

BAHASA INGGRIS

- STRUCTURE AND WRITTEN EXPRESSION
- VOCABULARY AND READING COMPREHENSION



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SELEKSI MASUK UNIVERSITAS INDONESIA 2014

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: 50 numbers of Vocabulary and Reading Comprehension

You may choose to begin work on ANY part.

For each number, you will see four possible answers, marked (A), (B), (C) and (D). Choose <u>one</u> 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 items of the test, just guess the best answer as you can and continue.

The page numbers printed on the exam booklet are the page numbers of the exam paper and the exam answer sheet. The exam answer sheet is attached to this exam booklet and cannot be used for a different exam booklet. They have to be used together.



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.

<u>Directions</u>: Question 1-15 are incomplete sentences. Beneath each sentence you will see four words or phrases, marked (A), (B), (C) and (D). Choose the <u>one</u> 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 circle cannot be seen.

Example 1	Sample Answer
are found in virtually every country in the world.	(A) (B) (D)
(A) Swamps and marshes which	

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

Sample Answer

Example II

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(B) When swamps and marshes

(D) Now that swamps and marshes

(C) Swamps and marshes

(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 temperature below 10° Centigrade." Therefore, you should choose answer (D).

Now begin work on the questions.

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- The uncommon and devastating natural disasters in many parts of the world reminded people of the gloomy predictions ... the effects of global warming.
 - (A) regarding
 - (B) in agreement with
 - (C) on top of
 - (D) according to
- 2. International companies and investors in China are complaining that China's policies on foreign enterprises are much more restrictive than ... two years before.
 - (A) were
 - (B) were they
 - (C) it was
 - (D) they were
- 3. Originally black in color, the razor fish will change into its colors of camouflage ...
 - (A) because of its danger.
 - (B) as soon as it senses danger.
 - (C) in spite of the danger.
 - (D) there is the sense of danger.
- 4. Vitamin D is effective for the absorption of calcium needed for our bones and ... of rickets in children, a disease caused by a lack of vitamin D.
 - (A) to prevent
 - (B) the prevention
 - (C) preventing
 - (D) preventive
- 5. ... cholesterol that floats around in our blood comes from consuming too much bad fats, such as saturated fats and trans-fats.
 - (A) The most
 - (B) Most of
 - (C) Since most
 - (D) Most of the

- 6. Only recently in February 2014 ... in the Olympic Winter Games, while ski jumping for men has been a fixed event ever since the first Winter Games started in 1924.
 - (A) was ski jumping for women incorporated
 - (B) the incorporation of women's ski jumping
 - (C) women's ski jumping was incorporated
 - (D) that ski jumping for women was incorporated
- 7. The deeper the coal mines, ... faced by the miners.
 - (A) the more numerous the problems
 - (B) there were numerous problems
 - (C) the problems are more numerous
 - (D) more numerous are the problems
- 8. There is a type of jelly-fish that does not grow bigger than a peanut; ..., it is the most poisonous creature on earth.
 - (A) otherwise
 - (B) however
 - (C) in spite of
 - (D) unless
- 9. ... that primary and secondary schools are too much focused on rote-learning is one of the reasons for the Ministry of Education to make changes in the school curriculum.
 - (A) It is the notion
 - (B) The notion is
 - (C) The notion
 - (D) As the notion
- 10. With slow ... growth around the world, investors are searching for startup companies that might give a good return on their investment.
 - (A) economy
 - (B) economic
 - (C) economist
 - (D) economical

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- 11. The Richter Scale, a system of measuring how strong an earthquake is, ... seismologists to describe an earthquake in quantitative terms.
 - (A) to enable
 - (B) enabling
 - (C) they enable
 - (D) enables
- 12. Sophisticated underwater drones were also used in the hunt for the Malaysian airliner that had disappeared in such a ... way.
 - (A) mystery
 - (B) mysterious
 - (C) big mystery
 - (D) mysteriously
- 13. Smoke signals, used in the past by the American Indian tribes, were sent to convey simple messages ... had been agreed upon beforehand.
 - (A) that meaning
 - (B) its meaning
 - (C) the meaning
 - (D) whose meaning
- 14. Widely known as the land of 'fire and ice', Iceland is famous for its highly active volcanoes- ... side by side with cold glaciers and thick ice.
 - (A) its existence
 - (B) they exist
 - (C) whose existence
 - (D) existing
- 15. The local TV station had to withdraw a commercial that ... offensive by the general public.
 - (A) consider it
 - (B) to consider
 - (C) considering
 - (D) was considered



<u>Directions</u>: 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 <u>one</u> 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 question and fill in the space that corresponds to the letter of answer you have chosen.

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Example I

Meadowlarks are <u>about</u> the same size <u>than</u> robins.

but they have $\frac{A}{B}$ but they have $\frac{\text{heavier}}{C}$ bodies, shorter tails, and longer $\frac{\text{bills}}{D}$.

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).

Sample Answer

Example II

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

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. Easy terms on loans for motorcycles have met the need for a private means of transport, but has simultaneous $\frac{A}{B}$ led to huge, unforeseen traffic problems.
- 17. Construction of nuclear reactors that generate clean energy has come to a standstill in many countries because $\frac{A}{A}$ the unsolved problem of radioactive waste disposal.
- 18. To protect the giant Panda in the wild, the Chinese government banned $\frac{\log \log}{B}$ and $\frac{\text{undertaking}}{C}$ expansion of the Panda's habitat by $\frac{\text{replanting}}{D}$ the forest.
- 19. Fossils found in $\underline{\underline{any}}$ sedimentary rock are $\underline{\underline{a}}$ $\underline{\underline{good}}$ source of $\underline{\underline{informations}}$ about insects, animals and plants of $\underline{\underline{C}}$ $\underline{\underline{the}}$ $\underline{\underline{far}}$ $\underline{\underline{past}}$.
- 20. According to World Bank reports, gasoline subsidies in developing countries may in one year amount to \$ 125\frac{\text{billions}}{C}, which is a heavy burden on the government.



21.	$\frac{\text{Exposure to radiation it may affect}}{A} = \frac{\text{In may affect}}{B} = \frac{\text{In may affect}}{B} = \frac{\text{In may affect}}{D} = \frac{\text{In may affect}}{D}$
22.	
23.	$\frac{\underline{The}}{A} \text{ importance of agribusiness for a developing country is } \underline{\frac{\text{whether}}{B}} \text{ it absorbs agricultural } \underline{\frac{\text{surpluses}}{C}} \text{ and eventually reduces dependence } \underline{\frac{\text{on food imports.}}{D}}$
24.	$\frac{\underline{Medical}}{A} \ \underline{experts} \ \underline{have} \ \underline{since} \ \underline{\underline{suspected}} \ \underline{long} \ \underline{that} \ \underline{unremitting} \ \underline{stress} \ \underline{can} \ \underline{\underline{impair}} \ \underline{the} \ \underline{immunity} \ \underline{system} \ or \ \underline{lead} \ to \ \underline{depression}, \ \underline{\underline{especially}} \ \underline{among} \ \underline{elderly} \ \underline{people}.$
25.	Although it is true that $\underline{\text{was}}$ $\underline{\text{correspondents}}$ and photographers are always working in great danger of $\underline{\text{their}}$ lives, $\underline{\text{but}}$ it was a shock to know the large number of those $\underline{\text{killed}}$ during the war in Iraq .
26.	Floating either upstream and downstream from villages deep in Kalimantan, the bamboo raft is never A in lack of passengers. D
27.	One of the major $\frac{\text{ways}}{A}$ to understand modern societies $\frac{\text{are}}{B}$ found in the $\frac{\text{relatively}}{C}$ new $\frac{\text{theories}}{D}$ of social science today.
28.	Crossbills, $\underline{\underline{an}}$ unique type of birds living in the pine forests of North America, primarily $\underline{\underline{feed}}$ on the seeds $\underline{\underline{within}}$ pine cones which they skillfully draw out with $\underline{\underline{their}}$ hard, crossed bills.
29.	$\frac{\underline{Whereas}}{A} \text{ tourism in the beautiful western part of Bali is } \underbrace{\frac{getting}{B}} \text{ overdeveloped, the eastern part of Bali with } \underbrace{\frac{their}{C}} $ highlands and beaches remains $\underbrace{\frac{unspoiled}{D}}.$
30.	The $\frac{1300\text{-miles-long}}{A}$ Orinoco River in Venezuela begins in the $\frac{\text{highland}}{B}$ of Parima in the south and $\frac{\text{flows}}{C}$ to $\frac{\text{the}}{D}$ Atlantic Ocean in the north-west.
31.	The red-breasted wild geese in the Arctic Circle $\frac{are}{A}$ in danger of extinction because the $\frac{continuous}{B}$ melting of the arcticice $\frac{makes}{C}$ it increasingly hard to find $\frac{food}{D}$ enough.
32.	The government's $\underbrace{\text{tax revenues}}_{A}$ will $\underbrace{\text{undoubtedly}}_{B}$ $\underbrace{\text{to rise}}_{C}$ significantly on account of the sharply increased taxes $\underbrace{\text{imposed on properties.}}_{D}$

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33.	In times past the appearance of a comet created fear and hysterical among the people as it was attributed to A supernatural causes or perceived as bad omens of disasters.
34.	Because astronomers have been able to predict the recurrence of sun and moon eclipses since ages, it was not until 1754 that an astronomer, Edmund Halley, could successfully predict the return of a comet. D
35.	$\frac{Almost \ every}{A} \ university \ and \ college \ now \ \frac{have}{B} \ a \ placement \ office \ \frac{where}{C} \ employers \ and \ \underline{job\text{-seekers}} \ can \ meet.$
36.	Offering distinctively comfortable facilities, modern big hotels being ideal venues not only for social gatherings \overline{A} but also for different annual conferences or conventions.
37.	$\frac{\underline{Supporting}}{\underline{A}} \ \underline{nuclear} \ \underline{power} \ to \ \underline{replace} \ \underline{fossil} \ \underline{fuels \ in \ order} \ to \ \underline{\underline{reduce}} \ \underline{global} \ \underline{warming} \ \underline{\underline{actually} \underline{means}} \ \underline{c} \ \underline{c} \ \underline{order} \ \underline{c} \ \underline{order} \ \underline{c} $
38.	When present your business card to someone in Japan or Korea, you should use both hands and $\frac{\text{show}}{B}$ the card in way that enables $\frac{\text{the recipient}}{C}$ to read it $\frac{\text{readily}}{D}$.
39.	In the late $\frac{\text{fifteenth century}}{A}$ European countries $\frac{\text{are competing}}{B}$ in $\frac{\text{sending}}{C}$ sea expeditions to find $\frac{\text{the spice islands}}{D}$ and create new trade routes.
40.	F. Sherwood Woodland was the 1995 Nobel Prize winner in Chemistry who sounding the alarm of the A
	$\frac{\text{damage to the thin ozone layer as } \underline{a \text{ consequence}}}{C} \text{ of the widespread use of chemicals known as CSCFs.}$

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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 question and fill in the circle 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 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 ear infections should find *relief* and restored hearing with the new device.

Example I

Sample Answer







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

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

Example II

Sample Answer







The word "relief" in line 6 means

- (A) less distress
- (B) assistance
- (C) distraction
- (D) relaxation

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

Now begin with the questions.



New findings from a study of 12 astronauts show the heart becomes more spherical when exposed to long periods of microgravity in space, a change that could lead to cardiac problems, according to research to be presented at the American College of Cardiology's 63rd Annual Scientific Session. With implications for an eventual manned mission to Mars, the findings represent an important step toward understanding how a spaceflight of 18 months or more could affect astronauts' heart health. "The heart doesn't work as hard in space, which can cause a loss of muscle mass," said James Thomas, M.D., Moore Chair of Cardiovascular Imaging and Lead Scientist for Ultrasound at NASA, and senior author of the study. "That can have serious consequences after the return to Earth, so we're looking into whether there are measures that can be taken to prevent or counteract that loss."

The researchers say that knowing the amount and type of exercise astronauts need to perform to keep the heart healthy is going to be very important to guarantee their safety on a long flight like a mission to Mars. Thomas adds that exercise regimens developed for astronauts could also be used to help maintain heart health in people on Earth who have *severe* physical limitations, such as people on extended bed rest or those with heart failure. The research team trained astronauts to take images of their hearts using ultrasound machines installed on the International Space Station. Twelve astronauts participated, providing data on heart shape before, during and after spaceflight.

The results show the heart in space becomes more spherical by a factor of 9.4 percent, a transformation similar to what scientists had predicted with sophisticated mathematical models developed for the project. By validating those models, the study could also lead to a better understanding of common cardiovascular conditions in patients on Earth. "The models predicted the changes we observed in the astronauts almost exactly. It gives us confidence that we can move ahead and start using these models for more clinically important applications on Earth, such as to predict what happens to the heart under different stresses," Thomas said.

The team is now working to generalize the models to analyze such conditions as ischemic heart disease, hypertrophic cardiomyopathy and valvular heart disease. "The models could help us *simulate* those pathologies to understand the impact on cardiac function," Thomas said. The astronauts' more spherical heart shape appears to be temporary, with the heart returning to its normal elongated shape shortly after the return to Earth. The more spherical shape experienced in space may mean the heart is performing less efficiently, although the long-term health effects of the shape change are not known.

Spaceflight is known to cause a variety of cardiac effects. Upon return to Earth, astronauts commonly become lightheaded or pass out in a condition known as orthostatic hypotension, in which the body experiences a sudden drop in blood pressure when standing up. Arrhythmias have also been observed during space travel, and there is concern that the radiation astronauts are exposed to in space may accelerate atherosclerosis. The research team is continuing to examine these and other potential cardiovascular effects.

41. The author's main purpose in writing this passage is to ...

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- (A) elucidate the transformation of astronauts' hearts when they are in space.
- (B) describe the cardiac problems faced by astronauts due to missions to Mars.
- (C) confirm that astronauts need to exercise excessively in long spaceflights.
- (D) argue that astronauts'spherical hearts do not affect their overall health.

- 42. According to the passage, astronauts' exercises can also be beneficial for people who ...
 - (A) want to avoid possible heart failure.
 - (B) are too busy to exercise on a daily basis.
 - (C) wish to be prospective astronauts in the future.
 - (D) have to stay in their beds for a long period of time.
- 43. The word "severe" in line 13 means ...
 - (A) acute.
 - (B) harsh.
 - (C) stern.
 - (D) belligerent.

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- 44. It can be inferred from the passage that a manned mission to Mars ...
 - (A) will take a few months.
 - (B) requires young astronauts.
 - (C) has never been done before.
 - (D) causes trivial health impacts.
- 45. According to the passage, the study ...
 - (A) involved twelve researchers that were trained to be astronauts.
 - (B) used advanced mathematical models generally used by doctors.
 - (C) can help understand common cardiovascular conditions in patients.
 - (D) observed astronauts'heartbeats before, during and after spaceflight.
- 46. Which of the following best expresses the meaning of the word "simulate" in line 25?
 - (A) Profess
 - (B) Replicate
 - (C) Develop
 - (D) Explain
- 47. It can be inferred from the passage that the mathematical models ...
 - (A) can be easily understood by the research team and astronauts.
 - (B) will be very useful for doctors specializing in cardiac problems.
 - (C) have a mediocre level of accuracy in predicting heart transformation.
 - (D) managed to reveal long-term effects of spherical hearts among astronauts.
- 48. According to the passage, which of the following is NOT TRUE about astronauts' spherical hearts?
 - (A) They are rounder due to less work in space.
 - (B) Long spaceflights contribute to the change.
 - (C) They lead to several cardiac problems.
 - (D) The condition usually lasts forever.

- 49. According to the passage, the following are cardiac effects of long spaceflight, EXCEPT ...
 - (A) disturbance in the heartbeat rhythm.
 - (B) blockage in blood vessels.
 - (C) orthostatic hypotension.
 - (D) hypertrophic cardiomyopathy.
- 50. The author's attitude toward spaceflight effects on astronauts' health is generally ...
 - (A) weary.
 - (B) vigilant.
 - (C) oblivious.
 - (D) favourable.

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After decades of focusing on such staples of bad behavior as aggressiveness, selfishness, narcissism and greed, scientists have turned their attention to the subtler and often unsettling theme of spite—the urge to punish, hurt, humiliate or harass another, even when one gains no obvious benefit and may well pay a cost. Psychologists are exploring spitefulness in its customary role as a negative trait, a lapse that should be embarrassing but is often sublimated as righteousness, as when you take your own sour time pulling out of a parking space because you notice another car is waiting for it and you will show that vulture who is boss here, even though you are wasting your own time, too.

Evolutionary theorists, by contrast, are studying what might be viewed as the brighter side of spite, and the role it may have played in the origin of admirable traits like a cooperative spirit and a sense of fair play. The new research on spite transcends older notions that we are savage, selfish brutes at heart, as well as more recent suggestions that humans are inherently affiliative creatures yearning to love and connect. Instead, it concludes that vice and virtue, like the two sides of a V, may be inextricably linked. "Spitefulness is such an intrinsically interesting subject, and it fits with so many people's everyday experience, that I was surprised to see how little mention there was of it in the psychology literature," said David K. Marcus, a psychologist at Washington State University. At the same time, he said, "I was thrilled to find something that people haven't researched to exhaustion."

Reporting in February in the journal Psychological Assessment, Dr. Marcus and his colleagues presented the *preliminary* results from their new "spitefulness scale," a 17-item survey they created to assess individual differences in spitefulness, just as existing personality tests measure traits like agreeableness and extroversion. A total of 946 college students and 297 adults were asked to rate how firmly they agreed with sentiments like "If my neighbor complained about the appearance of my front yard, I would be tempted to make it look worse just to annoy him or her" or "If I opposed the election of an official, I would happily see the person fail even if that failure hurt my community" or "I would be willing to take a punch if it meant someone I did not like would receive two punches." (That attitude, said David Sloan Wilson of the State University of New York at Binghamton, recalls the Eastern European folk tale in *which* a genie offers to grant a man's wish as long as his hated neighbor gets double the prize; the man says, "Put out one of my eyes.")

From the survey and related experiments, the researchers determined that men were generally more spiteful than women and young adults more spiteful than older ones, and that spitefulness generally cohabited with traits like callousness and poor self-esteem —but not with agreeableness, conscientiousness or a tendency to feel guilt. Dr. Marcus also identified circumstances that can *provoke* spiteful outbursts from otherwise temperate people: partisan politics, for example. ("If the other candidate wins, I hope the economy crashes.") Or bitter divorces, like the husband who threw his savings into a trash bin, Dr. Marcus said, to avoid sharing any money with his ex-wife.

For their part, evolutionary theorists have long been intrigued by the origins and purpose of spite, and a new report suggests that sometimes spite can make right.

- 51. According to the passage, the following traits are generally considered undesirable, EXCEPT for ...
 - (A) selfishness.

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- (B) callousness.
- (C) aggressiveness.
- (D) conscientiousness.
- 52. According to Dr. David K. Marcus, spitefulness ...
 - (A) is a common feature of our daily lives.
 - (B) is an attractive quality mostly found in women.
 - (C) usually coexists with certain characteristics, such as cordialness.
 - (D) has been thoroughly studied by a significant number of psychologists.

- 53. Which of the following best expresses the meaning of the word "preliminary" as used in line 18?
 - (A) Subsequent
 - (B) Exploratory
 - (C) Previous
 - (D) Initial

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- 54. The study conducted by Dr. Marcus and his colleagues ...
 - (A) covered a total of 1,243 subjects.
 - (B) included 297 adult researchers.
 - (C) was designed to measure vengeance in each participant.
 - (D) found that older people are generally more spiteful than younger ones.
- 55. The word "which" in line 25 refers to ...
 - (A) that attitude.
 - (B) a man's wish.
 - (C) the Eastern European folk tale.
 - (D) the State University of New York at Binghamton.
- 56. With which of the following statement would the author probably agree?
 - (A) Conscientiousness is a tendency for someone to easily feel guilty.
 - (B) Evolutionary theorists are looking at spitefulness in a more positive light.
 - (C) Psychologists think that spitefulness contributes to the spirit of fair-play.
 - (D) In general, spitefulness is considered a good behavior leading to virtues.
- 57. Which of the following statement is NOT suggested by the passage?
 - (A) People who are emotionally stable can turn spiteful in aggravating situations.
 - (B) Recently there has been a tendency toward a more balanced study of spitefulness.
 - (C) The act of spitefulness may hurt the opponent as well as the performer.
 - (D) Spitefulness is a rare trait that can be transformed into conscientiousness.
- 58. The word "provoke" as used in line 30 could best be replaced by which of the following?
 - (A) Alleviate
 - (B) Prompt
 - (C) Placate
 - (D) Appease

- 59. In the fourth paragraph, Dr. Marcus gave an example of a husband who threw his money into a trash bag to ...
 - (A) ensure the readers understand how spiteful a person can be.
 - (B) demonstrate how a spiteful divorce can lead to irrationality.
 - (C) illustrate how a situation can make a normally calm person spiteful.
 - (D) show willingness to hurt oneself knowing the opponent suffers more.
- 60. The paragraph following the last paragraph would most likely be about ...
 - (A) the goals of spitefulness.
 - (B) the origin and purposes of spite.
 - (C) a description of evolutionary theories.
 - (D) a report elaborating the benefits of spite.

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People with low vitamin D levels are more likely to die from cancer and heart disease and to suffer from other illnesses, scientists reported in two large studies published on Tuesday. The new research suggests strongly that blood levels of vitamin D are a good barometer of overall health. But it does not resolve the question of whether low levels are a cause of disease or simply an indicator of behaviors that contribute to poor health, like a *sedentary* lifestyle, smoking and a diet heavy in processed and unhealthful foods.

Nicknamed the sunshine nutrient, vitamin D is produced in the body when the skin is exposed to sunlight. It can be obtained from a small assortment of foods, including fish, eggs, fortified dairy products and organ meats. And blood levels of it can be lowered by smoking, obesity and inflammation.

Vitamin D helps the body absorb calcium and is an important part of the immune system. Receptors for the vitamin and related enzymes are found throughout cells and tissues of the body, suggesting it may be vital to many physiological functions, said Dr. Oscar H. Franco, a professor of preventive medicine at Erasmus Medical Center in the Netherlands and an author of one of the new studies, which appeared in the journal BMJ. "It has effects at the genetic level, and it affects cardiovascular health and bone health," he said. "There are different hypotheses for the factors that vitamin D regulates, from genes to inflammation. That's the reason vitamin D seems so promising." The two studies were meta-analyses that included data on more than a million people. They included observational findings on the relationship between disease and blood levels of vitamin D. The researchers also reviewed evidence from randomized controlled trials, the gold standard in scientific research, which assessed whether taking vitamin D daily was beneficial.

Dr. Franco and his co-authors, a team of scientists at Harvard, Oxford and other universities, found persuasive evidence that vitamin D protects against major diseases. Adults with lower levels of the vitamin in their systems had a 35 percent increased risk of death from heart disease, 14 percent greater likelihood of death from cancer, and a greater mortality risk overall. When the researchers looked at supplement use, they found no benefit to taking one form of the vitamin, D2. But middle-aged and older adults who took another form, vitamin D3, which is the type found in fish and dairy products and produced in response to sunlight, had an 11 percent reduction in mortality from all causes, compared to adults who did not. In the United States and Europe, it is estimated that more than two-thirds of the population is deficient in vitamin D. "We are talking about a large part of the population being affected by *this*," he said. "Vitamin D could be a good route to prevent mortality from cardiovascular disease and other causes of mortality."

In the second study, also published in BMJ, a team of researchers at Stanford and several universities in Europe presented a more nuanced view of vitamin D. They concluded there was "suggestive evidence" that high vitamin D levels protect against diabetes, stroke, hypertension and a *host* of other illnesses. But they also said there was no "highly convincing" evidence that vitamin D pills affected any of the outcomes they examined. "Based on what we found, we cannot recommend widespread supplementation," said Evropi Theodoratou, an author of the study and a research fellow at the Center for Population Health Sciences at the University of Edinburgh.

- 61. Why is vitamin D called the sunshine nutrient?
 - (A) Because sunshine carries vitamin D.
 - (B) Because its color is yellow, like the sun.
 - (C) Because it requires sunshine to form.
 - (D) Because it is needed when the sun is shining.
- 62. According to the passage, all the behaviors below lead to poor health, EXCEPT ...
 - (A) smoking.
 - (B) being a couch potato.
 - (C) exercising on a regular basis.
 - (D) eating plenty of processed foods.

- 63. The word "sedentary" in line 5 could best be replaced with which of the following?
 - (A) Inactive
 - (B) Unhealthy
 - (C) Overworked
 - (D) Robust

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- 64. All of the following can be inferred from paragraph three, EXCEPT ...
 - (A) vitamin D makes it easier for the body to take in calcium.
 - (B) vitamin D is beneficial when it is taken regularly every day.
 - (C) vitamin D is important to keep the heart and the bone healthy.
 - (D) vitamin D helps produce substances that fight against infection and disease.
- 65. According to the passage, which one of the following is NOT true about Dr. Oscar H. Franco?
 - (A) He teaches at a university.
 - (B) He is doing research on vitamin D.
 - (C) He found medicine to prevent diseases.
 - (D) His study was published in the journal BMJ.
- 66. The word "this" in line 27 refers to ...
 - (A) mortality.
 - (B) vitamin D3.
 - (C) the population.
 - (D) vitamin D deficiency.
- 67. According to the passage, taking vitamin D supplement ...
 - (A) is not necessary, but many people do so nonetheless.
 - (B) is absolutely necessary to decrease mortality
 - (C) is a panacea for all major diseases like diabetes and TBC.
 - (D) can be useful for older adults, but only of the D3 type.
- 68. Which of the following would be the best title for the passage?
 - (A) The Sunshine Nutrient
 - (B) Vitamin D: the New Barometer for Health
 - (C) The Vital Nutrient for Heart Protection
 - (D) The Fight against Cancer and Heart Disease

- 69. The word "host" in line 31 could best be replaced with which of the following?
 - (A) Multitude
 - (B) Presenter
 - (C) Landlord
 - (D) Emcee
- 70. The author's purpose in writing this passage is to ...
 - (A) describe the benefits of taking vitamin D supplements.
 - (B) compare vitamin D with other vitamins that are important for the body.
 - (C) inform about the importance of vitamin D as an indicator of overall health.
 - (D) persuade the readers to start leading a sedentary lifestyle in order to live longer.

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For decades now, people have been observing the rapid changes in the climate that alarm the world. They have heard things such as carbon footprint and the melting of the ice caps. Somewhere along the line, they might have considered adjusting their lifestyle to a more sustainable one. Scientists are still debating whether the rising temperature of the planet will harm humans or everyone will be able to adapt. Some researchers are even looking into the positive effects of the climate change.

An interesting view was presented by a team of ecological and environmental scientists at Sweden's Umea University. They state that global warming will not cause extinction among Arctic species. On the contrary, *it* could allow species to expand their ranges. The study began concentrating on the effects of climate change among species in Arctic and subarctic Europe. The scientists created models showing the effects of global warming to these species, and the results are surprising. Their results indicate that most species (43 out of 61) will expand and shift their ranges, mostly in a north-easterly direction, in response to expected climate change if the species are assumed to be able to colonize all areas that become climatically suitable.

Some aquatic species may also benefit from the warming ocean. Research carried out by McMaster University biologist Graham Scott and University of St. Andrew's Ian Johnston suggests that certain species of fish growing up at warmer temperature may adapt quickly to the changing climate. The study shows that fish are *hardier* after being raised in warm-water. In the study, Zebrafish, a native of Southern Asia, were observed growing in different temperatures. Typically, Zebrafish can withstand temperatures ranging from 40 degrees Celsius to near freezing. The fish in the study were raised across temperatures they would naturally live in. Scott and Johnson found that embryos raised in warm waters can swim faster and developed muscles better-suited for aerobic exercises. These fishes were also able to adjust to colder temperatures better compared to other fishes raised in colder water.

Agriculture may also benefit from the changing mechanics of the atmosphere. Carbon dioxide may aid growth in plants while their need for water is reduced. For the first time in three years, carbon dioxide concentration exceeded 400 parts per million. Professor Graham Farquhar of Australian National University said that partial benefits from the climate change may offset some of its negative effects. Areas with annual rainfall below 400 millimeters can benefit the most from the increasing carbon dioxide in the atmosphere. However, Dr. Mark Howden of CSIRO criticized the ANU studies, which overlooked the fact that plants still need other key nutrients such as phosphorus and nitrogen to grow effectively. Without those nutrients plants cannot grow faster nor can they take advantage of that additional carbon dioxide more effectively.

As with any story, there are two sides that need to be considered. It is *undeniable* that global warming has its possible advantages in the future. However, significant negative impacts are already felt around the globe, ecologically and economically. The small positive effects cannot offset the greater calamities and problems brought about by global warming. Right now people still have a choice: create a better future environment for the coming generations, or equip them to adapt in a harsher planet. Nevertheless, if they delay, they may not have this option.

- 71. Which of the following would most likely be the main idea of the entire passage?
 - (A) The climate change leads to several changes in human and animal life.
 - (B) Animals receive more positive effects of global warming than humans.
 - (C) The negative impacts of the climate change outweigh the positive effects.
 - (D) Scientists work hard to prove that the changes in climate are beneficial.

- 72. According to the passage, which of the following is a result of Umea University study?
 - (A) Some Arctic species will not survive living in warmer climates.
 - (B) A few species will dominate in all areas that are climatically suitable.
 - (C) Some species will move in a northward direction to adapt to the climate change.
 - (D) Most species in the Arctic and subarctic Europe will move around in wider regions.

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- 73. The word "it" in line 8 refers to ...
 - (A) an interesting view.
 - (B) global warming.
 - (C) extinction.
 - (D) the study.
- 74. The word "hardier" in line 17 is closest in meaning to more ...
 - (A) feeble.
 - (B) brittle.
 - (C) resilient.
 - (D) enervated.
- 75. According to the passage, Zebrafish ...
 - (A) can live in warm and cold water.
 - (B) can adjust to living with other fish.
 - (C) are originally from Southern Africa.
 - (D) normally have poor swimming skills.
- 76. According to the passage, plants need the following nutrients to grow well, EXCEPT ...
 - (A) oxygen.
 - (B) nitrogen.
 - (C) phosphorus.
 - (D) carbon dioxide.
- 77. According to the passage, the following are positive effects of climate change, EXCEPT ...
 - (A) some species can spread out their ranges instead of becoming extinct.
 - (B) carbon dioxide helps plants grow and reduces their need for water.
 - (C) fish become strong and well-adapted after being raised in warm-water.
 - (D) people can develop agricultural techniques which multiply yields.
- 78. Which of the following best expresses the opposite meaning of the word "undeniable" in line 31?
 - (A) Palpable
 - (B) Debatable
 - (C) Irrefutable
 - (D) Understandable

- 79. With which of the following statements about global warming would the author probably agree?
 - (A) Animals and plants can thrive due to rapid changes in climate.
 - (B) Global warming is essentially not as dangerous as alarmists believe.
 - (C) Global warming brings with it some possible benefits in the future.
 - (D) People should not interfere with nature since it only causes calamities.
- 80. It can be inferred from the passage that humans ...
 - (A) know perfectly well how to cope with problems brought about by global warming.
 - (B) are responsible for all global warming phenomena that are currently going on.
 - (C) might outlive other species as they are better equipped to live in extreme conditions.
 - (D) will be doomed if they do not make a quick decision about their future on the planet.



CSI: Crime Scene Investigation is a television program which first aired in 2000. In it, a fictional team of crime scene investigators solve murders in the Las Vegas metropolitan area. In each episode, the discovery of a human corpse leads to a criminal investigation by members of the team, who gather and analyze forensic evidence, question witnesses, and apprehend suspects – all swiftly and neatly done. The show's popularity led to two spin-offs, which were later followed by over a dozen television series and movies. Crime dramas were among the most popular shows in the United States in 2005, and CSI: Crime Scene Investigation itself held the number one ranking in November 2007. More importantly, the exaggerated portrayal of forensic science on the shows has led to what is known as the CSI Effect, which refers to the ways public perception is influenced by the shows.

The "CSI Effect" has been described as being an increased expectation from jurors that forensic evidence will be presented in court that is instantaneous and unequivocal because that is how it is often presented for dramatic effect in television programs and movies. Of course, in reality forensic science, while exact in some respects, is just as susceptible to the vagaries of measurements and analyses as any other part of science. In reality, crime scene investigators often spend seemingly *inordinate* amounts of time gathering and assessing evidence and then present it as probabilities rather than the kind of definitive result expected of a court room filled with actors rather than real people. However, while suggesting this CSI Effect is perhaps not quite as widespread as one might imagine among jurors, informatician Richard Overill of King's College London believes it might have a positive effect on reducing the tendency to criminal behavior among some individuals. He offers details of his analysis of the "Inverse CSI Effect" in a forthcoming issue of the International Journal of Electronic Security and Digital Forensics. This would be manifest, he says, particularly among so-called cyber-criminals, fearing the instantaneous and definitive forensic evidence from the imagined cyber-sleuths.

If this inverse CSI effect exists then one might imagine that a proportion of cyber-criminals would modify their behavior in one of three ways. They might go straight by withdrawing from their *nefarious* activities altogether. They might attempt to go "under the radar," restricting their crimes to ones with lower impact and less "profit" that would not necessarily warrant costly police resources for investigation. Alternatively, they might expend large amounts of effort or money to obfuscate their modus operandi with multiple layers of concealment and stealth to make their crimes invisible to even the slyest cyber sleuth.

Overill points out that there are three trends that might emerge if this inverse CSI effect emerges in the realm of cybercrime. First, we might see a reduction in the incidence (frequency) of economic cyber-crimes over time. Second, there could be an increase in the impact (value) of economic cyber-crimes over time. Finally, there will be a rise in the use of anti-forensic techniques by cyber-criminals over time. His analysis of crime data stretching back eleven years in the US suggests that these trends have been at play and that there is an inverse CSI effect.

Of course, there might be other explanations such as improved awareness among the public of security issues and identity theft and the like as well as more effective and so protective software and security systems on putative targets of cybercrime including as email phishing attacks on bank account, for example. He also points out that cybercrime is much bigger "business" than it ever was and petty activity may well have been subsumed by much bigger crime organizations. Nevertheless, the inverse CSI effect stands out as a plausible explanation of changes in cybercrime activity over the last few years. In conclusion, Overill suggests that the TV and movie viewing habits of incarcerated criminals perhaps intent on self-education ought to be monitored closely with a view to understanding how behavior might be "adjusted" following their release.

- 81. Where in the passage does the author explain most clearly that the inverse CSI effect really exists?
 - (A) Paragraph 3

20

25

- (B) Paragraph 4
- (C) Paragraph 5
- (D) Paragraph 6

- 82. Which of the following would most likely be the title of the entire passage?
 - (A) Trends after the Emerging CSI Effect
 - (B) The Positive Impacts of Forensic Science
 - (C) The Inverse CSI Effect in the Age of Digital Crime
 - (D) Cyber Sleuths against Cyber Criminals in the Digital Era

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- 83. According to the passage, CSI Effect is defined as ...
 - (A) expectation that investigators catch criminals by using advanced technology.
 - (B) anticipation that forensic evidence is promptly and plainly shown in court.
 - (C) longing for dramatic effects in court during forensic evidence presentation.
 - (D) juror's habit to watch television shows and movies about forensic science.
- 84. Which of the following best expresses the opposite meaning of the word "inordinate" in line 14?
 - (A) Excessive
 - (B) Subsidiary
 - (C) Imprudent
 - (D) Reasonable
- 85. It can be inferred from the passage that crime scene investigators ...
 - (A) inspire actors to perform their roles as convincingly as possible.
 - (B) are depicted unrealistically in the television programs and movies.
 - (C) try their best to be as effective as investigators in the television series.
 - (D) struggle with stress and challenges that actors do not have to deal with.
- 86. Which of the following words would be used by the author to describe forensic science?
 - (A) Intricate
 - (B) Frivolous
 - (C) Hazardous
 - (D) Straightforward
- 87. The word "nefarious" in line 24 is closest in meaning to ...
 - (A) wicked.
 - (B) naughty.
 - (C) reputable.
 - (D) benevolent.

- 88. According to the passage, due to the CSI effect cyber criminals will change their behaviors in the following ways, EXCEPT ...
 - (A) completely stopping their criminal activities.
 - (B) committing small-scale crimes that are inconspicuous.
 - (C) infiltrating the police with undercover agents to gather information.
 - (D) spending more energy and budget to cover up their criminal activities.
- 89. According to the passage, which of the following is an emerging trend related to the inverse CSI effect on cyber crimes?
 - (A) Rise in the frequency of economic cyber criminals
 - (B) Decrease in the occurrence of economic cyber crimes.
 - (C) Fall in the use of forensic techniques by cyber criminals.
 - (D) Increase in the use of anti-forensic techniques by cyber sleuths.
- 90. It can be inferred from the passage that cyber crimes ...
 - (A) will not be able to compete with cunning cyber sleuths.
 - (B) tend to be organized by minor yet influential crime organizations.
 - (C) are immune to changes in forensic techniques deployed by investigators.
 - (D) may probably develop further and become very troublesome in the future.

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Testee's Name

University of Indonesia's Entrance Test ${f D3~S1}$ (SIMAK UI)

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