

Listening & Reading

Time: 60 minutes

Listening

Task 1

You will hear a story about a boy from Manchester. For **items 1-10** decide whether the statements marked **1-10** are **True (A)** or **False (B)** according to the text you hear. You will hear the text only **ONCE**.

1. David didn't switch off the light downstairs on purpose.
A True B False
2. The television in the house was out of order.
A True B False
3. It wasn't a weekend.
A True B False
4. David was an only child in the family.
A True B False
5. David was obedient to his mother.
A True B False
6. David was satisfied with the result of the match.
A True B False
7. David could not sleep without his mother at home.
A True B False
8. David lived close to the United's stadium.
A True B False
9. David knew most of his neighbours.
A True B False
10. David's mother told him the old man's story.
A True B False

Integrated listening and reading

Task 2

Read the text ‘**Productivity and Rewards**’, then listen to a part of the lecture on the same topic. You will notice that some ideas coincide and some differ in them. Answer **questions 11-25** by choosing **A** if the idea is expressed in both materials, **B** if it can be found only in the reading text, **C** if it can be found only in the audio-recording, and **D** if neither of the materials expresses the idea.

Now you have 7 minutes to read the text.

Productivity and Rewards

An important management principle is that when behavior is rewarded, it tends to be repeated. It follows that in many business enterprises, the approach to getting employees to work hard or improve productivity is to reward them with money or company stock. In addition, some enterprises use other forms of compensation such as special privileges or perhaps promotion or job reassignments or even company-paid luxury vacations and other bonuses in kind. All such rewards are usually tied in to some index of performance, which precisely calculates the relative amount of increased productivity.

Whatever the type of reward given, managerial consultants point out that the promise of such incentives improves employee attitudes, motivation and productivity. Typical business handbooks describing compensation methods advocate giving the greatest rewards to those who perform the best. For example, a well-known academic text on incentives points out that “the closer the link between job performance and rewards, the greater the motivational effect.”

Advocates of improving productivity through rewards tacitly accept that people are rather like physical bodies that require the application of some external motivating force to be set in motion. Furthermore, they argue that any such incentives must have a high perceived value to the employee and must also be perceived as within the reach of that person. If the productivity goal appears beyond the reach of the person striving for the reward, then the motivational effect will be lower and productivity may decline. But if the reward system is correctly structured, productivity experts argue, it is possible to persuade people to achieve remarkable results.

Now listen to a part of the lecture on the same topic and then do the task (questions 11-25), comparing the text above and the lecture. You will hear the lecture twice.

11. There is a belief that rewards increase productivity.
12. Not only money and job promotion but also company-paid holidays can be used as rewards.
13. Some books on the influence of rewards on productivity are written by lawyers.
14. Companies usually determine the size and form of rewards on the basis of measurements of increased productivity.
15. Productivity decreases if employees consider rewards unreachable.

16. People value respect more than financial bonuses.
17. There has been no reliable research to prove the long-term effectiveness of any reward scheme.
18. What's missing from the theory of rewards is genuine enthusiasm of employees.
19. Disappointment may result from not getting the bonus one has expected.
20. Reward and punishment principle in management is similar to that used in education.
21. Some employees feel as if they are controlled or manipulated through incentives.
22. Incentives can sometimes be counterproductive.
23. People can be persuaded to work better if the system of incentives is properly organised.
24. The most gifted employees should be rewarded regardless of their performance.
25. Concealing problems and not asking questions can be caused by a fear of negative ratings.

Reading

Task 3

Read the text 'Terraforming – science fiction or near future?' and answer questions 26-40 below.

TERRAFORMING – SCIENCE FICTION OR NEAR FUTURE?

As plans are slowly being drawn up for the first manned missions to Mars, many space travel skeptics are asking one vital question: why go there? Mars is a barren, desolate planet, and with its thin atmosphere and bitterly cold climate, it would appear to be completely unsuitable for human life. Above all, it is a very distant place, and getting there would be an enormous challenge. However, the planet might just hold the key to long-term human survival. With the Earth's population currently at more than seven billion and climbing, we may eventually be forced to look elsewhere in the solar system for somewhere to live. It is just possible that, contrary to photographic evidence, Mars may be more promising than it appears.

Today, Mars is a viciously cold, dry place. However, it does have some things in common with our own planet. For example, it has a daily rotation rate of 24 hours 37 minutes, compared with 23 hours 56 minutes on Earth. It also has an axial tilt of 24 degrees, which is just half a degree more than Earth's, and a gravitational pull one third of Earth's. Furthermore, it holds many of the elements that are required to support life, including carbon and oxygen (in the form of carbon dioxide), nitrogen, and frozen water at its polar ice caps. In fact, if you were to travel back in time several billions years, you would notice some remarkable parallels between the atmosphere on Earth then and Mars today. Back then, Earth was also a lifeless planet; until photosynthetic bacteria developed and began to produce enough oxygen to allow for the development of animal and plant life, our atmosphere also consisted entirely of carbon dioxide and nitrogen.

It comes as no surprise to learn, therefore, that some scientists believe the same process which turned Earth's atmosphere from mostly carbon dioxide into breathable air could be repeated on Mars, but by using technology rather than by letting nature and evolution take its natural course. Terraforming, as this process is known, would initially create a greenhouse effect that would heat the planet, which in turn would create other conditions necessary to provide a suitable living environment for plants and animals. However, it would be a highly challenging undertaking, and the process of terraforming the entire planet into an Earth-like habitat could still take many thousands of years.

Three terraforming methods have been suggested, with the first already under development, albeit for a different purpose. At present, the American space agency NASA is working on a system that will use large mirrors to capture the sun's radiation. This radiation will be used to propel spacecraft through space, removing the need for heavy and expensive rocket fuel. With a few changes, it might be possible to use similar mirrors to reflect the sun's radiation and heat the surface of Mars. Aimed at the planet from a distance of two hundred thousand miles, these enormous mirrors would raise the surface temperature by a few degrees. If they were concentrated on the polar ice caps, they would provide enough heat to melt the polar ice caps and release the carbon dioxide that is believed to be trapped there. Gradually, as the temperature rose, greenhouse gases would be released, and this would create a form of Martian global warming, the first stage in making the planet sustainable for life.

The second method would be to set up greenhouse gas 'factories' in order to raise the temperature of the planet. It is generally accepted that greenhouse gases produced by heavy industry are raising the Earth's temperature. Therefore, by building hundreds of greenhouse-gas emitting factories on Mars, a similar effect could be achieved. Carbon dioxide, methane and other greenhouse gases would be pumped into the Martian atmosphere. The same factories would then produce oxygen by mimicking the natural process of plant photosynthesis: they would inhale the carbon dioxide they produce, and then emit oxygen. The process could be accelerated by 'sowing' the planet's surface with photosynthetic bacteria, which would increase the rate at which oxygen is produced. Eventually, there would be enough oxygen on the planet for humans to breathe using only special apparatus similar to that used by mountain climbers.

The third, and by far the most extreme, method has been proposed by space scientists Robert Zubrin and Christopher McKay. They believe that it would be possible to produce greenhouse gases and water by firing large, ammonia-bearing asteroids at the planet. Each asteroid would weigh about ten billion tons, and would be powered by huge rocket engines which would move it towards Mars at over 10,000 miles per hour. At this speed, it would take each asteroid about ten years to reach its destination. The energy produced by one asteroid slamming into Mars' surface, say Zubrin and McKay, would raise the temperature of the planet by three degrees Celsius and melt about one thousand billion tons of ice at the polar caps. They believe it would take many of these asteroids, and at least fifty years, in order to create a temperate climate and enough water to cover a quarter of the planet's surface.

Terraforming Mars, if it is ever attempted, will be neither cheap nor easy. And it certainly won't be quick: although optimists like Zubrin and McKay say it could be achieved in five or six decades, the reality is that terraforming is more likely to take hundreds or even thousands of years. Furthermore, it will stretch human ingenuity to its limits, and will require levels of will and commitment that have rarely been seen before. The challenge of developing a habitable

environment and bringing life to the cold, dry world of Mars is fraught with challenges, but it might just be one that saves the human race.

Questions 26-31

Do the following statements agree with the views of the writer in the reading passage?

Write

YES if the statement agrees with the writer's view

NO if the statement contradicts the writer's view

NOT GIVEN if it is impossible to say what the writer thinks about this

26. Pictures of Mars suggest it might make a good place for people to settle.
27. Modern Mars and ancient Earth looked remarkably similar.
28. Population growth may soon make people look for another planet to live on.
29. One method of terraforming could involve adapting technology that is already under development.
30. Greenhouse gas factories would provide enough oxygen for people to breathe without special equipment.
31. Terraforming Mars would be an extreme test of human skill and intelligence.

Questions 32-35

Choose the correct variant A, B, C or D. Transfer your answers to the answer sheet.

32. Which one of these factors suggests that Mars might be a good place for people to settle?
 - A It is not too far from Earth.
 - B It has no other life forms living there.
 - C It has a cool, dry climate.
 - D It has some similarities with Earth.
33. The first step in terraforming Mars would be to
 - A make the planet warmer.
 - B create a breathable atmosphere.
 - C find a suitable source of water.
 - D create a habitat for living organisms.

34. Special factories on Mars could be used to
- A control the level of greenhouse gases.
 - B absorb excess levels of carbon dioxide.
 - C produce oxygen in a manner similar to plants.
 - D help grow essential bacteria.
35. What is the writer's main purpose in the passage?
- A To explain why we need to terraform Mars.
 - B To illustrate the three processes required to terraform a planet like Mars.
 - C To consider how and why Mars might be terraformed.
 - D To demonstrate how straightforward it would be to terraform a planet.

Questions 36 - 40

Complete the summary of the text using words A-I from the box to fill in the gaps numbered 36 - 40. There are 4 extra words in the box.

One method of terraforming Mars would be to **36** _____ asteroids at the planet. Rockets attached to enormous asteroid would propel it towards Mars, taking ten years to **37** _____ the enormous distances required. The asteroid would **38** _____ the planet with incredible force and **39** _____ enough energy to **40** _____ the planet's temperature. The result would be a temperate climate and lots of water from melting ice caps.

A cover	B create	C hit	D increase	E land	F drive	G power	H rise	I shoot
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TRANSFER ALL YOUR ANSWERS TO YOUR ANSWER SHEET