

READING PASSAGE 1

You should spend about 20 minutes on **Questions 1-13** which are based on Reading Passage 1 below.

Amazon Rainforest of Peru

- A** A cement maker proudly speaks about the brief history of the road: this main road was part of an incentive programme supported by the US's fund to help local people to find economic alternatives to harvesting coca, from which cocaine is produced. Four years later, the road is a global vacuum from which timber from the Peruvian rainforest is taken to China. Some wood will be polished into luxury parquet flooring for high-quality homes in Shanghai and Beijing. More wood will be used in Chinese factories and made into patio furniture, decking or flooring in North America and Europe.
- B** Going down the street, muddy tracks show the old forest known as *Monte Alto*, where local farmers have been using the sunlight that comes through the openings in the forest canopy to grow a variety of food crops, like cassava, sweet potatoes, bananas and plantains. They are also growing a few cash crops like coffee and cacao. This also helps to fund essential services like schools and hospitals.
- C** As a tree ecologist and student studying about the timber trade, I am here researching a kind of *Dipteryx* known in the region as *shihuahuaco* (its international trade name is *cumaru*) and to research its movements from the Amazonian forest to Chinese factories. Although *shihuahuaco* is not particularly high profile, ecologists call it a "keystone" tree, as its large seeds are an essential food source for forest herbivores in the dry season, whilst its hollow rooms are utilized as the nesting place of parrots and macaws. It is so hard that local residents use big *shihuahuaco* trees as a shelter when strong storms bring trees down.
- D** My trip began in the company of a great group of people who were logging from the sawmill town in Pucallpa. A two-day trip into the forest guided us beyond the road's end to a community called *Esperanza*, or "Hope." In the middle of a flourishing *Chacra* – a farm typical of the area – there was a temporary logging camp. As well as their productive farming, the *chacra* had a family business called the *Medinas* which offered a refuge for birds, wild piglets and primates saved from logged areas. From there, I walked through the *Monte Alto* with my logging friends for 10 days, which they were soon to cut.

E The adult trees were colossal, reaching heights of up to 50 metres and a width of 1.3 metres, towering above their huge buttresses which spread up to 5 metres around the main trunk. There were one or two such trees per hectare and most of them were put forward for the long voyage across the Pacific. Whilst we found approximately 250 seedlings and saplings, there were only two young trees which had reached the canopy and therefore could be expected to harvest into adults.

F I don't want to be sentimental about trees. On one of my last nights in the rainforest when speaking to the company's chief woodsman Pedro, I felt reassured about the situation. Pedro said, "At least there are the Medias arbolitos." "What, little trees?" I asked. The next day Pedro showed me the trees he was referring to. We walked up the hill and Pedro stopped in front of a very healthy-looking young shihuahuaco growing in the sun. "When do you expect to harvest them?" I had to ask. I hope he wasn't planning to profile them in a few years.

Questions 1-3

Choose **THREE** letters, **A-F**.

Write your answers in boxes 1-3 on your answer sheet.

The list below gives some features of shihuahuaco.

Which **THREE** ways are mentioned by the writer of the text?

- A** a field to grow varied sustainable food crops
- B** a habitat for parrots and macaws
- C** a shelter for natives against a natural disaster
- D** a village of palm-thatch houses
- E** a road to help local people in finding economic alternatives
- F** an ecologist named it a keystone tree

Questions 4-6

Answer the questions below, using **NO MORE THAN TWO WORDS** from the passage for each answer.

Write your answers in boxes 4-6 on your answer sheet.

- 4 What is the name given to the old forest of the Amazon?
- 5 What is the international trade name of shihuahuaco?
- 6 What is the typical farm land area that is used as a temporary logging camp?

Questions 7-13

Reading Passage 1 has six paragraphs labeled A-F.

Which paragraph contains the following information?

Write the correct letter A-F in boxes 7-13 on your answer sheet.

NB You may use any letter more than once.

- 7 the self-rescue measures there to cover essentials
- 8 the dimensions of timber
- 9 the road sponsored by the United States' fund to aid relief work schemes
- 10 an anecdote for the writer
- 11 a short camping trip of the writer
- 12 practical sides of shihuahuaco
- 13 the export of timber

READING PASSAGE 2

You should spend about 20 minutes on **Questions 14-27** which are based on Reading Passage 2 below.

A shot for public health

Millions of elderly people in the US, Europe and elsewhere get injections for their annual flu shots this month. It is widely seen as a largely effective public health programme which halves the risk of dying over the winter among people aged 65 or over. Actually for every 200 vaccinations one life is saved. However, there is overwhelming evidence that this claim is too good to be true, and we must look for additional ways to prevent the flu.

According to the US Centre for Disease Control and Prevention (CDC), flu kills approximately 36,000 people every winter in the US. Of them about 30,000 are aged 65 or over. This is about 5% of the 650,000 winter deaths per year in this age group. Flu itself is never recorded as a cause of death: instead, it leads to the elderly dying from other causes, like bacterial pneumonia, heart disease or a stroke.

Most rich countries are concentrated on cutting this figure by vaccinating those who are at the highest risk, but how well does this actually work? The best way to carry out research is trials that compare those who are vaccinated against those who aren't, with applicants allocated randomly from each group. But as flu shots are known to be an advantage, it would be unethical to deny some people vaccinations. Researchers compare those who choose to be vaccinated with those who don't. Then, they use the statistical methods of control to observe the differences between the two groups. One large meta-analysis of such studies concluded that those who get flu shots are half as likely to die as their unvaccinated peers over the winter. Several other studies have come to a similar conclusion.

It sounds possibly a bit too good to be true. In 2005, Lone Simonsen, a researcher at George Washington University, and her colleagues showed that the number of flu deaths among the elderly in the US has remained at about 5% of deaths in the group during winter. Vaccination coverage has skyrocketed from about 15% in 1980 to about 70% today. So how could flu vaccination be preventing half of the deaths in winter, when the flu accounted for only 5% of those deaths back in 1980, when most people were not vaccinated?

Also, in 2006 epidemiologist Lisa Jackson and her colleagues at the Centre for Health Statistics in Seattle analysed a Seattle medical database using the same statistical methods as the previous studies. It showed that the maximum benefit of having the flu shot happened in the months before the season of flu even started.

Jackson insisted that the studies failed to give an account of ill and weak elderly people who had died but were less inclined to be vaccinated, making vaccination seem more valuable than it actually is.

But the debate was not over. Last year Kristin Nichol and her colleagues from the University of Minnesota published a dissertation using slightly different statistical methods and included records from tens of thousands of patients in three cities over 10 years. It came to the same incredible conclusion that vaccination was preventing about half of all deaths in winter. Researchers like Simonsen, Jackson and myself estimated Nichol's methods. Also, we believe this finding is subject to the sort of bias already identified by Jackson.

Last week Simonsen and Nichol discussed the issue at the Interscience Conference on Antimicrobial Agents and Chemotherapy in Washington DC. Nichol accepted that although there might still be some bias in her latest survey, flu deaths are estimated indirectly, especially when counting extra deaths beyond those expected in winter. Researchers may have underestimated the number of people who have died as a result of the flu.

In conclusion, we need to improve our statistical methods for measuring the effectiveness of the flu vaccine. This issue has much wider implications as similar methods are used to analyse other areas in which randomized trials are not possible. For example, the effectiveness of cholesterol-lowering statins for pneumonia patients is also analysed in this way.

Questions 14-20

Do the following statements reflect the claims of the writer in Reading Passage 2?

In boxes 14-20 on your answer sheet, write

TRUE	if the statement agrees with the information
FALSE	if the statement contradicts the information
NOT GIVEN	if there is no information on this

- 14 About 3,600 people are dying from the flu every winter in the US.
- 15 Although flu itself is seldom a disease that causes death, it can make people age quicker.
- 16 Lots of rich countries have successfully carried out a high-quality vaccination programme.
- 17 Flu shots should be useful for prescription but it may be immoral to hold back vaccination.
- 18 From meta-analysis, those who get the flu shot are fifty per cent less likely to die than their unvaccinated peers.
- 19 Lone Simonsen indicated how many people died from flu among the young.
- 20 The time for the highest level of efficacy of the flu shot turned out within the weeks previous to the flu season.

Questions 21-25

Classify the following statements as being

- A** US Centre for Disease Control and Prevention (CDC)
- B** George Washington University in Washington DC
- C** Centre for Health Statistics in Seattle
- D** University of Minnesota in Minneapolis

Write the appropriate letters A-D in boxes 21-25 on your answer sheet.

NB You may use any letter more than once.

- 21** Vaccination extent has maximised.
- 22** Seattle medical database was analysed using a statistical method.
- 23** Around 83 per cent of flu-related fatalities are in the over-65 age group.
- 24** Vaccination was able to prevent about fifty per cent of all winter deaths.
- 25** The flu deaths account for five per cent of annual winter deaths in the age group of 65 or over.

Questions 26-27

Answer the questions below with words taken from Reading Passage 2.

Use **ONE** or **TWO WORDS** for each answer.

Write your answers in boxes 26 and 27 on your answer sheet.

- 26** What is **ONE** of several diseases recorded as a cause of death if the elderly have the flu?
- 27** What percentage of the vaccination coverage is recently maximised by the research of Lone Simonsen?

READING PASSAGE 3

You should spend about 20 minutes on **Questions 28-40** which are based on Reading Passage 3 below.

High-tech Switzerland

For a nation with a history of making sophisticated clocks, it is not surprising that Switzerland is the best place for precision and high-tech research. The country is so proud of two Federal Institutes of Technology, like the CERN of particle physics laboratory and a core of IBM research facilities. Also, there are two big pharmaceutical companies called Roche and Novartis. Also, who can forget Switzerland's world-famous chocolate industry?

British citizens are able to work in Switzerland visa-free and the country offers salaries of up to £72,000 per year for highly-skilled experienced researchers with the option of skiing in the lunch break. It is easy to know why Switzerland appeals to so many. In what fields are these great opportunities available?

Computing Clout

IBM is one of the global companies that has established a research hub in Switzerland. The Ruschlikon lab located in the south of Zurich draws researchers from around the world, with 80% of them coming from abroad.

This lab is a leader in digital storage technology and semiconductor and optical electronics for online networks. Projects to build a top-class nanotechnology research centre in the place are going on and will be completed by 2014.

Irene Holenweger Koeb, a manager in IBM human resources, says that the lab is looking for a wide range of disciplines including physics, chemistry and mathematics. Also, it is a thriving bioscience group working on the application of nanotechnology to life sciences and other areas. Most of the positions only accept applicants with a Ph.D. but the lab also hires approximately 100 applicants with Bachelors and Masters degrees each year.

Paul Hurley, a researcher in IBM's systems software group, is enjoying the flexible atmosphere of his work. There is a relaxed atmosphere in the office at IBM and meetings often take place over lunch or a coffee break.

As a lot of employees are not Swiss nationals, the company offers a lot of support and also has a policy of paying relocation expenses. Koeb says that it is important to gradually ease employees into their new workplace.

German lessons which are paid for by IBM are offered to new employees working in Zurich. The standard of German is different to the German spoken in Zurich. Whilst Hurley has attended the classes, he says a little bit more practice is needed to notice the "Swiss-isms."

Raising the Chocolate Bar

Switzerland is known for chocolate. Jose Rubio of Lindt's human resources department says "Our company has 44 nationalities and 18 languages."

Scientists are able to find jobs within quality management, research and development and in the factory working conditions. The work of R&D is to help improve new recipes and products as well as designing and building new machines for making them. You are able to hone your skills in a well-managed company and have the pleasant task of testing the products to make sure they meet the company's high standards.

Rubio says that a foreign staff must speak at least one of the official Swiss languages. Most of the positions need a good level of German, as it is vital when working with Swiss coworkers in the production lines.

The ETH in German-speaking Zurich has a sister institution, which is the Federal Institute of Technology in French-speaking Lausanne (EPFL). With over 250 research groups and 10,000 students and faculties, it is focused on interdisciplinary scientific research. The institute's technology transfer programmes ensure that practical tools and methods make it out of the lab and into industry.

Questions 28-30

Choose the appropriate letters A-D and write them in boxes 28-30 on your answer sheet.

- 28 Ruschlikon lab located in Zurich attracts
- A almost 80 per cent of research staff from overseas.
 - B 80 per cent of research staff domestically.
 - C at least 80 per cent of engineers from abroad.
 - D 80 per cent of staff with a PhD from overseas.
- 29 The lab has a plan to complete in 2014
- A founding a top-class Ruschlikon lab.
 - B making a world-famous chocolate industry.
 - C founding the best nanotechnology research centre.
 - D researching digital storage marketing.
- 30 According to information in the text, the main purpose of the writer is
- A to survey various high-tech research in Switzerland.
 - B to introduce attractive research centres in Switzerland.
 - C to recruit a variety of human resources in Switzerland.
 - D to understand the world-famous chocolate in Switzerland.

Questions 31-35

Complete the summary below. Choose **NO MORE THAN TWO WORDS** from Reading Passage 3 for each answer.

Write your answers in boxes 31-35 on your answer sheet.

Raising the chocolate bar

Switzerland is familiar with **31** _____, attracted scientists in quality management, research and development. Those working in R&D aid to improve new versions of recipes, products and design and build **32** _____. Foreign staff should fluently speak one of **33** _____ official tongues in the least. Especially, a number of workplaces need to have an advanced level of **34** _____. With over 250 research groups and 10,000 students and faculties, it emphasises **35** _____ scientific research.

Questions 36-40

Do the following statements reflect the claims of the writer in Reading Passage 3?

In boxes 36-40 on your answer sheet write

TRUE if the statement agrees with the information
FALSE if the statement contradicts the information
NOT GIVEN if there is no information on this

- 36** Switzerland has a reputation for history of making precise clockwork.
- 37** Coffee in Switzerland is world-famous.
- 38** Four-fifths of the staff at the Ruschlikon in Zurich are from overseas.
- 39** The Ruschlikon lab is a trailblazer in only the field of semiconductors in digital storage technology.
- 40** Most study fields need a high level of English.