	Cambridge International Examinations Cambridge International General Certificate of Secondary Education				
	CANDIDATE NAME				
	CENTRE NUMBER	CANDIDAT NUMBER	E		
*	ENGLISH AS	A SECOND LANGUAGE	0510/22		
6 8 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	Paper 2 Readi	ing and Writing (Extended)	February/March 2018 2 hours		
		swer on the Question Paper. Materials are required.			
n *	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.

Read the leaflet about a fun race for families, and then answer the following questions.



Family Fun Run

Practical information

The Arrow Bay Family Fun Run is taking place on 1 July. Online registration starts from 3 April, and entry forms cannot be accepted after 15 May. It's important to apply early – last year's race was over-subscribed, so some people were disappointed not to get a place. The 2.4-kilometre route loops twice around the town centre, through the park and past local monuments. This year, the entry fee for the event is US\$8 per person, or US\$26 for a family of 4 and there is also a special price of US\$6 per person for groups of 10 or more. All runners will be sent an information pack one month before the event.

Who can enter

It's great for all ages. There's no minimum age for entry, but children under 11 need to have an adult running with them. Those aged 11 to 14 must be accompanied by an adult to the start and met at the Fun Run exit. All runners will be given a race number, and they need to make sure that this is securely attached to their clothes and can be clearly seen by the race officials. If this number isn't visible when runners cross the finish line, they will take home the memory of an amazing experience, but not an official race time!

A photographer will also be taking photos, so runners should check the website later to find a picture of themselves as they cross the finish line! On completion of the race, each runner will be given a medal, and special T-shirts will be on sale as a souvenir of the event. However, for many families and friends, the main idea is simply to enjoy the experience, and there is no pressure to record a fast time or even run all the way round.

On the day

On arrival, there will be volunteers on hand to direct runners to the warm-up area. Even if it's cloudy at the start, all those taking part should bring a hat because it might get hot later. Water is provided by the volunteers along the route to keep everyone cool and hydrated. The organisers recommend leaving valuables at home due to limited storage facilities.

Sponsorship

Every year, thousands of runners raise money for charity, and more than US\$500000 has been donated to over 400 different charities over the years. This year, the event committee is aiming for a total of US\$20000 for their chosen charity *MilesofSmiles*, which supports local youth projects. For more information about getting sponsored for this year's charity, email Katherine Jones at events@milesofsmiles.com, or contact Steve Heston on steve@funrun.com for payment of current entry fees and the dates of future events.

(a)	What is the latest date to book a place on the run?	
(b)	If twelve friends book together, how much will each person pay?	
(c)	When will competitors be provided with details about the run?	
(d)	What is the youngest age at which children can run on their own?	
(e)	What do runners need to show in order to get an official race time?	
(f)	What does everyone who finishes the race receive?	
(g)	Why are runners advised to wear a hat?	
(h)	How much money are the organisers hoping to raise for charity?	
(i)	What information can Steve Heston provide about this year's event?	
		[1]
		[Total: 9]

Read the article about sailing around the world, and then answer the following questions.

Round the world adventure

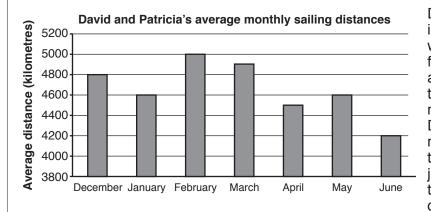
When David and Patricia Jones sailed off in a boat from the United Kingdom, they were intending to take their boat on a short trip for a couple of weeks. They wanted to sail to northern Spain. Amazingly, fourteen years later, they have just returned, after an adventure which took them 94000 kilometres. During their journey, they visited 56 countries, swam with dolphins, and even survived running out of water for 20 days, by filtering seawater.



They bought a second-hand boat, which needed US\$10000 spent on repairs, in addition to the US\$25000 purchase price. When the work on the boat was finished, they were ready to begin their first journey. The couple were both skilled sailors, and they thought that a short trip would allow them to see what living in a small space was like before attempting a longer ocean crossing in the future. They also wanted an idea of how much food and drink they would need to take to last the journey.

Sailing to Spain, however, was so successful that they decided to continue to the USA, stopping in New York for a two-day shopping trip. They didn't really feel like normal holidaymakers, because they spent their time buying safety equipment and medicine for the next stage of their journey. Surprisingly, Patricia's happiest memory of the city was when she saw a dentist, as she had complained of painful toothache on the boat for days! After the USA, they sailed via the Panama Canal and the Pacific Ocean towards Australia, before returning home.

Although using wind power most of the time meant there were fewer stops for refuelling, they still needed money to keep the boat running safely. On one occasion, the side of the boat was damaged when they hit an object floating in the sea. Because of these costs, in the middle of their trip, they decided they would have to use all their savings. Even with that money, they still preferred trading some of their possessions for the supplies they needed. On one island that they visited near Fiji, they handed over some tools that they were carrying in return for fresh fruit and vegetables. Patricia explains, "One of the villagers saw a rope we had with us. We had wanted to use it to climb the mountain there, but the weather wasn't good enough. In fact, the villagers needed the rope to repair a roof in the village that had been damaged by a recent storm. So we exchanged it for enough food for a month!"



During their trip, they had some incredible experiences – swimming with seals, and watching smoke from a distant volcano. They met a giant whale – even bigger than their 11-metre boat. Some people might have been frightened, but David described the encounter as magical. However, meeting other travellers was the highlight of their journey. They also found it useful to talk to locals and get ideas for new destinations.

The adventure taught them to rely on themselves, and they were generally quite lucky. While at sea, David fell and twisted his ankle, but otherwise they survived without injury. Their biggest scare was when they thought they were being chased by another boat. Fortunately this turned out to be a fishing-boat. One of the crew had cut his leg, and needed first aid. Patricia volunteered to help, and David watched anxiously as she put on her safety equipment and crossed over to the other boat. "I was so relieved when she came back safely," he said.

The couple are already planning another adventure, this time travelling through European canals.

(a)	How long were David and Patricia expecting their first trip to last?
(b)	How many US dollars did they pay to buy their boat?
(c)	What did they plan to check during their first trip? Give two details.
(-1)	[2]
	What made them different from other tourists in a city they visited?
(e)	How did using the wind benefit them on their journey?
(f)	How did they finance the second half of their trip?
(g)	What did they use their climbing rope for when visiting an island near Fiji?
(h)	According to the chart, in which months did they travel the same average distance?
(i)	What did they enjoy most about the whole trip? [1]
(j)	Why was David worried about Patricia's safety?
(k)	What difficulties did they experience during their long journey? Give four details.
	[4]
	[Total: 15]

In his hometown of Barton, New Zealand, high-school student Travis Finley bought a new laptop on 5 January, 2018 as his old one was beginning to run very slowly. Also, he was having problems completing his schoolwork because the battery wasn't lasting as long as it should have. This meant that it was sometimes difficult to use when he wasn't at home at 56 Hills Avenue, Barton. He knew that a new laptop would be expensive, as the typical cost of the type that he wanted was around US\$940.

He researched the different options from a number of stores in town, including popular electronics stores like Officeworld and Compu-Planet. He also looked online, but he decided in the end that he wanted to talk to an expert about what to buy. He found good deals on offer from an independent shop called Easy IT Solutions, and when he visited the shop in Dawson City, he found the salesperson was very helpful. He initially decided to buy an Aria ZK2954 laptop for US\$970, but then he was persuaded that if he spent more, he could buy something that would last longer. The FD4876 by Jansson was the recommendation he accepted, and he bought the laptop that day.

At first he was pleased with the machine, as it was much quicker than his old one and the battery was more reliable. However, after a month he noticed that after he had switched it on, although the programs loaded without problems, he found the picture quality disappointing. He realised that the problem was getting worse, and additionally, he found getting online was taking a very long time.

Last week he emailed the manager of the shop, Robin Turner – robin@EITS.bis.com – and Robin asked Travis to bring the laptop back to the shop on 2 February. Robin told him that because the machine was less than a year old, Travis could return it to the manufacturer. Robin asked him to complete a form giving personal details such as his email – travisfin@nz.ac – and information about the problem. Unfortunately, Travis had lost his receipt which showed the purchase date and the cost of US\$1250, but the shop checked their records and gave him a letter to send off with the laptop explaining the situation. Travis is going to complete the computer repair sheet and send it to the manufacturer together with the letter and the laptop.

Because Travis is currently studying, he needs to be able to use a computer as soon as possible, as he can't do his work without it. For this reason, he needs to make sure that the manufacturer tells him how long the repairs to his laptop are likely to take, or if he needs to get a replacement. He wants the laptop manufacturer to email him about this so that he can decide what to do next.

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

Computer Repair Sheet To be completed by customer
Section A: Personal details
Full name:
Address:
Preferred contact details:
Section B: Purchase details
Name of shop:
Location of shop:
Manager:
Date of purchase:
Name of laptop manufacturer:
Model number:
Cost of item: (please underline)
less than US\$950 US\$950 – US\$1200 more than US\$1200
Section C: Problem
Please tell us the problem with your laptop (please circle all that apply)
power switch error short battery life
screen display internet not working properly
Section D: Further information

In the space below, write **one** sentence of between 12 and 20 words telling the manufacturer what further information you need.

Read the article about how students can use technology to learn about the environment, and then complete the following notes.

Technology and Environmental science

Environmental science includes subjects such as chemistry, geography and biology in the study of the environment. It is an important part of many education programmes, and developments in technology have greatly benefited the way the subject is taught and learnt.

One particularly successful use of technology is with special apps on smartphones. These use scientific facts to show students predictions about the future. For example, students might be studying the ecology of a nearby lake, and possible environmental damage. The app uses information collected by the student to explain how different pollution levels will affect that particular lake. Of course, many people agree that doing experiments outside the classroom is a great learning opportunity. However, not everyone is convinced that it is necessary to use the latest technology to do so, and some teachers worry that too much time is spent on electronic devices during science lessons. Most schools try to take a balanced approach, and limit how often electronic devices are used.

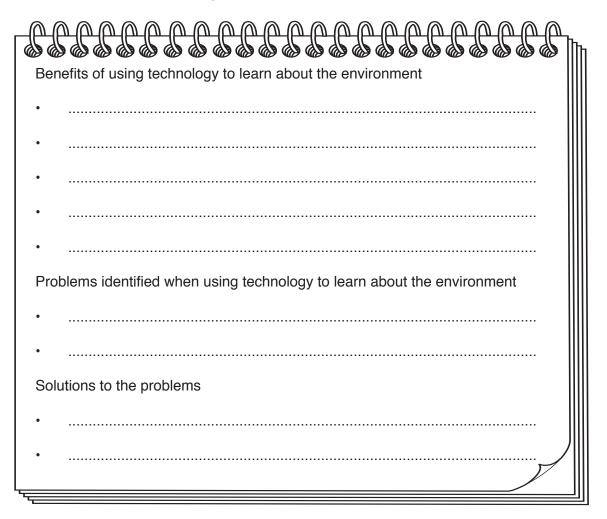
When students use the internet in their science lessons, they also benefit from being able to access the latest information about international environmental research that is relevant to their studies. However, not all students own smartphones, or have access to tablets at school. To address this issue, some mobile phone companies are offering schools special deals. They give free phones to schools for the students to use, with cheaper internet connection which the schools can afford more easily.

We all know how important it is to protect the environment, but the results of the damage that is caused by pollution often take time to appear. To help students see the long-term effects of different solutions to the problem, a virtual reality computer game called *TimeSpeed* has been created. It is set in a beautiful ocean, and students wear special glasses, which make the game look so real that people feel as if they are actually in the water. The game begins with a sea filled with creatures, then as pollution levels rise, the sea-life starts to vanish. Although some people have commented that educational games like *TimeSpeed* do not include enough detailed information for students, teachers have been pleased by how well students have responded to its message. Developers have released a new improved version of the game, which is even more relevant to study programmes.

Most students today learn through working together and sharing information. As well as work in the classroom, the same approach can now extend to the wider world. It is easier than ever to compare results of scientific investigations with students in other countries.

Teachers of other subjects are also exploring interesting ways of using technology to improve their students' learning experience. You are going to give a talk to your class about using technology to learn about the environment. Prepare some notes to use as the basis for your talk.

Make short notes under each heading.



[Total: 9]

Read the following article about giant sequoia trees.

Write a summary about what has helped the giant sequoia trees survive for so long.

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.

Giant sequoias

Giant sequoias are very special trees. They are found growing at heights of 1400–2150 metres above sea-level, and can reach 3000 years old. The largest trees live in North America, in a popular national park in California's Sierra Nevada mountain range. The first widely known discovery of a giant sequoia was in 1852, a massive specimen around 1240 years old. This great age explains its size. People used to think that tree growth slowed down with age, but it has been found that sequoia trees produce wood at a faster rate around their trunks and branches as they grow older, making them even stronger.

In the early twentieth century, people started cutting down giant sequoias to sell the wood, destroying trees that had grown for many years. Fortunately, this practice was stopped as the trees would often fall apart when they hit the ground because of their great weight. The fact that the wood had little value meant that it could not be used for commercial purposes, which protected the trees from large-scale destruction.

Giant sequoias become so tall because they grow in height quickly and live a very long time. These trees are too massive to be blown over in storms and winds. To do well, giant sequoias require lots of water, which until recently they have received from snow that falls in the Sierra Nevada mountains over the winter months. When the water from melting snow is absorbed into the ground, this has provided a steady supply of water throughout the drier months. These conditions have historically created an ideal growing environment for sequoias. Over the last few years, scientists have noticed that climate change has led to a reduction in the amount of snow falling. This means that there is less snow in the mountains to melt and provide the regular water supply that the trees need. Visitors can also cause great harm by walking around the base of giant sequoias. This presses down the soil around their roots and prevents the trees from getting enough water.

In times of hot dry weather, forest fires can be a common occurrence, but the giant sequoias are fortunate in that their thick outer surface is resistant to fire. In fact, even when a fully-grown tree is hit by lightning, it might be damaged but it is not usually killed. Despite the dangers, fire is actually an important factor in the life cycle of the giant sequoia forest. To grow successfully, young sequoia trees need sunlight, and an area free of competition from other plants. Over the centuries, small forest fires have helped to clear the ground of other species of plants and have created the space that sequoias need in order to become established. However, in many areas of the park, there are fire prevention regulations in place, which means that these smaller fires are less frequent, and this reduces the chances of new sequoia plants growing.

The increase in temperature linked to climate change can create another possible danger. Insects, which have increased in numbers in the warmer temperatures, have killed other species of trees in the forest, such as spruce and pine. In normal conditions, trunks of giant sequoia trees contain special chemicals to protect them from most insects, but scientists are becoming increasingly worried that insects might also attack the sequoias. For this reason, these trees are monitored closely for signs of disease.

Giant sequoias are a popular tourist attraction, and many people have enjoyed spending time among these majestic trees.





You have just returned from a holiday.

Write an email to a friend about your holiday.

In your email, you should:

- describe the place where you went on holiday
- explain why you went there
- say what you bought when you were there.

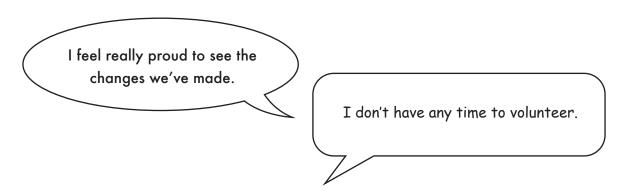
The pictures above may give you some ideas, and you should try to use some ideas of your own.

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.

Some people say that all young people should do some unpaid work to help improve the lives of everyone in their local community.

Here are two comments from your friends:



Write an article for your school newspaper, 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.

BLANK PAGE

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced online in the Cambridge International Examinations Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at www.cie.org.uk after the live examination series.

Cambridge International Examinations is part of the Cambridge Assessment Group. Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.