



CANDIDATE
NAME

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CENTRE
NUMBER

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CANDIDATE
NUMBER

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0510/22

February/March 2020

2 hours

No additional materials are needed.

- Answer **all** questions.
- Use a black or dark blue pen.
- Write your name, centre number and candidate number in the boxes at the top of the page.
- Write your answer to each question in the space provided.
- Do **not** use an erasable pen or correction fluid.
- Do **not** write on any bar codes.
- Dictionaries are **not** allowed.

- The total mark for this paper is 80.
- The number of marks for each question or part question is shown in brackets [].

This document has **16** pages. Blank pages are indicated.

Exercise 1

Read the article about Jenny Talbot, a young mountain bike rider, and then answer the following questions.

Jenny Talbot: mountain bike rider

Mountain bike rider Jenny Talbot recently won her first mountain bike race, and is planning to become a professional rider soon. She and her brother enjoyed exercising from a young age with their parents, and the family often went cycling at weekends, but it was hearing a teacher at school talking about the sport that made Jenny want to try mountain biking herself. She persuaded her parents to get her a suitable bike. There were fields at the back of her house where she could have gone riding. However, they were too flat to be worth considering, so instead, every weekend she went to a valley popular with local riders. Its steep sides took an hour to walk up, but only 10 minutes to come down! Whenever she felt tired, the other riders would tell her to never give up. Later on, she discovered various tracks with different conditions, including a 15-kilometre forest track with jumps and tight turns.

Jenny enjoyed various sports, including playing football for the school. She swam regularly at a local pool and was asked to join her regional swimming team, which she seriously thought about. She wasn't completely sure as it would take up lots of time, and she was really into her mountain biking. As her parents always said you should choose what makes you happy, she turned down the offer and continued riding whenever she could.

She used her bike a lot over the next couple of years and eventually needed an upgrade. She spent eight months doing jobs for her family to get enough money for a proper downhill bike. She was then able to buy the expensive bike and kit that she needed to take her riding to another level. Shortly after getting her new bike, she heard about a race taking place nearby. Although she was worried that she might be the youngest competitor there, she still entered. A few days before the race, she received a letter with race information, including a list of the other riders. She recognised one of the names – top mountain biker Helen Foxton, who Jenny had read about in a magazine. Jenny found her details online and emailed her to see if she had any tips for the race. Helen replied, explaining how it was important to enjoy every race, and said she would look out for Jenny on the day.

On the race morning, Jenny arrived early with her parents. It had been very rainy over the previous few days, which made the route muddy, but this wasn't a problem, and the spectators enjoyed watching the race in sunny conditions. Jenny was amazed to come 17th out of 30 riders. All the finishers were given a certificate, and the first 10 received helmets and sunglasses. Helen, who came first, won a cash prize. Jenny was also presented with a medal for being the youngest rider.

Jenny met up with Helen, who explained how useful it was to vary the places where you practise. Jenny also picked up a leaflet about a training weekend that, by chance, Helen was involved in, called 'Biking for All'. Helen was running a popular session called 'Competitive Skills', and another top rider was leading one called 'Safe Mountain Biking', aimed at new riders, so Jenny decided to go to the former. She went on the course and really enjoyed it. She says the things she was taught, such as how important it is to learn from mistakes, have played a big part in getting her to her current position, and will support her in her future career.

- 1 Who introduced Jenny to mountain biking?
..... [1]
- 2 Where did Jenny prefer to practise mountain biking at first?
..... [1]
- 3 Which team was Jenny a member of at school?
..... [1]
- 4 How long did it take Jenny to save up money for a better bike?
..... [1]
- 5 Where did Jenny get the information she needed to contact Helen Foxton?
..... [1]
- 6 What was the weather like when Jenny was competing in the race?
..... [1]
- 7 What things did Jenny get to take home with her after the race? Give **two** details.
.....
..... [2]
- 8 Which part of the cycling training course did Helen teach?
..... [1]
- 9 What advice has helped Jenny in her sport? Give **four** details.
.....
.....
.....
..... [4]

[Total: 13]

Exercise 2

Read the article about four people (**A–D**) who have reached the final of the Young Musician competition. Then answer Question **10(a)–(j)**.

Young Musician Competition

Find out more about this year's finalists in their own words

A Max: cellist

I honestly can't remember the exact age I started playing, but I guess I was about three or four. I begged my parents to let me play the violin, which I did for a year. Then I was invited to a cello concert, where to my surprise, I fell in love with the instrument – it has the perfect balance of sounds. When I was eight, I got into a music school on the other side of the country. This meant moving away from my parents' home and living at school during the week. At first, it was difficult only seeing my parents at weekends. It was a long drive and we spent hours in the car. But it's been worth it – studying there has really helped me mature as a musician, as well as make some great friends in my class. I'm busy preparing for the Young Musician competition now, as well as for school exams. I have to say there's been more music practice than revision, but the competition will be over soon and I can focus more on studying.

B Louis: pianist

Well, the Young Musician competition is taking place in my hometown, and I've actually performed in the place where the competition is happening, so that's making me feel less nervous. I was born in the US, but came to the UK while my parents were working at City University. During this time, I got the chance to have private lessons with one of the best teachers in the country, and although we'd planned to return to the US, I was making such good progress with my piano that we stayed in the UK. As well as playing the piano, I love reading, and I've taken up the violin because I needed to do something more social, like joining an orchestra, although I haven't had time to actually do that yet. For the competition, I'll be playing a piece that I hope the audience will like – it has a good balance of exciting fast bits and some beautiful slower sections too, which are full of emotion.

C Rob: clarinettist

I was amazed when I found out I was in the final. I didn't think I'd get that far so I didn't start practising the piece I'll be performing until I got the news. Most of the other competitors have been rehearsing for much longer! I'm the oldest competitor, and I've been playing for a long time. I only started playing music at primary school because that was just what everyone else did. Lots of us played a simple wind instrument, called a recorder, at an after-school club. Then, as my friends started to give up, I kept going. I only stopped when my teacher suggested I moved on to the clarinet. After a few years, I got a place at the Royal Music School. I have a clarinet lesson every day, and I spend four hours playing and preparing for it. It's hard to fit that in around my studies, but I manage. One of the best things about being at the school is that I get the chance to listen to other performers.

D Ahmed: trumpet player

I've been playing the trumpet since I was seven, and have spent those years with the best teachers I can find, always trying to improve my technique. I'm lucky enough to be the lead trumpet player in a national orchestra, which is a real honour. I've played in big concerts with them, which I thought would help me in this competition. I quickly discovered that it's rather different. I'm used to performing with lots of other people, but being on stage alone isn't the same at all. In the last round, I looked out at all the people in the audience, and I immediately felt very tense. Afterwards, I remembered what my teacher said about taking deep breaths to help me relax and remember to enjoy a really special moment. I might try this next time.

10 For each question, write the correct letter A, B, C or D on the line.

Which young musician ...

- (a) explains a technique that helped him control his emotions? [1]
- (b) says that he decided to start playing because of his classmates? [1]
- (c) suggests that he needs to spend more time on his schoolwork? [1]
- (d) mentions that he plays with a group of musicians? [1]
- (e) describes how his family changed a decision to help support his music? [1]
- (f) mentions the amount of preparation he's done compared to other people? [1]
- (g) explains that his choice of instrument was unexpected? [1]
- (h) gives a reason why he also plays an additional instrument? [1]
- (i) describes the way in which being at his music school has changed him? [1]
- (j) mentions a past event he thinks will help his confidence? [1]

[Total: 10]

Exercise 3

Read the article about a type of grass called bamboo, and then complete the notes.

Bamboo

Bamboo is the largest member of the grass family. It comes in various sizes, and the plant is noted for its long woody stems. As a domestic plant, it is a beautiful addition to many gardens, and the young bamboo shoots can be picked and enjoyed in a wide variety of popular dishes – they are a low-fat food, and taste delicious! Many people associate bamboo with pandas, as it is their main source of food. However, other animals also benefit from the way that bamboo grows, as the dense cover of the leaves provides shelter for many different species.

Bamboo grows in many different climates and soil types. Its stems are found in an amazing range of colours, including green, yellow, red and even blue. There are bamboo species that have striped stems, and others that have a texture. The strong and durable stems are ideal for creating many household items such as kitchenware. Unlike products made from plastic, which are difficult to get rid of, bamboo has only a minimal effect on the pollution levels of our planet. As well as the stems, the bamboo leaves also come in a wide variety of shades of green and can also display interesting patterns. The leaves, which range in length from around 6 millimetres to 60 centimetres, are a very useful tool in the fight against global warming because they absorb harmful greenhouse gases. What makes bamboo particularly important is that it releases far more oxygen into the atmosphere than many types of tree.

When bamboo is grown as a commercial crop, it requires no chemicals in order to grow well, unlike cotton, which is one of the most intensely sprayed crops. This means that there is no need for additional fertilisers which could pollute local water supplies and upset the balance of nature. Bamboo is very fast-growing, and some varieties can reach full maturity in 1 to 5 years. In contrast, certain trees called hardwoods can take 30 to 40 years to mature, so bamboo is the only woody plant that grows quickly enough to keep up with demand. In a bamboo plantation, because the roots remain after harvesting, the root system prevents the soil from being washed or blown away. New plants start to grow from these roots, quickly producing the next crop. In contrast, after a hardwood forest is cleared, the soil is exposed and eventually washes away into the rivers and streams.

Bamboo contains a substance which is anti-bacterial in its natural form, which means it is protected from disease. Additionally, bamboo can be made into clothes which have similar benefits and are excellent at absorbing moisture so help to keep the skin dry.

There are well over 1400 species of bamboo worldwide and many more are still being discovered each year. There is a bamboo that grows on every continent on the planet, and some bamboo species reach towering heights of as much as 30 metres. It is a strong and readily available building material, commonly found in the construction industry. Certain species of bamboo can even grow over 90 centimetres in one day, and amazingly, it is even possible to watch some species grow before your eyes!

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

Make short notes under each heading.

11 Why bamboo is good for the environment:

-
-
-
-
- [5]

12 What bamboo products are used for:

-
-
-
- [4]

[Total: 9]

Exercise 4

- 13** Read the article about the award-winning Eastgate Centre, a shopping centre in Africa.

Write a summary about how the design features of the shopping centre help control the temperature inside 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 8 marks for the content of your summary, and up to 8 marks for the style and accuracy of your language.

Eastgate Centre

The Eastgate Centre is an award-winning shopping centre in Harare, the capital city of Zimbabwe, Africa. This impressive centre was designed by Zimbabwean architect Mick Pearce, and the idea behind his design came from an unlikely source. He got his inspiration from the home of a termite, which is an ant-like insect. Termites live in large groups, in structures called mounds that they build from mud. These mounds can be as high as five metres. Termites need their environment to be kept at a fairly constant temperature, but in Zimbabwe there can be a 40 °C difference between day- and night-time temperatures. Termites use a system of tunnels, hollow spaces and chimneys to control the temperature of the air inside the mound. Opening and closing these tunnels helps the termites to create a suitable living environment.

Pearce's design includes various clever features, and also takes advantage of natural processes similar to the ones used in termite mounds. He has created a building in which the temperature can be effectively controlled by entirely natural methods, without the need for expensive air conditioning units. This is reported to have saved the building's owners a massive \$3.5 million. The building itself is very different to some other more traditional large structures, which may have a large amount of glass and take a lot of energy and money to heat and cool. Pearce's building, in contrast, uses less than 10% of the energy of a typical building of its size. Traditional buildings often also recycle the air within the building, rather than bringing in fresh air as the Eastgate Centre is designed to do. The building still has windows, but they are small and positioned so that they are not in direct sunlight.

The Eastgate Centre consists of two large buildings side by side, separated by a central area with small shops and places for people to sit. Although the central area has a glass cover over the top, being open to breezes makes it a pleasant place to relax. As the sun comes up in the morning, the outside temperature rises. The walls of the buildings are made of a special material, which is very good at holding heat. During the day, the walls absorb and store the heat from outside, which helps to regulate the temperatures inside the shopping centre.

Warm air naturally rises, and so in the evening, when it gets cooler, the warm air stored in sections of the building's walls moves upwards through long pipes called vents, and out of chimneys at the top of the building. This process is aided by the use of huge fans in the vents. At the same time as the warmer air is being pushed out at the top of the building, cooler air from outside is entering at the bottom. The cooler air finds its way through the specially designed spaces between the different floors of the shopping centre. This cooling process continues all night, so that by the morning, the building is again at an ideal temperature, ready for customers and shop workers. The fact that the building is so eco-efficient is good for the shop owners too, as rents are 20% lower than those in similar shopping areas in the city.

Exercise 5



14 Last week, you tried a new activity.

Write an email to a friend about the activity.

In your email, you should:

- describe the activity you did
- explain what you liked about it
- invite your friend to do the activity with you.

The pictures above may give you some ideas, and you can also use some ideas of your own.

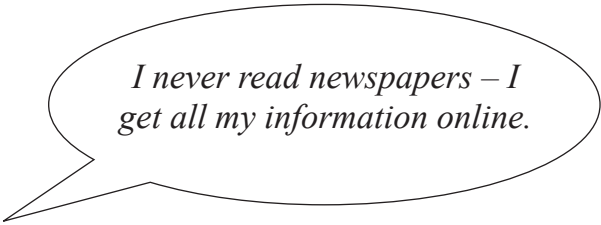
Your email should be between 150 and 200 words long.

You will receive up to 8 marks for the content of your email, and up to 8 marks for the language used.

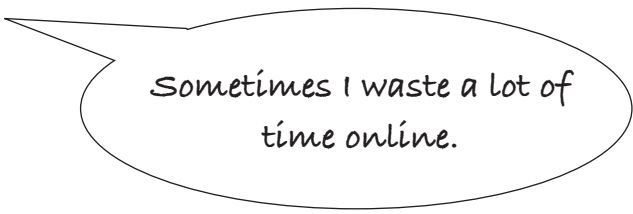
Exercise 6

- 15** Some people say that teenagers use the internet too much.

Here are two comments from young people:



*I never read newspapers – I
get all my information online.*



*Sometimes I waste a lot of
time online.*

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

The comments above may give you some ideas, and you can also use some ideas of your own.

Your article should be between 150 and 200 words long.

You will receive up to 8 marks for the content of your article, and up to 8 marks for the language used.

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