

# Test 3

## LISTENING

### SECTION 1 Questions 1–10

#### Questions 1–6

Choose the correct letter, **A**, **B** or **C**.

### Free activities in the Burnham area

#### Example

The caller wants to find out about events on

- A** 27 June.
- B** 28 June.
- C** 29 June.

- 1 The 'Family Welcome' event in the art gallery begins at
  - A** 10 am.
  - B** 10.30 am.
  - C** 2 pm.
- 2 The film that is now shown in the 'Family Welcome' event is about
  - A** sculpture.
  - B** painting.
  - C** ceramics.
- 3 When do most of the free concerts take place?
  - A** in the morning
  - B** at lunchtime
  - C** in the evening
- 4 Where will the 4 pm concert of Latin American music take place?
  - A** in a museum
  - B** in a theatre
  - C** in a library
- 5 The boat race begins at
  - A** Summer Pool.
  - B** Charlesworth Bridge.
  - C** Offord Marina.
- 6 One of the boat race teams
  - A** won a regional competition earlier this year.
  - B** has represented the region in a national competition.
  - C** has won several regional competitions.

Questions 7–10

Complete the sentences below.

Write **ONE WORD ONLY** for each answer.

### Paxton Nature Reserve

- 7 Paxton is a good place for seeing rare ..... all year round.
- 8 This is a particularly good time for seeing certain unusual .....
- 9 Visitors will be able to learn about ..... and then collect some.
- 10 Part of the ..... has been made suitable for swimming.

**SECTION 2      Questions 11–20***Questions 11–15*

Choose the correct letter, **A**, **B** or **C**.

**Changes in Barford over the last 50 years**

- 11 In Shona's opinion, why do fewer people use buses in Barford these days?
- A The buses are old and uncomfortable.
  - B Fares have gone up too much.
  - C There are not so many bus routes.
- 12 What change in the road network is known to have benefited the town most?
- A the construction of a bypass
  - B the development of cycle paths
  - C the banning of cars from certain streets
- 13 What is the problem affecting shopping in the town centre?
- A lack of parking spaces
  - B lack of major retailers
  - C lack of restaurants and cafés
- 14 What does Shona say about medical facilities in Barford?
- A There is no hospital.
  - B New medical practices are planned.
  - C The number of dentists is too low.
- 15 The largest number of people are employed in
- A manufacturing.
  - B services.
  - C education.

## Questions 16–20

What is planned for each of the following facilities?

Choose **FIVE** answers from the box and write the correct letter, **A–G**, next to Questions 16–20.

**Plans**

- A** It will move to a new location.
- B** It will have its opening hours extended.
- C** It will be refurbished.
- D** It will be used for a different purpose.
- E** It will have its opening hours reduced.
- F** It will have new management.
- G** It will be expanded.

**Facilities**

- 16** railway station car park .....
- 17** cinema .....
- 18** indoor market .....
- 19** library .....
- 20** nature reserve .....

**SECTION 3**      **Questions 21–30**

Questions 21–26

Complete the table below.

Write **ONE WORD ONLY** for each answer.

Subject of drawing	Change to be made
A <b>21</b> ..... surrounded by trees	Add Malcolm and a <b>22</b> ..... noticing him
People who are <b>23</b> ..... outside the forest	Add Malcolm sitting on a tree trunk and <b>24</b> .....
Ice-skaters on <b>25</b> ..... covered with ice	Add a <b>26</b> ..... for each person

## Questions 27–30

Who is going to write each of the following parts of the report?

Write the correct letter, **A–D**, next to Questions 27–30.

- |   |
|---|
| <p><b>A</b> Helen only</p> <p><b>B</b> Jeremy only</p> <p><b>C</b> both Helen and Jeremy</p> <p><b>D</b> neither Helen nor Jeremy</p> |
|---|

**Parts of the report**

- 27** how they planned the project .....
- 28** how they had ideas for their stories .....
- 29** an interpretation of their stories .....
- 30** comments on the illustrations .....

**SECTION 4 Questions 31–40**

Complete the notes below.

Write **ONE WORD ONLY** for each answer.

## ETHNOGRAPHY IN BUSINESS

Ethnography: research which explores human cultures

It can be used in business:

- to investigate customer needs and **31** .....
- to help companies develop new designs

### Examples of ethnographic research in business

Kitchen equipment

- Researchers found that cooks could not easily see the **32** ..... in measuring cups.

Cell phones

- In Uganda, customers paid to use the cell phones of entrepreneurs.
- These customers wanted to check the **33** ..... used.

Computer companies

- There was a need to develop **34** ..... to improve communication between system administrators and colleagues.

Hospitals

- Nurses needed to access information about **35** ..... in different parts of the hospital.

Airlines

- Respondents recorded information about their **36** ..... while travelling.

**Principles of ethnographic research in business**

- The researcher does not start off with a hypothesis.
- Participants may be selected by criteria such as age, **37** ..... or product used.
- The participants must feel **38** ..... about taking part in the research.
- There is usually direct **39** ..... of the participants.
- The interview is guided by the participant.
- A lot of time is needed for the **40** ..... of the data.
- Researchers look for a meaningful pattern in the data.



**READING****READING PASSAGE 1**

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

**THE STORY OF SILK**

*The history of the world's most luxurious fabric,  
from ancient China to the present day*

Silk is a fine, smooth material produced from the cocoons – soft protective shells – that are made by mulberry silkworms (insect larvae). Legend has it that it was Lei Tzu, wife of the Yellow Emperor, ruler of China in about 3000 BC, who discovered silkworms. One account of the story goes that as she was taking a walk in her husband's gardens, she discovered that silkworms were responsible for the destruction of several mulberry trees. She collected a number of cocoons and sat down to have a rest. It just so happened that while she was sipping some tea, one of the cocoons that she had collected landed in the hot tea and started to unravel into a fine thread. Lei Tzu found that she could wind this thread around her fingers. Subsequently, she persuaded her husband to allow her to rear silkworms on a grove of mulberry trees. She also devised a special reel to draw the fibres from the cocoon into a single thread so that they would be strong enough to be woven into fabric. While it is unknown just how much of this is true, it is certainly known that silk cultivation has existed in China for several millennia.

Originally, silkworm farming was solely restricted to women, and it was they who were responsible for the growing, harvesting and weaving. Silk quickly grew into a symbol of status, and originally, only royalty were entitled to have clothes made of silk. The rules were gradually relaxed over the years until finally during the Qing Dynasty (1644–1911 AD), even peasants, the lowest caste, were also entitled to wear silk. Sometime during the Han Dynasty (206 BC–220 AD), silk was so prized that it was also used as a unit of currency. Government officials were paid their salary in silk, and farmers paid their taxes in grain and silk. Silk was also used as diplomatic gifts by the emperor. Fishing lines, bowstrings, musical instruments and paper were all made using silk. The earliest indication of silk paper being used was discovered in the tomb of a noble who is estimated to have died around 168 AD.

Demand for this exotic fabric eventually created the lucrative trade route now known as the Silk Road, taking silk westward and bringing gold, silver and

wool to the East. It was named the Silk Road after its most precious commodity, which was considered to be worth more than gold. The Silk Road stretched over 6,000 kilometres from Eastern China to the Mediterranean Sea, following the Great Wall of China, climbing the Pamir mountain range, crossing modern-day Afghanistan and going on to the Middle East, with a major trading market in Damascus. From there, the merchandise was shipped across the Mediterranean Sea. Few merchants travelled the entire route; goods were handled mostly by a series of middlemen.

With the mulberry silkworm being native to China, the country was the world's sole producer of silk for many hundreds of years. The secret of silk-making eventually reached the rest of the world via the Byzantine Empire, which ruled over the Mediterranean region of southern Europe, North Africa and the Middle East during the period 330–1453 AD. According to another legend, monks working for the Byzantine emperor Justinian smuggled silkworm eggs to Constantinople (Istanbul in modern-day Turkey) in 550 AD, concealed inside hollow bamboo walking canes. The Byzantines were as secretive as the Chinese, however, and for many centuries the weaving and trading of silk fabric was a strict imperial monopoly. Then in the seventh century, the Arabs conquered Persia, capturing their magnificent silks in the process. Silk production thus spread through Africa, Sicily and Spain as the Arabs

swept through these lands. Andalusia in southern Spain was Europe's main silk-producing centre in the tenth century. By the thirteenth century, however, Italy had become Europe's leader in silk production and export. Venetian merchants traded extensively in silk and encouraged silk growers to settle in Italy. Even now, silk processed in the province of Como in northern Italy enjoys an esteemed reputation.

The nineteenth century and industrialisation saw the downfall of the European silk industry. Cheaper Japanese silk, trade in which was greatly facilitated by the opening of the Suez Canal, was one of the many factors driving the trend. Then in the twentieth century, new manmade fibres, such as nylon, started to be used in what had traditionally been silk products, such as stockings and parachutes. The two world wars, which interrupted the supply of raw material from Japan, also stifled the European silk industry. After the Second World War, Japan's silk production was restored, with improved production and quality of raw silk. Japan was to remain the world's biggest producer of raw silk, and practically the only major exporter of raw silk, until the 1970s. However, in more recent decades, China has gradually recaptured its position as the world's biggest producer and exporter of raw silk and silk yarn. Today, around 125,000 metric tons of silk are produced in the world, and almost two thirds of that production takes place in China.

Questions 1–9

Complete the notes below.

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

Write your answers in boxes 1–9 on your answer sheet.

# THE STORY OF SILK

## Early silk production in China

- Around 3000 BC, according to legend:
  - silkworm cocoon fell into emperor’s wife’s 1 .....
  - emperor’s wife invented a 2 ..... to pull out silk fibres
- Only 3 ..... were allowed to produce silk
- Only 4 ..... were allowed to wear silk
- Silk used as a form of 5 .....
  - e.g. farmers’ taxes consisted partly of silk
- Silk used for many purposes
  - e.g. evidence found of 6 ..... made from silk around 168 AD



## Silk reaches rest of world

- Merchants use Silk Road to take silk westward and bring back 7 ..... and precious metals
- 550 AD: 8 ..... hide silkworm eggs in canes and take them to Constantinople
- Silk production spreads across Middle East and Europe
- 20th century: 9 ..... and other manmade fibres cause decline in silk production

Questions 10–13

Do the following statements agree with the information in Reading Passage 1?

In boxes 10–13 on your answer sheet, write

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

- 10 Gold was the most valuable material transported along the Silk Road.
- 11 Most tradesmen only went along certain sections of the Silk Road.
- 12 The Byzantines spread the practice of silk production across the West.
- 13 Silk yarn makes up the majority of silk currently exported from China.

## READING PASSAGE 2

You should spend about 20 minutes on **Questions 14–26**, which are based on Reading Passage 2 below.

# Great Migrations

Animal migration, however it is defined, is far more than just the movement of animals. It can loosely be described as travel that takes place at regular intervals – often in an annual cycle – that may involve many members of a species, and is rewarded only after a long journey. It suggests inherited instinct. The biologist Hugh Dingle has identified five characteristics that apply, in varying degrees and combinations, to all migrations. They are prolonged movements that carry animals outside familiar habitats; they tend to be linear, not zigzaggy; they involve special behaviours concerning preparation (such as overfeeding) and arrival; they demand special allocations of energy. And one more: migrating animals maintain an intense attentiveness to the greater mission, which keeps them undistracted by temptations and undeterred by challenges that would turn other animals aside.

An arctic tern, on its 20,000 km flight from the extreme south of South America to the Arctic circle, will take no notice of a nice smelly herring offered from a bird-watcher's boat along the way. While local gulls will dive voraciously for such handouts, the tern flies on. Why? The arctic tern resists distraction because it is driven at that moment by an instinctive sense of something we humans find admirable: larger purpose. In other words, it is determined to reach its destination. The bird senses that it can eat, rest and mate later. Right now it is totally focused on the journey; its undivided intent is arrival.

Reaching some gravelly coastline in the Arctic, upon which other arctic terns have converged, will serve its larger purpose as shaped by evolution: finding a place, a time, and a set of circumstances in which it can successfully hatch and rear offspring.

But migration is a complex issue, and biologists define it differently, depending in part on what sorts of animals they study. Joe Berger, of the University of Montana, who works on the American pronghorn and other large terrestrial mammals, prefers what he calls a simple, practical definition suited to his beasts: 'movements from a seasonal home area away to another home area and back again'. Generally the reason for such seasonal back-and-forth movement is to seek resources that aren't available within a single area year-round.

But daily vertical movements by zooplankton in the ocean – upward by night to seek food, downward by day to escape predators – can also be considered migration. So can the movement of aphids when, having depleted the young leaves on one food plant, their offspring then fly onward to a different host plant, with no one aphid ever returning to where it started.

Dingle is an evolutionary biologist who studies insects. His definition is more intricate than Berger's, citing those five features that distinguish migration from other forms of movement. They allow for the fact that, for example, aphids will

become sensitive to blue light (from the sky) when it's time for takeoff on their big journey, and sensitive to yellow light (reflected from tender young leaves) when it's appropriate to land. Birds will fatten themselves with heavy feeding in advance of a long migrational flight. The value of his definition, Dingle argues, is that it focuses attention on what the phenomenon of wildebeest migration shares with the phenomenon of the aphids, and therefore helps guide researchers towards understanding how evolution has produced them all.

Human behaviour, however, is having a detrimental impact on animal migration. The pronghorn, which resembles an antelope, though they are unrelated, is the fastest land mammal of the New World. One population, which spends the summer in the mountainous Grand Teton National Park of the western USA, follows a narrow route from its summer range in the mountains, across a river, and down onto the plains. Here they wait out the frozen months, feeding mainly on sagebrush blown clear of snow. These pronghorn are notable for the invariance of their migration route and the severity of its constriction at three bottlenecks. If they can't pass through each of the three during their spring migration, they can't reach their bounty of summer grazing; if they can't

pass through again in autumn, escaping south onto those windblown plains, they are likely to die trying to overwinter in the deep snow. Pronghorn, dependent on distance vision and speed to keep safe from predators, traverse high, open shoulders of land, where they can see and run. At one of the bottlenecks, forested hills rise to form a V, leaving a corridor of open ground only about 150 metres wide, filled with private homes. Increasing development is leading toward a crisis for the pronghorn, threatening to choke off their passageway.

Conservation scientists, along with some biologists and land managers within the USA's National Park Service and other agencies, are now working to preserve migrational behaviours, not just species and habitats. A National Forest has recognised the path of the pronghorn, much of which passes across its land, as a protected migration corridor. But neither the Forest Service nor the Park Service can control what happens on private land at a bottleneck. And with certain other migrating species, the challenge is complicated further – by vastly greater distances traversed, more jurisdictions, more borders, more dangers along the way. We will require wisdom and resoluteness to ensure that migrating species can continue their journeying a while longer.

Questions 14–18

Do the following statements agree with the information given in Reading Passage 2?

In boxes 14–18 on your answer sheet, write

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

- 14 Local gulls and migrating arctic terns behave in the same way when offered food.
- 15 Experts' definitions of migration tend to vary according to their area of study.
- 16 Very few experts agree that the movement of aphids can be considered migration.
- 17 Aphids' journeys are affected by changes in the light that they perceive.
- 18 Dingle's aim is to distinguish between the migratory behaviours of different species.

## Questions 19–22

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

Write the correct letter, **A–G**, in boxes 19–22 on your answer sheet.

- 19 According to Dingle, migratory routes are likely to  
 20 To prepare for migration, animals are likely to  
 21 During migration, animals are unlikely to  
 22 Arctic terns illustrate migrating animals' ability to

- |          |  |
|----------|--|
| <b>A</b> | be discouraged by difficulties.                            |
| <b>B</b> | travel on open land where they can look out for predators. |
| <b>C</b> | eat more than they need for immediate purposes.            |
| <b>D</b> | be repeated daily.   |
| <b>E</b> | ignore distractions.                                       |
| <b>F</b> | be governed by the availability of water.                  |
| <b>G</b> | follow a straight line.                                    |

## Questions 23–26

Complete the summary below.

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

Write your answers in boxes 23–26 on your answer sheet.

### The migration of pronghorns

Pronghorns rely on their eyesight and **23** ..... to avoid predators. One particular population's summer habitat is a national park, and their winter home is on the **24** ....., where they go to avoid the danger presented by the snow at that time of year. However, their route between these two areas contains three **25** ..... One problem is the construction of new homes in a narrow **26**..... of land on the pronghorns' route.



**READING PASSAGE 3**

You should spend about 20 minutes on **Questions 27–40**, which are based on Reading Passage 3 below.

**Preface to ‘How the other half thinks:  
Adventures in mathematical reasoning’**

**A** Occasionally, in some difficult musical compositions, there are beautiful, but easy parts – parts so simple a beginner could play them. So it is with mathematics as well. There are some discoveries in advanced mathematics that do not depend on specialized knowledge, not even on algebra, geometry, or trigonometry. Instead they may involve, at most, a little arithmetic, such as ‘the sum of two odd numbers is even’, and common sense. Each of the eight chapters in this book illustrates this phenomenon. Anyone can understand every step in the reasoning.

The thinking in each chapter uses at most only elementary arithmetic, and sometimes not even that. Thus all readers will have the chance to participate in a mathematical experience, to appreciate the beauty of mathematics, and to become familiar with its logical, yet intuitive, style of thinking.

**B** One of my purposes in writing this book is to give readers who haven’t had the opportunity to see and enjoy real mathematics the chance to appreciate the mathematical way of thinking. I want to reveal not only some of the fascinating discoveries, but, more importantly, the reasoning behind them.

In that respect, this book differs from most books on mathematics written for the general public. Some present the lives of colorful mathematicians. Others describe important applications of mathematics. Yet others go into mathematical procedures, but assume that the reader is adept in using algebra.

**C** I hope this book will help bridge that notorious gap that separates the two cultures: the humanities and the sciences, or should I say the right brain (intuitive) and the left brain (analytical, numerical). As the chapters will illustrate, mathematics is not restricted to the analytical and numerical; intuition plays a significant role. The alleged gap can be narrowed or completely overcome by anyone, in part because each of us is far from using the full capacity of either side of the brain. To illustrate our human potential, I cite a structural engineer who is an artist, an electrical engineer who is an opera singer, an opera singer who published mathematical research, and a mathematician who publishes short stories.

**D** Other scientists have written books to explain their fields to non-scientists, but have necessarily had to omit the mathematics, although it provides the foundation of their theories. The reader must remain a tantalized spectator rather than an involved participant, since the appropriate language for describing the details in much of science is mathematics, whether the subject is expanding universe, subatomic particles, or chromosomes. Though the broad outline of a scientific theory can be

sketched intuitively, when a part of the physical universe is finally understood, its description often looks like a page in a mathematics text.

- E** Still, the non-mathematical reader can go far in understanding mathematical reasoning. This book presents the details that illustrate the mathematical style of thinking, which involves sustained, step-by-step analysis, experiments, and insights. You will turn these pages much more slowly than when reading a novel or a newspaper. It may help to have a pencil and paper ready to check claims and carry out experiments.
- F** As I wrote, I kept in mind two types of readers: those who enjoyed mathematics until they were turned off by an unpleasant episode, usually around fifth grade, and mathematics aficionados, who will find much that is new throughout the book.

This book also serves readers who simply want to sharpen their analytical skills. Many careers, such as law and medicine, require extended, precise analysis. Each chapter offers practice in following a sustained and closely argued line of thought. That mathematics can develop this skill is shown by these two testimonials:

- G** A physician wrote, 'The discipline of analytical thought processes [in mathematics] prepared me extremely well for medical school. In medicine one is faced with a problem which must be thoroughly analyzed before a solution can be found. The process is similar to doing mathematics.'

A lawyer made the same point, 'Although I had no background in law – not even one political science course – I did well at one of the best law schools. I attribute much of my success there to having learned, through the study of mathematics, and, in particular, theorems, how to analyze complicated principles. Lawyers who have studied mathematics can master the legal principles in a way that most others cannot.'

I hope you will share my delight in watching as simple, even naïve, questions lead to remarkable solutions and purely theoretical discoveries find unanticipated applications.

Questions 27–34

Reading Passage 3 has seven sections, **A–G**.

Which section contains the following information?

*Write the correct letter, **A–G**, in boxes 27–34 on your answer sheet.*

**NB** *You may use any letter more than once.*

- 27 a reference to books that assume a lack of mathematical knowledge
- 28 the way in which this is not a typical book about mathematics
- 29 personal examples of being helped by mathematics
- 30 examples of people who each had abilities that seemed incompatible
- 31 mention of different focuses of books about mathematics
- 32 a contrast between reading this book and reading other kinds of publication
- 33 a claim that the whole of the book is accessible to everybody
- 34 a reference to different categories of intended readers of this book

Test 3

Questions 35–40

Complete the sentences below.

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

Write your answers in boxes 35–40 on your answer sheet.

- 35 Some areas of both music and mathematics are suitable for someone who is a .....
- 36 It is sometimes possible to understand advanced mathematics using no more than a limited knowledge of .....
- 37 The writer intends to show that mathematics requires ..... thinking, as well as analytical skills.
- 38 Some books written by ..... have had to leave out the mathematics that is central to their theories.
- 39 The writer advises non-mathematical readers to perform ..... while reading the book.
- 40 A lawyer found that studying ..... helped even more than other areas of mathematics in the study of law.

## WRITING

### WRITING TASK 1

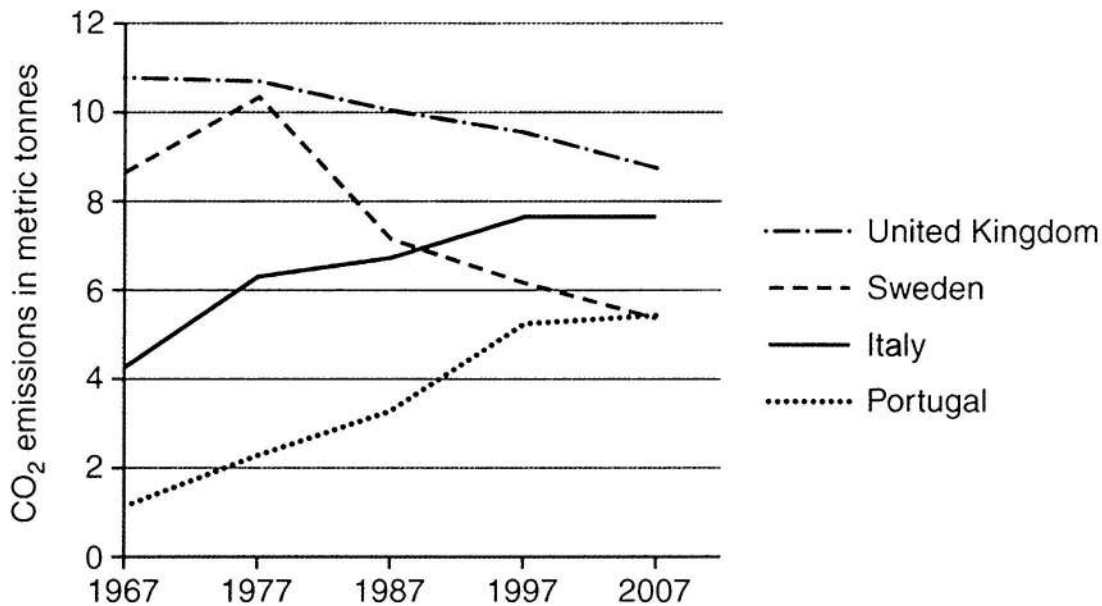
You should spend about 20 minutes on this task.

*The graph below shows average carbon dioxide (CO<sub>2</sub>) emissions per person in the United Kingdom, Sweden, Italy and Portugal between 1967 and 2007.*

*Summarise the information by selecting and reporting the main features, and make comparisons where relevant.*

Write at least 150 words.

Average carbon dioxide (CO<sub>2</sub>) emissions per person, 1967–2007



## WRITING TASK 2

You should spend about 40 minutes on this task.

Write about the following topic:

*Some people say that the only reason for learning a foreign language is in order to travel to or work in a foreign country. Others say that these are not the only reasons why someone should learn a foreign language.*

*Discuss both these views and give your own opinion.*

Give reasons for your answer and include any relevant examples from your own knowledge or experience.

Write at least 250 words.

## SPEAKING

### PART 1

The examiner asks the candidate about him/herself, his/her home, work or studies and other familiar topics.

#### EXAMPLE

##### Photographs

- What type of photos do you like taking? [Why/Why not?]
- What do you do with photos you take? [Why/Why not?]
- When you visit other places, do you take photos or buy postcards? [Why/Why not?]
- Do you like people taking photos of you? [Why/Why not?]

### PART 2

**Describe a day when you thought the weather was perfect.**

**You should say:**

**where you were on this day**

**what the weather was like on this day**

**what you did during the day**

**and explain why you thought the weather was perfect on this day.**

You will have to talk about the topic for one to two minutes.

You have one minute to think about what you are going to say.

You can make some notes to help you if you wish.

### PART 3

#### *Discussion topics:*

##### Types of weather

*Example questions:*

What types of weather do people in your country dislike most? Why is that?

What jobs can be affected by different weather conditions? Why?

Are there any important festivals in your country that celebrate a season or type of weather?

##### Weather forecasts

*Example questions:*

How important do you think it is for everyone to check what the next day's weather will be? Why?

What is the best way to get accurate information about the weather?

How easy or difficult is it to predict the weather in your country? Why is that?

# Test 4

## LISTENING

### SECTION 1 Questions 1–10

Questions 1–7

Complete the table below.

Write **ONE WORD AND/OR A NUMBER** for each answer

Event	Cost	Venue	Notes
<b>Jazz band</b>	<i>Example</i> Tickets available for £ .....15.....	The 1 ..... school	Also appearing: Carolyn Hart (plays the 2 ..... )
<b>Duck races</b>	£1 per duck	Start behind the 3 .....	Prize: tickets for 4 ..... held at the end of the festival. Ducks can be bought in the 5 .....
<b>Flower show</b>	Free	6 ..... Hall	Prizes presented at 5 pm by a well-known 7 .....



Questions 8–10

Who is each play suitable for?

Write the correct letter, **A**, **B** or **C**, next to Questions 8–10.

- |   |
|---|
| <p><b>A</b> mainly for children</p> <p><b>B</b> mainly for adults</p> <p><b>C</b> suitable for people of all ages</p> |
|---|

**Plays**

- 8** The Mystery of Muldoon .....
- 9** Fire and Flood .....
- 10** Silly Sailor .....

**SECTION 2 Questions 11–20**

*Questions 11–16*

What does the speaker say about each of the following collections?

Choose **SIX** answers from the box and write the correct letter, **A–G**, next to Questions 11–16.

- | <b>Comments</b> |  |
|-----------------|--|
| <b>A</b>        | was given by one person                            |
| <b>B</b>        | was recently publicised in the media               |
| <b>C</b>        | includes some items given by members of the public |
| <b>D</b>        | includes some items given by the artists           |
| <b>E</b>        | includes the most popular exhibits in the museum   |
| <b>F</b>        | is the largest of its kind in the country          |
| <b>G</b>        | has had some of its contents relocated             |

**Collections**

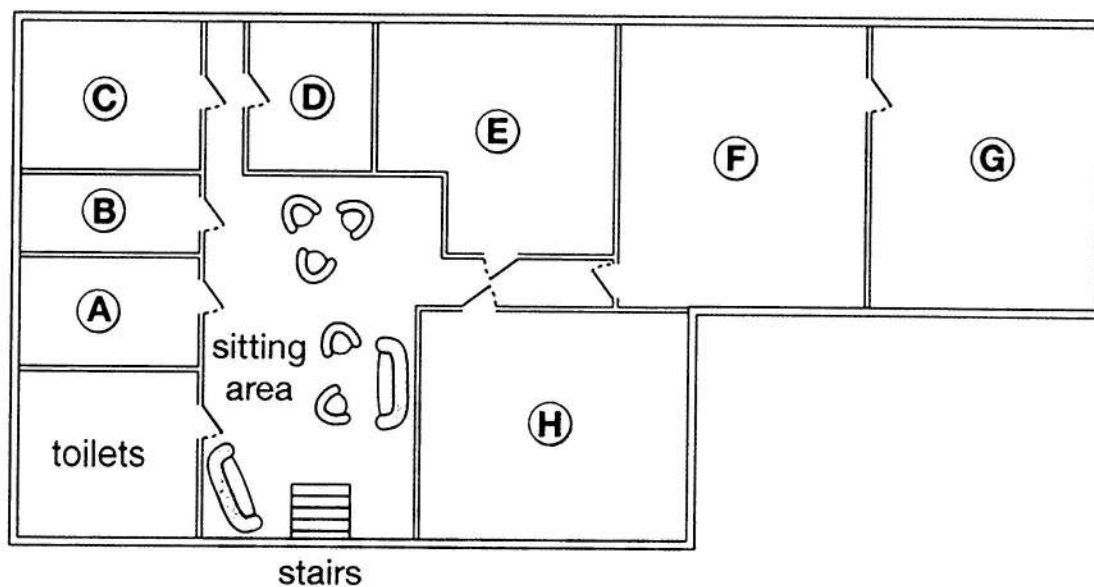
- 11** 20th- and 21st-century paintings .....
- 12** 19th-century paintings .....
- 13** Sculptures .....
- 14** 'Around the world' exhibition .....
- 15** Coins .....
- 16** Porcelain and glass .....

Questions 17–20

Label the plan below.

Write the correct letter, **A–H**, next to Questions 17–20.

### Basement of museum



- 17 restaurant .....
- 18 café .....
- 19 baby-changing facilities .....
- 20 cloakroom .....

**SECTION 3      Questions 21–30**

Questions 21 and 22

Choose **TWO** letters, **A–E**.

Which **TWO** characteristics were shared by the subjects of Joanna's psychology study?

- A** They had all won prizes for their music.
- B** They had all made music recordings.
- C** They were all under 27 years old.
- D** They had all toured internationally.
- E** They all played a string instrument.

Questions 23 and 24

Choose **TWO** letters, **A–E**.

Which **TWO** points does Joanna make about her use of telephone interviews?

- A** It meant rich data could be collected.
- B** It allowed the involvement of top performers.
- C** It led to a stressful atmosphere at times.
- D** It meant interview times had to be limited.
- E** It caused some technical problems.

Questions 25 and 26

Choose **TWO** letters, **A–E**.

Which **TWO** topics did Joanna originally intend to investigate in her research?

- A** regulations concerning concert dress
- B** audience reactions to the dress of performers
- C** changes in performer attitudes to concert dress
- D** how choice of dress relates to performer roles
- E** links between musical instrument and dress choice

## Questions 27–30

Choose the correct letter, **A**, **B** or **C**.

- 27** Joanna concentrated on women performers because
- A** women are more influenced by fashion.
  - B** women's dress has led to more controversy.
  - C** women's code of dress is less strict than men's.
- 28** Mike Frost's article suggests that in popular music, women's dress is affected by
- A** their wish to be taken seriously.
  - B** their tendency to copy each other.
  - C** their reaction to the masculine nature of the music.
- 29** What did Joanna's subjects say about the audience at a performance?
- A** The musicians' choice of clothing is linked to respect for the audience.
  - B** The clothing should not distract the audience from the music.
  - C** The audience should make the effort to dress appropriately.
- 30** According to the speakers, musicians could learn from sports scientists about
- A** the importance of clothing for physical freedom.
  - B** the part played by clothing in improving performance.
  - C** the way clothing may protect against physical injury.

**SECTION 4 Questions 31–40**

Complete the notes below.

Write **ONE WORD ONLY** for each answer.

# The use of soil to reduce carbon dioxide (CO<sub>2</sub>) in the atmosphere

## Rattan Lal:

- Claims that 13% of CO<sub>2</sub> in the atmosphere could be absorbed by agricultural soils
- Erosion is more likely in soil that is **31** .....
- Lai found soil in Africa that was very **32** .....
- It was suggested that carbon from soil was entering the atmosphere

## Soil and carbon:

- plants turn CO<sub>2</sub> from the air into carbon-based substances such as **33** .....
- some CO<sub>2</sub> moves from the **34** ..... of plants to microbes in the soil
- carbon was lost from the soil when agriculture was invented

## Regenerative agriculture:

- uses established practices to make sure soil remains fertile and **35** .....
- e.g. through year-round planting and increasing the **36** ..... of plants that are grown

## California study:

- taking place on a big **37** ..... farm
- uses compost made from waste from agriculture and **38** .....

## Australia study:

- aims to increase soil carbon by using **39** ..... that are always green

## Future developments may include:

- reducing the amount of fertilizer used in farming
- giving farmers **40** ..... for carbon storage, as well as their produce

## READING

## READING PASSAGE 1

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

## Research using twins

To biomedical researchers all over the world, twins offer a precious opportunity to untangle the influence of genes and the environment – of nature and nurture. Because identical twins come from a single fertilized egg that splits into two, they share virtually the same genetic code. Any differences between them – one twin having younger looking skin, for example – must be due to environmental factors such as less time spent in the sun.

Alternatively, by comparing the experiences of identical twins with those of fraternal twins, who come from separate eggs and share on average half their DNA, researchers can quantify the extent to which our genes affect our lives. If identical twins are more similar to each other with respect to an ailment than fraternal twins are, then vulnerability to the disease must be rooted at least in part in heredity.

These two lines of research – studying the differences between identical twins to pinpoint the influence of environment, and comparing identical twins with fraternal ones to measure the role of inheritance – have been crucial to understanding the interplay of nature and nurture in determining our personalities, behavior, and vulnerability to disease.

The idea of using twins to measure the influence of heredity dates back to 1875, when the English scientist Francis Galton first suggested the approach (and coined the phrase 'nature and nurture'). But twin studies took a surprising twist in the 1980s, with the arrival of studies into identical twins who had been separated at birth and reunited as adults. Over two decades 137 sets of twins eventually visited Thomas Bouchard's lab in what became known as the Minnesota Study of Twins Reared Apart. Numerous tests were carried out on the twins, and they were each asked more than 15,000 questions.

Bouchard and his colleagues used this mountain of data to identify how far twins were affected by their genetic makeup. The key to their approach was a statistical concept called heritability. In broad terms, the heritability of a trait measures the extent to which differences among members of a population can be explained by differences in their genetics. And wherever Bouchard and other scientists looked, it seemed, they found the invisible hand of genetic influence helping to shape our lives.

Lately, however, twin studies have helped lead scientists to a radical new conclusion: that nature and nurture are not the only



## Test 4

elemental forces at work. According to a recent field called epigenetics, there is a third factor also in play, one that in some cases serves as a bridge between the environment and our genes, and in others operates on its own to shape who we are.

Epigenetic processes are chemical reactions tied to neither nature nor nurture but representing what researchers have called a 'third component'. These reactions influence how our genetic code is expressed: how each gene is strengthened or weakened, even turned on or off, to build our bones, brains and all the other parts of our bodies.

If you think of our DNA as an immense piano keyboard and our genes as the keys – each key symbolizing a segment of DNA responsible for a particular note, or trait, and all the keys combining to make us who we are – then epigenetic processes determine when and how each key can be struck, changing the tune being played.

One way the study of epigenetics is revolutionizing our understanding of biology is by revealing a mechanism by which the environment directly impacts on genes. Studies of animals, for example, have shown that when a rat experiences stress during pregnancy, it can cause epigenetic changes in a fetus that lead to behavioral problems as the rodent grows up. Other epigenetic processes appear to occur randomly, while others are normal, such as those that guide embryonic cells

as they become heart, brain, or liver cells, for example.

Geneticist Danielle Reed has worked with many twins over the years and thought deeply about what twin studies have taught us. 'It's very clear when you look at twins that much of what they share is hardwired,' she says. 'Many things about them are absolutely the same and unalterable. But it's also clear, when you get to know them, that other things about them are different. Epigenetics is the origin of a lot of those differences, in my view.'

Reed credits Thomas Bouchard's work for today's surge in twin studies. 'He was the trailblazer,' she says. 'We forget that 50 years ago things like heart disease were thought to be caused entirely by lifestyle. Schizophrenia was thought to be due to poor mothering. Twin studies have allowed us to be more reflective about what people are actually born with and what's caused by experience.'

Having said that, Reed adds, the latest work in epigenetics promises to take our understanding even further. 'What I like to say is that nature writes some things in pencil and some things in pen,' she says. 'Things written in pen you can't change. That's DNA. But things written in pencil you can. That's epigenetics. Now that we're actually able to look at the DNA and see where the pencil writings are, it's sort of a whole new world.'



## Questions 1–4

Do the following statements agree with the information given in Reading Passage 1?

In boxes 1–4 on your answer sheet, write

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

- 1 There may be genetic causes for the differences in how young the skin of identical twins looks.
- 2 Twins are at greater risk of developing certain illnesses than non-twins.
- 3 Bouchard advertised in newspapers for twins who had been separated at birth.
- 4 Epigenetic processes are different from both genetic and environmental processes.

## Questions 5–9

Look at the following statements (Questions 5–9) and the list of researchers below.

Match each statement with the correct researcher, **A**, **B** or **C**.

Write the correct letter, **A**, **B** or **C**, in boxes 5–9 on your answer sheet.

**NB** You may use any letter more than once.

<b>List of Researchers</b>	
<b>A</b>	Francis Galton
<b>B</b>	Thomas Bouchard
<b>C</b>	Danielle Reed



- 5 invented a term used to distinguish two factors affecting human characteristics
- 6 expressed the view that the study of epigenetics will increase our knowledge
- 7 developed a mathematical method of measuring genetic influences
- 8 pioneered research into genetics using twins
- 9 carried out research into twins who had lived apart

## Questions 10–13

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

Write the correct letter, **A–F**, in boxes 10–13 on your answer sheet.

### Epigenetic processes

In epigenetic processes, **10** ..... influence the activity of our genes, for example in creating our internal **11** ..... . The study of epigenetic processes is uncovering a way in which our genes can be affected by our **12** ..... . One example is that if a pregnant rat suffers stress, the new-born rat may later show problems in its **13** .....

**A** nurture

**B** organs

**C** code

**D** chemicals

**E** environment

**F** behaviour/behavior

## READING PASSAGE 2

You should spend about 20 minutes on **Questions 14–26**, which are based on Reading Passage 2 below.

### An Introduction to Film Sound

Though we might think of film as an essentially visual experience, we really cannot afford to underestimate the importance of film sound. A meaningful sound track is often as complicated as the image on the screen, and is ultimately just as much the responsibility of the director. The entire sound track consists of three essential ingredients: the human voice, sound effects and music. These three tracks must be mixed and balanced so as to produce the necessary emphases which in turn create desired effects. Topics which essentially refer to the three previously mentioned tracks are discussed below. They include dialogue, synchronous and asynchronous sound effects, and music.

Let us start with dialogue. As is the case with stage drama, dialogue serves to tell the story and expresses feelings and motivations of characters as well. Often with film characterization the audience perceives little or no difference between the character and the actor. Thus, for example, the actor Humphrey Bogart is the character Sam Spade; film personality and life personality seem to merge. Perhaps this is because the very texture of a performer's voice supplies an element of character.

When voice textures fit the performer's physiognomy and gestures, a whole

and very realistic persona emerges. The viewer sees not an actor working at his craft, but another human being struggling with life. It is interesting to note that how dialogue is used and the very amount of dialogue used varies widely among films. For example, in the highly successful science-fiction film *2001*, little dialogue was evident, and most of it was banal and of little intrinsic interest. In this way the film-maker was able to portray what Thomas Sobochack and Vivian Sobochack call, in *An Introduction to Film*, the 'inadequacy of human responses when compared with the magnificent technology created by man and the visual beauties of the universe'.

The comedy *Bringing Up Baby*, on the other hand, presents practically non-stop dialogue delivered at breakneck speed. This use of dialogue underscores not only the dizzy quality of the character played by Katherine Hepburn, but also the absurdity of the film itself and thus its humor. The audience is bounced from gag to gag and conversation to conversation; there is no time for audience reflection. The audience is caught up in a whirlwind of activity in simply managing to follow the plot. This film presents pure escapism – largely due to its frenetic dialogue.

Synchronous sound effects are those sounds which are synchronized or

matched with what is viewed. For example, if the film portrays a character playing the piano, the sounds of the piano are projected. Synchronous sounds contribute to the realism of film and also help to create a particular atmosphere. For example, the 'click' of a door being opened may simply serve to convince the audience that the image portrayed is real, and the audience may only subconsciously note the expected sound. However, if the 'click' of an opening door is part of an ominous action such as a burglary, the sound mixer may call attention to the 'click' with an increase in volume; this helps to engage the audience in a moment of suspense.

Asynchronous sound effects, on the other hand, are not matched with a visible source of the sound on screen. Such sounds are included so as to provide an appropriate emotional nuance, and they may also add to the realism of the film. For example, a film-maker might opt to include the background sound of an ambulance's siren while the foreground sound and image portrays an arguing couple. The asynchronous ambulance siren underscores the psychic injury incurred in the argument; at the same time the noise of the siren adds to the realism of the film by acknowledging the film's city setting.

We are probably all familiar with background music in films, which has become so ubiquitous as to be noticeable in its absence. We are aware that it is used to add emotion and rhythm. Usually not meant to be noticeable, it often provides a tone or an emotional attitude toward the story and/or the characters depicted. In addition, background music often foreshadows a change in mood. For example, dissonant music may be used in film to indicate an approaching (but not yet visible) menace or disaster.

Background music may aid viewer understanding by linking scenes. For example, a particular musical theme associated with an individual character or situation may be repeated at various points in a film in order to remind the audience of salient motifs or ideas.

Film sound comprises conventions and innovations. We have come to expect an acceleration of music during car chases and creaky doors in horror films. Yet, it is important to note as well that sound is often brilliantly conceived. The effects of sound are often largely subtle and often are noted by only our subconscious minds. We need to foster an awareness of film sound as well as film space so as to truly appreciate an art form that sprang to life during the twentieth century – the modern film.

## Questions 14–18

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

Write the correct letter in boxes 14–18 on your answer sheet.

- 14** In the first paragraph, the writer makes a point that
- A** the director should plan the sound track at an early stage in filming.
  - B** it would be wrong to overlook the contribution of sound to the artistry of films.
  - C** the music industry can have a beneficial influence on sound in film.
  - D** it is important for those working on the sound in a film to have sole responsibility for it.
- 15** One reason that the writer refers to Humphrey Bogart is to exemplify
- A** the importance of the actor and the character appearing to have similar personalities.
  - B** the audience's wish that actors are visually appropriate for their roles.
  - C** the value of the actor having had similar feelings to the character.
  - D** the audience's preference for dialogue to be as authentic as possible.
- 16** In the third paragraph, the writer suggests that
- A** audiences are likely to be critical of film dialogue that does not reflect their own experience.
  - B** film dialogue that appears to be dull may have a specific purpose.
  - C** filmmakers vary considerably in the skill with which they handle dialogue.
  - D** the most successful films are those with dialogue of a high quality.
- 7** What does the writer suggest about *Bringing Up Baby*?
- A** The plot suffers from the filmmaker's wish to focus on humorous dialogue.
  - B** The dialogue helps to make it one of the best comedy films ever produced.
  - C** There is a mismatch between the speed of the dialogue and the speed of actions.
  - D** The nature of the dialogue emphasises key elements of the film.
- 8** The writer refers to the 'click' of a door to make the point that realistic sounds
- A** are often used to give the audience a false impression of events in the film.
  - B** may be interpreted in different ways by different members of the audience.
  - C** may be modified in order to manipulate the audience's response to the film.
  - D** tend to be more significant in films presenting realistic situations.

## Questions 19–23

Do the following statements agree with the information given in Reading Passage 2?

In boxes 19–23 on your answer sheet, write

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

- 19 Audiences are likely to be surprised if a film lacks background music.
- 20 Background music may anticipate a development in a film.
- 21 Background music has more effect on some people than on others.
- 22 Background music may help the audience to make certain connections within the film.
- 23 Audiences tend to be aware of how the background music is affecting them.

Questions 24–26

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

Write the correct letter, **A–E**, in boxes 24–26 on your answer sheet.

- 24** The audience's response to different parts of a film can be controlled
- 25** The feelings and motivations of characters become clear
- 26** A character seems to be a real person rather than an actor

- A** when the audience listens to the dialogue.
- B** if the film reflects the audience's own concerns.
- C** if voice, sound and music are combined appropriately.
- D** when the director is aware of how the audience will respond.
- E** when the actor's appearance, voice and moves are consistent with each other.

**READING PASSAGE 3**

You should spend about 20 minutes on **Questions 27–40**, which are based on Reading Passage 3 on the following pages.

Questions 27–32

Reading Passage 3 has six paragraphs, **A–F**.

Choose the correct heading for paragraphs **A–F** from the list of headings below.

Write the correct number, **i–vii**, in boxes 27–32 on your answer sheet.

**List of Headings**

- i** Differences between languages highlight their impressiveness
- ii** The way in which a few sounds are organised to convey a huge range of meaning
- iii** Why the sounds used in different languages are not identical
- iv** Apparently incompatible characteristics of language
- v** Even silence can be meaningful
- vi** Why language is the most important invention of all
- vii** The universal ability to use language

**27** Paragraph **A**

**28** Paragraph **B**

**29** Paragraph **C**

**30** Paragraph **D**

**31** Paragraph **E**

**32** Paragraph **F**



# 'This Marvellous Invention'

- A** Of all mankind's manifold creations, language must take pride of place. Other inventions – the wheel, agriculture, sliced bread – may have transformed our material existence, but the advent of language is what made us human. Compared to language, all other inventions pale in significance, since everything we have ever achieved depends on language and originates from it. Without language, we could never have embarked on our ascent to unparalleled power over all other animals, and even over nature itself.
- B** But language is foremost not just because it came first. In its own right it is a tool of extraordinary sophistication, yet based on an idea of ingenious simplicity: 'this marvellous invention of composing out of twenty-five or thirty sounds that infinite variety of expressions which, whilst having in themselves no likeness to what is in our mind, allow us to disclose to others its whole secret, and to make known to those who cannot penetrate it all that we imagine, and all the various stirrings of our soul'. This was how, in 1660, the renowned French grammarians of the Port-Royal abbey near Versailles distilled the essence of language, and no one since has celebrated more eloquently the magnitude of its achievement. Even so, there is just one flaw in all these hymns of praise, for the homage to language's unique accomplishment conceals a simple yet critical incongruity. Language is mankind's greatest invention – except, of course, that it was never invented. This apparent paradox is at the core of our fascination with language, and it holds many of its secrets.
- Language often seems so skillfully drafted that one can hardly imagine it as anything other than the perfected handiwork of a master craftsman. How else could this instrument make so much out of barely three dozen measly morsels of sound? In themselves, these configurations of mouth – *p, f, b, v, t, d, k, g, sh, a, e* and so on – amount to nothing more than a few haphazard spits and splutters, random noises with no meaning, no ability to express, no power to explain. But run them through the cogs and wheels of the language machine, let it arrange them in some very special orders, and there is nothing that these meaningless streams of air cannot do: from sighing the interminable boredom of existence to unravelling the fundamental order of the universe.
- The most extraordinary thing about language, however, is that one doesn't have to be a genius to set its wheels in motion. The language machine allows just about everybody – from pre-modern foragers in the subtropical savannah, to post-modern philosophers in the suburban sprawl – to tie these meaningless sounds together into an infinite variety of subtle senses, and all apparently without the slightest exertion. Yet it is precisely this deceptive ease which makes language a victim of its own success, since in everyday life its triumphs are usually taken for granted. The wheels of language run so smoothly that one rarely bothers to stop and think about all the resourcefulness and expertise that must have gone into making it tick. Language conceals art.



## Test 4

- E** Often, it is only the estrangement of foreign tongues, with their many exotic and outlandish features, that brings home the wonder of language's design. One of the showiest stunts that some languages can pull off is an ability to build up words of breath-breaking length, and thus express in one word what English takes a whole sentence to say. The Turkish word *şehirliliştiremediklerimizdensiniz*, to take one example, means nothing less than 'you are one of those whom we can't turn into a town-dweller'. (In case you were wondering, this monstrosity really is one word, not merely many different words squashed together – most of its components cannot even stand up on their own.)
- F** And if that sounds like some one-off freak, then consider Sumerian, the language spoken on the banks of the Euphrates some 5,000 years ago by the people who invented writing and thus enabled the documentation of history. A Sumerian word like *munintuma'a* ('when he had made it suitable for her') might seem rather trim compared to the Turkish colossus above. What is so impressive about it, however, is not its lengthiness but rather the reverse – the thrifty compactness of its construction. The word is made up of different slots, each corresponding to a particular portion of meaning. This sleek design allows single sounds to convey useful information, and in fact even the absence of a sound has been enlisted to express something specific. If you were to ask which bit in the Sumerian word corresponds to the pronoun 'it' in the English translation 'when he had made it suitable for her', then the answer would have to be nothing. Mind you, a very particular kind of nothing: the nothing that stands in the empty slot in the middle. The technology is so fine-tuned then that even a non-sound, when carefully placed in a particular position, has been invested with a specific function. Who could possibly have come up with such a nifty contraption?

Questions 33–36

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

Write the correct letter, **A–G**, in boxes 33–36 on your answer sheet.

### The importance of language

The wheel is one invention that has had a major impact on **33** ..... aspects of life, but no impact has been as **34** ..... as that of language. Language is very **35** ..... , yet composed of just a small number of sounds.

Language appears to be **36** ..... to use. However, its sophistication is often overlooked.

<b>A</b> difficult	<b>B</b> complex	<b>C</b> original
<b>D</b> admired	<b>E</b> material	<b>F</b> easy
<b>G</b> fundamental	我 预 测 你 高 分	

# PREDICTING

Questions 37–40

Do the following statements agree with the views of the writer in Reading Passage 3?

In boxes 37–40 on your answer sheet, write

- YES** if the statement agrees with the views of the writer
- NO** if the statement contradicts the views of the writer
- NOT GIVEN** if it is impossible to say what the writer thinks about this

- 37** Human beings might have achieved their present position without language.
- 38** The Port-Royal grammarians did justice to the nature of language.
- 39** A complex idea can be explained more clearly in a sentence than in a single word.
- 40** The Sumerians were responsible for starting the recording of events.

**WRITING**

**WRITING TASK 1**

You should spend about 20 minutes on this task.

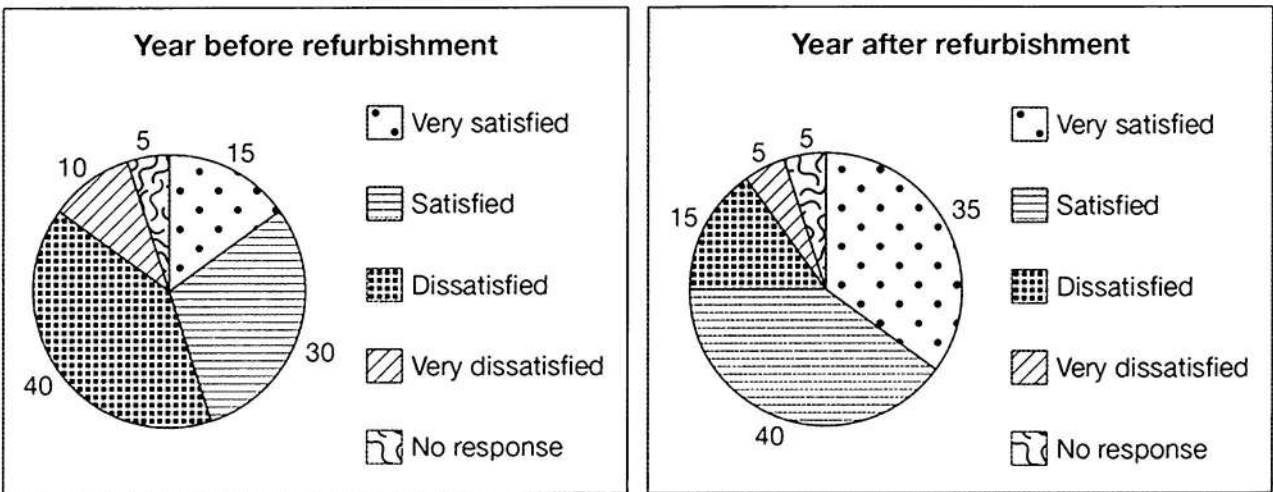
*The table below shows the numbers of visitors to Ashdown Museum during the year before and the year after it was refurbished. The charts show the result of surveys asking visitors how satisfied they were with their visit, during the same two periods.*

*Summarise the information by selecting and reporting the main features, and make comparisons where relevant.*

Write at least 150 words.

Total number of visitors to Ashdown Museum	
During the year before refurbishment:	74,000
During the year after refurbishment:	92,000

**Results of surveys of visitor satisfaction**



## WRITING TASK 2

You should spend about 40 minutes on this task.

Write about the following topic:

*Many governments think that economic progress is their most important goal. Some people, however, think that other types of progress are equally important for a country.*

*Discuss both these views and give your own opinion.*

Give reasons for your answer and include any relevant examples from your own knowledge or experience.

Write at least 250 words.

**SPEAKING****PART 1**

The examiner asks the candidate about him/herself, his/her home, work or studies and other familiar topics.

**EXAMPLE****Names**

- How did your parents choose your name(s)?
- Does your name have any special meaning?
- Is your name common or unusual in your country?
- If you could change your name, would you? [Why/Why not?]

**PART 2**

**Describe a TV documentary you watched that was particularly interesting.**

**You should say:**

**what the documentary was about  
why you decided to watch it  
what you learnt during the documentary  
and explain why the TV documentary was particularly interesting.**

You will have to talk about the topic for one to two minutes. You have one minute to think about what you are going to say. You can make some notes to help you if you wish.

**PART 3****Discussion topics:****Different types of TV programmes**

*Example questions:*

What are the most popular kinds of TV programmes in your country? Why is this?

Do you think there are too many game shows on TV nowadays? Why?

Do you think TV is the main way for people to get the news in your country? What other ways are there?

**TV advertising**

*Example questions:*

What types of products are advertised most often on TV?

Do you think that people pay attention to adverts on TV? Why do you think that is?

How important are regulations on TV advertising?