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0510/23

May/June 2015

2 hours

No Additional Materials are required.

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 following leaflet advertising an adventure course, and then answer the questions on the opposite page.



Visit Ropeworks!

Ropeworks is Wales's most exciting attraction. It is situated at Greenacres Holiday Park in Snowdonia. This unique climbing adventure is about you!

From the moment you arrive at the Ropeworks reception, you are in safe hands. The friendly, trained instructors will help you into your safety harness, and explain what the course is about.

The impressive network of high poles is linked by a combination of ropes and nets. You can swing, climb, balance and go through the air in a way that you never dreamed possible. There is no limit to the high-flying fun that you can experience!

You can do it!

There is more than one way around the course because we want to encourage you to challenge yourself. You make the decisions about which step to take or which move to make. Your confidence will grow as you climb around the maze of poles and ropes.

You might like to try the specially built, multi-coloured climbing wall. It now has foot and hand holds, which have been added for extra safety. Or, you might prefer to sit back and enjoy the Giant Swing. There is room for two people, so you can ride with another person if you wish.

If you choose the advanced course, you can move around the highest parts of the course at your own speed. You can have fun as you balance along the high wire, and walk on your tiptoes over the wooden logs.

On the Zip Descent, you can admire the wonderful view of the sea and the mountains. You will feel an amazing sense of excitement when you launch yourself from the platform for the high-speed descent.

Adventure for all

Ropeworks is open to adults and children who are 8 years old and above. Those under twelve years old should be accompanied by an adult. The Ropeworks course is not physically demanding, so it is suitable for people of all levels of fitness.

What to wear

You need to wear comfortable trousers and flat shoes. Open-toed footwear is not allowed. If it is raining, we provide waterproof jackets.

Opening hours

Ropeworks is open daily from 9.30 am to 5.00 pm.

Holiday periods are very busy times, so advance booking is essential. You can pre-book your session by phone or on the website. Ropeworks welcomes group bookings, just telephone or email for details. Please note, people who arrive late may miss their session and will not be refunded.

Friends and family members who do not wish to participate are welcome to stay and watch.

(a) Where in Wales is Ropeworks?

.....[1]

(b) What do the staff do for you? Give **two** details.

.....
[1]

(c) What connects the high poles?

.....[1]

(d) What keeps you safe on the climbing wall?

.....[1]

(e) What is the minimum age for taking part in the activities?

.....[1]

(f) When does Ropeworks offer you clothing?

.....[1]

(g) When do you have to pre-book?

.....[1]

(h) Why must you make sure you arrive on time? Give **two** details.

.....
[2]

[Total: 9]

Exercise 2

Read the following article about research into talent, and then answer the questions on the opposite page.

Born to Win?

In 1993, three psychologists wanted to find out more about talent. They carried out research at the Music Academy of Berlin, which has a reputation for producing world-class violinists. The project was criticised because all the participants were the same age. However, its results have led to changes in the hours of practice that talented musicians are expected to do.

The psychologists asked the teachers at the academy to select 30 violin students, and put them into three groups of different abilities. The boys and girls were all talented students, but the teachers had different expectations of each group. One group might become expert solo performers in the future. Another group was expected to become good enough to work full-time in an orchestra, and a third group had more modest ability.

The psychologists interviewed all the students individually, and found that they had many similarities. For example, they had all started music lessons at the age of eight, and by the time they were 15 years old they had all decided to have a music career. Every student spent 50 hours each week improving their music skills. This included attending music classes and performing with other students.

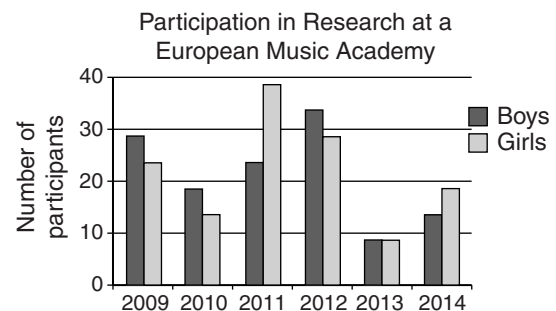
However, the psychologists discovered that there was a big difference in the amount of time that the students spent practising on their own. They found that the less successful students spent a much shorter time practising by themselves than the others.

Finally, the students were asked to estimate how many hours they had spent practising alone since starting music lessons at the age of eight. By 18, the 'solo performers' counted a total of 7400 hours of practice. Students in the 'orchestra' group worked out that they had completed 5300 hours. By contrast with these two groups, students in the third group said that they had spent only 3420 hours practising.

From the evidence of these findings, the psychologists concluded that the more practice

people do, the better they become. They believed that what might appear to be inborn talent is the result of years of practice. However, the lead psychologist himself pointed out that this study was limited because it looked only at the students from one school.

Some critics say that, although the findings of the Berlin research may be true for musicians, they are not relevant to other areas, such as sport and fitness. Others say that the study was limited because there was no proof that the students at the music academy were accurate in estimating their hours of practice.



However, this study has had an impact on the training of talented people in a wide range of activities all over the world. Time spent practising is seen as more vital for high achievement than natural ability. For example, experts advise sportspeople to do at least 10,000 hours of practice if they want to become good enough to win at the highest level.

In addition, a recent North American research project investigated how far training can influence people's fitness potential. The scientists analysed the genetic data of 100 families. The family members then participated in a fitness programme in a sports laboratory. At the end of the training, people from the same families showed very similar patterns of improvement.

The scientists concluded that half our fitness potential comes from the genes that we inherit, and no amount of extra practice can change that. We do not yet know whether this view will be accepted by everyone.

(a) What is the Music Academy of Berlin famous for?

.....[1]

(b) What was the outcome of the research for the musicians?

.....[1]

(c) How did the teachers at the academy help the researchers? Give **two** details.

.....
[1]

(d) What ambition did all the students share?

.....[1]

(e) What was the difference between the students of modest ability and the others?

.....[1]

(f) What conclusions did the psychologists make from the results of the study? Give **two** details.

.....
[2]

(g) According to the chart, in which two years did more girls than boys take part in research?

.....[1]

(h) What is the minimum suggested training time needed to be a top athlete?

.....[1]

(i) What was the first stage of the North American research project?

.....[1]

(j) What did the scientists decide about people's fitness levels?

.....[1]

(k) What were the limitations of the research in Berlin? Give **four** details.

.....

[4]

[Total: 15]

Exercise 3

Fatima Noeli was born on 14 March 1998 and lives at 40 Hussein Street, Loran in Alexandria. Fatima has heard of a charity, which raises funds for children and teenagers who suffer from asthma. The charity is organising a marathon around the city, which will take place on 22 May 2016. The funds raised from the marathon will be used to provide new equipment at the local hospital, and also to give sick children free holidays by the sea. Fatima is particularly keen to help this charity because one of her cousins suffers from asthma, and she has seen how it restricts his life.

Fatima would like to run in the marathon and some of her friends have said that they will sponsor her. She also hopes to get sponsorship from some local businesses. Unfortunately, Fatima fell over while she was out shopping and hurt her knee. She has not been able to do any exercise since her accident, because she has been waiting for her doctor to give her permission to start training. Her latest X-ray shows that her knee has fully recovered, and her doctor says that it will now be safe for her to begin a fitness programme.

Fatima has discussed her plans with her parents, who think that training for the marathon is a good idea, provided that she does not do too much. Although she has not taken part in a regular exercise programme before, Fatima feels that she is moderately fit. She is a student at Mountain High School, but it does not have a gym, so sporting activities are limited. In order to increase her fitness, her parents have suggested that she runs once a week. They do not mind her running alone as long as she takes her phone with her. Her phone number is 01189754325. She is a good swimmer and, as well as running, she hopes to swim as part of her training.

Fatima's uncle has told her about a new sports and swimming club, Superb Fitness, which has recently opened in the city centre. The club has first class facilities, including a fully equipped gym and indoor and outdoor swimming pools. It also offers reduced rates for student members, which makes membership more affordable. Fatima thinks that she will be able to swim twice a week and still have time to run and do her homework. She is confident that swimming regularly will increase her stamina and endurance, so that she will be in good physical condition to do her best on the day of the marathon.

Fatima and her family are on holiday in June, so she has decided that she would like to start her membership on 10 July. This will give her ten months to get fit enough to run the marathon. She has contacted Superb Fitness and they have sent her a membership form to complete.

Imagine you are Fatima. Fill in the membership form on the opposite page, using the information above.

Superb Fitness Membership Form

SECTION A: Personal details

Full name:

Date of birth:

Address:

Phone number:

Occupation:

If you are applying for student membership, please give name of school or college attended.

.....

SECTION B: Other details

Current fitness level:

Which facilities interest you at the club? (please tick)

weights room ☐ swimming pool ☐ sauna ☐

Do you require our 'Learn to Swim' lessons? (please delete) **YES / NO**

How often would you be able to visit Superb Fitness?

.....

Membership start date:

How did you hear about Superb Fitness?

.....

SECTION C

In the space below write **one** sentence of between 12 and 20 words, giving further information about why you want to join Superb Fitness.

[Total: 8]

Exercise 4

Read the following article about the world's smallest monkeys, golden lion tamarins, and then complete the notes on the opposite page.

World's Smallest Monkeys

Golden lion tamarins are among the most endangered animals on earth. They have fur which ranges in colour from reddish orange to golden brown. They are the smallest monkeys in the world, and they weigh only half a kilogram. The species is named after lions because of the ring of fur around their faces. Their natural habitat is the Atlantic forest in Brazil.

Sadly, it is unusual to see a golden lion tamarin nowadays. They move quickly through the forest, and there are very few of them left because they are hunted for the pet trade. Victor Wilkins, wildlife adviser, says, "They suffer terribly if they are caught and put into small cages." In addition, the rapid expansion in the human population has resulted in the need for more land to grow crops. Mr Wilkins adds, "This has had a terrible effect on their numbers. There were tens of thousands of golden lion tamarins in the past, but their numbers dropped to hundreds about thirty years ago."

Golden lion tamarins live in close family groups. In the 1970s, the Brazilian primatologist, Eduardo Figueiro, realised what was happening to this rare species, and began trying to save them. He says, "It is so important to preserve and protect this species, which evolved more than 20 million years ago. Each group of these delightful creatures needs a living space of about two square kilometres of dense forest. Deforestation has led to the animals being separated from each other and living in isolated groups of trees. The problem is that the monkeys cannot travel without tree cover, so our first task has been to plant trees in order to connect these groups. In this way, the monkeys can meet and socialise with each other."

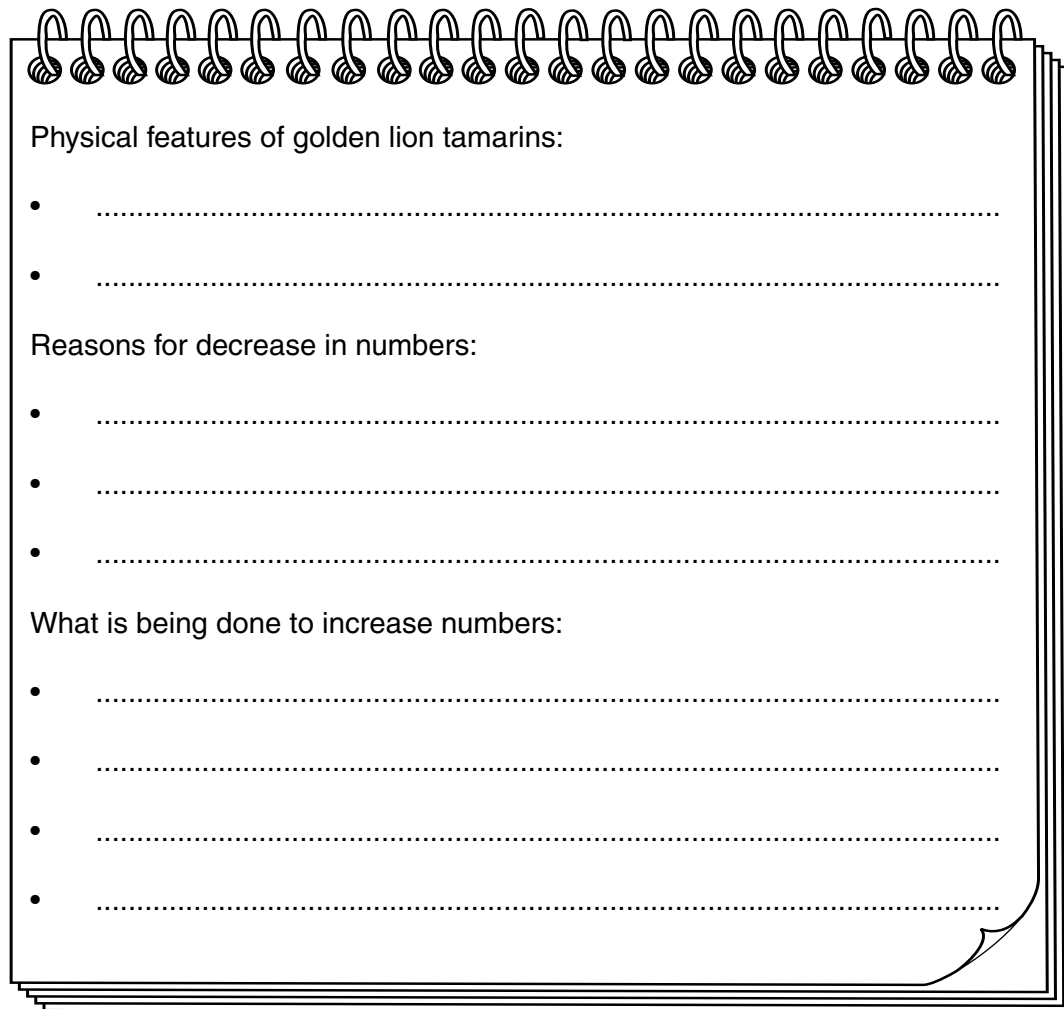
Meanwhile, zoos all over the world have begun breeding programmes, which have had some success. The monkeys have become one of the few primates to be successfully returned to their native home in the forest, where they live on fruit, flowers and insects. In 2002, the Brazilian government established new areas of forest as protected reserves. Special patrols have been organised in these reserves to prevent hunting and forest fires. The danger is that just one fire could destroy the entire population of golden lion tamarins.

As a result of these actions, the number of golden lion tamarins in the Atlantic forest has grown to about 1500. There are also another 450 living in zoos throughout the world. Here they can be seen in close family groups, with the male taking much of the responsibility for the young.

Primatologists are hoping to build on the success that has already been achieved. Some progress has been made to save the golden lion tamarins, but the future is still uncertain and the species remains critically endangered. Zoos will continue to work to maintain a stable population of golden lion tamarins. Introducing them to other parts of the world is not possible because their natural habitat is the Atlantic forest. Experts hope to increase the population living in the forest to 10 000, and this will help to ensure the survival of this endangered species.

You are going to give a talk to your biology class about golden lion tamarin monkeys. Prepare some notes to use as the basis for your talk.

Make short notes under each heading.



Physical features of golden lion tamarins:

-
-

Reasons for decrease in numbers:

-
-
-

What is being done to increase numbers:

-
-
-
-

[Total: 9]

Exercise 5

Read the following article about survival. **Write a summary about the ways people can survive dangerous situations.**

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.

John Nichols, a teenage backpacker, was spending the summer travelling around Australia when he got lost in the Australian bush. John survived for 12 days in the dense eucalyptus forest of the Blue Mountains near Katoomba, New South Wales, before being found by two walkers who raised the alarm.

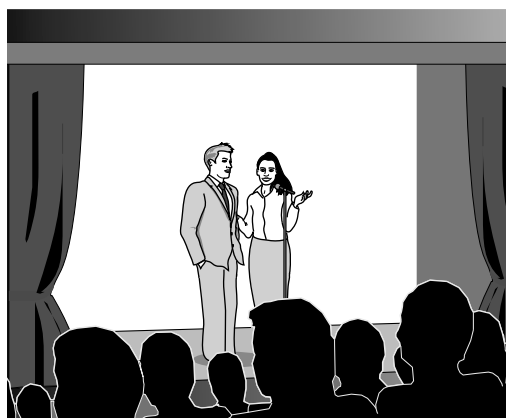
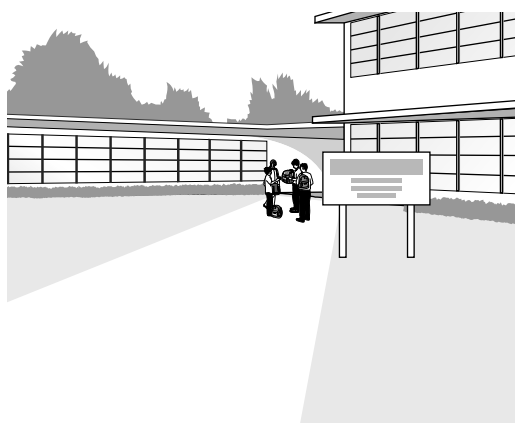
Lloyd Harrison, an expert in survival skills, lives just six kilometres from Katoomba. He says, "Luckily, when John realised he was lost, he stayed where he was. The usual reaction when you are lost is to keep walking, which can be very dangerous in unknown areas. It is easier to find people if they stay in one place. He did the right thing and stopped walking. He stayed in the shade too, which protected him from the hot sun."

Harrison believes that, in dangerous situations, some people are more likely to escape with their lives than others. He adds, "When you are in a life-threatening situation, thinking clearly helps you to survive. In emergencies, some people become so frightened that they are unable to make decisions. Those who survive, however, are often the ones who were able to react quickly to the situation. If people can avoid panic and stay calm, it is possible for them to survive some truly terrible situations."

Human beings can survive for three weeks without food, but only three days without water. John was lucky because he had a bread roll and two small bottles of water. Although the weather was very hot and he was hungry and thirsty, he knew the importance of conserving body fluids and did not allow himself to finish all his food and water too quickly. He was aware that there was a risk of dehydration and that people should sip water slowly, so that their body can absorb it.

Harrison knows a lot about survival. He is a mountain climber who collapsed just after climbing Mount Everest. His fellow climbers struggled for eight hours to carry him down the mountain. Eventually, thinking that he had died, they left him in the snow. They took his food pack and oxygen with them, believing that he would no longer need them. However, Harrison was deeply unconscious, but still alive. The next day, he opened his eyes to find that he was completely alone on the mountain, without any source of help. "Everything was against me: dehydration, exhaustion and lack of oxygen, but the worst of all was being completely alone." Like other survivors, thinking of a reason to stay alive motivated Harrison and kept his mind ticking over. "The only thing I could do was to think of my family, and that made me keep hoping for rescue."

Luckily for him, his friends reported the incident when they arrived back, and three days later, a team of rescuers found him. He had stayed alive by eating the snow. He had never been so relieved to see anyone in his life.

Exercise 6

A famous person recently spent a day at your school.

Write an email to a friend, describing what happened.

In your email, you should:

- describe the famous person
- say what they did while they were there
- explain how the school has benefited from the visit.

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.

[Turn over

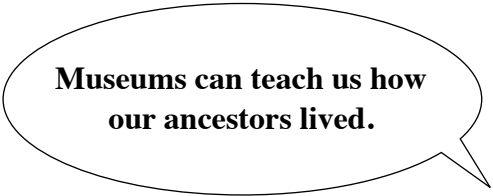
Exercise 7

Some people think that museums are a waste of money, but others believe that they are important.

Here are two comments from your friends on the subject:



Young people want to look to the future, not the past.



Museums can teach us how our ancestors lived.

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.

The 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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