

BAHASA INGGRIS

(1) The factor that determines whether ozone is good or bad is its location. (2) Ozone is "good" when it is in the stratosphere. (3) The stratosphere is a layer of the atmosphere starting at the level of about 6 miles (about 10 kilometers) above sea level. (4) The stratosphere naturally contains about six parts per million of ozone. (5) This ozone is very beneficial because it absorbs UV radiation and prevents it from reaching us. (6) When it is at ground level, in contrast, ozone is "bad". (7) Ozone is a very reactive gas that is hard on lung tissue. (8) It also damages plants and buildings. (9) Any ozone at ground level is a problem. (10) Unfortunately, chemicals in car exhaust and chemicals produced by some industries react with light to produce lots of ozone at ground level. (11) In cities, the ozone level can rise to a point where it becomes hazardous to our health. (12) That's when you hear about an ozone warning on the news. (13) To protect yourself from ozone exposure, you should be aware of the Air Quality Index (AQI) in your area every day.

Gunakan **Petunjuk A** dalam menjawab soal nomor 41 sampai nomor 42.

41. Which of the following sentences is irrelevant?

- (A) Sentence 5.
- (B) Sentence 7.
- (C) Sentence 8.
- (D) Sentence 12.
- (E) Sentence 13.

42. The paragraph should end with ...

- (A) These facts show that ozone can be found in different layers of atmosphere.
- (B) Thus, the position of the ozone decides if it is consider advantageous or disadvantageous to human.
- (C) Since ozone is dangerous, many pharmaceutical companies manufacture a variety of health products.
- (D) In conclusion, the composition of ozone can either be beneficial or dangerous to our health.
- (E) It is clear that chemicals produced by human worsen the condition of ozone in the atmosphere.

Some people express their personal philosophies by tattooing themselves with phrases like "Live Hard" or "Love Thy Neighbor." Others consider tattoos a way of displaying their taste in art. They might tattoo a William Blake's etching or a Georgia O'Keeffe's flower on some part of their bodies. But in different cultures and eras, tattoos have also (43)_____ religious purposes. Mexico's Mayan people expressed their religious beliefs by tattooing themselves with (44)_____ of jaguars, snakes, turtles, and toads. Some Native American tribes used tattooing for (45)_____ purposes, believing that tattoos would ward off illness. The Cree, for instance, would tattoo a cross on each cheek to protect against toothaches, and members of the Ojibwa tribe tattooed small circles on their temples to prevent headaches. Throughout history tattooing has been widely used as a means of identification. Before 787 AD, early Christians used tattoos to identify members of their faith. (46)_____, members of the military or fraternities may have themselves tattooed to (47)_____ show their commitment. Some cultures have tattooed prisoners, the most sinister example being the Nazis, who tattooed numbers on the arms of concentration camp victims during World War II.

Gunakan **Petunjuk A** dalam menjawab soal nomor 43 sampai nomor 47.

43.

- | | |
|--------------|-------------|
| (A) provided | (D) served |
| (B) offered | (E) covered |
| (C) revealed | |

44.

- | | |
|---------------|----------------|
| (A) images | (D) epitomes |
| (B) models | (E) depictions |
| (C) portraits | |

45.

- | | |
|---------------|----------------|
| (A) medicine | (D) medication |
| (B) medical | (E) medicinal |
| (C) medicated | |

46.

- | | |
|------------------|---------------|
| (A) Nevertheless | (D) Therefore |
| (B) Similarly | (E) However |
| (C) In summary | |

47.

- | | |
|---------------|---------------|
| (A) published | (D) publicity |
| (B) public | (E) publicly |
| (C) publish | |

Alligators, which often engage in violent fights over territories and mates, have made scientists puzzled why their wounds rarely get infected. Now researchers think the secret lies in the reptiles' blood. Chemists in Louisiana found that blood from the American alligator can successfully destroy 23 strains of bacteria, including strains known to be resistant to antibiotics. In addition, the blood was able to deplete and destroy a significant amount of HIV, the virus that causes AIDS.

Study co-author Lancis Darville at Louisiana State University in Baton Rouge believes that peptides – fragments of proteins – within alligator blood help the animals stop fatal infections. Such peptides are also found in the skin of frogs and toads, as well as komodo, dragons and crocodiles. The scientists think that these peptides could one day lead to medicines that would provide humans with the same antibiotic protection. 'We are in the process of separating and identifying the specific peptides in alligator blood,' said Darville. 'Once we sequence these peptides, we can obtain their chemical structure to potentially create new drugs.'

Study co-author Mark Merchant, a biochemist at Mc Neese State University in Lake Charles, Louisiana, was among the first to notice alligators' unusual resistance. He was intrigued that, despite living in swampy environments where bacteria thrive, alligators that suffered frequent scratches and bruises rarely developed fatal infections. Merchant therefore created human and alligator serum-protein-rich blood plasma that has been able to remove clotting agents, and exposed each of them to 23 strains of bacteria. Human serum destroyed only eight of the bacterial strains while the alligator serum killed all 23. When the alligator was exposed to HIV, the researchers found that a good amount of the virus was destroyed.

The study team thinks that pills and creams containing alligator peptides could be available at level pharmacies within seven to ten years. Such products would be a solution to patients that need extra help preventing infections, such as diabetes patients with foot ulcers, burn victims and people suffering from auto-immune diseases. However, there may be potential problems before alligator-based medicines can reach drugstore shelves. For example, initial tests have revealed that higher concentrations of the alligator serum tend to be toxic to human cells.

Gunakan **Petunjuk A** dalam menjawab soal nomor 48 sampai nomor 52.

48. The tone of this passage is ...

- (A) discouraging.
- (B) touching.
- (C) positive.
- (D) concerned.
- (E) alarming.

49. Which of the following statements is NOT TRUE about peptides within alligators' blood?

- (A) They are fragments of proteins.
- (B) They may stop fatal infections.
- (C) They are injected in the human body.
- (D) They are within the blood of reptiles.
- (E) They have the same function as antibiotics.

50. The followings are what Merchant, the biochemist, experienced EXCEPT that he ...

- (A) developed two kinds of serum, each can destroy 23 strains of bacteria.
- (B) learned why alligators can survive in bacterial environments.
- (C) became interested in alligators' resistance to infections.
- (D) created a serum which can remove things that cause clotting.
- (E) found out that crocodiles can decrease infection caused by HIV.

51. The word 'revealed' in line 23 is closest in meaning to ...

- | | |
|----------------|----------------|
| (A) told. | (D) disclosed. |
| (B) concealed. | (E) released. |
| (C) exposed. | |

52. The writer concludes his essay by saying that ...
- (A) scientists are now searching for a medicine against HIV.
 - (B) alligators have contributed a lot to stop human life.
 - (C) reptiles have peptides which can be used as serum.
 - (D) peptides in the blood are only found in American alligators.
 - (E) alligator serum has the possibility to harm human beings.

Two French researchers have recently proposed the first ever model explaining how the great majority of regular satellites in our solar system were formed out of planet rings. The model, the only one of its kind, (54)_____ in 2010 on Saturn's moons. It seems to account for the present distribution of "giant" planets and also explains how the satellites of the "terrestrial" planets such as Earth or Pluto came into being. These results are a major step forward in understanding and (55)_____ the formation of planet systems across the universe.

There is a (56)_____, such as Jupiter and Saturn, and the terrestrial planets, such as Earth or Pluto. Whereas the giants are surrounded by rings and a myriad of small natural satellites, the terrestrial planets have few moons, or just one, and no rings. Until now, two models (57)_____ to explain the presence of regular satellites in our solar system. These indicate that the satellites of the terrestrial planets like Earth or Pluto were formed following a giant collision. They also indicate that the satellites of the giant planets were formed in a nebula (58)_____ the planet. They do not, however, account for the specific distribution and chemical composition of the satellites orbiting the giant planets.

In 2010 and 2011, a French research team developed a new model to describe how Saturn's moons came into being based on numerical simulations and Cassini probe data. The researchers discovered that Saturn's rings, (59)_____ are very thin disks made up of small blocks of ice surrounding the planet, in turn gave birth to ice satellites. This is due to the fact that the rings spread over time and, when they reach a certain distance from the planet (known as the Roche limit or Roche radius), (60)_____ ends agglomerate and form small bodies that break off and move away. This is how rings give birth to satellites orbiting the planet.

Gunakan **Petunjuk A** dalam menjawab soal nomor 53 sampai nomor 60.

53. This sentence "Another theory, therefore, seemed necessary." should be put as ...

- (A) the last sentence of paragraph 1.
- (B) the first sentence of paragraph 2.
- (C) the last sentence of paragraph 2.
- (D) the first sentence of paragraph 3.
- (E) the last sentence of paragraph 3.

54.

- (A) first tested
- (B) to first test
- (C) first testing
- (D) was first tested
- (E) had first tested

55.

- (A) explain
- (B) explains
- (C) explained
- (D) to explain
- (E) explaining

56.

- (A) fundamental difference between giant planet systems
- (B) difference between giant planet fundamental systems
- (C) giant fundamental system between different planets
- (D) planet system difference between giant fundamental difference
- (E) giant planet difference between fundamental systems

57.

- (A) have been commonly used
- (B) had been commonly used
- (C) will be commonly used
- (D) were commonly used
- (E) are commonly used

58.

- (A) surrounding
- (B) surrounded
- (C) will surround
- (D) which surround
- (E) which surrounded

59.

- (A) that
- (B) which
- (C) who
- (D) when
- (E) where

60.

- (A) it
- (B) its
- (C) it's

- (D) they
- (E) their