



Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER



ENGLISH AS A SECOND LANGUAGE

0510/22

Paper 2 Reading and Writing (Extended)

February/March 2017

2 hours

Candidates answer on the Question Paper.

No Additional Materials are required.

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name on all the work you hand in.

Write in dark blue or black pen.

Do not use staples, paper clips, glue or correction fluid.

DO **NOT** WRITE IN ANY BARCODES.

Answer **all** questions.

Dictionaries are **not** allowed.

At the end of the examination, fasten all your work securely together.

The number of marks is given in brackets [] at the end of each question or part question.

This document consists of **15** printed pages and **1** blank page.

Exercise 1

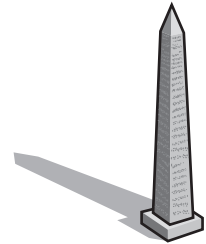
Read the article about the development of clocks, and then answer the following questions.

Measuring Time

Throughout history, people have estimated the approximate time of day based on the amount of light or position of the sun. Needing to know the exact time, however, is a relatively recent development. It is thought that between 5000 and 6000 years ago, people in the Middle East and North Africa began to design clocks to organise their time more precisely.

Sun Clocks

Around 4000 years ago, Egyptian sun clocks used the movement of the sun to divide and calculate time. Tall monuments known as obelisks made shadows on the ground. As the sun moved, these shadows changed position, which marked the divisions of the day. The Egyptians could calculate the height of the sun by checking the length of the shadow at midday.



Water Clocks

Water clocks did not depend on the movement of the sun. They were in the shape of a bowl, and were often constructed of stone. The bowl was filled with water, which dripped at a steady rate from a small hole in the bottom. As the water emptied, lines on the inside of the bowl measured the passing of time. Another type of water clock used the opposite method. A metal bowl with a hole in the bottom was placed in a larger container of water. As the bowl filled with water, it gradually sank, and this measured how much time had passed.

Candle Clocks

The earliest-known candle clocks were designed to burn six identical candles one after the other, which lasted for twenty-four hours. Individual candles were marked into twelve equal parts, which people used to calculate how much time had passed. In order to stop the candles from blowing out, they were placed in a wooden box, and they burned for what we now know to be four hours. Unlike the water clock, the box containing the candle clock could easily be carried from place to place.

Sand Clocks

Sand clocks are made from two ball-shaped pieces of glass, one on top of the other, joined by a narrow neck. A fine material, often sand, falls from the top to the bottom. The total length of time that a clock can measure depends on the amount of sand in the clock. However, that is not the only important factor – the width of the neck controls how quickly the sand falls through, and therefore the amount of time that can be measured. Nowadays, sand clocks are used as egg timers, and are sometimes found in board games, in which they help create a sense of urgency, as players literally see time ‘running out’.

- (a) When did ancient people start to measure time using clocks?
.....[1]
- (b) What information was provided by measuring the shadow in the middle of the day?
.....[1]
- (c) What material was used to make water clocks?
.....[1]
- (d) How many sections were there on each candle in a candle clock?
.....[1]
- (e) Why was the candle clock box important? Give **two** details.
.....
.....[2]
- (f) What affects the measurement of time in a sand clock? Give **two** details.
.....
.....[2]
- (g) How do people use sand clocks today?
.....[1]

[Total: 9]

Exercise 2

Read the article about a swimming holiday in Croatia, and then answer the following questions.

In at the deep end

Here, journalist Peter Taylor writes about a new and different holiday experience.

“I had never heard of open-water swimming in seas, lakes and rivers, until a friend told me about his holiday with a company called VacationSwim. The company provides guided swimming trips in Europe and surfing holidays in Australia. Listening to my friend persuaded me that I should try something new and exciting.

So here I was in Croatia. I had decided that three days would be too short, so I chose to spend seven days swimming between some small islands around the coast. The clear Adriatic Sea surrounding the tiny island of Prvic, which was the base for the holiday, looked beautiful. However, the huge expanse of blue sea was worrying me, and made me question my decision to choose this holiday.

I had failed to complete the recommended six-week training plan, so I realised that I wasn't as fit as I could be. However, when I spoke to my fellow swimmers and we compared our fitness levels, I felt better. Our group included people of all nationalities and ages, but everyone was looking for adventure. We had individual requirements too – some wanted to explore a new area, and others wanted professional swimming tips.

On the first morning, our guides Maria and Robbie greeted us, and gave us swimming hats and goggles. They asked us to swim around the harbour so that they could observe our technique and divide us into ability groups. Then we were ready to go. The swimming hats helped keep us warm, and when we got in the water, it was easy to see the logic of choosing such brightly-coloured hats – it was much easier for our guides to keep an eye on us from the safety boat.

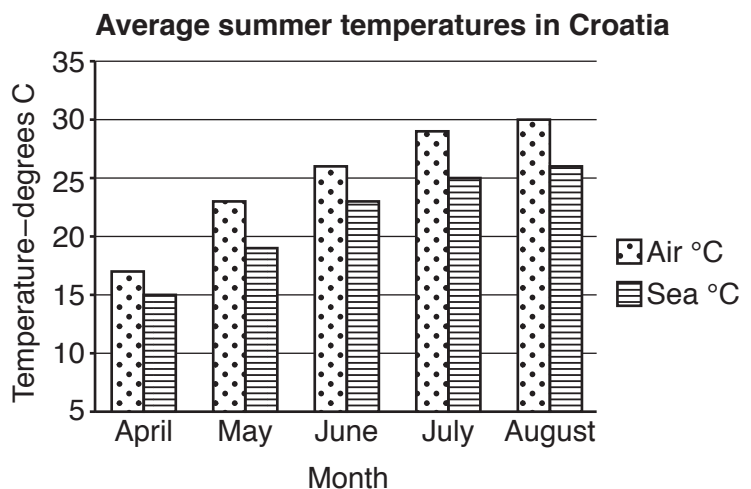
After 10 minutes of splashing around, I started to get used to the new environment. I had previously swum in a pool of course, but the combination of waves, salt and depth was a new and unfamiliar experience. However, I soon settled into a regular rhythm, and having people in the water near me was comforting. I could see the beach where we were heading in the distance, and the guides kept watch from the safety boat.

When we got tired, we stopped swimming. We hung onto the side of the boat and had some high-calorie sports drinks so that we could get our strength back. Then we were off again, and I focused on staying with my group. Before long, we reached the beach on the island of Tijat, and looked back in delight at the impressive distance that we had swum.

The weather during our stay played an important part in the experience. Fortunately, the lack of wind meant that the sea wasn't rough – big waves can cause problems for swimmers. I would recommend anyone to check the sea temperature before booking, because it can vary throughout the year.

My confidence grew daily. I managed the longest single swim of 3 kilometres with no problem, and although a few people swam more than 30 kilometres, I was thrilled to have covered a total of 20 kilometres. I never completely lost my childhood fear of the creatures that could be swimming below me, but it didn't hold me back. The guides encouraged us and were very supportive throughout. We were even filmed underwater, and our movements were examined in slow motion, which taught us how to swim more efficiently.

When I described the trip to some of my friends, they said, “It doesn't sound like much of a holiday!” I loved it though, and now I'm saving for another trip!”



- (a) Where does VacationSwim organise swimming trips?
.....[1]
- (b) How long did Peter’s holiday last?
.....[1]
- (c) Why did Peter feel happier after talking to the other swimmers?
.....[1]
- (d) Why did the swimmers wear the hats provided? Give **two** details.
.....
.....[2]
- (e) How did the swimmers replace energy they had used in the water?
.....[1]
- (f) What effect did the weather have on the swimming conditions?
.....[1]
- (g) What advice does Peter give to people who are planning a similar holiday?
.....[1]
- (h) According to the chart, what is the average sea temperature in April **and** the average air temperature in August?
Sea temperature:
Air temperature: [1]
- (i) How far did Peter swim during his whole holiday?
.....[1]
- (j) How was technology used to help swimmers improve their performance?
.....[1]
- (k) What evidence is there that the holiday was a surprising choice for Peter? Give **four** details.
.....
.....
.....
.....[4]

[Total: 15]

[Turn over

Exercise 3

Miguel Ramirez enjoys creative writing, both in his free time, and also at college, where he is currently studying a range of subjects including languages, chemistry and psychology. His 21-year-old sister, Maria Ramirez, who works on a newspaper, has just phoned him on his mobile, 07867553628, to let him know about a competition run by an organisation called Young Writers' Ink. She thinks that he should enter the competition with his latest story, 'The Journey', which is about what happens when a young detective attempts to solve a mystery hidden deep in the past. Fifteen-year-old Miguel finds ideas for his stories from his many interests, including foreign travel, the cinema and the natural world. On this occasion, the inspiration for the story came from a display of old photos and documents about local historical figures in his town museum. He agrees with his sister, and decides to enter the competition.

He had entered a similar writing competition three years ago, after reading a leaflet in his local library. He was very encouraged by the whole experience, and was amazed to come second in the competition. The title of his story was 'The Dolphin', and in Miguel's opinion, the best part of his prize was seeing the story printed in 'Write It' magazine. He knows the Young Writers' Ink organisation well, and has enjoyed reading stories by previous winners on their website. He would welcome the chance of similar widespread publicity if his story is good enough. Miguel is hoping to follow his sister into journalism. He therefore likes to take any opportunity to build up his confidence in writing, and feels that success in the competition will help him to do this.

Young Writers' Ink is well-respected in the world of professional writing, and Miguel often visits their website for the useful hints and tips pages, but his favourite section is the interviews with various writers. He is keen to know more about the online workshops that Young Writers' Ink runs from time to time. He is happy to receive information from this organisation, and recently decided to set up a new email address – writermiguel@freetalk.com – specifically for his writing. This means that he can keep his original email address – rami@secure.com – for contacting his friends.

In order to enter the competition, Miguel needs to complete the Young Writers' Ink registration form, and submit it with his story. If he is successful, the organisers could inform him on his landline, on 0475847345, although he would rather be contacted on his mobile number. Miguel has downloaded the registration form from the Young Writers' Ink website. He is looking forward to submitting his story and hopes to do well.

Imagine you are Miguel. Fill in the form, using the information above.

Young Writers' Ink registration form

Section A: About you

Full name:

Age group (please circle): 8 – 12 13 – 17 18 – 22

Preferred email address:

Preferred phone number:

Any previously published work? (give brief details)

Title: Where published:

Section B: About your story

How did you hear about the competition?

.....

Title of story entry:

Story category: (please tick)

natural world travel historical crime

Do we have permission to publish your story? (please delete) YES / NO

Section C: About us

What do you like best about our website?

.....

What would you like more information about? Give details:

.....

Section D

In the space below, write **one** sentence of between 12 and 20 words, giving reasons why winning this competition is important to you.

[Total: 8]

Exercise 4

Read the article about bees, and then complete the notes on the following page.

The world needs bees

If there were no bees, our world today would be a very different place – and our lives would be very different too. These hard-working insects have existed for around 125 million years, and although numbers of bees are sadly declining, the survivors continue to be hugely important for our planet.

Many nutritious fruit and vegetable crops depend on bees for pollination. This is when bees transfer pollen from the flowers of one plant to another in order to fertilise them. This process is affected by the decline in bees and other insects. Without them, about one third of the crops that we consume would have to be pollinated in other ways, or crop production would be significantly less. Not only are bees essential in the pollination of crops, they also help 90% of the world's wild plants with seed production and survival.

In modern farming practices, certain chemicals are used to increase crop production and prevent disease. It is perhaps surprising to discover that these chemicals are also responsible for the decline of bees. They have been found to attack the bees' nervous system, quickly killing them. In a number of countries, farmers are trying to address this problem by producing food organically. This is when crops are grown without the use of any chemicals. Although this is an expensive method of farming, it is one that many people are choosing to support.

As well as pollinating crops, bees are famous for producing honey, which both people and animals enjoy. Bees are well known for their love of honey, and creatures such as birds, bats and other insects will take advantage of an open beehive. Often, both the honey and the protein-rich young bees are eaten, providing an important energy source for many animals.

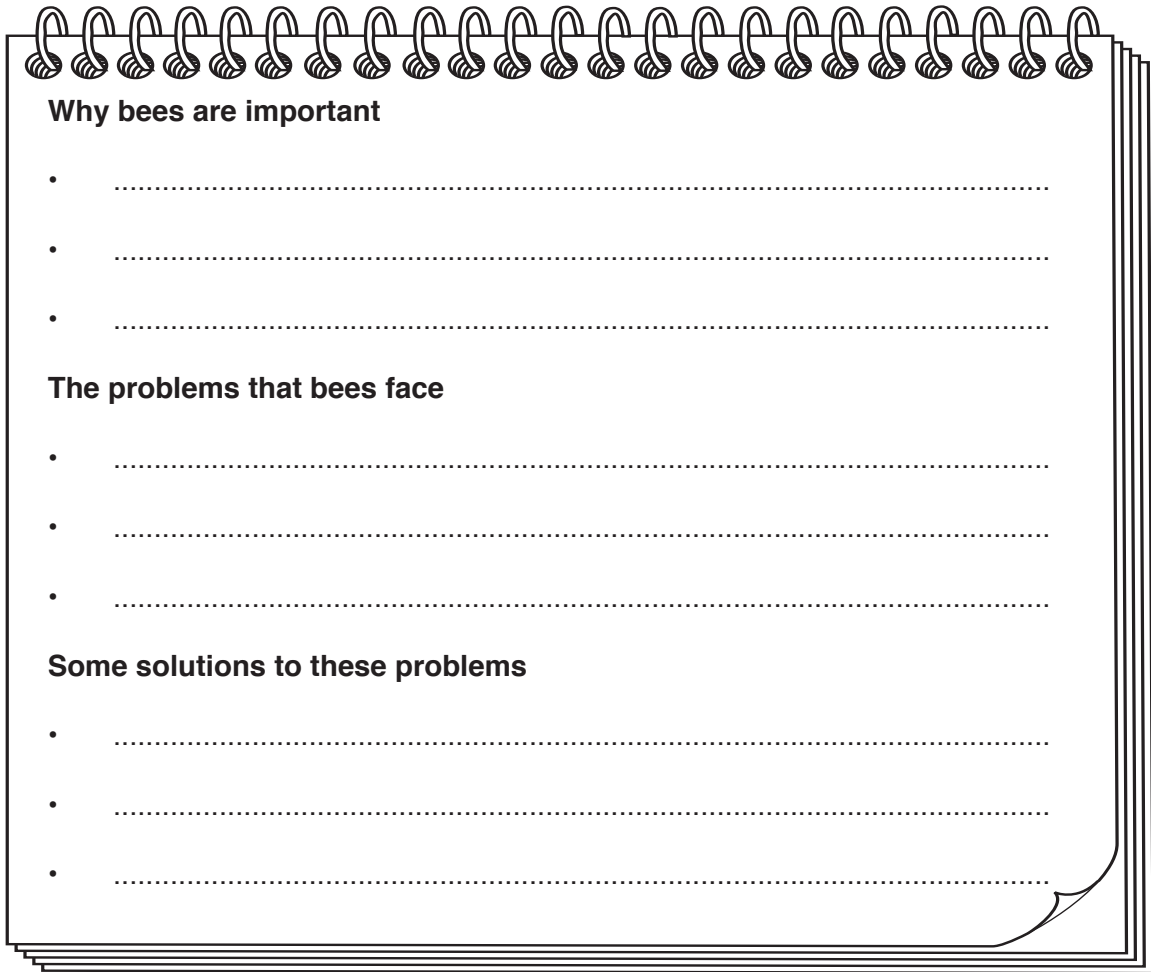
There is a tendency nowadays for farmers to concentrate on producing a single crop. Bees need food from a range of sources, so even though they are surrounded by huge areas of farmland, it is sometimes difficult for them to find adequate food. An increase in the variety of plants grown in the fields could improve their chances of survival. If farmers created semi-wild areas around their fields, this farmland could support more bees, which would lead to increased pollination of crops.

Bee populations can also be reduced by climate change. Increasing temperatures, changes in rainfall patterns and extreme weather all have a damaging effect. One result of rising temperatures is that bees are leaving their beehives earlier in the year, and the concern is that they are searching for pollen before the flowers are available. There have been projects in some areas to promote the growing of bee-friendly plants, which produce pollen earlier. These provide bees with food at times when they need it most.

The steady decline in the bee population clearly results from changes in our environment. Bees need our help, and it is time for us to respond.

You are going to give a talk to your class about bees. Prepare some notes to use as the basis for your talk.

Make short notes under each heading.



Why bees are important

-
-
-

The problems that bees face

-
-
-

Some solutions to these problems

-
-
-

[Total: 9]

Exercise 5

Read the following article about a type of desert animal called a jerboa.

Write a summary about how jerboas' physical features help them survive in the desert, AND the threats that jerboas face.

Your summary should be about 100 words long (and no more than 120 words long). You should use your own words as far as possible.

You will receive up to 6 marks for the content of your summary and up to 5 marks for the style and accuracy of your language.

Jerboas



Jerboas are unusual-looking creatures which live in hot and cold deserts in Africa and Asia. There are many different kinds of jerboa – their head and body length varies from 3 to 15cm. They all have long tails, which can be up to 23cm in length, and help them keep their balance as they move quickly across the sand. Some jerboas have small mouse-like ears, while in others they are large and rabbit-like, but they all have hairs in their ears which keep out the sand. However, the jerboa's back legs are its most unusual feature, as they tend to be around four times as long as the front ones. These allow the jerboa to travel long distances, with a minimum of energy, when searching for food in the desert.

Desert animals have to be able to survive in very harsh conditions where temperatures can vary widely, and they have to exist in an area that is almost waterless for a large part of the year. Jerboas don't actually drink water, so they have to extract as much moisture as possible from their food. They eat leaves whenever possible, but can also survive in dry periods by digging up plant roots. Climate change has led to further drying of water sources, which affects the availability of plant life. Although jerboas have been found to live for up to three years on dry seeds alone, this has made surviving in these desert conditions even more of a challenge.

When on the move, jerboas jump like kangaroos, which is an amazing sight. Little hairs on their feet give better grip on the sand, almost like snow shoes, helping them to hop in a zig-zag pattern in order to confuse enemies. Their natural predators typically include snakes, owls and foxes, but a more recent problem has been an increase in the number of cats. Their presence is a direct result of urbanisation, as towns in some areas grow and spread into the natural habitat of the jerboas. The biggest challenge for jerboas has been identified as the loss of their habitat, which is another consequence of this expansion.

Jerboas survive in the desert by living in holes called burrows. In order to help them dig these burrows, many species have special folds of skin to stop sand getting into their noses. During hot summers in the African deserts, jerboas place a small amount of sand at the entrance to their burrows to prevent the heat from getting in. Jerboas living in Asiatic deserts, where the temperatures can be low, use the same technique in winter to keep out the cold. The choice of location of burrow sites is very important, but jerboas are experiencing another problem. More and more land is used by farmers for keeping their animals, resulting in the destruction of the jerboas' burrows as the animals walk on them.

Jerboas have successfully adapted to life in the desert. It is true that they are rather strange-looking, but their appearance is a vital part of their survival in the arid conditions of desert life. They are a fascinating choice of study for scientists who are keen to know more about these creatures and the threats that they are facing.

Exercise 6



Your friend is doing a project about places of interest in your country, and has asked you for some help.

Write an email to your friend, giving some information.

In your email, you should:

- describe a visit you made to an interesting place in your country
- suggest reasons why people enjoy visiting different places of interest in your country
- explain how you can help more with your friend's project.

The pictures above may give you some ideas, and you should try to use some ideas of your own.

Your email should be between 150 and 200 words long.

You will receive up to 10 marks for the content of your email, and up to 9 marks for the style and accuracy of your language.

Dotted lines for writing.

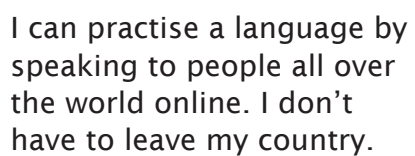
[Total: 19]

[Turn over

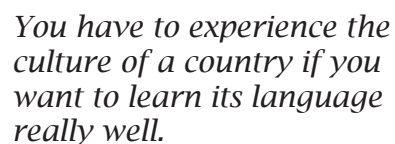
Exercise 7

Some people think you can only learn another language well if you go and live in the country where it is spoken.

Here are two comments from young people on the topic:



I can practise a language by speaking to people all over the world online. I don't have to leave my country.



You have to experience the culture of a country if you want to learn its language really well.

Write an article for your school magazine, giving your views.

The comments above may give you some ideas, and you should try to use some ideas of your own.

Your article should be between 150 and 200 words long.

You will receive up to 10 marks for the content of your article, and up to 9 marks for the style and accuracy of your language.

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