which are used to hold the prey. A small but strong pair of jawlike chelicerae in front of the mouth aids in crushing the body of the victim.

The scorpion digests the soft parts of its prey by discharging a digestive fluid over them. The predigested food is then sucked through the mouth by the pharynx, which serves as both a pump and a strainer. As in all arachnids, the genital products are voided through a pore that opens on the ventral face of the second abdominal segment. Immediately behind is a pair of comblike pectines found only in scorpions and thought to have a sensory function.

Scorpions are solitary, nocturnal creatures that attack each other as readily as any other suitable prey. During mating the male extrudes to the ground a complicated spermatophore. He then grasps the forelegs of the female and dances her into a position to accept the sperm mass. Whereas most arachnids lay eggs, the scorpions are viviparous, bringing forth living young. The newly born scorpions mount the back of the mother and stay there until after their first molt, usually for about a week. During this period they consume the food stored in their bodies. The belief that these weak, tiny babies feed upon the body of the mother has no basis in fact. No less a fable is the classic story that scorpions commit suicide by stinging themselves when they are helplessly cornered or surrounded by a ring of fire. During frantic effort to escape, the victim stings at random, sometimes striking its own body before succumbing.

Scorpions abound in humid tropical areas and in hot deserts, where they are represented by many species. The giants are great black creatures from tropical Africa, frequently 7 inches (180 mm) long, and the average size for the whole order is about half that length. Thirty or more species are found in the United States, chiefly in the South and Southwest, but some penetrate north to Virginia in the East and even farther north in the West, where they range into the Canadian provinces of British Columbia, Alberta, and Saskatchewan.

91. The following are questions that the passage tries to address EXCEPT

- (A) What do scorpions look like?
- (B) How do scorpions eat?
- (C) How venomous are scorpions?
- (D) Where can scorpions be easily found?

92. The word "carapace" in line 7 is closest in meaning to

- (A) body.
- (B) covering.
- (C) waist.
- (D) tusk.

93. The following animals would most likely be a scorpion's prey EXCEPT

- (A) beetles.
- (B) spiders.
- (C) grasshoppers.
- (D) birds.

94. According to the passage, the following are parts of a scorpion's body used to attack its victim EXCEPT

- (A) the sting.
- (B) legs.
- (C) pincers.
- (D) chelicerae.

95. According to the passage, which of the following is TRUE about scorpions?
- (A) Their natural death is by stinging themselves.
  - (B) The average size is 9 cm.
  - (C) They like damp and cool areas.
  - (D) They lay eggs.
96. The word "they" in line 24 refers to
- (A) arachnids.
  - (B) adult scorpions.
  - (C) female scorpions.
  - (D) newly born scorpions.
97. Which of the following best expresses the opposite meaning of the word "frantic" in line 25?
- (A) composed
  - (B) agitated
  - (C) desperate
  - (D) tense
98. Which of the following about scorpions is NOT supported by the passage?
- (A) They are active during the day
  - (B) Their genital products are similar to other arachnids.
  - (C) There are some false beliefs about scorpions.
  - (D) They attack other scorpions as aggressively as they attack their prey.
99. Scorpions are abundant in the following areas EXCEPT
- (A) Africa
  - (B) Southern United States
  - (C) Alaska
  - (D) British Columbia
100. The passage would probably be a part of an assigned reading in which of the following courses?
- (A) Paleontology
  - (B) Geography
  - (C) Biology
  - (D) Chemistry