Cambridge IGCSE

Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER			

ENGLISH AS A SECOND LANGUAGE **0510/21**

Paper 2 Reading and Writing (Extended) **October/November 2016**

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.

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Exercise 1

Read the following leaflet about a popular attraction called Deacon Dale, and then answer the following questions.



WELCOME TO DEACON DALE!

Every year, thousands of people come to Deacon Dale, an area of outstanding natural beauty. Visitors have always been able to walk in the hills and admire the beautiful views, but this year, for the first time, they have the opportunity to explore another world below the ground.

Hidden under the hills, a network of caves has been discovered, and this year, five kilometres of tunnels which link these caves have finally been opened to the public. Now this exciting tourist attraction has something for everyone.

Deacon Hole

If you fancy something really different, you'll have to put on your climbing boots and a safety helmet to go down into Deacon Hole, the deepest cave in the network. To reach this cave, you have to face the challenge of crawling on your hands and knees through 800 metres of narrow tunnels. Kim Tomas, a recent visitor, said that this was really exciting: "The highlight of my visit," she said, "was the thrill of reaching the magnificent cave, after crawling in the dark for such a long time!"

Starting out

For young people who want to take up caving but lack confidence, there are easier practice caves to explore. Safety is taken very seriously. Our safety features include fixed ladders, first aid supplies and spare torches.

All the essential caving equipment is provided, including an over suit, boots, helmet, light and belt. Any other items, such as a wetsuit or knee and elbow pads, are available at an additional cost.

Your adventure will begin with a short talk by one of our highly qualified instructors, who will show you how to put on and use the equipment. You will then be ready to start your adventure! When you finally emerge from the caves, exhausted but proud, you will be awarded with a special achievement certificate.

Apart from offering an exciting sporting activity for all, Deacon Dale is ideal for groups. Not only does it encourage teamwork and trust, but it also provides participants with a shared sense of achievement.

Visitor information

If you would like more information about Deacon Dale, please visit our website at www.deacondale.com and for advice about educational bookings, email our groups coordinator. Details can be found on the website.

With plenty to do, whatever the weather, Deacon Dale is open all year round. Come and discover the magic!

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(a) What has been found underground at Deacon Dale?

View solution

.....[1]

(b) What must you do before you can start climbing down to Deacon Hole? Give **two** details.

View solution

.....

.....[1]

(c) According to Kim Tomas, what was the best part of her visit?

View solution

.....[1]

(d) Where in Deacon Dale can beginners start caving?

View solution

.....[1]

(e) Which equipment will you have to pay extra for when you go caving at Deacon Dale? Give **two** details.

.....

.....[1]

(f) According to the leaflet, how will you feel after your first caving adventure?

View solution

.....[1]

(g) Why is a visit to Deacon Dale popular with groups? Give **two** details.

View solution

.....

.....[2]

(h) Who is the best person to contact to arrange a school visit?

.....[1]

[Total: 9]

View solution

Exercise 2

Read the following article about the Dana octopus squid, and then answer the following questions.

SQUID THAT LIGHTS UP IN THE DARK

Several species of squid, including the giant squid and the colossal squid, live in the deep waters of the ocean. However, very little is known about them. Scientists have therefore been particularly excited to discover another type of deep-sea squid – one which lights up in the dark.

This enormous squid, known as the Dana octopus squid, has been filmed for the first time in the wild. The film shows the squid, which can grow as big as a human, using bright, flashing lights on its arms to catch other creatures.

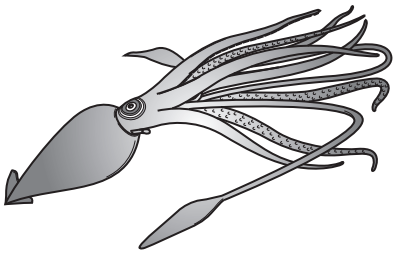
The glow-in-the-dark squid was discovered in 2006 in the dark waters of the North Pacific Ocean off south-eastern Japan by Japanese scientists, during an expedition led by Tsunemi Kubodera of the National Science Museum in Tokyo. They attracted the massive squid by putting food at the end of a long line which they dropped from the research ship down into the ocean, and lowered cameras alongside it. Two years previously, in 2004, the same team had also filmed the first ever images of a live giant squid.

The Dana octopus squid, like most squid, has eight arms with cat-like claws on its suckers. Other large squid use two long tentacles, which are like extra arms, to grab creatures while hunting, but scientists think that the Dana octopus squid blinds its victims using light-producing organs on the ends of two of its arms.

These organs, which are about the size of lemons, are called photophores, and they can be opened and closed like eyes. This deep-sea squid swims in a very dark environment, so their photophores can be used to light up its immediate surroundings. Additionally, the squid uses them to measure the distance between itself and its prey.

The Japanese scientists noticed that the Dana octopus squid also glows when it is not hunting. They believe that the squid uses these light signals as a form of communication. For example, a single flash of light seems to act as a warning signal when the squid is approaching unfamiliar objects. Further investigation revealed that these flashes of light could also be used to attract a mate.

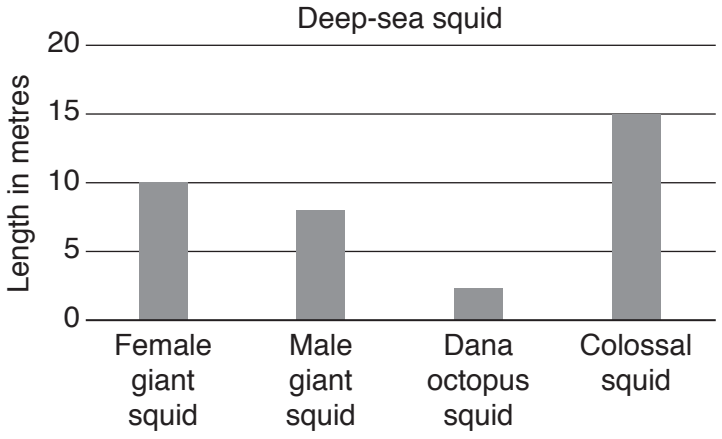
Researchers already had some ideas about how this glowing squid behaves, and the new video footage supports those theories. “It’s nice to have some proof,” says squid researcher Michael Vecchione of the Natural History Institute. “It has mostly been just theory and guesswork up until now.”



The footage also shows that the Dana octopus squid is a very effective hunter. It swims backwards and forwards and it is able to change direction rapidly by bending its body. On the film some were seen reaching speeds of 2.5 metres per second as they attacked the food.

“Some people have said that all deep-water squid are rather slow and heavy because their muscles are not very firm,” says Vecchione, “but this particular type of squid has got very muscular fins for swimming.”

The Dana octopus squid is thought to be one of the world’s largest squid and scientists believe that they live in large numbers in the tropical oceans. However, because they swim in such deep waters, it has not been easy to conduct more detailed research on them. Until the Japanese team caught them on film, no one had ever seen one alive.



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(a) Where exactly was the Dana octopus squid first filmed? View solution

.....[1]

(b) How did the Japanese scientists film the Dana octopus squid? View solution

.....[1]

(c) In which year was the giant squid first filmed? View solution

.....[1]

(d) According to the scientists, what is unusual about the way the Dana octopus squid catches its food?

.....[1]

(e) What are the Dana octopus squid's light-producing organs comparable to in size? View solution

.....[1]

(f) Why is the video evidence of the Dana octopus squid important to the researchers? View solution

.....[1]

(g) Apart from using light-producing organs, what makes the Dana octopus squid such a good hunter? Give **two** details.

.....

.....[2]

(h) Why is the Dana octopus squid better at swimming than other deep-sea squid? View solution

.....[1]

(i) Why is the Dana octopus squid so difficult to study? View solution

.....[1]

(j) According to the chart, which is the second longest squid **and** how long is it? View solution

.....[1]

(k) What does the Dana octopus squid use its light-producing organs for? Give **four** details. View solution

.....

.....

.....

.....[4]

[Total: 15]

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Exercise 3

Tieneke Brusche lives in the Netherlands and is in her first year at Bakker Academy, where she is following a foundation course in Performing Arts. She is a keen musician and hopes to go to university after this course to study music. She lives with her parents at Apartment 79, Grebbeweg 103, Achterberg. She is just 17 but is very excited about the prospect of living and studying somewhere new.

Tieneke's principal instrument is the trumpet and she plays it to an excellent standard. Recently, she passed her Grade 8 exam. She plays in the local brass band called Rhenen Brass and also in the Music Society Orchestra at her college, so she has plenty of opportunities to perform and has made many good friends in both groups. She also plays the piano, but she has only reached Grade 6 so far. She thinks that if she wants to study music at the best university, she should do her best to improve her piano playing. Tieneke knows that after she has finished her exams, she will have a long holiday, so she has decided to apply for a course at a music summer school, where she can have piano tuition and play in groups with other pianists. She also thinks that this will be a good way to meet other young keyboard players.

After doing some research at the local library, Tieneke has discovered that there are three courses suitable for her age group. One of these is at Groningen Summer School and runs for two weeks. It looks really interesting as it is designed specifically for students who want to go on to study music. It is particularly recommended for piano and keyboard players. However, Groningen is quite far from where Tieneke lives and so she would have to catch a train every day. She could stay on campus for the duration of the course but this is expensive and Tieneke's parents would not be able to afford it.

Tieneke would prefer to be nearer home. The course at Leo Smit's Summer School offers a good choice of activities, and she knows that two of her friends from orchestra are also thinking of going there. She could easily travel there by bus, which is not too expensive.

After discussing this with her parents, Tieneke has decided to apply for a place on the course at Arnhem School, which is much closer to home. It specialises in piano performance and composition, and the facilities are excellent. The school also organises a variety of social events. Although accommodation is available, Tieneke would not need to stay overnight as she could cycle every day from home.

There is a central booking agency which covers all the summer schools in the north of the country, so Tieneke has requested an application form.

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



View solution

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Music Summer School: Application Form

Section A: Personal details

Full name: .....

Age: .....

Home address: .....

College currently attended: .....

Section B: Music background

Main instrument: .....

Current level of ability in this instrument (tick one box)

Advanced ☐ Intermediate ☐ Beginner ☐

Name(s) of musical group(s) you play in: .....

.....

Section C: Proposed course

Which summer school would you like to attend?

First choice: .....

Second choice: .....

Which type of instrument will you be studying? (please underline):

brass keyboard woodwind

Do you require accommodation? (please circle): YES/NO

Where did you hear about the summer schools on offer? .....

Section D

In the space below, write **one** sentence of between 12 and 20 words, explaining why you want to attend a music summer school.

[Total: 8]

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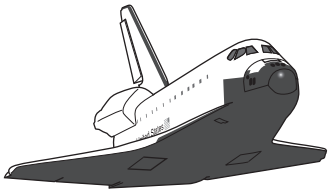
Exercise 4

Read the following article about the Mars One project, and then complete the notes on the following page.

LIFE ON MARS



Bas Lansdorp is the co-founder of the Mars One project and is looking for people who want to live on Mars as part of an exciting new project. He believes that with proper preparation a human settlement can exist there, and says that the settlement would provide valuable information for scientists around the world who are studying the possibility of living on another planet.

Undiscovered waters, mountains or faraway lands have always attracted explorers as they search for adventure on Earth, even in the face of extreme danger. It is perhaps not surprising that the Mars One project has already received thousands of applicants, all keen to achieve their dream of setting foot on Mars.

Future explorers take note, however. Mars is a planet very different from Earth. Its atmosphere is very thin, it is extremely cold and the water that remains is frozen or underground. Applicants, then, must be physically fit, adaptable and must work well in a team. There are also plans to televise the project as a reality TV show, from the initial selection of participants to everyday life on Mars.

The first four settlers will be transported to Mars in 2026. Those who are chosen to go will live together in a small community. In order for them to stay alive, energy will be generated from solar panels and water will be extracted from the soil and recycled. The new settlers will attempt to grow their own food, but they will also have an emergency food supply and will receive deliveries when new explorers arrive. After two years, four more people will be sent to join them.

The Mars One project advisers say that, when the number of settlers reaches twenty, the community will be self-sufficient. This means that they will be able to take care of themselves and continue to build the settlement on their own.

So far, no human has ever visited Mars. Critics say that the surface of Mars is extremely hostile, and the planet cannot support human life. Radiation levels are very high, and this could lead to an increased risk of cancer. However, the project team have already thought of this and will advise the settlers to wear protective clothing at all times.

The people who run the Mars One project are confident that it can happen. Tom Acosta, an astronaut who has just returned to Earth after five months in space, has shown interest and has even said that it would be an honour to be one of those selected to go to Mars.

Funding the project may be difficult as it would cost $5.9 billion to send the first group. However, Bas remains confident that their financial target will be met. “This could be the biggest thing that mankind has ever done,” he says. “Humans are naturally curious and so many people want to explore beyond our world; our dream of going to Mars will come true.”

Whether or not the Mars One project will achieve its goal, the publicity generated from televising the whole process means that the world will surely be watching.

View solution

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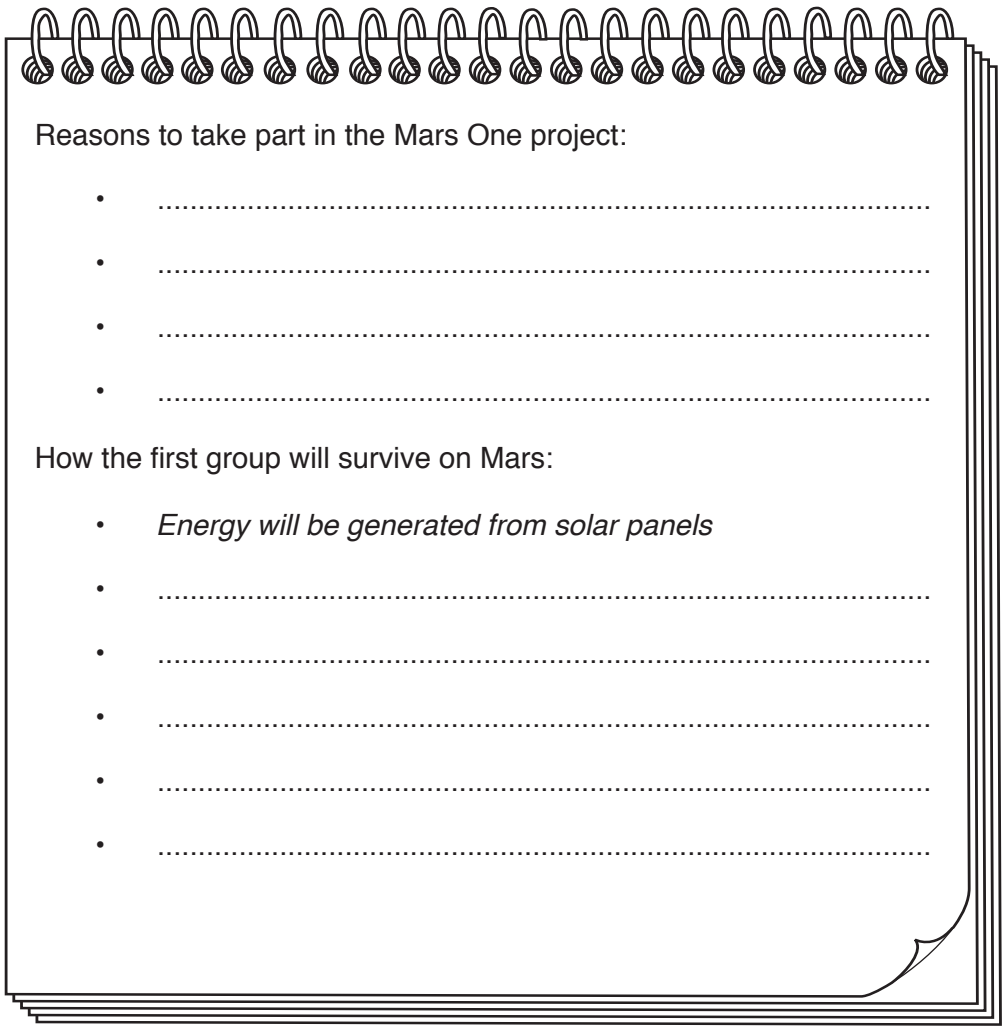
You are going to give a talk to your school's science club about the Mars One project. Prepare some notes to use as the basis for your talk.

Make short notes under each heading.



Reasons to take part in the Mars One project:

- .....
- .....
- .....
- .....

How the first group will survive on Mars:

- *Energy will be generated from solar panels*
- .....
- .....
- .....
- .....
- .....

[Total: 9]

Exercise 5

View solution

Read the following article about a proposal to develop a new mini-helicopter.

Write a summary about the benefits of this new mode of travel AND about the possible problems associated with it.

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.

RUSH HOUR IN THE SKY

If you have ever spent time sitting in a car stuck in traffic or in a delayed train or bus, then you will probably have dreamed of a better way to get from A to B. We have all imagined the concept of flying cars, and the idea has been explored in popular films and cartoons. Now, though, an inventor has come up with a design for a mini-helicopter which he says can be used to travel around cities and ease road traffic.

The Smartcopter was created by Philippe Bertillon, who was looking for an eco-friendly alternative to crowded public transport and congested roads. “As the population in busy cities continues to grow,” Bertillon says, “the traffic also increases, and everybody is trying to use the same routes at the same times.” This personal helicopter has been designed, then, to transport us around cities in a more environmentally friendly way than relying on driving or waiting for a bus.

The Smartcopter has touchscreen digital control panels as well as automatic take-off, autopilot and auto-landing functions. It weighs just over 1000 kg and can carry two people from city to city in no time. In fact, the designer believes that with a maximum speed of 193 km per hour, the aircraft could fly from London to Paris in a little under two hours. Furthermore, this light aircraft can be ready for take-off in one minute, which means that busy executives can arrive at their meetings on time. However, it may be difficult to find a space large enough in cities for the Smartcopter to land.

Bertillon’s original idea was based on his desire to increase our use of green energy. He is concerned that cities across the world have recently experienced increased levels of fog and pollution caused by CO_2 emissions. He says, “I see the Smartcopter as an urban aerial vehicle. It is powered by electricity and recharged by the sun using solar cells. It is similar in flight to a standard helicopter, but smoother thanks to its eco-friendly engine design.” Bertillon is convinced, then, that his little aircraft can certainly play its part in the fight against global warming.

However, some people might argue that Bertillon’s unique flying machine will never become a regular form of transport. They claim that using solar energy to power the machine is only effective if you live somewhere sunny, but it may not be so efficient in cloudier climates, such as in the UK. Despite this, Bertillon maintains that such a small, lightweight aircraft with a flying distance of 480 km could be a very desirable purchase.

But will the Smartcopter concept really work? There would have to be more regulation and potential owners would need a pilot’s licence. Furthermore, the practicalities of having a large number of these aircraft in the air have not been fully explored. Bertillon suggests that the maximum altitude for the Smartcopter could be as high as 4000 m, which might present difficulties for air traffic controllers.

So, although the Smartcopter sounds like a great idea, many issues will need to be overcome before it ever gets off the ground.

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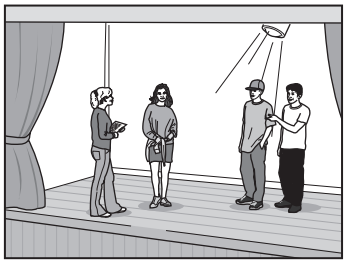
[Total: 11]

Exercise 6

View solution





You have recently joined a new club at school.

Write an email to a friend telling them about the club.

In your email, you should:

- explain how you found out about the club
- say what you enjoy about it
- say why you think your friend should join the club too.

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.

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[Total: 19]

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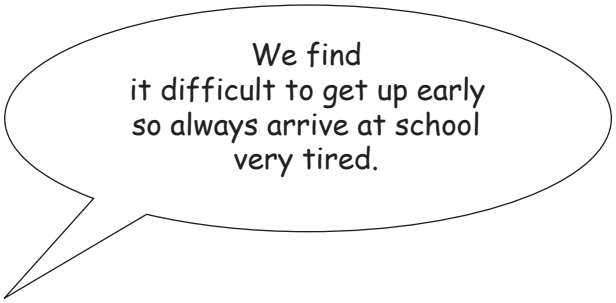
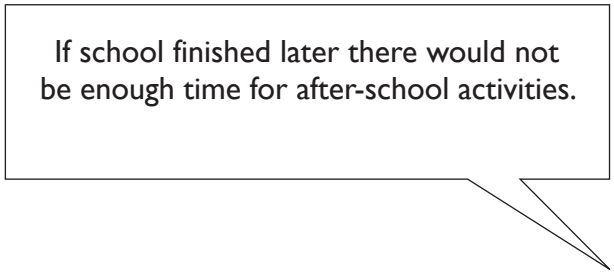
Exercise 7

It has been suggested that the times of the school day should be changed, to start and finish one hour later.

View solution

Here are two comments from your friends about this:





Write an article for the 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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[Total: 19]

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