

IELTS PRACTICE TASK

Charles-Marie de la Condamine

The man who helped measure the shape of the world

Although ordinary people may have thought so, few scientists had ever really believed that the world was flat. And certainly, by the beginning of the eighteenth century, they agreed without exception that it was round. There was still some minor disagreement, however, about exactly what being 'round' meant in this context. Some said the planet was a perfect sphere, like a ball. Others thought it might be generally round, but with some irregularities. The English scientist Sir Isaac Newton argued that the Earth bulged outwards around the equator. On the other hand, the French astronomer royal, Jacques Cassini, believed that the planet was stretched out at the north and south poles, making it shaped more like an egg. The debate was partly just a reflection of the way England and France competed about many things at the time, but it was also a serious question that affected how maps and sailing charts were drawn, and therefore the safety of sailors at sea. So in 1734 the French Academy of Sciences decided to measure the Earth's shape. An expedition under Pierre de Maupertius would travel close to the North Pole, and another under Charles-Marie de la Condamine would travel to the equator. Both expeditions would survey the shape of the Earth's surface and then compare findings. After a long voyage, Condamine reached Peru in South America, where the scientific experiments began. His team climbed high into the mountains to take measurements using surveying equipment and then descended to the desert plains to continue their work. Finally, after four years' work – more than twice the time the leader had intended – the survey work was complete. As part of their research, they had built small pyramids made of rock as permanent features from which to take certain measurements, and their remains can still be seen today as monuments to the expedition. When Condamine's team returned to France, the Earth was found to be slightly wider between the poles than when measured through its centre at the equator. Condamine and Maupertius were now counted as among the most eminent scientists in Europe.

TASK TYPE 1 Identifying Information (True/False/Not Given)

Questions 1–6

Do the following statements agree with the information given in the Reading Passage?

You should 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*

- 1 At the start of the eighteenth century, scientists knew the Earth was round.
- 2 Sir Isaac Newton had done scientific experiments at the equator.
- 3 The debate between Newton and Cassini was important for sailors.
- 4 Maupertius and Condamine had worked together in the past.
- 5 Condamine finished his research sooner than he had expected.
- 6 Condamine left behind no physical evidence of his expedition to South America.

IELTS PRACTICE TASK**Extinct birds of New Zealand**

Many species of birds that once lived in this South Pacific country aren't found today.

Today, New Zealand is a typical, modern country with cities, towns and roads. But for many thousands of years, and until relatively recently, the more than 3,000 islands that make up the country had no human inhabitants at all. Instead, a vast number of birds lived in its forests, mountains and along the thousands of kilometres of beaches. In fact, New Zealand probably had more species of birds than any other country in the world. One reason for this was that the natural environment was a perfect source of food to support the bird population, particularly from the enormous oceans that surround the country. With so much food readily available, it's not surprising that the bird population grew. Another important factor was that the birds had no predators on land because, with the exception of a single species of bat, there weren't any mammals at all in the country that would otherwise have killed birds and kept their numbers down. Because of this, over many, many years, New Zealand's birds developed characteristics not associated with bird populations in other countries. For example, they didn't have to defend themselves from predators, so many birds lived on the ground and didn't have wings because they didn't need to fly, such as the iconic kiwi bird and also the much larger, ostrich-like bird called the moa. This characteristic allowed the birds to save huge amounts of energy and provided them with numerous other advantages – so long as they didn't need to defend themselves against attacks by predators! One final development was that many of these birds now made their nests on the ground rather than in trees and the eggs that they laid became much bigger over time. This was just one more factor that made these populations of birds very vulnerable when humans eventually reached New Zealand.

The first human migrants to New Zealand were the Maori people, who arrived approximately 800 years ago. The Maori sailed from their original homes in the tropical Pacific to New Zealand in canoes, bringing food supplies and many of the things they needed to set up new homes. Unfortunately, however, they unintentionally brought Pacific rats with them as well, a species previously unknown in New Zealand, and these killed many birds that were unable to fly away. The Maori themselves also hunted birds for food, and their loud calls in the forest at night time made them particularly easy to find. Birds were useful in other ways, too. Fish hooks were frequently manufactured from bones, while feathers were highly prized as decorations to be worn in the hair or clothing. The results of this, in terms of bird populations, has been calculated by the scientist Paul Martin. His research since the 1960s has assessed the impact on flora and fauna of human arrival in various parts of the world, and he has concluded that New Zealand is a unique example because bird species were wiped out so fast, relative to other countries.

TASK TYPE 2 Note/Table Completion

European migrants started arriving in significant numbers in the early 1800s and brought with them a whole lot of new problems. The journals of the earliest European explorers in the country are full of references to how they relied on their hunting dogs to catch birds in order to supply the expedition with food, and these animals have been a constant threat to bird life ever since. Many of the European settlers came to New Zealand to set up farms, but before this was possible it was necessary to clear the land of trees, and this process of deforestation had serious consequences for many birds, as their habitats were destroyed. As the country's population has grown and the need for more land for housing, industry and farming has increased with it, many more bird species have faced extinction. However, in recent decades attempts have been made to save some of these endangered species by creating sanctuaries where they can live and breed. The location for nearly all of these sanctuaries has been small islands scattered around the coastline, which can be kept free of predators and pests. In some cases, this includes human beings, allowing the environment to return to its original condition.

Questions 1–4

Complete the notes below.

Write **ONE WORD ONLY** from the passage for each answer.

New Zealand before humans arrived

- there were many birds
- the large **1** provided food for birds
- there were no **2** on land so birds had few predators
- many birds had no **3** so couldn't defend themselves, e.g. moa
- birds' **4** were also very large
- birds were very vulnerable

TASK TYPE 2 Note/Table Completion

Questions 5–10

Complete the table below.

Write **NO MORE THAN TWO WORDS** from the passage for each answer.

Human migration to New Zealand

	Reasons Birds Died	Results
Maori migration	<ul style="list-style-type: none"> ● 5 were accidentally introduced to New Zealand ● birds' loud calls made them easy to find ● birds' feathers were used for decoration and bones for 6 	<ul style="list-style-type: none"> ● according to Paul Martin, the extinction of some species was unusually 7
European migration	<ul style="list-style-type: none"> ● explorers used 8 to kill birds for food ● creating farms caused 9 and loss of habitat 	<ul style="list-style-type: none"> ● attempts to save endangered species on 10 around the country

IELTS PRACTICE TASK**Classic style**

For a few short years, fins were in fashion on American cars.

It's rare to see fins on the back of motor cars today – those raised, stylish extrusions on the car's rear end that once made each model unique. But for a decade or two in the years after the Second World War, the inclusion of ever more extravagant and ostentatious fins was the height of fashion among American car designers and the must-have automotive accessory for the discerning car buyer.

It started in 1947 when chief of styling at the car-making firm of General Motors, Harley Earl, developed the entirely new notion of attaching fins to the back of the company's motor cars, typically on the edges of the trunk, or boot, running down to the vehicle's brake lights. Earl had been inspired by the twin tail fins he had seen on the Lightning fighter planes used during the war and instructed General Motors' team of designers to play around with the same concept. The designers liked the idea immediately – perhaps unsurprisingly, could there be any better symbol of speed and power? And after some experimentation, the first General Motors' Cadillac was released the following year sporting a pair of relatively modest fins. The effect was immediate: the public loved the new innovation – the young and young at heart especially – and competing firms were forced quite literally to go back to the drawing board. So, in the 1950s, a race began between American car manufacturers to see who could produce cars with the most pronounced, extreme and even outlandish fins. It seemed almost impossible to overdo it as consumers rushed to the showroom to buy the latest model and keep one step ahead.

It's necessary to understand the culture of the times in America if one is to truly comprehend exactly why it was that fins became so popular. After all, they served no practical purpose whatsoever; these were not the 'spoilers' or similar appendages that were later attached to cars to improve aerodynamics, road handling and fuel economy. They existed simply to amplify the shape of the car, to accentuate its curves, speed and style. And as such, fins would have been quite unthinkable in earlier times – the Great Depression of the 1920s most obviously. But in the 1950s and 60s the American people were filled with a sense of national optimism, because theirs was a young country, the economy was booming and their place in the world was assured. Furthermore, iron ore was cheap, as were the coal and oil necessary to turn it into steel, so car production costs were a fraction of what they are today. The result was some truly extravagant cars: General Motors' Firebird III had no fewer than nine fins – still a world record – while the nearly six-metre long Eldorado might not have had so many but the tallest was nearly 300mm high.

TASK TYPE 3 Short Answer Questions

Of course, it couldn't last. By the 1980s, American society had become concerned about a wide range of issues including petrol consumption, road safety and car-affordability. In short, people wanted a different type of car. The result was that the Federal Government passed a number of new laws that transformed the automotive industry. Cars undoubtedly became safer and greener, but some of the flair and individualism has arguably been lost along the way, as so many models of cars all around the world today look remarkably similar. And one final point to note: it would be very easy to see the fashion for fins as an oddly human extravagance, but there may actually be a parallel in nature. In 1998, Chinese researchers found a fossil, deep beneath the ground, of a species they named the abnormal shrimp. This was a two-metre long predator with five eyes and mouth parts on the end of a prehensile proboscis. What's more, on its tail, it had a series of fins to which the researchers have been able to attribute no practical purpose whatsoever.

Questions 1–6

Answer the questions below.

*Choose **NO MORE THAN TWO WORDS AND/OR A NUMBER** from the passage for each answer.*

- 1 In 1947 Cadillac cars copied the fins on what type of transport?
- 2 What did car companies take part in during the 1950s?
- 3 What feeling in America did car makers exploit in the 1950s and 1960s?
- 4 Which model of car had the most number of fins ever?
- 5 In the 1980s, what was introduced to make motoring more expensive?
- 6 According to Chinese research in 1998, what creature once had fins?

IELTS PRACTICE TASK

Questions 1–5

The Reading Passage has five paragraphs, **A–E**.

Choose the correct heading for each paragraph from the list of headings below.

Write the correct number, **i–vii**, below.

List of headings

- i** How one mall has promoted itself over the years
- ii** Reasons for government support of malls
- iii** Ongoing research into the psychology of shoppers
- iv** How malls have gone in and out of fashion
- v** How different countries interpret malls in new ways
- vi** The ideas behind the original malls
- vii** The influence one type of shop has had on malls

- 1** Paragraph A
- 2** Paragraph B
- 3** Paragraph C
- 4** Paragraph D
- 5** Paragraph E

Shop till you drop!

The rise and rise of the shopping mall?

A

Today, shopping malls are found in almost every nation, in both the developed and developing world. Visitors to any city, from Auckland to Washington, and Beijing to Jogjakarta, can expect to find shopping malls in the suburban centres, and all of them will appear to be broadly similar. So it's easy to forget that malls are actually a relatively recent development. The first suburban shopping malls as we would recognise them today only started to be built in America in the 1950s, and in most of the rest of the world in the decades after that as the craze for mall shopping went global. But 50 or so years on, while malls are still an important part of the retail economy, mall owners have little to celebrate as increased competition from the Internet means fewer and fewer people walk into their air-conditioned halls. In the U.S.A, few if any new malls have opened since 2006, and those already operating are having to work harder and harder to attract customers.

TASK TYPE 4 Matching Headings

B

One of the first indoor 'shopping centres' was the Cleveland Arcade, built in the late nineteenth century. However, this was an inner city shopping venue without parking and cannot really be considered the forebear of today's malls which didn't appear until much later and in response to a new feature of urban development. Their invention is usually credited to an Austrian-born U.S. immigrant, who hated suburban living, seeing it as essentially 'empty' and lacking any focal point. His solution was to try to recreate in the suburbs the same compact shopping experience as was found in city centres – the shopping mall, a town square for the suburbs, but one with plentiful parking for the increasingly car-dominated culture of the 1950s.

C

It would be a mistake, however, to assume that consumers have always flocked to malls on impulse without any effort being made to entice them. In fact, if my own local mall is any guide, these institutions have always found it necessary to publicise themselves and actively seek customers. In the 1960s my local mall ran a variety of publicity events such as beauty pageants, fashion parades and even a bed-making competition. More recently these events have focussed on appearances by minor celebrities, aspiring singers, unemployed actors, and discarded contestants from the latest television reality series. So it's apparent that malls have never taken their customers for granted and have always been prepared to lure them away from alternative shopping venues.

D

While malls come in a variety of shapes and sizes, they nearly always contain at least one supermarket, and it is arguably this store that is the crucial component of any mall: the necessity of buying groceries draws customers in, and thereafter they may well be persuaded to purchase non-essential items from some of the other stores on site. What's more, the whole mall enterprise has learned a great deal from supermarkets, which have always led the field in understanding the shopper's mind. Studies conducted since the 1960s have established certain fixed principles to apply to supermarket design: essential items are spread throughout the shop, forcing customers to walk down every aisle, where they might be tempted into an unplanned purchase; chocolate and sweets are placed at child's eye level at the checkouts, and so on. The potential for all shops to exploit consumers in similar ways is one that mall designers have been quick to recognise.

TASK TYPE 4 Matching Headings

E

These days it's not an understatement to say that malls extensively spy on their customers in order to better understand their shopping habits. This, of course, is justified in terms of 'better meeting customer needs', but it also has the fortunate by-product of increasing sales. Cameras are commonly used in numerous malls around the world, not just for security purposes but also to monitor shoppers' behaviour so as to learn how to exploit it. It's commonplace today for business schools to conduct these sorts of studies, to record how long shoppers spend in every store, which goods they inspect, what they try on and whether or not they ask for assistance. This way, according to marketers, real-time shopping in actual stores will always be more popular than internet-based alternatives.

IELTS PRACTICE TASK**Are germs bad?**

*Scientists know that bacteria make humans sick,
but research suggests some bacteria may also keep people alive.*

A

The bacterium *Helicobacter pylori* (*H. pylori*) is able to live – indeed, thrive – inside the human stomach, which makes it relatively rare because the stomach is so acidic as to be an extremely hostile environment for most bacteria. *H. pylori* is shaped like a corkscrew and is three microns long – to give a sense of scale, a grain of sand is about three hundred microns long. Research has shown that over 50% of the world's population is infected by *H. pylori*, making it the most common infection of its kind among human beings. However, it would be a mistake to assume from its diminutive proportions or the fact that it occurs so frequently that the bacteria is a benign presence in the human body.

B

In the 1980s doctors realised that antibiotic medications could free the body of the bacterium and thus cure various illnesses including gastritis and stomach ulcers. At the time there was complete consensus among scientists that *H. pylori* did nothing but harm and all steps should be taken to eradicate it. One of those at the forefront of the research was Martin Blaser, professor of microbiology at New York University School of Medicine. Professor Blaser still remembers how certain the academic community was in those days about *H. pylori*. 'It was bad for us, so the idea was to get it out of our bodies, as fast as we can. I don't know of anyone who said, "We'd better think about the consequences."'

C

Professor Blaser's laboratory was ahead of the field and developed the original blood analysis techniques to identify the bacterium, and most of them are commonly in use today. But Professor Blaser has a mind that engages with a number of different intellectual activities; for example, in addition to his medical work, he helped to set up an important magazine of literary criticism in the United States. And perhaps it was this diversity of perspective that first caused him to wonder about *H. pylori*. In particular, he was curious to know how a bacterium that was as old as humans could survive in the human body if its only role was negative. As a result, Professor Blaser began to examine fresh aspects of the bacterium, such as its molecular make up and behaviour.

TASK TYPE 5 Matching Information

D

In 1998 Professor Blaser's findings appeared in the British Medical Journal. On the basis of extensive research into the subject, the paper concluded that, despite the prevailing consensus to the contrary, *H. pylori* might actually help promote human health, such as by regulating the level of acidity in the stomach. He pointed to the fact that, while the incidence of *H. pylori* is decreasing thanks to the widespread use of antibiotics, some diseases are actually becoming more common. Professor Blaser hypothesised that the bacterium occurs quite naturally in the human stomach and that the changes to the stomach's composition caused by its removal over recent decades account for today's increasing rates of diabetes, obesity and asthma. This is certainly an area of medical research worth watching over the years ahead.

Questions 1–7

The Reading Passage has four paragraphs, **A–D**.

Which paragraph contains the following information?

Write the correct letter, **A–D**, next to each question.

NB You may use any letter more than once.

- 1 some details of the first test to determine the presence of *H. pylori*
- 2 some details of a pioneering academic publication
- 3 the suggestion that one man's range of interests led to a new approach
- 4 a warning about underestimating the importance of *H. pylori*
- 5 an example of a medical benefit attributed to the presence of *H. pylori*
- 6 a comparison between *H. pylori* and a natural substance familiar to most people
- 7 examples of some medical problems caused by *H. pylori* being present

IELTS PRACTICE TASK**Building cities right**

How do we plan and design the best urban environments?

Researchers have estimated that sometime in 2007, more than 50% of the human race lived in cities for the first time in history. In this sense then, most of us are urban dwellers: our home, the place we know best in the world, is a city. Yet despite this widespread familiarity with the urban environment, the issues involved in town planning and design are hugely complex and sometimes misunderstood, according to Dr Simon Lavers, a senior lecturer in urban planning and management at the Millennium Institute. 'I can think of no other form of design that incorporates such a broad range of factors,' he says. 'It comprises a huge number of sometimes conflicting considerations – economic, political, legal, cultural, aesthetic.' Part of the problem, Lavers believes, is that governments pass too many laws regulating design issues, leaving the planning process inflexible and bureaucratic.

'There's something very symbolic about that majority figure,' says Helene Olav, a research fellow at the Institute for Urban Affairs, referring to the fact that over 50% of people now live in cities. In fact, in many countries it's more like 80%. 'Urban life is a fundamentally human experience,' says Olav, 'but in some cities it doesn't necessarily feel like it. Urban planners need to incorporate this reality at the heart of their designs, creating urban facilities intended for all residents, whether that be galleries, museums, recreational centres, or open areas such as parks and squares.' A similar point is made by Professor Margaret Evans, a long-time advocate for tighter controls on urban planning. Too often, she argues, urban planning is geared solely towards commerce and city centres are sold into private ownership. Says Evans, 'Most cities are good at protecting their great landmarks and national monuments, but the smaller heritage sites, the homes of lesser writers or community leaders for example, which also give our cities a sense of common ancestry, are too often torn down by property developers and replaced with glass towers.'

In reality, good urban planning and design is not that hard, continues Olav. 'It's definitely possible to overthink it,' she says. 'Roads, water, sewage disposal – the unexciting but essential issues faced by every urban centre – that's where designers should concentrate their efforts.' However, the next generation of planners might disagree, if doctorate student Suzy Wong is representative. 'I think planning is changing very fast,' she says. 'My contemporaries want urban designs that protect the environment, not only take waste water out of the city but treat it at the same time – that's an initiative for the future.' She also thinks there's too much repetition in urban architecture and that planners need to conceive of architecture in far more innovative and individual ways. Lavers, however, offers a word of caution. 'Planners live in the real world,' he says, 'or more accurately, they

TASK TYPE 6 Matching Features

each live in their own real world. It's not one size fits all. Each city is different, it has its own climate and landscape, its own types of stone, wood and traditional building methods. All of these should be apparent in the way each city is planned.' Given this diversity of opinion, it seems likely that debate over urban planning and design will continue for as long as there are cities.

Questions 1–6

Look at the following statements (Questions 1–6) and the list of researchers below.

Match each statement with one of the researchers, **A**, **B**, **C** or **D**.

Write the correct letter **A–D** in boxes 1–6 on your answer sheet.

NB You may use any letter more than once.

- 1 The focus should be on simple, universal, practical issues.
- 2 Conserving buildings of minor historical value is often overlooked.
- 3 Urban design should reflect local conditions and materials.
- 4 The creation of shared public spaces in cities is essential.
- 5 It's important to create unusual and original designs.
- 6 Urban planning is a unique type of design.

List of researchers

- | | |
|----------|--------------------------|
| A | Dr Simon Lavers |
| B | Helene Olav |
| C | Professor Margaret Evans |
| D | Suzy Wong |

IELTS PRACTICE TASK**What secrets lie beneath the waters of the Rhône?**

No one ever suspected that an ancient Roman ship – a long wooden barge – had been preserved in the most powerful river of France.

The Romans needed millions of curvy clay jars called amphorae to ship wine, olive oil, and fish sauce around the empire, and often didn't use them more than once. During the first century A.D. in the town of Arles, on the Rhône River in what is now southern France, the workers unloading this kind of cargo threw the empty amphorae into the river.

Nowadays, the Rhône is the most powerful river in France. Most people cannot imagine wanting to dive into it. Neither could archaeologist Luc Long, at first, but once he discovered the amphorae, his future opened before him. He's been investigating the Roman dump ever since. For the first 20 years or so, neither the local authorities nor the general public paid much attention to what he was doing. But while diving in 2004, he noticed a mass of wood swelling from the mud at a depth of 13 feet. It turned out to be the aft port side of a 102-foot-long barge. The barge was almost intact; most of it was still buried under the layers of mud and amphorae that had sheltered it for nearly 2000 years. Long and a colleague sawed a section out of the exposed part, which the colleague analysed in minute detail. In 2007, three younger archaeologists, Sabrina Marlier, David Djaoui, and Sandra Greck, took over the study of the barge, which by now Long had named *Arles-Rhône 3*.

As they began diving onto the wreck of the barge that year, Long proceeded with his survey of the rest of the dump and started finding pieces of the town: monumental blocks of stone and also statues. Word began to leak out. The French customs police warned Long that antiquities thieves might be watching his operation. When his divers found a life-size statue of Neptune, god of the sea and sailors, they brought it up at night. Before that diving season was out, another statue was discovered: a marble bust that looked like Julius Caesar. Portraits of Caesar are surprisingly rare. This one might be the only surviving one that was sculpted while he was alive.

'You have to understand,' said Claude Sintès, the director of the Arles antiquities museum, 'Arles is a small town. The locomotive workshop closed in 1984, the rice mill and the paper mill within the past decade. What's left is mostly tourism. The tourists come in part for Van Gogh, who painted here for a time. But the town sits on deposits of the Roman past—you can't sink a shovel into your garden without hitting a Roman stone or tile.' The exhibition, later built around the bust of Caesar, after news of it spread around the world, showed that some of the excavated artefacts were commercial grade. 'The exhibition's success was astonishing,' Sintès said. 'When a modest town like ours got 400,000 visitors, the politicians understood that the economic return was strong.'

TASK TYPE 7 Multiple Choice (with more than one answer)

By the fall of 2010, those officials were looking for more culture to invest in. Suddenly nine million euros became available to build a new wing on Sintes's museum and put a Roman barge into it. There was just one catch. The project would need to be completed by 2013. That sounds like enough time unless you know about ancient wood. Mud had protected the wood of *Arles-Rhône 3* from microbial decay, but water had dissolved the cellulose and filled the wood's cells, leaving the whole boat soft and spongy. If the water evaporated, the whole barge would collapse. The solution was to bathe the wood for months in polyethylene glycol, then freeze-dry it. But the barge would have to be cut into sections small enough to fit into the freeze-dryers. And the process would take nearly two years. That left only one excavation season, 2011, to extract the boat from the Rhône, and usually the Rhône is safe for diving only from late June to October; otherwise the current is too strong. Three or four months would not be enough to excavate *Arles-Rhône 3*. Then 2011 arrived. It hardly snowed in the Alps that winter; that spring it barely rained. The Rhône's current was so gentle that Sabrina Marlier's team got in the water by early May. Her team worked straight into November and completed the job.

When *Arles-Rhône 3* sank, it was carrying 33 tons of building stones. They were flat, irregular slabs of limestone, from three to six inches thick. The boat was pointed upstream, indicating it had been tied up at the quay when it sank. A flash flood had probably swamped it. As the flood subsided, the cloud of sediment it had kicked up settled out of the water again, draping the barge in a layer of fine clay no more than eight inches thick. In that clay, in contact with the boat, Marlier and her team found the crew's personal effects. A sickle they'd used to chop fuel for their cooking fire, with a few wood splinters next to the blade. A plate and a gray pitcher that belonged to the same man—both bore the initials AT. 'That's what's exceptional about this boat,' said Marlier. 'We're missing the captain at the helm. But otherwise we have everything.'

Questions 1 and 2

Choose **TWO** letters, **A–E**.

The list below gives some of the possible reasons why Luc Long's excavation work in the Rhône was challenging.

Which **TWO** of these reasons are mentioned by the writer of the text?

- A** the local authorities' restrictions on certain projects in the river
- B** the competitive attitudes of other archaeologists working in the area
- C** the possibility of excavated items being stolen
- D** the fact that any excavation would interrupt tourist activities
- E** the need to complete a particular project within a given time

1

2

TASK TYPE 7 Multiple Choice (with more than one answer)

Questions 3 and 4

Choose **TWO** letters, A–E.

Which **TWO** of the following statements are true of the Roman boat?

- A It had been constructed in a way that was unusual for Roman times.
- B It had been broken into several parts by the force of the mud it was under.
- C It was excavated so it could bring economic benefit to the area.
- D It was carrying a kind of cargo for which it had not been originally designed.
- E It contained more preserved items than are normally found on an excavated boat.

3

4

IELTS PRACTICE TASK**Rising seas**

As the planet warms, the sea rises. Coastlines flood. What will we protect? What will we abandon?

How will we face the danger of rising seas?

An extremely altered planet is what our fossil-fuel-driven civilization is creating, a planet where massive flooding will become more common and more destructive for the world's coastal cities. By releasing carbon dioxide and other heat-trapping gases into the atmosphere, we have warmed the Earth by more than a full degree Fahrenheit over the past century and raised sea level by about eight inches. This warming of our planet affects sea level in two ways. About a third of its rise comes from thermal expansion – from the fact that water grows in volume as it warms. The rest comes from the melting of ice on land. So far it's been mostly mountain glaciers, but for the future the big concern is the giant ice sheets in Greenland and Antarctica. These areas combined have lost on average about 50 cubic miles of ice each year since 1992. Many think sea level will be at least three feet higher than today by 2100. Even that figure might be too low.

Coastal cities now face a twin threat: rising oceans will gradually flood low-lying areas, and higher seas will extend the destructive reach of storm surges. Using a conservative prediction of a half meter (20 inches) of sea-level rise, the Organisation for Economic Co-operation and Development (OECD) estimates that by 2070, 150 million inhabitants of the world's large port cities will be at risk from coastal flooding, along with \$35 trillion worth of property, an amount that will equal 9 % of the global GDP. How will they cope?

Malcolm Bowman, a physical oceanographer at the State University of New York, has been trying for years to persuade anyone who will listen that New York City needs greater protection from flooding. He proposes two barriers: one constructed at Throgs Neck, to keep floods from Long Island Sound out of the East River, and a second one spanning the harbor south of the city. Gates would be adjusted for ships and tides, closing only during storms. Another way to safeguard New York might be to revive a bit of its past, according to landscape architect Kate Orff. She explains how the islands and shallows along the coastline vanished long ago, demolished by harbor-dredging and landfill projects that added new real estate to a growing city. Orff suggests that throughout the harbor, there would be dozens of artificial reefs built from stone, rope, and wood pilings and seeded with oysters and other shellfish. These would continue to grow as sea levels rose, helping to lessen the impact of storm waves – and the shellfish, being filter feeders, would also help clean the harbor. '25 % of New York Harbor used to be oyster beds,' Orff says.

TASK TYPE 8 Sentence Completion

The Netherlands has taken other approaches to the issue of flooding. In Rotterdam, Arnoud Molenaar is the manager of the city's Climate Proof program, which aims to make Rotterdam resistant to future sea levels. He describes the assorted flood-control structures that have been constructed there, including an underground car park designed to hold 10,000 cubic meters – more than 2.5 million gallons – of rainwater. He also mentions Rotterdam's Floating Pavilion, a group of three connected, transparent domes on a platform in a harbor off the Meuse river. These are about three storeys tall, and made of a plastic that's a hundred times as light as glass. Though used for meetings and exhibitions, their main purpose is to demonstrate the wide potential of floating urban architecture. By 2040 the city anticipates that as many as 1,200 homes will float in the harbor.

Among the most vulnerable low-lying cities in the U.S. is Miami in the state of Florida. There is no obvious engineering solution to flooding on this peninsula as it sits on top of a foundation of highly porous limestone – meaning that sea water just flows through the foundation, gradually eroding it. Even now, during unusually high tides, seawater spouts from sewers in Miami Beach, Fort Lauderdale, and other cities, flooding streets. In a state exposed to hurricanes as well as rising seas, people like John Van Leer, an oceanographer at the University of Miami, worry that one day they will no longer be able to acquire insurance for their houses. 'If buyers can't insure it, they can't get a mortgage on it. And if they can't get a mortgage, you can only sell to cash buyers,' Van Leer says. 'What I'm looking for is a climate-change denier with a lot of money.'

Questions 1–8

Complete the sentences below.

Choose **NO MORE THAN TWO WORDS** from the passage for each answer.

- 1 The process of is one reason why sea levels are rising.
- 2 In the future, it is the water released from enormous that may contribute most to rising sea levels.
- 3 The OECD is concerned about the impact of flooding on coastline, as well as people living in port cities.
- 4 Malcolm Bowman has proposed erecting some to reduce the effects of flooding in New York City.
- 5 Kate Orff believes that would prevent flooding and lead to a cleaner harbour.
- 6 In Rotterdam, rainwater can be contained in a massive built below ground level.
- 7 Plastic in Rotterdam give an idea of how flood-proof buildings could be designed.
- 8 In Miami, people may no longer be able to get house, which limits the number of potential buyers.

IELTS PRACTICE TASK

The history of colour

How the invention of synthetic colour changed our world

Today, in the urban centres of the 21st century, we are surrounded by a vast spectrum of colours that once only occurred within the natural world. We now take it for granted that the products that we buy and the packaging they are presented in will be available in our preferred shade or tone. Colourful man-made objects have become so ubiquitous that it requires a stretch of the imagination to conceive of a time when such a range did not exist, but until the mid-19th century, this was indeed the case.

It was the ancient civilizations of China, Rome, Persia, India and Egypt where the craft of dyeing fabric was developed; an often complicated and labour-intensive process. Dyes that were derived from vegetables were usually cheaper and more easily obtainable than ones derived from animals. The roots of a plant called madder were used to create a strong red colour, and the leaves of the indigo shrub produced a colour between blue and violet. Saffron and turmeric plants, now used to colour and flavour food, once created yellow and orange hues for cloth. Because of the scarcity of certain sources or the complexity of production, some colours were only worn by very wealthy people or royalty, for example, purple which originated in the Mediterranean and was a dye created from the secretions of sea snails; and black, coming from oak or chestnut wood, which indicated high status in 14th century Europe. In the 15th century, South America began exporting large quantities of a dye called carmine to Europe; this deep crimson-red colour was derived from the crushed bodies and eggs of the cochineal beetle. Carmine remains a major component of food colouring and cosmetics even now.

Although dyeing methods had evolved over the millennia, the use of natural sources would always be impractical; there was no guarantee that the colour of dyed material would be consistent or that the material, when exposed to the sun, would not suffer from fading over a period of time. Furthermore, it would often take months to produce a relatively small quantity of fabric, an insufficient supply for growing populations. In the 19th century, the expanding European textile industry created a need for larger quantities of cheaper and more adaptable dyes. It was a young English chemist, William Henry Perkin, who responded to this need, quite by accident. In 1856, he was experimenting in his laboratory, with the aim of synthesising the drug quinine, used to help people suffering from malaria. One of the chemical compounds he was testing was aniline. From this, he obtained a black solid, and then isolated a dye that could colour silk purple. The dyed silk did not fade in the sun and did not wash out. Perkin had thus created the first synthetic dye. He built a factory to manufacture the dye on an industrial scale, and developed a technique to apply the dye to cotton materials that could be made into dresses and accessories.

TASK TYPE 9 Summary Completion (1)

The new colour, which Perkins named 'Aniline Purple', quickly became fashionable and much in demand, both in Britain and overseas. Due to its growing reputation in France, Perkins made a sensible marketing decision and changed the name to 'mauve', after the French word for the purple mallow flower. Perkin's discovery not only inspired other scientists and researchers to experiment with synthetic colours, but also demonstrated to manufacturers that colour novelty could be used to attract customers. Now, when it comes to establishing a brand, it is often the use of colour or a colour combination that speaks to potential buyers, and it is colour which often determines consumer choice.

Questions 1–8

Complete the summary below.

Choose **ONE WORD ONLY** from the passage for each answer.

Write your answers **1–8** below.

Summary

The craft of dyeing has been practised since ancient times. Early civilizations found it was more difficult to get dyes from **1** than from plants, and so it was plants that they tended to rely on, sometimes using roots but also the **2**, depending on the species, and whether they wanted red, blue, yellow or orange dye. Some colours were traditionally worn only by **3** or the very rich, such as purple and black. By the 15th century, a crimson-red dye, which is still used in **4** and to add colour to food products, was imported by Europe from South America. However, there were various problems with using natural sources; it was never certain that the exact same colour would appear in dyed material; gradual **5** was likely to occur, and quantities of the dyed material were never enough to meet demand. Fortunately, in 1856, while chemist William Henry Perkin was attempting to find a way of treating **6**, he accidentally discovered that a purple dye can be obtained from the chemical aniline. His purple-dyed fabrics made of **7** quickly became popular, and he ended up calling his synthesized colour 'mauve'. Companies now rely heavily on colour to make their **8** known to people, and to persuade them to buy.

IELTS PRACTICE TASK**The amazing brains of babies**

Recent scientific techniques have challenged our beliefs about the way that babies think.

In the past three decades remarkable discoveries have been made about the way babies think and the development of their brains. It was previously thought in the scientific community that babies and young children were amoral and therefore unable to understand the perspective of other people, and that they were also quite irrational; unable to make sense of the world around them. However, new scientific techniques have proved otherwise. From an evolutionary point of view, one of the most fascinating things about humans is that they take a very long time to develop all the skills and knowledge required to survive independently of their parent. In other words, humans experience a far longer childhood than any other species. Nevertheless, this does, in fact, benefit them in the long run.

Of course, the young of some animal species can fend for themselves within hours or days of being born. Known as 'precocial' species, these animals enter the world with specific innate capabilities that allow them to survive in a particular set of environmental circumstances. They can move with agility, search for food, and avoid predators intuitively – without conscious thought. In other words, they just *know* what to do. 'Altricial' species behave rather differently. They must learn how to co-ordinate their limbs, need feeding by their parents, and must be protected from enemies. But while all this is happening, learning is still occurring in their very flexible brains. Neurons, or nerve cells as they are also known, are the cells in the brain that process and transmit information through electrical and chemical signals. These signals between neurons happen via synapses, specialized connections with other cells. It is now known that the brains of babies have many more connections between neurons than adults. The area of the brain called the prefrontal cortex takes a particularly long time to develop, however. In an adult, this region allows a person to focus on achieving internal goals, and to work out which actions are most likely to achieve them quickly and effectively. It is also the area which allows a person to control their feelings and moderate their social behaviour. On the surface, therefore, it may seem that the slow development of the prefrontal cortex is a disadvantage, but actually it may aid the process of learning. The prefrontal cortex also restricts irrelevant thoughts or behaviours, and in a baby, because they are uninhibited in this way, it may encourage them to explore freely and learn flexibly, giving them an eventual advantage over other species.

What are the implications of this for the way we raise our young children? Science has certainly demonstrated how vitally important a child's early years are, and some policy makers have responded to this by insisting on the establishment of early education programmes and continual testing. Many parents are also anxious to give their children a head start by enrolling them in extra classes and paying for out-of-school tuition. Yet science suggests that children learn best from normal daily interaction with other people and things, and from playful exploration of their environment within a safe setting. This is when all those neurons get excited the most.

TASK TYPE 10 Summary Completion (2)

Questions 1–6

Complete the summary using the list of words, **A–I**, below.

Write the correct letter, **A–I**, below.

How babies think

Thirty years ago, scientists believed that human babies lacked **1** and had no sense of right and wrong. Today the common belief is quite different. Scientists have realised that human babies' period of **2** has an evolutionary advantage. Unlike precocial species which are born with **3** , humans belong to altricial species which rely on gradual learning to function well as adults. In humans, the prefrontal cortex, responsible for efficient action and **4** , takes a particularly long time to develop. This slow development of the prefrontal cortex, however, allows **5** in babies instead. What some scientists have concluded, is that the most effective learning in young children occurs when they take part in as many **6** as possible.

A emotional balance

B academic situations

C instinctive abilities

D communication strategies

E basic logic

F everyday experiences

G extended immaturity

H creative thinking

I intellectual development

IELTS PRACTICE TASK**Champions of the track**

Researchers investigate what makes some athletes faster than others

With the next Olympics in sight, athletes, their trainers, and sports fans alike are wondering just what new records will be set in the marathon. In this event, runners must cover a distance of just over 26 miles, and what's amazing is that today's champions are running at a pace that could only be achieved for the 10,000 metres run a mere century ago. So have humans become better built in some way? Is it to do with better nutrition or training routines? Research teams have been looking into why these accomplishments have become possible.

Professor Eileen Atkinson is at the forefront of such studies. She has concluded that there are a number of key factors responsible for improved speed and pace. A hundred years back, there was no such thing as training every day. The widely held belief amongst athletes and coaches was that three or four times per week was sufficient, otherwise athletes could risk 'overtraining' and actually get worse rather than better at running. In the years since, that view has been completely rejected and the amount of training has increased: now runners are out on the track for hours at a time, each and every day. Atkinson is also keen to point out that athletes are no longer just from the developed world; perhaps partly due to sponsorship, athletes from developing countries are also able to compete, and with increasing frequency, win.

Atkinson and her team have also looked at what kind of treadmill times first-class athletes have achieved in the past and now. What they have found is that there is very little difference between current and previous generations when it comes to performance on a running machine. So why the big difference on the track? Atkinson puts it down to the fact that the design and construction of racetracks have come a long way, and sport shoe technology has seen similar improvement. Both these developments could be giving today's runners an edge. Atkinson's team have also been carefully measuring the oxygen consumption of athletes compared to non-athletes while on treadmills. In top athletes, the maximal oxygen uptake (the maximum capacity for oxygen consumption) will be far higher than the capacity of non-athletes, meaning that cardiac output, the amount of blood pumped per minute, will also be better. This all helps indicate a runner's level of aerobic fitness.

Another interesting aspect of successful marathon running that Atkinson explored was the impact of ageing on performance. Although the generally held view is that peak performance is normally achieved somewhere between the mid-twenties to mid-thirties, and that runners will experience a decline thereafter, this is an average, and not necessarily true for all individuals. Some runners in their forties, even fifties, are able to go the distance due to their commitment to tough training programmes. In other words, there is no set point at which an athlete should announce retirement.

TASK TYPE 11 Matching Sentence Endings

Atkinson is also keen to dispel another popular myth. The belief that there is a specific gene that guarantees athletic superiority is an idea that has no scientific foundation. Many genes play a role in enhancing athletic performance, but the likelihood of any one person having the exact grouping of genes required to become a natural champion is minimal. Rather, for many young athletes, it comes down to internal motivation and external incentives.

Questions 1–5

*Complete each sentence with the correct ending, **A–G**, below.*

*Write the correct letter **A–G** below.*

- 1 It is wrong to assume that runners' performances
- 2 The speeds of modern runners compared to earlier runners
- 3 The amount of oxygen the best runners can utilise during a race
- 4 The chances of older runners performing well in a race
- 5 The combination of genes in an individual runner

- A** can be linked to the performance of their hearts.
- B** may depend on what running style they adopt.
- C** will probably not play a role in their overall success.
- D** might be better because of superior equipment and facilities.
- E** can be weakened through daily practice.
- F** will gradually decrease over long distances.
- G** will depend on how hard they continue to train.

IELTS PRACTICE TASK**Sugar and society**

How has sugar impacted on human development and health?

The use of sugar and sugar production goes back to ancient times. On the island of New Guinea, where sugar cane was domesticated some 10,000 years ago, people picked cane and ate it raw. Sugar spread from island to island in the south-western Pacific Ocean, finally reaching the Asian mainland around 1000 B.C. By A.D. 500 it was being processed into a powder in India and used among other things to treat headaches and stomach problems. For years, sugar refinement remained a secret science, passed from master to apprentice. By A.D. 600 the art had spread to Persia, and then when Arab armies conquered the region, they carried away the knowledge and love of sugar, and turned the art into an industry. The work was brutally difficult, however. By A.D. 1500, with the demand for sugar surging, the work was considered suitable only for the lowest of labourers.

The sugar that eventually reached the West was consumed only by the very wealthy as it was so rare. The European 'Age of Exploration', the search for new land that would send Europeans all around the world, was in reality, to no small degree, a hunt for fields where sugar cane would prosper in the tropical temperatures and rainfall. In 1425 the Portuguese prince known as Henry the Navigator sent sugar cane to Madeira with an early group of colonists. The crop soon made its way to other newly discovered Atlantic islands. Then, in September 1493, when Christopher Columbus set off from Spain on his second voyage to the Americas, he too carried cane. Thus dawned the age of big sugar production in the Caribbean islands.

As more cane was planted, the price of the product fell, and as the price fell, demand increased. Economists call it a 'virtuous cycle' – not a phrase you would use if you were one of the millions of slaves involved in production. In the mid-17th century sugar began to change from a luxury spice to a staple part of the diet: first for the middle class, then for the poor. There was no stopping the boom. In 1700 the average Englishman consumed four pounds a year. Today the average American consumes 77 pounds of added sugar annually, or more than 22 teaspoons of added sugar a day.

'It seems like every time I study an illness and trace a path to the first cause, I find my way back to sugar,' says Richard Johnson, a nephrologist at the University of Colorado Denver. 'Why is it that one-third of adults [worldwide] have high blood pressure, when in 1900 only 5% had high blood pressure?' he asks. 'Why did 153 million people have diabetes in 1980, and now we're up to 347 million? Sugar, we believe, is one of the culprits, if not the major culprit.' This is hardly a novel theory. In the 1960s the British nutrition expert John Yudkin conducted a series of experiments on

TASK TYPE 12 Multiple Choice

animals and people showing that high amounts of sugar in the diet led to high levels of fat and insulin in the blood – risk factors for heart disease and diabetes. But Yudkin’s message was drowned out by a chorus of other scientists blaming the rising rates of obesity and heart disease instead on cholesterol caused by too much saturated fat in the diet.

As a result, fat makes up a smaller portion of the American diet than it did 20 years ago. Yet the portion of America that is obese has only grown larger. The primary reason, says Johnson, along with other experts, is sugar, and in particular fructose. Sucrose, or table sugar, is composed of equal amounts of glucose and fructose, the latter being the kind of sugar you find naturally in fruit. It’s also what manufacturers use to give table sugar its sweetness, and which is found in large quantities in soft drinks and candy. Johnson summed up the conventional wisdom this way: Americans are obese because they eat too much and exercise too little. But they eat too much and exercise too little because they’re addicted to sugar, which not only makes them fatter but also reduces their energy.

The solution? Stop eating so much sugar. When people cut back, many of the ill effects disappear. The trouble is, in today’s world it’s extremely difficult to avoid sugar: manufacturers use sugar to replace taste in foods low in fat so that they seem more healthful. But if sugar is so bad for us, why do we crave it? The short answer is that an injection of sugar into the bloodstream stimulates the pleasure centres of the brain. All tasty foods do this to some extent— but sugar has a sharply pronounced effect. In this sense it is literally addictive.

Questions 1–6

Choose the correct answer, **A**, **B**, **C** or **D**.

- 1 What are we told about sugar production in ancient times?
 - A It became physically less demanding as production methods improved.
 - B The Arabs simplified the way the Persians had produced sugar.
 - C It was a process that producers did not wish to share with other people.
 - D India produced sugar mainly for medicinal purposes rather than dietary ones.

- 2 What does the writer suggest about the ‘Age of Exploration’?
 - A It led to a new understanding of how sugarcane would best grow.
 - B It was partly motivated by the need to develop the sugar industry.
 - C It was a time when it was easy to persuade people to invest in sugar.
 - D It probably resulted in the development of new kinds of sugar cane.

TASK TYPE 12 Multiple Choice

- 3** What is the writer's main point in the third paragraph?
- A** Sugar has changed from being a rare food item to an everyday one.
 - B** People in lower socio-economic groups are now the highest consumers of sugar.
 - C** Most people are unaware of how the sugar industry once exploited workers.
 - D** Economists in the 17th century failed to predict how the demand for sugar would grow.
- 4** The writer refers to John Yudkin's experiments in order to show
- A** when the connection between sugar and heart disease was established.
 - B** that using animals to predict human reaction to sugar is an unreliable method.
 - C** that scientists are likely to alter their opinions on the effects of sugar in the future.
 - D** how there is a need for further research into the combined effects on health of fat and sugar.
- 5** What is the writer doing in the fifth paragraph?
- A** calling for greater responsibility on the part of manufacturers
 - B** questioning the value of high fruit consumption to people's health
 - C** comparing the benefits of natural sugar to its processed form
 - D** explaining the nature and consequences of a particular cycle
- 6** Which of the following best summarises the writer's argument in the final paragraph?
- A** It is naturally harder for some people to reduce their sugar intake than others.
 - B** Sugar is frequently used to disguise the unpleasant taste of certain foods.
 - C** The human brain is designed to have a positive response to sugar.
 - D** Consumers are easily misled about the true sugar content in products.

TASK TYPE 13 Identifying the Writer's Views and Claims (Yes/No/Not Given)

IELTS PRACTICE TASK

The future of coal

Can this source of energy ever be made cleaner?

Coal currently provides an estimated 40% of the world's electricity, and with that, millions of jobs for people working in the sector. It also produces 39% of global carbon dioxide, and causes serious health problems for many urban populations. As a source of energy, it provides us with heat and power, but it is often a disaster for local environments and the global climate.

The big question is not how we can make coal *clean*, which is impossible, but how to make it *cleaner*. In the USA, the Clean Air Act was a law that was introduced to reduce the emission of sulphur dioxide and nitrogen oxides from factories and power plants. The consequent reductions have been dramatic, showing that laws like this can and do make a difference. Unfortunately, less progress has been made with carbon dioxide regulations. Last year 34.5 billion metric tons of carbon dioxide were emitted from fossil fuels, the highest amount on record, with coal contributing the most. Cheap natural gas has recently reduced the demand for coal in the USA, but elsewhere demand is rising. Over the next twenty years several hundred million people worldwide will gain access to electricity for the first time, and it is likely that most of them will use power produced by coal.

American Electric Power's Mountaineer Plant in West Virginia supplies electricity to 1.3 million customers across seven states. Those customers pay relatively little to power the contents of their households: refrigerators, washers, dryers, flat screens and lights, but neither they nor any American power company have to pay anything for the right to pollute the atmosphere. However, to their credit, Mountaineer did carry out an experiment in containing the carbon they produced. Through a complex chemical process, they were able to compress over 37,000 metric tons of carbon dioxide and inject it into a large area of sandstone a mile below ground level. It was a successful system and they had planned to develop the project further to increase the amount of carbon dioxide that they could capture. However, they were unable to obtain the financial investment they needed from the United States Department of Energy, due to a change in climate change legislation, and they were forced to abandon it.

Trapping carbon dioxide underground is nothing new, however. Other companies in North America and Norway have also been experimenting with this for the last few decades. Although some voices in the media have expressed concerns about the possibility of a sudden and catastrophic leak of carbon dioxide – which would be lethal to people and animals – the risk of this happening is extremely low. More worrying would be smaller leaks occurring over long periods of time that would defeat the purpose of storage. The task ahead, then, is to make carbon capture more efficient, and countries such as China are keen to make this happen. In Tianjin, about 85 miles from Beijing, a power plant called GreenGen is China's first power plant designed to capture 80% of its emissions,

TASK TYPE 13 Identifying the Writer's Views and Claims (Yes/No/Not Given)

and likewise, in the U.S. a new power plant in eastern Mississippi has also come up with the technology to capture a high proportion of carbon dioxide. Technological innovation is only half a solution, though. It won't be adopted by other power companies until governments require it, for instance, by imposing a tax on the carbon that plants emit. This may be a small price to pay for the sake of our future.

Questions 1–6

Do the following statements agree with the claims of the writer in the Reading Passage?

You should write

YES	<i>if the statement agrees with the claims of the writer</i>
NO	<i>if the statement contradicts the claims of the writer</i>
NOT GIVEN	<i>if it is impossible to say what the writer thinks about this</i>

- 1 The Clean Air Act has been disappointing in what it has achieved so far.
- 2 The use of natural gas in the USA is likely to soon overtake the use of coal.
- 3 People need to be more responsible in the way they use power in their homes.
- 4 It was Mountaineer's own choice to give up its carbon dioxide storage project.
- 5 There is only a small chance that stored carbon dioxide might escape from below ground.
- 6 Carbon-storage technology will only spread if the government makes it compulsory.

TASK TYPE 1 Identifying Information (True/False/Not Given)

- 1 TRUE** ... by the beginning of the eighteenth century, they [scientists] agreed without exception that it was round.
- 2 NOT GIVEN** We are told Newton had a theory about the shape of the Earth at the equator, but the text does not refer to him ever having travelled there.
- 3 TRUE** ... it was also a serious question that affected how maps and sailing charts were drawn, and therefore the safety of sailors at sea.
- 4 NOT GIVEN** One expedition 'would travel close to the North Pole and another 'to the equator.' This refers to future events. The text does not refer to the two men ever working together in the past.
- 5 FALSE** Finally, after four years' work – more than twice the time the leader had intended – the survey work was complete.
- 6 FALSE** As part of their research, they had built small pyramids made of rock as permanent features from which to take certain measurements and their remains can still be seen today as monuments to the expedition.

TASK TYPE 2 Note/Table Completion

- 1 oceans** One reason for this was that the natural environment was a perfect source of food to support the bird population, particularly from the enormous **oceans** that surround the country.
- 2 mammals** Another important factor was that the birds had no predators on land because, with the exception of a single species of bat, there weren't any **mammals** at all in the country that would otherwise have killed birds and kept their numbers down.
- 3 wings** For example, they didn't have to defend themselves from predators, so many birds lived on the ground and didn't have **wings** because they didn't need to fly, such as the iconic kiwi bird and also the much larger, ostrich-like bird called the moa.

4 eggs One final development was that many of these birds now made their nests on the ground rather than in trees and the **eggs** that they laid became much bigger over time.

5 (Pacific) rats Unfortunately, however, they unintentionally brought **Pacific rats** with them, a species previously unknown in New Zealand, and these killed many birds that were unable to fly away.

6 (fish) hooks Birds were useful in other ways, too. **Fish hooks** were frequently manufactured from bones, while feathers were highly prized as decorations to be worn in the hair or clothing.

7 fast ...and he has concluded that New Zealand is a unique example because bird species were wiped out so **fast**, relative to other countries.

8 (hunting) dogs The journals of the earliest European explorers in the country are full of references to how they relied on their **hunting dogs** to catch birds in order to supply the expedition with food.

9 deforestation ... but before this was possible it was necessary to clear the land of trees, and this process of **deforestation** had serious consequences for many birds ...

10 (small) islands The location for nearly all of these sanctuaries has been small **islands** scattered around the coastline,

TASK TYPE 3 Short Answer Questions

1 fighter planes / Lightning planes / lightning planes / planes Earl had been inspired by the twin tail fins he'd seen on the Lightning fighter planes used during the war and ...

2 race / a race So, in the 1950s, a race began between American car manufacturers to see who could produce cars with the most pronounced ...

3 (national) optimism But in the 1950s and 60s the American people were filled with a sense of national optimism, because theirs was a young country...

4 Firebird III / Firebird 3 General Motors' Firebird III had no fewer than nine fins – still a world record ...

5 (new) laws The result was that the Federal Government passed a number of new laws that transformed the automotive industry.

6 (abnormal) shrimp In 1998, Chinese researchers found a fossil, deep beneath the ground, of a species they named the abnormal shrimp.

TASK TYPE 4 Matching Headings

A iv This paragraph says when and where the first malls were built and how the 'craze' for mall shopping went global. But it then goes on to state that many malls are becoming less popular today in the face of competition from the Internet. Thus, malls have gone in and out of fashion.

B vi This paragraph outlines the ideas behind all the first malls – i.e. to create a focal point in the suburbs, rather like a town square. NB, the reference to Cleveland Arcade is misleading and may lead some students to choose option i. However, the text goes on to say that the Cleveland Arcade cannot be considered a forebear to today's malls.

C i This paragraph focusses on the writer's local mall and the efforts it has made to promote itself over the years. The writer extrapolates from this comment on malls in general, but the focus remains overwhelmingly on 'my local mall'.

D vii This paragraph emphasises the importance of supermarkets – one type of shop. Supermarkets draw consumers into malls. They also started the process of exploiting shopper behaviour.

E iii This paragraph describes 'on-going' research – 'these days it's not an understatement', 'It's commonplace today' etc. It describes how all malls promote themselves, not just one mall (item i).

TASK TYPE 5 Matching Information

1 C Professor Blaser's laboratory was ahead of the field and developed the original blood analysis techniques to identify the bacterium, and most of them are commonly in use today.

2 D In 1998 Professor Blaser's findings appeared in the British Medical Journal.' etc.

3 C ... in addition to his medical work, he helped to set up an important magazine of literary criticism in the United States. And perhaps it was this diversity of perspective that first caused him to wonder about *H. pylori*.

4 A However, it would be a mistake to assume from its diminutive proportions or the fact that it occurs so frequently that the bacteria is a benign presence in the human body.

5 D *H. pylori* might actually help promote human health, such as by regulating the level of acidity in the stomach.

6 A ... to give a sense of scale, a grain of sand is about three hundred microns long. Sand is a familiar natural substance.

7 B In the 1980s doctors realised that antibiotic medications could free the body of the bacterium and thus cure various illnesses including gastritis and stomach ulcers.

TASK TYPE 6 Matching Features

1 B simple = 'design is not that hard'; universal = 'faced by every urban centre'; practical = 'roads, water, sewage'.

2 C ... but the smaller heritage sites, the homes of lesser writers or community leaders for example, which also give our cities a sense of common ancestry, are too often torn down by property developers and replaced with glass towers.

3 A each city is different, it has its own climate and landscape, its own types of stone, wood and traditional building methods.

4 B ... creating urban facilities intended for all residents, whether that be galleries, museums, recreational centres, or open areas such as parks and squares.

5 D She also thinks there's too much repetition in urban architecture and that planners need to conceive of architecture in far more innovative and individual ways.

6 A I can think of no other form of design that incorporates such a broad range of factors ...

TASK TYPE 7 Multiple Choice (with more than one answer)

1/2 C Word began to leak out (= spread). The French customs police warned Long that antiquities thieves (= people who steal valuable antiques and old treasures) might be watching his operation.

1/2 E The project would need to be completed by 2013. That sounds like enough time unless you know about ancient wood. ... usually the Rhône is safe for diving only from late June to October; otherwise the current is too strong. Three or four months would not be enough to excavate *Arles-Rhône 3*.

3/4 C When a modest town like ours got 400,000 visitors, the politicians understood that the economic return was strong (= money could be made from archaeological exhibitions).

3/4 E Marlier and her team found the crew's personal effects (=the items they owned). A sickle they'd used to chop fuel for their cooking fire ... A plate and a gray pitcher that belonged to the same man ... 'That's what's exceptional (= unusual, not normal) about this boat,' said Marlier.

TASK TYPE 8 Sentence Completion

1 thermal expansion About a third of its rise comes from thermal expansion – from the fact that water grows in volume as it warms.

2 ice sheets ... but for the future the big concern is the giant ice sheets in Greenland and Antarctica.

3 property ... 150 million inhabitants of the world's large port cities will be at risk from coastal flooding, along with \$35 trillion worth of property, ...

4 barriers He proposes two barriers: one constructed at Throgs Neck, to keep floods from Long Island Sound out of the East River, and a second one spanning the harbor south of the city.

5 artificial reefs Orff suggests that throughout the harbor, there would be dozens of artificial reefs built from stone, rope, and wood pilings and seeded with oysters and other shellfish.

6 car park ... including an underground car park designed to hold 10,000 cubic meters – more than 2.5 million gallons – of rainwater.

7 domes He also mentions Rotterdam's Floating Pavilion, a group of three connected, transparent domes on a platform in a harbor off the Meuse river. These are about three storeys tall, and made of a plastic ...

8 insurance ... people like John Van Leer, an oceanographer at the University of Miami, worry that one day they will no longer be able to acquire insurance for their houses.

TASK TYPE 9 Summary Completion (1)

1 animals Dyes that were derived from vegetables were usually cheaper and more easily obtainable than ones derived from animals.

2 leaves The roots of a plant called madder were used to create a strong red colour, and the leaves of the indigo shrub produced a colour between blue and violet.

3 royalty ... some colours were only worn by very wealthy people or royalty, for example, purple which originated in the Mediterranean ... and black ... which indicated high status in 14th century Europe.

4 cosmetics Carmine remains a major component of food colouring and cosmetics even now.

5 fading ... or that the material, when exposed to the sun, would not suffer from fading over a period of time.

6 malaria In 1856, he was experimenting in his laboratory, with the aim of synthesising the drug quinine, used to help people suffering from malaria.

7 cotton He ... developed a technique to apply the dye to cotton materials that could be made into dresses and accessories.

8 brand Now, when it comes to establishing a brand, it is often the use of colour or a colour combination, that speaks to potential buyers ...

TASK TYPE 10 Summary Completion (2)

- 1 E unable to understand the perspective of other people, and that they were also quite irrational ...
- 2 G ... humans experience a far longer childhood than any other species. Nevertheless, this does, in fact, benefit them in the long run.
- 3 C ... these animals enter the world with specific innate capabilities that allow them to survive in a particular set of environmental circumstances.
- 4 A It is also the area which allows a person to control their feelings and moderate their social behaviour.
- 5 H ... because they are uninhibited in this way, it may encourage them to explore freely and learn flexibly ...
- 6 F ... children learn best from normal daily interaction with other people and things ...

TASK TYPE 11 Matching Sentence Endings

- 1 E In the years since, that view has been completely rejected and the amount of training has increased: now runners are out on the track for hours at a time, each and every day.
- 2 D ... the design and construction of racetracks have come a long way, and sport shoe technology has seen similar improvement. Both these developments could be giving today's runners an edge.
- 3 A In top athletes, the maximal oxygen uptake ... will be far higher than the capacity of non-athletes, meaning that cardiac output, the amount of blood pumped per minute, will also be better.
- 4 G Some runners in their forties, even fifties, are able to go the distance due to their commitment to tough training programmes.
- 5 C ... the likelihood of any one person having the exact grouping of genes required to become a natural champion is minimal.

TASK TYPE 12 Multiple Choice

- 1 C For years sugar refinement remained a secret science, passed from master to apprentice ...
- 2 B The European 'Age of Exploration', the search for new land that would send Europeans all around the world, was in reality, to no small degree, a hunt for fields where sugar cane would prosper in the tropical temperatures and rainfall.
- 3 A In the mid-17th century sugar began to change from a luxury spice to a staple (=normal, main) part of the diet: first for the middle class, then for the poor.
- 4 A In the 1960s the British nutrition expert John Yudkin conducted a series of experiments on animals and people showing that high amounts of sugar in the diet led to high levels of fat and insulin in the blood—risk factors for heart disease and diabetes.
- 5 D Americans are obese because they eat too much and exercise too little. But they eat too much and exercise too little because they're addicted to sugar, which not only makes them fatter but also reduces their energy.
- 6 C ... an injection of sugar into the bloodstream stimulates the pleasure centres of the brain.

TASK TYPE 13 Identifying the Writer's Views and Claims (Yes/No/Not Given)

- 1 NO The consequent reductions have been dramatic (= large, significant), showing that laws like this can and do make a difference.
- 2 NOT GIVEN Cheap natural gas has recently reduced the demand for coal in the U.S., but elsewhere demand is rising. We are not told whether gas is now more commonly used than coal, or whether the writer thinks this will happen in the future.

ANSWER KEY

3 NOT GIVEN Those customers pay relatively little to power the contents of their households; refrigerators, washers, dryers, flatscreens and lights. This sentence only tells us about people's behaviour; we don't know whether the writer wants people to change this behaviour.

4 NO However, they (= Mountaineer) were unable to obtain the financial investment they needed from the United States Department of Energy, due to a change in climate change legislation, and they were forced (= they were obliged) to abandon it (= give up on the project).

5 YES Although some voices in the media have expressed concerns about the possibility of a sudden and catastrophic leak of carbon dioxide ... the risk (= chance) of this happening is extremely low.

6 YES Technological innovation is only half a solution, though. It won't be adopted by other power companies until governments require it (= make it necessary by law).