

PTE LISTENING PRACTICE PAPER

SUMMARIZE WRITTEN TEXT

You will hear a short lecture. Write a summary for a fellow student who was not present at the lecture. You should write 50-70 words. You have 10 minutes to finish this task. Your response will be judged on the Quality of Your writing and on how well your response presents the key points presented in the lecture.

1. Well, that's what we called reducing government and modifying government. To be more precise, another aspect was called the devolution, reducing and moving governmental power from federal to the state level. And that has a kind of rational if you hear all over the time, place, for example, it was not a couple of weeks ago in New York Times by Zhang Cong Stanford, who would call that the philosophical issue that divides the democrats and republicans. The philosophical issue is that democrats believe in the big government and big entitlement. The republicans believe in getting power down closer to the people, to the states because they are kind of popular states, because they're kind of populist types. While it takes maybe three seconds thought, to realize that moving power down to the states, in the funding and zones just moving it away from the people for perfectly elementary reason. There's a hidden part of the system for the power system, the United States supposed to know about and think about and that's private power.
2. Today a university like the LSE certainly has to acknowledge that it is in competition for the best students, all of whom have choices they can exercise, and many of them have choices which run across national and continental borders. We are in competition, too, for staff. The academic job market is one of the most global there is. And in the 21st century English is the new Latin, so universities in English speaking countries are exposed to more intensive competition than those elsewhere. We are in competition for government funding, through the assessment of research quality. We are in competition for research contracts, from public and private sector sources, and indeed we are in competition for the philanthropic pound. Many of our own donors were at more than one university, and indeed think of the LSE's requests alongside those of other charities to which they are committed. That is a competitive environment which is particularly visible to Vice-Chancellor.
3. Citizenship education is important subject in schools as compared to the past. However, only 1/5 of schools have such courses that provide student right skills and attitudes. In the past, people were reluctant to teach. It is important for students in this changing world . There are still problems in teaching this subject due to lack of commitment and lack of teachers to teach. Criticism about the theory of citizenship education is ineffective, unless schools themselves reflected democratic practices by giving children the opportunity to have a say over decision making. It suggests that schools are fundamentally undemocratic institutions, and that such a setting cannot instil in children the commitment and belief in democratic values that is necessary for citizenship education to have a proper impact. Citizenship education is one critical element, and students will acquire knowledge of civics, including the

principles of democracy and associated local, state and Australian government structure and processes. In addition, students will also learn to participate responsibly and cooperatively in community.

4. The war for talent refers to an increasingly competitive landscape for recruiting and retaining talented employees. In the book, Michaels, et al., describe not a set of superior Human Resources processes, but a mindset that emphasizes the importance of talent to the success of organizations. The war for talent is intensified by demographic shifts (primarily in the United States and Europe). This is characterized by increasing demand along with decreasing supply (demographically). There are simply fewer post-baby-boom workers to replace the baby-boom retirement in The US and Europe (though this is not the case in most of East Asia, Southeast Asia, Central Asia, Central America, South America, or the Middle East; Eastern Europe also tends to have similar demographics, namely an ageing and/or shrinking labour force). While talent is vague or ill-defined, the underlying assumption is that for knowledge-intensive industries, the knowledge worker (a term coined by Peter Drucker) is the key competitive resource (see the Resource-based view of the firm). Knowledge-based theories of organizations consistently place knowledge workers as a primary, competitive resource. Talent is never explicitly defined in the book, though the Preface notes, "A certain part of talent eludes description: You simply know it when you see it." After several further caveats, the authors go on: "We can say, however, that managerial talent is some combination of a sharp strategic mind, leadership ability, emotional maturity, communications skills, the ability to attract and inspire other talented people, entrepreneurial instincts, functional skills, and the ability to deliver results." The authors offer no outside support for this assertion. A 2006 article in *The Economist*, which mentions the book, notes that "companies do not even know how to define 'talent', let alone how to manage it. Some use it to mean people like Aldous Huxley's alphas in "Brave New World"—those at the top of the bell curve. Others employ it as a synonym for the entire workforce, a definition so broad as to be meaningless." The 'War for talent is seen by various sources as becoming irrelevant during economic downturns. However, there have been highly visible talent poaching by solvent firms of others who have economic hardship.

5. Before we consider international environmental law and climate change we need to consider domestic legislation, as it is within the sovereign states that international law is put into practice. This reflects the environmentalists' maxim, 'think globally act locally'. United Kingdom legislative control over the impacts of man's activity on the environment is not new. As long ago as the reign of Charles II the main concern was the production of smoke from the burning of 'sea coal'. Almost all areas of trade and industry were subject to very detailed legislative controls at that time, although some were governed by 'self-regulation' in the form of guilds, who regulated both supply and methods of production. However, the measures implemented were mostly ineffective because then, as now, the specifying of legal duties and standards without providing any appropriate enforcement merely indicated good intentions but were of little practical effect. The next stage was prompted by the Industrial Revolution with the urbanization of society and its profound effects on the environment.

Local industrialists used the Adam Smith model to maximize their economic benefit, but this was to the detriment of the local environment with the operation of 'Gresham's Law' that is, the bad drives out the good. Those industrialists who were concerned for either the health of their employees or the local environment faced higher costs than their competitors. The result was the need for increasingly comprehensive statutory controls on the discharge of pollutants into various receiving media.

MULTIPLE CHOICE MULTIPLE ANSWERS

Listen to the recording and answer the question by selecting all the correct responses. You will need to select more than one response.

1. Woodblocks used for pictorial illustration became fairly common in 15th century Europe but had been used long before that for printing designs on textiles. Most of these were simple in design and quite crudely cut but some were skillfully drawn and cut while others even contained pictorial imagery. Records show that woodblock printing on fabrics was practiced by the Egyptians as early as 2000 years B.C. the oldest existing printed fabric which is Egyptian dates from the 4th century. At the same time the craft seems to become widely established even commonplace elsewhere. For example, in India Mexico and Peru where the same techniques continue to be practiced today and the technique was almost certainly used by both the Japanese and the Chinese to.

Which of these countries still use woodblock printing on fabrics?

- A. Japan
- B. Peru
- C. India
- D. Egypt
- E. China
- F. Mexico

2. The heyday of the English landscape garden was the 18th century and it stood for many things. The appreciation of natural beauty of course but also the idea of a civilized life, good taste, one's personal philosophy and one's social status gardens. Also though it is hard for us to credit became expressions of their own as political affiliations until the picturesque style emerged as part and parcel of the Romantic movement. Gardens had been strictly formal laid out with mathematical precision following the Italian and French examples. There then came a backlash against this rigid formality led by among others the poet Alexander Pope. Pope and his allies argued for a more natural nature, Burlington was a major figure in the landscape garden movement and he was famously influenced by his love of the Italian architect Andrei Palladio along with a picturesque romanticized landscapes of Italian classical painting. With these in mind he scouted his gardens and parks with classical Greek

and Roman temples and statues. In other words, he wanted to make the garden look like those paintings.

Which of the following are mentioned as influences on the English landscape garden?

- A. The poet Alexander Pope
- B. The Romantic Movement
- C. A person's political affiliations
- D. Italian classical painting
- E. Gardens from classical Greece and Rome

3. Today we're going to talk some more about architecture and what makes for a good design. There are of course a whole range of qualities that most architects would like their buildings to possess. One of these is the durability of the building. Architects must consider how well the building will stand up to the ravages of climate and time. Will it remain robust and in good condition? Clearly requirements will vary according to the surroundings of the building in question a design that is suitable for Dubai will have different needs from one for Moscow. Then of course it's essential to consider the appearance of the building regardless of what its purpose may be. Will people find pleasure in looking at it and original and still respected writer on architecture. The Roman Vitruvius wrote in the first century that a building should delight people and should raise their spirits again. Tastes may vary from one society to the next but the principle remains the same.

Which of these qualities of a building does the speaker mention as being important.

- A. how attractive the building is to look at
- B. how original the design of the building is
- C. how well the building fits in with surrounding buildings
- D. how long the building is likely to last
- E. how well the building suits its purpose

4. So today I'm going to talk about the key things you need to remember when you go out into the world as translators. The first thing is to be choosy about what commissions you accept. It's not advisable to agree to do every job you're offered even if you are in need of work you should refuse to do something if you don't know anything about the topic as it would be impossible for you to produce a good piece of writing and it could be serious. A mistranslation that's going to be used for medical or legal purposes could have disastrous consequences. Having decided you can reasonably take on a commission, if you have the slightest doubt about what something means then consult a dictionary or someone whose mother tongue is the language you're translating from. It's much better to devote a bit of time and effort to checking something than to risk making a potentially serious error.

Which of these tips about doing a good translation does the speaker mention.

- A. Always translate from a second language into your native language.
- B. Ask a native speaker if you are not sure of the meaning of something.
- C. Take care to choose the right meaning of a word if you use a dictionary.
- D. Don't translate technical texts unless you are familiar with the subject.
- E. Ask what your translation will be used for.

5. A further example of endangered species is the shark. Around 40 million sharks are killed each year. That's quite a lot. Consequently, the number of sharks is decreasing. So let's take a closer look at the causes of this. Firstly, in recent decades' sharks have become important. This is largely due to the growing popularity in some parts of the world for the consumption of shark it has become a very valuable food source. OK so maybe you're thinking while lots of other fish like cod, salmon, or tuna are caught for human consumption and they aren't disappearing at the same rate as sharks. Well that's true but the difference here is sharks are not able to repopulate or reproduce themselves quickly like the other types of fish that are commonly fished as a food source. Why? Because sharks are slow breeder's sharks maturing slowly and it takes them years to reach the age for egg production and then they produce only a few eggs. So that means just a few new sharks. Humans have a nine-month pregnancy or gestation period whereas some shark species are thought to have extremely long gestation periods as long as three years. This makes them much more vulnerable and in danger of dying out than many of the fish species.

What does the speaker say about sharks?

- A. They are hunted heavily because their price is high.
- B. They are a more popular food source than other fish species.
- C. They reproduce more slowly than other fish do.
- D. They live for much longer than other species of fish.
- E. They are more likely to become extinct than other fish.

FILL IN THE BLANKS

You will hear a recording. Type the missing words in each blank.

1. The walls are made of several layers of honey-coloured wood, all sourced from local beech trees. In order to improve the acoustic properties of the auditorium and to amplify the sound, they are not straight they are curved The acoustics are also adjustable according to the size of the orchestra and the type of music being played.

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2. Another team of ethnographic researchers looked at how cell phones were used in Uganda, in Africa. They found that people who didn't have their own phones could pay to use the phones of local entrepreneurs. Because these customers paid in advance for their calls, they were eager to know how much time they'd spent on the call so far. So the phone company designed phones for use globally with this added feature.

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3. For millions of years, carbon dioxide levels in the atmosphere have been regulated, in part, by a natural partnership between plants and microbes - tiny organisms in the soil. Plants absorb CO₂ from the air and transform it into sugars and other carbon-based substances. While a proportion of these carbon products remain in the plant, some transfer from the roots to fungi and soil microbes, which store the carbon in the soil.

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4. The other teams tried to collaborate on building the structure, and descended into confusion, with everyone getting in each other's way. Our team leader solved the challenge brilliantly. She simply asked everyone in the team to move a piece a few centimetres, to comply with the rule, and then let the person in the team with an aptitude for puzzles like this build it alone.

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5. As with all human behaviour, there are numerous reasons for it. But often it's caused by someone who feels the need to show their superiority over someone else, in order

to feel that they aren't at the lowest level in hierarchy or a group of people. In some cases, one person simply dislikes the other, on the basis that the personality of one is in some way incompatible with that of the other person.

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HIGHLIGHT THE CORRECT SUMMARY

You will hear a recording. Click on the paragraph that best relates to the recording.

1. Dr. Tony Wagner believes there are seven skills that young people need to have in order for them to find and keep a good job in today's economy. But he thinks our schools are focusing too much on tests and academic performance and aren't doing enough to teach those skills. Let me give you an example. One of Wagner's seven skills is the ability to work in an international team. This is because little teamwork is carried out in one building anymore. When most global companies have a problem they create teams of people from all over the world to solve it. And these people meet online in virtual meeting rooms. To succeed in this kind of environment you need to be a good communicator and understand different cultures. Teams also need good leaders who lead by influencing others. But Wagner and the business people he interviewed say that young people today are unprepared for teamwork and leadership because of this. Wagner thinks that people involved in teaching and learning must rethink the way that they educate people in schools so that these young people have the skills they need to achieve a successful career in the 21st century.
- A. Dr. Tony Wagner believes that schools focus too much on tests and academic performances instead of the seven skills that he thinks young people need to have in order for them to find a good job.
- B. Dr. Tony Wagner believes that schools should rethink the way they educate people in order to equip young people with the skills they need to achieve a successful career.

- C. Dr. Tony Wagner believes that global companies create teams from all over the world to solve problems and the ability to work in an international team is highly desired in employees.
- D. Dr. Tony Wagner believes that all young people need to become good communicators and understand different cultures in order to participate in virtual meeting rooms.

2. So where did this idea of evolution come from. Well. All there there are always ideas you can go back to Aristotle and find elements of evolutionary thought and Aristotle. But really it's a 19th century idea. And in order to see how it developed let's go back to about 1790 reconstructed. So at the end of the century of the Enlightenment. At that point. If you were to ask a well-educated person living in a western culture. How old the world is they would say oh thousands of years. And if you were to ask them Well where did all these species on the planet come from they would say they were all created just the way they look now and they've never changed. And if you ask them Have there ever been any species that went extinct they would say no. Everything that was created is still alive and can be found somewhere on the planet. So when Alexander von Humboldt who was certainly a creature of the Enlightenment sets out to explore South America. He thinks that he might encounter some of those strange fossils that the French have been turning up in the Paris basin on top of a mountain in Venezuela. So he really thought that there was a lost world. Of course Arthur Conan Doyle later wrote a novel about that. But I mean these guys actually thought hey I go to Venezuela or I go to the Congo I might meet a brontosaurus. That was what they thought.

- A. There are different ideas about evolution but only in Western culture. This is because the Enlightenment only happened in the West.
- B. There are different ideas about evolution but these really only came about in the nineteenth century.
- C. There are different ideas about evolution and Alexander von Humboldt was a person as part of the Enlightenment who proposed some of these ideas.
- D. There are different ideas about evolution and this is why Arthur Conan Doyle wrote a novel about a lost world.

3. Now, let's consider two types of mistakes that can occur when a manager actually starts to set up a duplicate system to replicate successful process. Firstly, perhaps he forgets that he was just trying to copy another process and starts trying to improve on it. Another mistake is trying to use the best parts of various different systems in the hope of creating the perfect combination. Unfortunately, attempts like these usually turn out to be misguided and lead to problems. Why? Well, for various reasons. Perhaps there weren't really any advantages that after all because the information was an accurate. Perhaps the business settings weren't really comparable. More typically, the advantages are real enough, but there are also disadvantages that have been overlooked. For example, modification might

compromise safety in some way. So what's the solution? Well, I don't intend to suggest that it's easy to get things right. The second time it's not. But the underlying problem has more to do with attitudes than an actual difficulty of tasks. And there are ways of getting it right. These involve adjusting attitudes, being more realistic and cautious. Really?

- A. The biggest mistake when setting up business systems is to create an ideal combination from the best parts of several processes. Inaccurate information usually leads to problems, while adjusting attitudes is the best solution.
- B. One of the mistakes a manager usually makes is to create an ideal combination from the best parts of several processes. Disadvantages are overlooked, which is one of the reasons why some attempts lead to problems. What we can do is to change attitudes.
- C. There are two mistakes that usually occur when setting up a business system, and the cause of problems has been mentioned, such as inaccurate information
- D. There are two mistakes that usually occur when setting up a business system, and there are various reasons why these attempts turn out to be misguided. In general, no action can be taken at any stage.

4. I've been looking at ocean biodiversity. That's the diversity of species that live in the world's oceans. Biologists still don't know how serious a threat to their survival is. For each individual species. So a body called the Global Marine Species Assessment is now creating a list of endangered species on land. So they consider things like the size of the population, how many members of one species are in a particular place? And then they look at their distribution in geographical terms, although this is quite difficult when you look at fish because they're so mobile. And then thirdly, they calculate the rate at which the decline of the species is happening. So far, only 1500 species have assessed. But they want to increase this figure to 20000 for each one they assess. They use the data they collect on that species to produce a map showing its distribution. So finally, what can be done to retain the diversity of species in the world's oceans? Firstly, we need to set up more reserves in our oceans, places where marine species are protected. We have some, but not enough. In addition to preserve species such as leather backed turtles, we need to create corridors for migration so they can get from one area to another safely.

- A. The geographical distribution of one endangered species needs to be consider, and the assessed figure is expected to be 1,500. Increasing the number of ocean reserves is critical when retaining ocean biodiversity.
- B. Considering the population size and decline rate of one ocean species is essential with the aim to assess 20,000 species. We need to establish ocean reserves as there is no reserve nowadays.

- C. The body Global Marine Species Assessment listed endangered ocean species by taking the population size and geographical distribution into account, and recommendations to retain ocean biodiversity are given, such as establishing migration corridors.
- D. The body Global Marine Species Assessment listed endangered ocean species by taking the population size and decline rate into account, and recommendations to retain ocean biodiversity are given, such as reducing fishing quotas

5. It's easy to think that humans are the only species that have true friendship, but animals make friends too, what we know about these friendships, well we thought for a long time, animals only have friends for biological reasons so their genes will continue, after all, It easier for animals to survive with the help of another animal, we saw the animals only help each other to get help and return, but there is growing evidence that tells us this isn't true, animals can also be generous and give up something important for friend without expecting anything back from them just like humans, I'm about friendships between animals from different species, like the bird looked after the count you mean, those friendships are very interesting, we actually know very little about that moments but we're starting to look more closely.

- A. We used to think that animals have friends only for biological reasons but we are discovering that animals can also have friends like humans can, and can sometimes have friends from different species.
- B. We used to think that animals have friends only for biological reasons because we focused too much on how animals need to survive with the help of another animal.
- C. We used to think that animals have friends only for biological reasons because they are unable to be generous and give up something important for a friend without expecting anything back from them.
- D. We used to think that animals have friends only for biological reasons but now we know this not to be free, however, animals cannot have friends from different species.

MULTIPLE CHOICE QUESTION WITH MULTIPLE ANSWER

1. Listen to part of a lecture in a psychology class, the professor is talking about stating laws in the science of psychology. Psychology is a relatively new science. Like other sciences, psychology must be able to state laws. A law is a way of organizing knowledge about something so that we can make predictions with enough knowledge is gained about a subject a scientist can state precisely what will happen under certain conditions. We experimental psychologists are interested in developing laws about human behavior, so we'll be able to understand and predict what people do and why they do it. Of course, to develop laws about human behavior, we must assume there's some regularity to it. We can't be psychologists without making the

assumption the behavior follows certain patterns. One of the major law psychologists have discovered is called the law of Effect. The Law of Effect states that whether or not a person will repeat a behavior depends on the effect of that behavior has. If an action is rewarded, it's likely to be repeated. If the action is not rewarded or if it's punished, it's not likely to be repeated. How the psychologist state laws first using available knowledge. A psychologist makes a hypothesis about behavior. Then the psychologist tests the hypothesis through an experiment. But even if the experiment proves the hypothesis was correct, it's not yet a law. It's just the beginning of the work to arrive at a law that will apply to all humans. Many repetitions of the experiment must be conducted under different conditions. Only repeated verification, especially proof that the behavior can be predicted, will result in a law.

According to the professor, why are psychologists interested in developing laws?

- A. To raise the status of psychology as a serious science
- B. To be able to make predictions about human behavior
- C. To permit scientists to experiment with human subjects
- D. To help students understand the art of psychology

2. Word class, if you are unsure of drawing directly in pen ink start off with a light pencil sketch, this will allow you to make sure that your proportions are corrected and you are happy with the composition, take a few minutes to study your subject, this term: violin & chair, notice how the straight lines of the chair differ from the curves of the violin. Once you are ready to begin drawing define the shape of the chair with clean straight lines, then add contrast by drawing the outline of the violin with gently curved lines, you may have to apply more pressure to the nib when drawing curve ends to allow the ink to flow easily, when you draw the outlines of both objects and in the finer details such as the seat of the chair and violin strings, suggests the texture of the woven seats by using lighten dark strokes of the pen.

What is the purpose of the talk?

- A. To compare a chair with a violin
- B. To compare two techniques of drawing
- C. To explain how to draw with pen and ink
- D. To explain why drawing with a pen is difficult

3. Land animals move easily through air because air does not slow them down. Sea creatures, on the other hand, have to move through water, which is hundreds of times thicker than air. A sea animal has to push itself through water in order to move. Sea animals use many different ways to swim, creep or glide through water, fish are able to swim by bending their bodies in the waves. They have flattened fins and tails that push against the water or blades, converting their body waves into forward movement. The size of a fish's tail contributes to swimming speed. Small tailfins are found in slow swimmers like the eel. The medium sized tail of the bass is linked with a medium to fast swimming speed. Long pointed tail lobes like those on the marlin are found only on fast swimmers. Sea mammals like whales and dolphins swim in a very fishlike way, except for one important difference. Because their ancestors lived on the land, they developed tails that moved up and down. Whales and dolphins wave their tails up and down rather than side to side like fish. To the seahorse is a fish whose tail is not used for swimming at all. The seahorse uses its thin coiled tail to attach itself to seaweed like a monkey's tail holds onto a tree branch. Squids and octopuses move in a completely different way. They use a type of jet propulsion, shooting water out through a nozzle to force themselves along. And then there are the creatures that live on the bottom of the sea. Sea slugs, limpets and whelks creep on a single flat piece of muscle called a foot. Ripple's pass along the foot, which allows these animals to glide smoothly forward.

What is the main purpose of the lecture?

- A. To compare land animals and sea animals
- B. To explain why fish are excellent swimmers
- C. To describe how various sea animals move
- D. To review material that will be on a test

4. The origins of jazz are richly textured as the music itself the term jazz really covers many different kinds of music in the late nineteenth century African Americans began performing folk music known as the blues origins lay in the work songs of slavery days, within the African American community the blues evolved into popular commercial music, 1914 black orchestra leader named w c handy wrote the st louis blues, adapting the African American folk idiom to European conventions of orchestration and harmony can be produced a hit song, the st louis blues was tremendously influential among black and white musicians and handy style of music became famous under the name of jazz, early jazz musicians were active in many cities and towns throughout the southern united states, it was new Orleans would long tradition of African American music that was the home of many fathers of jazz, after world war

one the musicians of new Ireland joined the general northward migration of African Americans, the first great national center of jazz was Chicago, there are the music into the mainstream and even gave its name to the decade of the nineteen twenties, gas blending African American folk roots with elements of popular music and European classical tradition has been called America's classical music,

What does the instructor imply about the style of music known as the blues?

- A. It originated in Chicago in the 1920s.
- B. It contributed to European classical music.
- C. It changed and developed over time.
- D. It made many musicians wealthy.

5. Listen to part of a talk in a Science class, as you recall from our previous discussion the chemistry of life is organized into metabolic pathways, next year in your organic chemistry lab you'll go into this into metabolism in more depth, since this is an intro course you need only a general understanding of the process for now, there is a wonderful video tape I'd like you to know about that will help you review for the test next week. It's the part of the transformation series that was on television about a year ago, the episode you should watch is called the industry of a cell, I strongly urge you to see, I believe our library has more than one copy. It has lots of examples of the many ways that cells use energy for metabolism for example it shows how bacteria indeed a headlight of a certain fish how these bacteria take the energy stored in food and converted into light in a process called bio luminescence, you should all try to see this program before next week I highly recommended in fact you can expect to see examples from it on the test.

What does the professor imply about the videotape?

- A. It cannot be checked out of the library.
- B. It covers material that will be on the next test.
- C. It will be shown on television later that week.
- D. It contains examples of the professor's research.

SELECT MISSING WORD

You will hear a recording. At the end of the recording, the last word or group of words has been replaced by a beep. Select the correct option to complete the recording.

1. For thousands of years we humans have used selective breeding to create animals and plants with properties that have been useful for us. This year's

Nobel laureates have taken the next step. They have used the molecular understanding that we today have of the evolutionary process and re-created the process in their laboratories in their test tubes. This work has led to the creation of proteins with new enzymatic activities, able to catalyze useful chemical reactions. In addition, with the method called phage display, they have also evolved proteins with new binding properties, such as antibodies that can be used to treat disease. In their laboratories, our laureates this year have been able to direct evolution, to steer it, which has led to new chemical tools that can be used in everything from environmentally friendly detergents to the creation of new bio fuels and pharmaceuticals. And this year's prize in chemistry rewards a revolution based on evolution. Our laureates have applied principles of Darwin in test tubes. And used this approach to develop new types of chemicals for

- 1. the greatest benefit of humankind.
- 2. the conservation of energies.
- 3. the better yield of processes in the laboratories.
- 4. the catalyzing the chemical reactions.

2. Baby giraffes inherit aspects of their mothers' patterning—which could give them a survival advantage if good camouflage runs in the family. Derek Lee is a wildlife biologist and population ecologist at Penn State, and with the Wild Nature Institute, a research consultancy group. He and his collaborators have been tracking giraffes for seven years, throughout 1,500 square miles in Tanzania. And they've amassed a library of 70,000 giraffe photos along the way. Now, they've used image analysis software to study the spots of mothers and their calves. And they found that baby giraffes inherit at least some particular elements of their patterning from their mothers. Like how circular the spots are, and how jagged the edges are. He also mentioned that just like humans have virtually unique sets of fingerprints, every giraffe has a unique set of

- 1. stripes.
- 2. features.
- 3. characteristics.
- 4. spots.

3. White has become the standard color for airplanes' exteriors. While stylish, it's also a calculated decision by many airlines. White is easy to spot, whether in the air, on the ground, or in the case of a crash, in the sea. And it's easy to see cracks or chips in the paint when that paint is white. This detection is important because dirt and moisture can quickly collect in these chips,

becoming sites of corrosion that could eat away at the aircraft's body. This is one reason, in fact, that planes are usually painted at all instead of being left as polished metal: painted metal more readily resists corrosion than unpainted metal. You'll often see plastic, fiberglass, or carbon fiber painted white on planes, too. This is because these parts of the plane are easily susceptible to sun damage, which the white paint helps

- 1. find
- 2. detect
- 3. prevent
- 4. solve

4. While experimenting with weed genes that turned tomatoes dark green, geneticists accidentally discovered one of the reasons why today's tomatoes lack taste. Modern tomatoes are light green before they turn uniformly red. Surprisingly, the mutation that gives tomatoes uniform red color actually disables some of the ripening genes. Those genes allow the fruit to make its own sugar which makes the tomato sweeter. The genes also increase the amount of carotenoid pigments, which give tomatoes

- 1. the red color.
- 2. the good taste.
- 3. the citrus taste.
- 4. the attractive color.

5. There are places on Earth like California or the Australian outback where there are fire seasons. While they can create significant property damage and are dangerous, the fire seasons are important ecological events. For some grasslands, they need wildfires to occur to stay grasslands. Without a cycle of growth, flame, re-growth, these areas can change dramatically over time to become forests. Wildfires destroy the grass, yes, but also any plants that if they continued to live in the area, would help it start to change into a forest. This in a basic way describes one of the ways that ecological succession happens. Many animals are bound to particular types of ecosystems. An animal that thrives in a prairie or savannah environment may not be able to adapt to live in a wooded

- 1. places
- 2. cities
- 3. environment
- 4. grassland

HIGHLIGHT INCORRECT WORDS

1. Walking through airports, you've probably crossed paths with a few K-9 cops. But those dogs aren't just following their noses. They maybe led astray by where their handlers think drugs and explosives are hiding, too—even when there aren't any. That's according to a study in the journal *Animal Cognition*. The researchers recruited 18 dogs certified by law enforcement agencies. As a test site, they used four rooms in a drug-and-explosive-free church. The researchers left the first room untouched. In the second, they taped up a sheet of red paper. In the third, they hid a few Slim Jims as a decoy. And in the fourth, they taped red paper to a stash of Slim Jims. The dog handlers were told they might encounter the scent of pot or gunpowder up to three times per room, sometimes marked with red paper. It was a flat-out lie—there were no target scents. But the dog teams still called 225 false alerts—most often at the site of the red paper, whether there were Slim Jims there or not. The study doesn't mean K-9 cops are totally unreliable in the real world. But it does imply that the dogs aren't immune to the power of suggestion—and neither are their handlers.

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If you're not a fan of cigarettes, you probably hold your breath as you hurry past the smokers that hang out in front of office buildings, stores, and restaurants. Smokers are banished outside because a growing number of cities concerned with the possible health effects of secondhand smoke have banned smoking in eateries, workplaces and other such establishments. Turns out holding your breath might not be such a bad idea. Because scientists at the University of Georgia have found that sidewalk smokers can generate more pollution than passing cars. Athens, Georgia, is a major college town, and on the weekends, students are packed shoulder to shoulder outside bars and restaurants. And since smoking

is banned inside such locations, plenty of those kids are puffing up a storm. That made the Georgia researchers wonder whether outdoor secondhand smoke could present a health hazard of its own. So they measured the carbon monoxide levels outside a handful of bars and restaurants. Because this gas is also found in car exhaust, the researchers counted the number of cars and the number of smokers. And they found that the pollution was coming from the people, not the tailpipes. So next time you stroll past a bunch of the banished, take a deep breath and feel free to run.

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2. PCR—the polymerase chain reaction—is a crucial tool. The DNA amplification technique is used in genome sequencing, forensics and the diagnosis of various diseases. To give researchers more genetic material to work with, a PCR instrument repeatedly heats and cools an original biological sample. Which gives enzymes a chance to replicate the DNA millions of times so it can be more easily analyzed. Such sequence amplification would be a boon to diagnosis in a doctor's office—especially when an infectious disease is spreading rapidly. Unfortunately, genetic tests usually take a day or two to complete. But researchers at the Lawrence Livermore National Laboratory aimed to speed up the process. First they created an extremely fast thermal cycle, in which a sample experiences 45 degrees Celsius temperature changes per second. Then they searched for DNA amplification enzymes that could operate at that thermal cycling speed. And they found two that worked without any tweaking. The technique accomplishes a billion-fold amplification in well under three minutes. The work is in the journal *Analyst*. The system could make it possible to identify food contamination virtually instantly. Or an infection before you even finish coughing.

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3. Picture a gamer, someone who spends countless hours immersed in one of those online role-playing alternate realities. And what do you see? Is it a physically fit female closer to 40 than 14? If not, you may need to rethink your assumptions about geekdom. Because a study in the *Journal of Communication* shows that when it comes to dominating the virtual world, women are actually more hardcore than men. Scientists conducted a survey of some 7,000 players who were logged on to a game called *Ever Quest II*. And they discovered some interesting things. First off, the average age of the gamers surveyed was 31. And that playing time tended to increase with age. Which is also where the sex differences come in. The female gamers actually logged more time online: an average of 29 hours a week, versus 25 for the males, with the top players putting in 57 hours a week on the girl's side, and 51 for the guys. What's more, it looks like women are more likely to lie about how much they really play. The researchers found that the gals tended to lowball how long they spend glued to the screen. So, never ask a woman her age. Or how much time she spends defeating the dark elves to rebuild the world of *Norrath*.

Picture a gamer, someone who spends countless hours immersed in one of those online role-playing alternate realities. And what do you see? Is it a pitifully fit female closer to 40 than 14? If not, you may need to rethink your assumptions about geekdom. Because a study in the *Journal of Communication* shows that when it comes to dominating the virtual world, women are in corrigibly more hardcore than men. Scientists departed a survey of some 7,000 players who were logged on to a game called *Ever Quest II*. And they discovered some interesting things. First off, the average age of the gamers surveyed was 31. And that playing time tended to increase with age. Which is also where the sex desensitizes come in. The female gamers actually logged more time online: an average of 29 hours a week, versus 25 for the males, with the top players putting in 57 hours a week on the girl's side, and 51 for the guys. What's more,

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4. The 2010 Nobel Prize in Physics goes to the University of Manchester's Andre Geim and Konstantin Novoselov for their investigations of the two-dimensional material graphene. Ordinary so-called pencil lead is graphite, a three-dimensional form of carbon. Flat layers of carbon, one-atom thick, are called graphene. Both born in Russia, Geim, 52, and Novoselov, just 36, showed that graphene has unusual properties related to quantum effects. Physicist Per Delsing explained at the announcement from the Royal Swedish Academy of Sciences: "The electronic structure of graphene is very unusual. It's a transparent conductor and as such it can be used as touch screens, solar cells, light panels. If you put graphene into other materials, such as epoxy or plastic, you can make very light and very strong materials, which is interesting for satellites and aircraft, but it's also that you can make flexible electronics. And so these are examples of the applications, and the pioneers that really did this were these two."

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5. All rise, the Twitter court of public opinion is now in session. And the next case on the docket will reach a quick verdict. Because public opinion solidifies rapidly on Twitter. That's according to a study in the journal *Chaos*. Researchers collected almost 6 million tweets during a six-month period. They sorted the tweets for either positive or negative sentiments, then focused on three topics related to electronics. At first opinions fluctuated, with one side gaining a slight advantage. This advantage grew gradually and then quickly leveled off, leaving one opinion in a stable and dominant position—but without an overwhelming consensus. And once public opinion is established, it is unlikely to change. Only those who see a large number of dissenting

opinions among the people they follow on Twitter will reconsider and examine the opposing viewpoint. These results may offer a valuable lesson for companies, candidates and anyone else in the spotlight. If you plan to sway the jury, be sure to make your case early. Because once public opinion stabilizes, the jury is dismissed.

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WRITE FROM DICTATION

You will hear a sentence. Type the sentence in the box below exactly as you hear it.

Write as much of the sentence as you can. You will hear the sentence only once.

1. Students are encouraged to read the new books recommended by professor Jones.
2. Many cities are actively working on ways to reduce air pollution.
3. Lecture outlines are available on the college internal website.
4. The cafeteria will only serve cold milk on Friday this week.
5. Electronic devices can help students to complete their assignments than ever before.