READING

READING PASSAGE 1

You should spend about 20 minutes on **Questions 1–13**, *which are based on Reading Passage 1 below.*

William Kamkwamba

At only 14 years old, William Kamkwamba built a series of windmills that could generate electricity in his African village, Masitala, in Malawi, south-eastern Africa.



In 2002, William Kamkwamba had to drop out of school, as his father, a maize and tobacco farmer, could no longer afford his school fees. But despite this setback, William was determined to get his education. He began visiting a local library that had just opened in his old primary school, where he discovered a tattered science book. With only a rudimentary grasp of English, he taught himself basic physics – mainly by studying photos and diagrams. Another book he found there featured windmills on the cover and inspired him to try and build his own.

He started by constructing a small model. Then, with the help of a cousin and friend, he spent many weeks searching scrap yards and found old tractor fans, shock absorbers, plastic pipe and bicycle parts, which he used to build the real thing.

For windmill blades, William cut some bath pipe in two lengthwise, then heated the pieces over hot coals to press the curled edges flat. To bore holes into the blades, he stuck a nail through half a corncob, heated the metal red and twisted it through the blades. It took three hours to repeatedly heat the nail and bore the holes. He attached the blades to a tractor fan using proper nuts and bolts and then to the back axle of a bicycle. Electricity was generated through the bicycle dynamo. When the wind blew the blades, the bike chain spun the bike wheel, which charged the dynamo and sent a current through wire to his house.

What he had built was a crude machine that produced 12 volts and powered four lights. When it was all done, the windmill's wingspan measured more than eight feet and sat on top of a rickety tower 15 feet tall that swayed violently in strong gales. He eventually replaced the tower with a sturdier one that stands 39 feet, and built a second machine that watered a family garden.

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The windmill brought William Kamkwamba instant local fame, but despite his accomplishment, he was still unable to return to school. However, news of his *magetsi a mphepo* – electric wind – spread beyond Malawi, and eventually things began to change. An education official, who had heard news of the windmill, came to visit his village and was amazed to learn that William had been out of school for five years. He arranged for him to attend secondary school at the government's expense and brought journalists to the farm to see the windmill. Then a story published in the *Malawi Daily Mail* caught the attention of bloggers, which in turn caught the attention of organisers for the Technology Entertainment and Design conference.

In 2007, William spoke at the TED Global conference in Tanzania and got a standing ovation. Businessmen stepped forward with offers to fund his education and projects, and with money donated by them, he was able to put his cousin and several friends back into school and pay for some medical needs of his family. With the donation, he also drilled a borehole for a well and water pump in his village and installed drip irrigation in his father's fields.

The water pump has allowed his family to expand its crops. They have abandoned tobacco and now grow maize, beans, soybeans, potatoes and peanuts. The windmills have also brought big lifestyle and health changes to the other villagers. 'The village has changed a lot,' William says. 'Now, the time that they would have spent going to fetch water, they are using for doing other things. And also the water they are drinking is clean water, so there is less disease.' The villagers have also stopped using kerosene and can use the money previously spent on fuel to buy other things.

William Kamkwamba's example has inspired other children in the village to pursue science. William says they now see that if they put their mind to something, they can achieve it. 'It has changed the way people think,' he says.

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Practice Test

Questions 1–5

Complete the flow chart below.
Choose NO MORE THAN TWO WORDS from the passage for each answer.

Building the Windmill

William learned some **1** ..... from a library book.

↓

First, he built a **2** ..... of the windmill.

↓

Then he collected materials from **3** ..... with a relative.

↓

He made the windmill blades from pieces of **4** ..... .

↓

He fixed the blades to a **5** ..... and then to part of a bicycle .

↓

He raised the blades on a tower.

Questions 6–10

Do the following statements agree with the information given in Reading Passage 1?

Write

TRUE	*if the statement agrees with the information*
FALSE	*if the statement contradicts the information*
NOT GIVEN	*if there is no information on this*

6 William used the electricity he created for village transport.
7 At first, William's achievement was ignored by local people.
8 Journalists from other countries visited William's farm.
9 William used money he received to improve water supplies in his village.
10 The health of the villagers has improved since the windmill was built.

Questions 11–13

Answer the questions below.
Use NO MORE THAN ONE WORD and/or a NUMBER from the passage for each answer.

11 How tall was the final tower that William built?
12 What did the villagers use for fuel before the windmill was built?
13 What school subject has become more popular in William's village?

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READING PASSAGE 2

You should spend about 20 minutes on **Questions 14–26**, *which are based on Reading Passage 2 below.*

White mountain, green tourism

The French Alpine town of Chamonix has been a magnet for tourists since the 18th century. But today, tourism and climate change are putting pressure on the surrounding environment. Marc Grainger reports.



A The town of Chamonix-Mont-Blanc sits in a valley at 1,035 metres above sea level in the Haute-Savoie department in south-eastern France. To the north-west are the red peaks of the Aiguilles Rouges *massif*; to the south-east are the permanently white peaks of Mont Blanc, which at 4,810 metres is the highest mountain in the Alps. It's a typical Alpine environment, but one that is under increasing strain from the hustle and bustle of human activity.

B Tourism is Chamonix's lifeblood. Visitors have been encouraged to visit the valley ever since it was discovered by explorers in 1741. Over 40 years later, in 1786, Mont Blanc's summit was finally reached by a French doctor and his guide, and this gave birth to the sport of alpinism, with Chamonix at its centre. In 1924, it hosted the first Winter Olympics, and the cable cars and lifts that were built in the years that followed gave everyone access to the ski slopes.

C Today, Chamonix is a modern town, connected to the outside world via the Mont Blanc Road Tunnel and a busy highway network. It receives up to 60,000 visitors at a time during the ski season, and climbers, hikers and extreme-sports enthusiasts swarm there in the summer in even greater numbers, swelling the town's population to 100,000. It is the third most visited natural site in the world, according to Chamonix's Tourism Office and, last year, it had 5.2 million visitor bed nights – all this in a town with fewer than 10,000 permanent inhabitants.

D This influx of tourists has put the local environment under severe pressure, and the authorities in the valley have decided to take action. Educating visitors is vital. Tourists are warned not to drop rubbish, and there are now recycling points dotted all around the valley, from the town centre to halfway up the mountains. An internet blog reports environmental news in the town, and the 'green' message is delivered with all the tourist office's activities.

E Low-carbon initiatives are also important for the region. France is committed to reducing its carbon emissions by a factor of four by 2050. Central to achieving this aim is a strategy that encourages communities to identify their carbon emissions on a local level and make plans to reduce them. Studies have identified that accommodation accounts for half of all carbon

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emissions in the Chamonix valley. Hotels are known to be inefficient operations, but those around Chamonix are now cleaning up their act. Some are using low-energy lighting, restricting water use and making recycling bins available for guests; others have invested in huge projects such as furnishing and decorating using locally sourced materials, using geothermal energy for heating and installing solar panels.

F Chamonix's council is encouraging the use of renewable energy in private properties too, by making funds available for green renovations and new constructions. At the same time, public-sector buildings have also undergone improvements to make them more energy efficient and less wasteful. For example, the local ice rink has reduced its annual water consumption from 140,000 cubic metres to 10,000 cubic metres in the space of three years.

G Improving public transport is another feature of the new policy, as 80 percent of carbon emissions from transport used to come from private vehicles. While the Mont Blanc Express is an ideal way to travel within the valley - and see some incredible scenery along the route - it is much more difficult to arrive in Chamonix from outside by rail. There is no direct line from the closest airport in Geneva, so tourists arriving by air normally transfer by car or bus. However, at a cost of 3.3 million euros a year, Chamonix has introduced a free shuttle service in order to get people out of their cars and into buses fitted with particle filters.

H If the valley's visitors and residents want to know why they need to reduce their environmental impact, they just have to look up; the effects of climate change are there for everyone to see in the melting glaciers that cling to the mountains. The fragility of the Alpine environment has long been a concern among local people. Today, 70 percent of the 805 square kilometres that comprise Chamonix-Mont-Blanc is protected in some way. But now, the impact of tourism has led the authorities to recognise that more must be done if the valley is to remain prosperous: that they must not only protect the natural environment better, but also manage the numbers of visitors better, so that its residents can happily remain there.

Questions 14–18

Reading Passage 2 has eight paragraphs, A–H.

Which paragraph contains the following information?
You may use any letter more than once.

14 a list of the type of people who enjoy going to Chamonix
15 reference to a system that is changing the way visitors reach Chamonix
16 the geographical location of Chamonix
17 mention of the need to control the large tourist population in Chamonix
18 reference to a national environmental target

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Questions 19–20

Choose TWO letters, A–E.

The writer mentions several ways that the authorities aim to educate tourists in Chamonix.
Which **TWO** of the following ways are mentioned?

A giving instructions about litter
B imposing fines on people who drop litter
C handing out leaflets in the town
D operating a web-based information service
E having a paper-free tourist office

Questions 21–22

Choose TWO letters, A–E.

The writer mentions several ways that hotels are reducing their carbon emissions.
Which **TWO** of the following ways are mentioned?

A using natural cleaning materials
B recycling water
C limiting guest numbers
D providing places for rubbish
E harnessing energy from the sun

Questions 23–26

Complete the sentences below.
Choose NO MORE THAN TWO WORDS from the passage for each answer.

23 The first people to discover the Chamonix valley were ..... .
24 Chamonix's busiest tourist season is the ..... .
25 Public areas, such as the ..... in Chamonix, are using fewer resources.
26 The ..... on the mountains around Chamonix provide visual evidence of global warming.

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Practice Test

READING PASSAGE 3

You should spend about 20 minutes on **Questions 27–40**, *which are based on Reading Passage 3 below.*

Reading in a whole new way

As technology improves, how does the act of reading change?



Reading and writing, like all technologies, are constantly changing. In ancient times, authors often dictated their books. Dictation sounded like an uninterrupted series of words, so scribes wrote these down in one long continuous string, *justastheyoccurinspeech*. For this reason, text was written without spaces between words until the 11th century. This continuous script made books hard to read, so only a few people were accomplished at reading them aloud to others. Being able to read silently to yourself was considered an amazing talent; writing was an even rarer skill. In fact, in 15th-century Europe, only one in 20 adult males could write.

After Gutenberg's invention of the printing press in about 1440, mass-produced books changed the way people read and wrote. The technology of printing increased the number of words available, and more types of media, such as newspapers and magazines, broadened what was written about. Authors no longer had to produce scholarly works, as was common until then, but could write, for example, inexpensive, heart-rending love stories or publish autobiographies, even if they were unknown.

In time, the power of the written word gave birth to the idea of authority and expertise. Laws were compiled into official documents, contracts were written down and nothing was valid unless it was in this form. Painting, music, architecture, dance were all important, but the heartbeat of many cultures was the turning pages of a book. By the early 19th century, public libraries had been built in many cities.

Today, words are migrating from paper to computers, phones, laptops and game consoles. Some 4.5 billion digital screens illuminate our lives. Letters are no longer fixed in black ink on paper, but flitter on a glass surface in a rainbow of colors as fast as our eyes can blink. Screens fill our pockets, briefcases, cars, living-room walls and the sides of buildings. They sit in front of us when we work – regardless of what we do. And of course, these newly ubiquitous screens have changed how we read and write.

The first screens that overtook culture, several decades ago – the big, fat, warm tubes of television – reduced the time we spent reading to such an extent that it seemed as if reading and writing were over. Educators and parents worried deeply that the TV generation would be unable to write. But the interconnected, cool, thin displays of computer screens launched an epidemic of writing that continues to swell. As a consequence, the amount of time people spend reading has almost tripled since 1980. By 2008, the World Wide Web contained more than a trillion pages, and that total grows rapidly every day.

But it is not book reading or newspaper reading, it is screen reading. Screens are always on, and, unlike books, we never stop staring at them. This new platform is very visual, and it is gradually merging words with moving images. You might think of this new medium as books we watch, or television we read. We also use screens to present data, and this encourages numeracy: visualising data and reading charts, looking at pictures and symbols are all part of this new literacy.

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Screens engage our bodies, too. The most we may do while reading a book is to flip the pages or turn over a corner, but when we use a screen, we interact with what we see. In the futuristic movie *Minority Report*, the main character stands in front of a screen and hunts through huge amounts of information as if conducting an orchestra. Just as it seemed strange five centuries ago to see someone read silently, in the future it will seem strange to read without moving your body.

In addition, screens encourage more utilitarian (practical) thinking. A new idea or unfamiliar fact will cause a reflex to do something: to research a word, to question your screen 'friends' for their opinions or to find alternative views. Book reading strengthened our analytical skills, encouraging us to think carefully about how we feel. Screen reading, on the other hand, encourages quick responses, associating this idea with another, equipping us to deal with the thousands of new thoughts expressed every day. For example, we review a movie for our friends while we watch it; we read the owner's manual of a device we see in a shop before we purchase it, rather than after we get home and discover that it can't do what we need it to do.

Screens provoke action instead of persuasion. Propaganda is less effective, and false information is hard to deliver in a world of screens because while misinformation travels fast, corrections do, too. On a screen, it is often easier to correct a falsehood than to tell one in the first place. Wikipedia works so well because it removes an error in a single click. In books, we find a revealed truth; on the screen, we assemble our own truth from pieces. What is more, a screen can reveal the inner nature of things. Waving the camera eye of a smartphone over the bar code of a manufactured product reveals its price, origins and even relevant comments by other owners. It is as if the screen displays the object's intangible essence. A popular children's toy (Webkinz) instills stuffed animals with a virtual character that is 'hidden' inside; a screen enables children to play with this inner character online in a virtual world.

In the near future, screens will be the first place we'll look for answers, for friends, for news, for meaning, for our sense of who we are and who we can be.

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Questions 27–31

Choose the correct letter, A, B, C or D.

27 What does the writer say about dictation?
- A It helped people learn to read.
- B It affected the way people wrote.
- C It was not used until the 11th century.
- D It was used mainly for correspondence.

28 According to the writer, what changed after the invention of the printing press?
- A Romance became more popular than serious fiction.
- B Newspapers became more popular than books.
- C Readers asked for more autobiographies.
- D Authors had a wider choice of topics.

29 In the third paragraph, the writer focuses on the
- A legal concerns of authors.
- B rapid changes in public libraries.
- C growing status of the written word.
- D recognition of the book as an art form.

30 What does the writer say about screens in the fourth paragraph?
- A They are hard to read.
- B They are bad for our health.
- C They can improve our work.
- D They can be found everywhere.

31 According to the writer, computers differ from television because they
- A encourage more reading.
- B attract more criticism.
- C take up more of our leisure time.
- D include more educational content.

Questions 32–36

Do the following statements agree with the views of the writer in Reading Passage 3?

Write

YES	*if the statement agrees with the views of the writer*
NO	*if the statement contradicts the views of the writer*
NOT GIVEN	*if it is impossible to say what the writer thinks about this*

32 Screen reading has reduced the number of books and newspapers people read.

33 Screen literacy requires a wider range of visual skills than book-based literacy.

34 Screen reading is more active than book reading.

35 Screens and books produce similar thought patterns in their readers.

36 People are easily persuaded to believe lies on the screen.

Questions 37–40

Complete each sentence with the correct ending, A–F, below.

37 The film *Minority Report* illustrates

38 Our behaviour when we watch a film shows

39 Wikipedia's success relies on

40 Webkinz is an example of

A	the accuracy of its information.
B	people's ability to concentrate.
C	the global use of the Internet.
D	how people behave physically when they read screens.
E	the screen's ability to make an object seem real.
F	how rapidly opinions can be communicated.

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