

入学試験問題



外国語 (英語)

(配点 120 点)

平成 18 年 2 月 26 日 14 時—16 時

注意事項

- 1 試験開始の合図があるまで、この問題冊子を開いてはいけません。
- 2 この問題冊子は全部で 39 ページあります。落丁、乱丁または印刷不鮮明の箇所があったら、手を挙げて監督者に知らせなさい。
- 3 解答には、必ず黒色鉛筆(または黒色シャープペンシル)を使用しなさい。
- 4 解答用紙の指定欄に、受験番号(第 1 面 2 箇所、第 2 面 1 箇所)、科類、氏名を記入しなさい。指定欄以外にこれらを記入してはいけません。
- 5 解答は、必ず解答用紙の指定された箇所に記入しなさい。
- 6 第 3 問は聞き取り問題です。問題は試験開始後 45 分経過した頃から約 30 分間放送されます。
- 7 解答は、5 問を越えてはいけません。
- 8 5 問全部英語の問題を解答してもよいし、また、第 4 問、第 5 問の代わりに 28 ページ以下にある他の外国語の問題第 IV 問、第 V 問を選んでよい。ただし、第 IV 問と第 V 問とは必ず同じ外国語の問題でなければいけません。
- 9 解答用紙第 2 面上方の指定された()内に、その紙面で解答する外国語名を記入しなさい。
- 10 解答用紙第 2 面の上部にある切り取り欄のうち、その紙面で解答する外国語の分のみ 1 箇所だけ正しく切り取りなさい。
- 11 解答用紙の解答欄に、関係のない文字、記号、符号などを記入してはいけません。また、解答用紙の欄外の余白には、何も書いてはいけません。
- 12 この問題冊子の余白は、草稿用に使用してもよいが、どのページも切り離してはいけません。
- 13 解答用紙および問題冊子は、持ち帰ってはいけません。

受験番号						
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上欄に受験番号を記入しなさい。

英 語

- 1 (A) 次の英文の内容を, 65~75 字の日本語に要約せよ。句読点も字数に含める。

Democracy is unthinkable without the ability of citizens to participate freely in the governing process. Through their activity citizens in a democracy seek to control who will hold public office and to influence what the government does. Political participation provides the mechanism by which citizens can communicate information about their interests, goals, and needs, and create pressure to respond.

Voice and equality are central to democratic participation. In a meaningful democracy, the people's voice must be clear and loud — clear so that policymakers understand citizen concerns and loud so that they have to pay attention to what is said. Since democracy implies not only governmental action in response to citizen interests but also equal consideration of the interests of each citizen, democratic participation also must be equal.

No democratic nation — certainly not the United States — lives up to the ideal of participatory equality. Some citizens vote or engage in more active forms of participation. Others do not. In fact, a majority of Americans undertake no other political activity aside from voting. In addition, those who do take part are in important ways not representative of the citizenry as a whole. They differ in their social characteristics and in their needs and goals. Citizen activists tend to be drawn more from more advantaged groups — to be well-educated and wealthy and to be white and male. The voice of the people as expressed through participation thus comes from a limited and unrepresentative set of citizens.

- (B) 次の英文はアメリカのある行事について述べたものであるが、一つおきに段落が抜けている。空所1～4を埋めるのに最も適切な段落を、ア～カ(6～7ページ)よりそれぞれ一つ選んでその記号を記せ。ただし不要な選択肢が二つ含まれている。

1

Although sheep and pony festivals had been held on the islands since the early eighteenth century as part of the regular control of animals, today's version of Pony Day began in 1924. At that time, the Volunteer Fire Department on Chincoteague began selling ponies during the annual festival to raise money for fire-fighting equipment. By selling ponies each year, the Fire Department has been able to support its operations and maintain the population of ponies at a suitable size for the balance of nature on the island. The Volunteer Fire Department's Pony Day was, surprisingly, just the first step in the direction of putting two tiny islands on the world map.

2

Before Pony Day became an international tourist attraction, very few people, even in the United States, knew these islands by name. After all, Chincoteague and Assateague are tiny islands where there used to be more wild birds and ponies than people. For centuries, the ponies lived mostly free of human contact; gradual human settlement on Chincoteague, however, resulted in their being only on Assateague where even today no people live. The ponies had been on the islands long before such things as Volunteer Fire Departments, carnivals, or tourism existed there, and their story is the one that continues to draw the most visitors.

It was difficult environmental conditions and isolation over centuries that created the “Chincoteague pony,” which was originally a horse. Indeed, if taken off the islands while young and raised with standard food and shelter, the ponies are known sometimes to grow to horse size, taller than fifty-eight inches. Yet, on the islands, where the weather and insects are severe, and their food mostly tough beach grasses, these horses have been quite literally downsized by their environment.

Thousands of visitors from all parts of the globe attend the festival, and selling the ponies, especially to families with children, is far from difficult. Children come to the festival trying to find ponies that look like Misty, and adults come to learn about simple island life and the history of Chincoteague and Assateague. It is a fact of modern times that global tourism is the best way to preserve local customs; without their popularity with huge crowds of tourists each summer, it is likely that the wild ponies would not be allowed to survive. Although Pony Day has become necessary to the local economy, the fishermen and residents of Chincoteague as well as the ponies must be relieved to return to their quiet lives after Pony Day is over. The tourists, on the other hand, return to their busy modern lives from brief summer vacations, refreshed somehow by the sight of wild ponies swimming to freedom.

ア Despite their hard lives, however, the ponies are not thin or ugly like so many wild mustangs in the American West; on the contrary, because they eat mostly salty sea grasses, wetland plants, and seaweed, the ponies drink a lot more water than average horses, which gives them a “fat” and healthy appearance. Once under human control, they are known to become gentle animals, too. Indeed, it is just their small size, intelligence, and good looks that have made these ponies such desirable pets for children.

イ Fame truly came, however, with the 1947 publication of *Misty of Chincoteague*, a best-selling children’s book translated into languages all over the world. In this story, author Marguerite Henry describes not only how the Beebe family adopted a clever little Chincoteague pony named Misty, but also the island people’s customs and lifestyles seemingly untouched by the mad rush of modern life in cities. The qualities of small island life that today’s tourists find so appealing in Chincoteague — quiet, old-fashioned, and not at all convenient — are the very same qualities that kept these islands unknown to so many for so long.

ウ It is a cruel fact of American history that many such places as these islands, rich in the language and history of what was once a strong Native American presence, now have only their native names remaining. Chincoteague and Assateague, in fact, were first named by a group of Native Americans called the Gingo-Teague. “Chincoteague,” for example, is said to mean “beautiful land across the water.” English settlers kept these names when they began to come to the islands, long after Native Americans had been forced out of the area altogether or onto lands where only Native Americans could live, called “reservations.”

工 George Breeden runs a local gift store on Chincoteague. “I have lived here for almost eighty years now, and my people came to these islands centuries before I was born,” says Breeden. “Some folks say that the first settlers sent here from the colonies were criminals, but I do not believe that was the case with my family. Where’s the evidence?” Breeden and other island residents have organized an official list of the first families of Chincoteague. These families are proud of their long history on the island, but critics claim that they are more interested in making money on tourism today than in learning about the real history of times past.

才 Every July, people from all over the world gather on an island off the mid-Atlantic coast of the United States for an event called “Pony Day”: a carnival where the only remaining wild ponies east of the Rocky Mountains lose their freedom for a day. The ponies swim and splash, as people cheer and “water cowboys” guide them across a narrow channel of water separating two small islands named Chincoteague and Assateague. A mere five minutes later, the ponies reach land. Once on Chincoteague, the ponies receive health inspections and some are sold. The next day, the ponies swim back home to freedom on Assateague, marking the end of a local festival known around the world.

力 Part of that appeal is the mystery of their origins; while the ponies have been on Chincoteague and Assateague for hundreds of years, how they got there is unknown. One tale has it that when a sixteenth-century Spanish ship sank nearby during a fierce storm, only the horses survived by swimming to safety. Another legend claims that Spanish pirates hid their precious horses on these lonely islands. However, most historians insist that early settlers in the Virginia and Maryland colonies brought the horses from England, and later kept them on the remote islands to avoid taxes on animals. No matter which story one believes, however, the legends of the wild ponies’ origins are rich with facts and fiction. No less interesting is their biology.

2 (A) 次の会話は、ある小学校の運動会(sports day)の種目についての先生どうしの議論である。A先生(Mr. A)とB先生(Ms. B)の主張とその根拠を明確に伝えるような形で、議論の要点を60~70語の英語で述べよ。

A先生：今回の運動会では、競争心をあおるような種目をやめてはどうでしょうか。

B先生：そりゃまたどうしてですか？ それじゃやっていて面白くないでしょう。

A先生：いやいや、競技の結果によって子供が一喜一憂したり、いらぬ敗北感を味わったりするのはよくないと思うんですよ。むしろ、みんなで協力することの大切さを教えるべきです。

B先生：もちろん勝ち負けだけにこだわるのはまずいですけど、勉強においてもある程度の競争心が刺激になるということはありませんか。第一、やめるといっても、たとえばどんな種目をやめるんですか？ 徒競走とか？

A先生：徒競走なら、同じくらいのタイムの子たちを同時に走らせることにして、それで順位をつけなければ、さほど勝負の要素は強くありませんが、綱引きとか、騎馬戦とか、玉入れとか、どれも勝つか負けるかのどちらかでしょう。

B先生：だけど、そういうものを除いたら、出し物が大幅に減って、運動会にならないでしょう。

A先生：組み体操とか創作ダンスとか、出し物なんていくらでもあるじゃないですか。

B先生：そんな出し物ばかりで子供が喜ぶますかねえ。いい意味でのライバル意識を育てるために、運動会でも普段の勉強でも、子供にはもっと競争させるべきだと思いますよ。

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(B) あなたが今までに下した大きな決断について、60～70語の英文で説明せよ。ただし、

- (1) その時点でどのような選択肢があったか
- (2) そこで実際にどのような選択をしたか
- (3) そこで違う選択をしていたら、その後の人生がどのように変わっていたと思われるか

という三つの内容を盛り込むこと。適宜創作をほどこしてかまわない。

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3 放送を聞いて問題(A), (B), (C)に答えよ。

注 意

- ・聞き取り問題は試験開始後 45 分経過した頃から約 30 分間放送される。
- ・放送を聞きながらメモを取ってもよい。
- ・放送が終わったあとも、この問題の解答を続けてかまわない。

聞き取り問題は大きく三つのパートに分かれている。Part A は独立した問題であるが、Part B と Part C は内容的に連続している。それぞれのパートごとに設問に答えよ。Part A, Part B, Part C のいずれも 2 回ずつ放送される。

(A) これから放送する講義を聞き、(1)~(5)の各文が放送の内容と一致するように、それぞれ正しいものを一つ選び、その記号を記せ。

(1) Daylight Saving Time

- ア was first used in Britain in 1907.
- イ is also known as Greenwich Mean Time.
- ウ means putting the clocks forwards in October.
- エ is used in Britain for seven months of the year.

(2) According to William Willett's original proposal, the clocks would be changed

- ア a total of eight times a year.
- イ once in March and once in October.
- ウ by twenty minutes a month throughout the summer.
- エ on the fourth Sunday of April and the fourth Sunday of September.

(3) Clocks in Britain were put two hours forwards in summer

- ア until 1971.
- イ every year after 1916.
- ウ during the Second World War.
- エ for part of the First World War.

(4) The version of Daylight Saving Time used from 1968 to 1971

- ア was an advantage to British businesses.
- イ was gradually introduced throughout Europe.
- ウ was introduced mainly in order to save energy.
- エ was good for children going to school in winter.

(5) The current time system

- ア makes the winter evenings less dark.
- イ makes it easy for children to play with their friends.
- ウ has been criticised because it leads to road accidents.
- エ has several disadvantages, so is likely to be changed soon.

(B) これから放送するのは、ある架空の新素材に関する記者会見の様様である。これを聞き、(1)、(3)、(4)については、各文が放送の内容と一致するように、それぞれ正しいものを一つ選び、その記号を記せ。(2)と(5)については英語で解答を記せ。

(1) The name “X15”

- ア is sensitive.
- イ is only temporary.
- ウ is already familiar.
- エ is part of a secret code.

(2) The following sentence occurs during Tony’s introduction to the press conference. Fill in the blank with the exact words you hear.

But following Dr. Fleming’s presentation, _____
_____ to ask questions.

(3) Dr. Fleming compares X15 to bronze because

- ア they are both relatively easy to make.
- イ they have both developed in three main stages.
- ウ they are both made by a process of combination.
- エ they have both been important in human history.

(4) Nufiber Industries have *not*

- ア combined silicon with a secret material.
- イ made an extremely light and strong material.
- ウ applied X15 to clothing and data transmission.
- エ discovered a new technique for working on materials.

- (5) The following sentence occurs near the end of Sally Fleming's presentation. Fill in the blank with the exact words you hear.

Of course, we are still at the beginning of this exciting new field, and we _____ about how to control forces and materials at the microscopic level.

(C) これから放送するのは、Part Bに続く記者会見の様様である。これを聞き、(1)~(5)の各文が放送の内容と一致するように、それぞれ正しいものを一つ選び、その記号を記せ。

(1) Jim Fredriks mentions the *Daily Herald* because

- ア Tony asked people to state their organisation.
- イ Jim is proud of working for a famous newspaper.
- ウ Dr. Fleming thinks the *Daily Herald* is important.
- エ the *Daily Herald* often runs articles about science.

(2) Jim Fredriks is concerned about

- ア holding back scientific progress.
- イ the cost of testing X15 thoroughly.
- ウ possible damage to the environment.
- エ the unexpectedness of this announcement.

(3) Yoko Suzuki is

- ア with K2 Radio.
- イ in the third row.
- ウ with K2 Fashion.
- エ in the second row.

(4) Dr. Fleming says that an important practical advantage of X15 is that

- ア it can keep itself clean.
- イ it can extend a person's lifetime.
- ウ it can be used to make ornaments.
- エ it can re-connect after being broken.

(5) Yoko Suzuki says that X15 could be a problem for the fashion industry because

ア it is too expensive to make.

イ it has to be coloured artificially.

ウ people would prefer a natural material like silk.

エ people would not need to buy so many new clothes.

- 4 (A) 次の(1)~(5)が最も自然な英語表現となるように()内の語を並べかえ、その2番目と3番目に来るものの記号を記せ。

Bats have a problem: how to find their way around in the dark. They hunt at night, and therefore (1)(ア cannot イ find , ウ help エ light オ them カ to キ use) food and avoid obstacles. You might say that if it is a problem it is one of their own making, which they could avoid simply by changing their habits and hunting by day. However, other creatures such as birds already take advantage of the daytime economy. Given that there is a living to be made at night, and given that alternative daytime trades are thoroughly occupied, natural selection has favoured bats that succeed at the night-hunting trade.

It is probable, by the way, that night-hunting (2)(ア back イ goes ウ history エ in オ of カ the キ way) all us mammals. In the time when the dinosaurs dominated the daytime economy, our ancestors probably only managed to survive at all because they found ways of making a living at night. Only after the mysterious disappearance of the dinosaurs about 65 million years ago (3)(ア able イ ancestors ウ come エ our オ out カ to キ were) into the daylight in any significant numbers.

In addition to bats, plenty of modern animals make their living in conditions where seeing is difficult or impossible. Given (4)(ア around イ how ウ move エ of オ question カ the キ to) in the dark, what solutions might an engineer consider? The first one that might occur to him is to use something like a searchlight. Some fish have the power to produce their own light, but the process seems to use a large amount of energy since the eyes have to detect the tiny bit of the light that returns from each part of the scene. The light source must therefore be a lot brighter if it is to be used as a headlight to light up the path, than if it is to be used as a signal to others. Anyway, (5)(ア is イ not ウ or

工 reason 才 the 力 whether) the energy expense, it seems to be the case that, except perhaps for some deep-sea fish, no animal apart from man uses artificial light to find its way about.

注：mammal ほ乳類

dinosaur 恐 竜

(B) 次の英文の下線部(1), (2), (3)を和訳せよ。

Merely stating a proposal by no means requires listeners to accept it. If⁽¹⁾
you say, “We should spend money on highway construction,” all you have
done is to assert that such a step should be taken. From the audience’s
point of view, you have only raised the question, “Why should we?” No⁽²⁾
person in that audience has any reason to believe that the proposal is good
simply because you have voiced it. If, however, you are able to say,
“Because...” and list several reasons why each of your listeners should
honestly make the same statement, you are likely to succeed in proving your
point. You have achieved your purpose when your audience would, if asked,
lean towards agreement on the importance of highway spending.⁽³⁾

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5 次の英文を読み、以下の問いに答えよ。

A few months ago, as I was walking down the street in New York, I saw, at a distance, a man I knew very well heading in my direction. The trouble was that I couldn't remember his name or where I had met him. This is one of those feelings you have especially when, in a foreign city, you run into someone you met back home or the other way around. A face out of (1 a) creates confusion. Still, that face was so familiar that, I felt, I should certainly stop, greet and talk to him; perhaps he would immediately respond, "My dear Umberto, how are you?" or even "Were you able to do that thing you were telling me about?" And I would be at a total loss. It was too late to (2) him. He was still looking at the opposite side of the street, but now he was beginning to turn his eyes towards me. I might as well make the first move; I would wave and then, from his voice, his first remarks, I would try to guess his identity.

We were now only a few feet from each other, I was just about to break into a big, broad smile, when suddenly I recognized him. It was Anthony Quinn, the famous film star. Naturally, I had never met him in my life, (3). In a thousandth of a second I was able to check myself, and I walked past him, my eyes staring into (1 b).

Afterwards, reflecting on this incident, I realized how totally (4) it was. Once before, in a restaurant, I had caught sight of Charlton Heston and had felt an impulse to say hello. These faces live in our memory; watching the screen, we spend so many hours with them that they are as familiar to us as our relatives', even more ⁽⁵⁾so. You can be a student of mass communication, discuss the effects of reality, or the confusion between the real and the imagined, and explain the way some people fall permanently into this confusion — but still you cannot escape the same confusion yourself.

My problems with film stars were all in my head, of course. But there is ⁽⁶⁾worse.

I have been told stories by people who, appearing fairly frequently on TV, have been involved with the mass media over a certain period of time. I'm not talking about the most famous media stars, but public figures, and experts who have participated in talk shows often enough to become recognizable. All of them complain of the same unpleasant experience. Now, (7), when we see someone we don't know personally, we don't stare into his or her face at length, we don't point out the person to the friend at our side, we don't speak of this person in a loud voice when he or she can hear us. Such behavior would be impolite, even offensive, (8). But the same people who would never point to a customer at a counter and remark to a friend that the man is wearing a smart tie behave quite differently with famous faces.

My own relatively famous friends insist that, at a newsstand, in a bookstore, as they are getting on a train or entering a restaurant toilet, they run into others who, among themselves, say aloud,

“Look, there's X.”

“Are you sure?”

“Of course I'm sure. It's X, I tell you.”

And they continue their conversation happily, while X hears them, and they don't care if he hears them: it's as if he didn't exist.⁽⁹⁾
(10 a)

Such people are confused by the (1 c) that a character in the mass media's imaginary world should unexpectedly enter real life, but at the same time they behave in the presence of the real person as if he still belonged to the world of images, as if he were on a screen, or in a weekly picture magazine. As if they were speaking in his (10).^(10 b)

I might as well have taken hold of Anthony Quinn by the arm, dragged him to a telephone box, and called a friend to say,

“Guess what! I'm with Anthony Quinn. And you know something? He seems real!” After which I would throw Quinn aside and go on about my business.

(11)

The mass media first convinced us that the (12 a) was (12 b), and now they are convincing us that the (12 b) is (12 a); and the more reality the TV screen shows us, the more movie-like our everyday world becomes — until, as certain philosophers have insisted, we think that we are alone in the world, and that everything else is the film that God or some evil spirit is projecting before our eyes.

(1) 空所(1 a)～(1 c)を埋めるのに最も適切な単語をそれぞれ次のうちから一つ選び、その記号を記せ。

ア context イ fact ウ identity エ sound オ space

(2) 空所(2)を埋めるのに最も適切な表現を次のうちから選び、その記号を記せ。

ア catch up with
イ get away from
ウ take advantage of
エ make friends with

(3) 空所(3)を埋めるのに最も適切な表現を次のうちから選び、その記号を記せ。

ア nor he me
イ nor did he
ウ neither did I
エ neither had I

(4) 空所(4)を埋めるのに最も適切な単語を次のうちから選び、その記号を記せ。

ア foreign イ lucky ウ normal エ useless

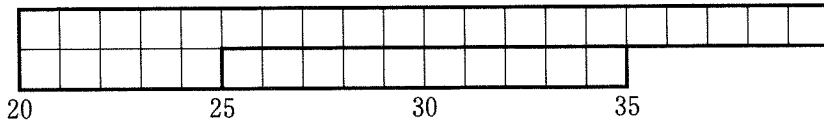
- (5) 下線部(5)の“so”は何をさしているか。7語の英語で答えよ。
- (6) 下線部(6)で“worse”とされていることは何か。25～35字の日本語で述べよ。
- (7) 空所(7)を埋めるのに最も適切な表現を次のうちから選び、その記号を記せ。
- ア as a rule
 - イ for all that
 - ウ as is the case
 - エ for better or worse
- (8) 空所(8)を埋めるのに最も適切な表現を次のうちから選び、その記号を記せ。
- ア if carried too far
 - イ if noticed too soon
 - ウ if taken too seriously
 - エ if made too frequently
- (9) 下線部(9)の場面で、X氏はどのように感じていたと考えられるか。最も適切なものを次のうちから選び、その記号を記せ。
- ア I wonder if they've taken me for somebody else.
 - イ I can't believe they're talking like that in front of me!
 - ウ I'm curious to know what they're going to say about me.
 - エ I can't remember their names or where I met them. What can I do?
- (10) 空所(10)に一語を補うと、下線部(10 a)と(10 b)はほぼ同じ意味になる。その単語を記せ。
- (11) 下線部(11)を和訳せよ。

(12) 空所(12a), (12b)を埋めるのに, 最も適切な単語の組み合わせを次のうちから選び, その記号を記せ。

- ア (a) confusion (b) real
- イ (a) real (b) confusion
- ウ (a) imaginary (b) real
- エ (a) real (b) imaginary
- オ (a) confusion (b) imaginary
- カ (a) imaginary (b) confusion

草稿用紙

(切り離さないで用いよ。)



Part A

If it's midnight in Tokyo on Saturday, October 28th, 2006, what time is it in London? Four in the afternoon, eight hours behind. But just one day later, on October 29th, when it's midnight in Tokyo, it will be 3 p.m. in London. London is suddenly nine hours behind. How is this possible? Well, here's the answer: for five months, from the last Sunday in October through to the last Sunday in March, Britain uses standard global time, known as Greenwich Mean Time. But from late March to late October, its clocks are moved one hour forwards, and it uses British Summer Time.

British Summer Time – or Daylight Saving Time as it's also known – was first proposed in 1907 by a Londoner called William Willett. He had noticed that in the summer the sun had already been shining for several hours in the morning by the time most people woke up. But in the evening, it was already getting dark by the time they were on their way home. He therefore proposed advancing Britain's clocks in April, putting them forwards by twenty minutes on four Sundays in a row, and then, at the end of the summer, putting them back on four Sundays in September, again by twenty minutes on each occasion. That way, British people would get an extra eighty minutes of sunlight every day from the beginning of May to the end of August.

This proposal wasn't accepted at the time, and it wasn't until the First World War that Daylight Saving Time was introduced in Britain as part of the wartime effort to save energy. When it was introduced in 1916, though, the system, like today's, was simpler than the one proposed by Mr. Willett: the clocks were advanced one hour in spring, and returned to Greenwich Mean Time in autumn.

Some form of Daylight Saving Time has been in use in Britain ever since. There have been some variations in the system, however. During the Second World War, for example, the clocks in summer were *two* hours ahead of Greenwich Mean Time. Later, from 1968 to 1971, clocks ran one hour ahead throughout the whole year. The main reason for this particular version of Daylight Saving Time was to put Britain in the same time zone as the rest of Europe. This worked well for businesses, but it was hard on schoolchildren who lived in the north of Britain, who in winter had to go to school in the morning in complete darkness. In 1972, Britain returned to the original system, using Daylight Saving Time only in summer.

However, safety experts argue that putting the clocks back at the end of October makes driving more dangerous throughout the winter. They estimate that about 450

deaths or serious injuries are caused every month in the winter by that hour of evening darkness. Children are particularly at risk: in the morning they usually go directly to school, but in the evening they tend to spend more time outside, either playing or on their way to the houses of friends. Despite this disadvantage, however, there are – for the time being at least – no plans to change the current system.

Part B

Tony: Ladies and gentlemen, let me welcome you to Nufiber Industries. We've called today's press conference to announce our discovery of a revolutionary new material, which for the time being we're calling X15. We believe it has the potential to transform the way we live.

In a moment, I'm going to ask the Project Leader, Dr. Sally Fleming, to explain all about X15. As you will understand, some information concerning X15 is sensitive and cannot be released. But following Dr. Fleming's presentation, there will be an opportunity to ask questions. Sally, over to you.

SF: Thank you, Tony. Perhaps the easiest way to explain X15 is to use a concept which is already familiar. You all know that it's possible to mix metals. Bronze, for example, is made of copper and tin, and it is harder than pure copper. You also know that bronze was a vitally important material in human culture and development. Most human cultures have passed through three main ages, named after the material from which tools were generally made - a stone age, a bronze age, and an iron age.

Now what does all this have to do with X15? Combining metals is relatively easy: you simply melt the two metals and physically mix them. Human beings learned to do this more than five thousand years ago. Other elements, of course, combine naturally: hydrogen and oxygen combine to form water. But there are many substances which do not want to combine. If only we could persuade reluctant partners such as these to unite, they might produce wonderful new materials - as important to our way of life as bronze once was.

Well, that's what we at Nufiber have done. By using a completely new technique for working on materials at the microscopic level, we have discovered how to combine silicon and another material whose name we cannot reveal into microscopic thread-like structures. The resulting material, called X15 for now, is both light and strong as well as extremely stable chemically. We believe that, as a result of this unique combination of characteristics, X15 will have important applications in such areas as clothing and data transmission.

Of course, we are still at the beginning of this exciting new field, and we still have much to learn about how to control forces and materials at the microscopic level. But I think it's important to stress that X15 is not just a *chemical* discovery. What we've discovered is a new technique for working on the micro-structure of any material. X15 is only the first practical result of using this new technique.

Part C

Tony: Thank you, Dr. Fleming. Ladies and gentlemen, I'd like to invite questions now. Could I ask you to give your name and organisation before asking your question..

JF: I have a question about the environment. Oh, my name is Jim Fredriks and I'm the science correspondent for the *Daily Herald*. Dr. Fleming, do you foresee any environmental dangers in X15?

SF: Thank you - that's an important question. X15 should pose no more of a threat to the environment than glass - which it resembles in some ways.

JF: I see. Have you done actual tests to support this or are you basing your belief just on the nature of the material?

SF: Well, we wanted to make this announcement as quickly as possible of course. But there is a program of experiments currently under way, looking for unexpected effects.

JF: It's possible, for example, that some other material might interact with X15 in some harmful way?

SF: It's most unlikely, but that's the kind of thing we're looking for, yes.

JF: Well, in that case, don't you think you should test X15 more thoroughly before releasing it into the environment?

SF: I understand your concern. But I don't think we can hold back progress just because there *might* be some danger which we can't presently foresee...

JF: Or are you just trying to save money?

Tony: Let's move on to the next question. The person in the second... no, third row, please...

LT: Thank you. I'm Yoko Suzuki and I'm with K2Television. Dr. Fleming, you mentioned clothing as a possible application for X15. Could you tell us more about that?

SF: I'd be glad to. X15 has two advantages over standard artificial fibres. One is that it's stronger. The other is that it has remarkable self-healing properties. If an X15 microfibre is damaged, it can heal itself. Even if it comes apart completely, it can fix itself if the two halves are not too far from each other.

LT: That's amazing. But as cloth, how flexible would it be?

SF: As light and flexible as the finest silk.

LT: But also long-lasting?

SF: Yes indeed. A dress or suit made of X15 would last a person's lifetime.

LT: That sounds like bad news for the fashion industry!

SF: Maybe so. But there's a piece of good news too. X15 can be coloured, of course, but its natural appearance is iridescent. It reflects light like the surface of a soap bubble, or like an insect's wing. You know, bronze is a very beautiful metal - people still make ornaments from bronze. I think it's wonderful that X15 is beautiful too.

Tony: Ladies and gentlemen, that's all we have time for. Thank you all for coming. Please remember to pick up your information packs at Reception as you leave.