

NOTE: Choose option A or B, and answer the questions from 1 to 4. For question 5, you can choose to write the composition that you like best, from either option A or option B.

OPTION A

THE BEAUTIFUL DESOLATION OF LIFE ON MARS -ON EARTH

In May 1996, an autonomous vehicle joined with Russia's Mir space station. It carried the usual items — food, clothes, scientific equipment — along with much more cherished ones. The American astronaut Shannon Lucid received M&Ms. For the two cosmonauts, Yuri Usachev and Yuri Onufriyenko, there were perfume-scented letters offering a break from the smells of the space station, which astronauts have associated with body odor, trash and hot metal.

Space crews in the past have delighted in the scents of fresh tomatoes, lemons and apples. Its psychological value is considered high enough to justify the extreme expense of delivery. (A single apple costs around \$300 to launch to orbit today aboard a SpaceX Falcon Heavy rocket.)

Many experts suggest that Mars settlers will need to live inside heavily engineered habitats, protected from a world with high radiation, a thin atmosphere and toxic dust storm. Communication with Earth will require at least three minutes each way, making live calls from home impossible even during emergencies. There are nevertheless those who would try to make a new home on Mars, though even the most ambitious proposals don't put humans there until 2029 at the earliest. In the meantime, the Mars Society offers a chance to rehearse extraterrestrial living in some of the most Mars-like locations on Earth.

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At the Mars Desert Research Station in Utah, crews of up to seven work and sleep in a small cylindrical habitat connected to a dome, a greenhouse and an observatory by narrow enclosed pathways so that participants can move between facilities without breaking the simulation.

MDRS is by no means a perfect analog for life on Mars. Crew members' suits aren't really pressurized. The gravity is earthlike, and missions last for weeks instead of years. Problems can be solved by a car ride to the hardware store. As space launch deadlines are perpetually postponed by NASA and SpaceX alike, crews at MDRS continue to take care of this bit of Mars on Earth, carrying a dream and keeping it tangible along with fellow believers. (Fragment adapted from *The New York Times*.)

1) BRIEFLY ANSWER ONLY 4 OUT OF THE FOLLOWING 6 QUESTIONS WITH ONLY THE DATA REQUIRED (NOT A WHOLE SENTENCE) (2 POINTS; 0.5 POINTS EACH).

- 1. What kind of vehicle joined with Russia's Mir space station?
- 2. What is the function of the perfume-scented letters given to the cosmonauts?
- 3. According to the text, what is the cost of launching an apple to orbit?
- 4. Name three characteristics of life in Mars.
- 5. What does MDRS stand for?
- 6. How long do missions in the Research Station in Utah last for?



INGLÉS

2) ARE THE FOLLOWING STATEMENTS TRUE OR FALSE? INDICATE THE LINES THAT SUPPORT YOUR ANSWER (1 POINT).

1. Communications with Earth will require only one minute, so live calls from home are very fast.

2. Space launch deadlines are always on time and never delayed by NASA.

3) CHOOSE a OR b, <u>ONLY ONE</u> CHOICE IS CORRECT ACCORDING TO THE TEXT (1 POINT).

- a) The psychological value of fresh food is highly valued to justify the expense of delivery.
- **b**) MDRS is a perfect analog for life on Mars, so the crew members' suits are perfectly pressurized.

4) VOCABULARY (2 POINTS).

4.1 Choose one of the options below and find one word in the text for its definition (0.6 POINTS):

- a) A person who is trained to travel in a spacecraft.
- b) A force that attracts a body toward the center of the Earth.

4.2 Find a synonym in the text for one of the two words below (0.6 POINTS):

- a) independent
- b) trip

4.3 For one of the following words from the text, give a synonym that fits the meaning of the text (0.8 POINTS):

a) toxic (line 10)

b) proposals (line 13)

5) WRITE ABOUT THE FOLLOWING TOPIC USING BETWEEN 120-150 WORDS (4 POINTS).

Do you think it is worth spending huge amounts of money in space exploration? Justify your answer.



INGLÉS

№ páginas: 4

NOTE: Choose option A or B, and answer the questions from 1 to 4. For question 5, you can choose to write the composition that you like best, from either option A or option B.

OPTION B

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EVEN SHORT RUNS HAVE MAJOR HEALTH BENEFITS

Numerous long-term studies have shown that running benefits people physically and mentally, and that runners tend to live longer and have a lower risk for cardiovascular disease than nonrunners.

One might assume that you need to run long distances, but there's strong evidence linking even very short, occasional runs to significant health benefits. "We've found that going for something like a two-mile run a few times a week gets you pretty much the full benefit of running in terms of lower mortality," said Dr. O'Keefe.

During the past decade, he has published multiple studies on running for health and longevity. In one of them, he and his colleagues analyzed long-term health and exercise data collected from around 5,000 adults ranging in age from 20 to 92. Compared to nonrunners, people who ran between one and 2.4 hours per week at a slow or moderate pace enjoyed the greatest reductions in mortality.

The physiological benefits of running may be attributable to a group of molecules known as exerkines. While research on exerkines is relatively new, studies have linked them to reductions in harmful inflammation and the generation of new blood vessels, said Dr. Lisa Chow. Much about these molecules requires more study. But she said research has already found that vigorous exercise — such as short runs — are enough to trigger some of these exerkine-related benefits.

A recent research review on exercise and depression found that adults who got the widely recommended 2.4 hours of moderate physical activity per week had a 25 percent lower risk of depression compared to people who didn't exercise at all. "If someone were to start running even once or twice a week, instead of not exercising at all, that's where we should see the most benefits," said Karmel Choi.

While some people love the challenge of lengthy runs, they're not for everyone. But there is plenty to be gained by putting one foot in front of the other, even if it's just around the block.

"The key message here," he added, "is that any physical activity is much better than none." (Fragment adapted from *The New York Times*.)

1) BRIEFLY ANSWER ONLY 4 OUT OF THE FOLLOWING 6 QUESTIONS WITH ONLY THE DATA REQUIRED (NOT A WHOLE SENTENCE) (2 POINTS; 0.5 POINTS EACH).

- 1. According to the text, what are two benefits of running?
- 2. Who has published multiple studies on running for health and longevity?
- 3. What was the average time that people had to run to enjoy the greatest reduction in mortality?
- 4. What triggers some of the exerkine-related benefits, according to Dr. Lisa Chow?
- 5. Does exercise also help reduce the risk of depression?
- 6. According to Karmel Choi, what is much better than doing nothing?

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2) ARE THE FOLLOWING STATEMENTS TRUE OR FALSE? INDICATE THE LINES THAT SUPPORT YOUR ANSWER (1 POINT).

1. There is weak evidence linking even very short, occasional runs to health benefits.

2. Lengthy runs are for everyone.

3) CHOOSE a OR b, <u>ONLY ONE</u> CHOICE IS CORRECT ACCORDING TO THE TEXT (1 POINT).

a) Lots of studies have shown that running does not benefit people physically and mentally.

b) Research on exerkines is relatively new, so they require more study.

4) VOCABULARY (2 POINTS).

4.1 Choose one of the options below and find one word in the text for its definition (0.6 POINTS):

- a) Strong, healthy and full of energy.
- b) Something that by its nature is a test or a difficult thing to accomplish.

4.2 Find a synonym in the text for one of the two words below (0.6 POINTS):

a) proof

b) damaging

4.3 For one of the following words from the text, give a synonym that fits the meaning of the text (0.8 POINTS):

- a) group (line 11)
- b) key (line 22)

5) WRITE ABOUT THE FOLLOWING TOPIC USING BETWEEN 120-150 WORDS (4 POINTS).

What's your opinion about the health benefits of physical activity?