

# General Training Reading and Writing

## Test A

### READING

#### SECTION 1 Questions 1–14

Read the text below and answer Questions 1–7.

#### Smoke alarms in the home

Smoke alarms are now a standard feature in Australian homes and are required by the National Building Code in any recently built properties. They are installed to detect the presence of smoke and emit a clear sound to alert you in the event of fire to give you time to escape.



There are two principal types of smoke alarms. Ionization alarms are the cheapest and most readily available smoke alarms. They are also very sensitive to 'flaming fires' – fires that burn fiercely – and will detect them before the smoke gets too thick. However, photoelectric alarms are more effective at detecting slow-burning fires. They are less likely to go off accidentally and so are best for homes with one floor. For the best protection, you should install one of each.

Most battery-powered smoke alarms can be installed by the home owner and do not require professional installation. For the installation of hard-wired smoke alarms, powered from the mains electricity supply, however, you will need the services of a licensed professional. Smoke alarms are usually most effective when located on the ceiling, near or in the middle of the room or hall.

Photoelectric smoke alarms in any quantity may be disposed of in domestic waste. If you have fewer than ten ionization alarms to get rid of, you may put them in your domestic waste. If you have more than ten to dispose of, you should contact your local council.

Your battery-powered smoke alarm will produce a short beep every 60 second to alert you when the battery is running out and needs replacing. Nevertheless, it should be tested every month to ensure that the battery and the alarm sounder are working. Note that the sensitivity in all smoke alarms will reduce over time.

**Questions 1–7**

Do the following statements agree with the information given in the text on page 104?

In boxes 1–7 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 All new houses in Australia must have smoke alarms.
- 2 Photoelectric smoke alarms cost less than ionization smoke alarms.
- 3 It takes a short time to fit most smoke alarms.
- 4 Any hard-wired smoke alarm must be fitted by a specialist technician.
- 5 You should get in touch with your local council before placing any ionisation smoke alarms in household rubbish.
- 6 Smoke alarms give a warning sound to indicate that battery power is low.
- 7 Old smoke alarms need to be checked more than once a month.

Read the text below and answer Questions 8–14.

## Sydney Opera House Tours

We offer three different tours of this iconic building.

- A The Essential Tour** brings to life the story behind the design and construction of one of the world's most famous landmarks. Using interactive audio-visual technology, your guide will take you on a memorable journey inside the youngest building ever to be World Heritage listed.
- B** Afterwards, why not stay around and eat at the Studio Café, with its modern Australian menu? Not only can you enjoy the best views in Sydney, you can claim a 20% reduction on the total cost of your meal. (Don't forget to show your ticket in order to claim your discount.)
- C Languages:** English, French, German  
**Takes place:** Daily between 9am and 5pm  
**Prices:** Adults \$35 / Online \$29.75  
**Concessions:** Australian seniors and pensioners; students and children of 16 and under \$24.50.  
Prior bookings are not essential.
- D The Backstage Tour** gives you backstage access to the Sydney Opera House. It is a unique opportunity to experience the real-life dramas behind the stage! You might even get to stand on the concert hall stage, take up a conductor's baton in the orchestra pit and imagine you are leading the performance. You will also get to see inside the stars' dressing rooms. The tour concludes with a complimentary breakfast in the Green Room, the private dining area of performers past and present.
- E** Takes place: Daily at 7am  
**Prices:** \$155. No concessions.  
**To purchase:** Bookings are essential. Limited to 8 people per tour.  
Online sales expire at 4.30pm two days prior.  
**Notes:**  
The tour includes up to 300 steps.  
Flat, rubber-soled shoes must be worn.  
For safety reasons, children of 12 years old and under are not permitted.
- F Opera High Tea** consists of a tour where you will walk in the footsteps of world-class singers, dancers and musicians, followed by fine food and music in the spectacular surroundings of the Bennelong Dining Room. What could be better than a treat of delicious light snacks and soft drinks followed by a live recital by a leading Australian singer?  
An unforgettable treat for young and old!
- G** Takes place: Every second Wednesday, 2pm  
**Duration:** 1.5 hours  
**Prices:** \$145 per person  
Book online or visit the Guided Tours Desk.

## Questions 8–14

The text on page 106 has seven sections **A–G**. Which section mentions the following?

Write the correct letter **A–G** in boxes 8–14 on your answer sheet.

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

- 8 discounts available to younger visitors
- 9 the need for suitable footwear
- 10 the opportunity to pretend you are taking part in a concert
- 11 a restriction on the number of participants
- 12 a reduction that applies to purchases using the internet
- 13 the need to book your ticket in advance
- 14 the length of one of the tours

## **SECTION 2      Questions 15–27**

Read the text below and answer Questions 15–21.

### **USING DIRECT MAIL TO SELL YOUR PRODUCT**

When you have set up your own business, you must, of course, start selling your goods or services. One way is by using direct mail – in other words, sending a sales letter (or email) directly to companies that might want to do business with you.

One important factor is your mailing list – that is, who you contact. You can build this up from your own market research, existing clients and advertising responses, or you can contact list brokers and rent or buy a compiled list. If you are contacting a business, it is important to address the letter to the decision maker, ideally by name or at least by job title.

While the desirability and price of the product on offer will obviously influence sales, you also need to gain the maximum impact from your sales letter. To achieve that, bear the following points in mind:

- You have no more than two seconds from when the reader starts the letter to convince them to continue. If you fail, they will throw it away. The opening is crucial to attract their attention. And so that they don't lose interest, avoid having too much text.
- Try to send each mailing in a white envelope. It might be cheaper to use a brown envelope but it doesn't make for such good presentation.
- Include a brochure. Depending on the volume and on whether you can afford the cost, try to use at least two-colour printing for this. If practicable, it may be worth enclosing a free sample – this is a much greater incentive than photographs.
- However interested your potential clients are in buying, they will only do so if it can be done easily. So, include an order form (and of course details of how to return it) with your letter.
- When you receive your replies, assess your response rate and monitor the sales. If necessary, the sales letter can then be amended to attract other clients on subsequent mail shots; make sure each different letter is coded so that monitoring is easy and effective.
- Ensure that each reply is dealt with quickly and professionally. If further details are requested, these must be sent out promptly. There is no point in encouraging potential customers to contact you if your service is slow or non-existent.

### Questions 15–21

Complete the sentences below.

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

Write your answers in boxes 15–21 on your answer sheet.

- 15 Sales letters should be sent to the ..... in a company.
- 16 Your letter should make as much ..... as possible.
- 17 The reader's attention needs to be caught by the ..... of your letter.
- 18 Letters should be sent in a .....
- 19 It is best to print the ..... in two or more colours.
- 20 Consider sending a ..... as this is more effective than a picture.
- 21 You should calculate the ..... to your letter.

Read the text below and answer Questions 22–27.

## **IFCES, the International Federation of Chemical Engineering Societies**

### **Job Specification: Communications Manager**

Contract: Permanent (with 3-month probationary period)

Reports to: Chief Executive

Hours: 9:15am – 5:30pm with 1 hour for lunch

Holidays: 23 days per annum + statutory public holidays

#### **Job Summary**

To raise the international profile of IFCES. To communicate our objectives, programmes and services to members, the chemical engineering community, the media and the wider public.

#### **Key Responsibilities**

- Develop and implement a programme of communications to member associations, the chemical engineering industry, sponsors and the media
- Plan and implement marketing strategies for all IFCES programmes including the World Chemical Engineering Congress
- Write and edit copy for publications intended for internal and external use including *Chemical Engineer Monthly*
- Work with design agencies, web developers and other external contractors to produce high quality corporate and marketing materials
- Research, write and distribute news releases as required, often at short notice and under pressure
- Deal with media enquiries and interview requests. Ensure that good relationships with both mainstream and chemical engineering media are developed and maintained
- Assist in the production of presentations and speeches for board members
- Ensure website content is up to date and consistent
- Develop a consistent corporate identity and ensure its application by all member associations and partner organisations
- Carry out specific duties and projects as directed from time to time

#### **Employee Specification**

##### ***Essential***

- Degree (any discipline)
- Minimum 4 years' experience in a communications role
- Excellent copy writing skills with strong attention to detail, a keen sense of audience and an ability to tailor writing to its particular purpose
- Demonstrable track record of producing high quality corporate publications and marketing materials
- Excellent interpersonal and organisational skills
- Sound IT skills, including working knowledge of Microsoft Office applications
- Willingness to travel internationally

##### ***Desirable***

- Recognised post-graduate qualification in public relations / journalism / marketing communications
- Knowledge of the global chemical engineering industry and the production of new materials in particular
- Understanding of the concerns surrounding sustainability in chemical engineering
- Ability to speak a foreign language

## Questions 22–27

Complete the notes below.

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

Write your answers in boxes 22–27 on your answer sheet.

### Position: Communications Manager

**Summary of role:** to improve IFCES's 22 ..... around the world

**Responsibilities include:**

- writing for a number of 23 ..... , produced for both IFCES and a wider readership
- producing news releases quickly when necessary
- making sure the 24 ..... contains current information.

**Employee specification (essential) includes:**

- high level skill in writing appropriately
  - for the 25 ..... to read
  - to achieve a specific 26 .....
- good IT skills.

**Employee specification (desirable) includes:**

- relevant qualification at a 27 ..... level
- awareness of issues of sustainability in relation to the industry
- knowledge of a foreign language.

## SECTION 3 Questions 28–40

Read the text on pages 112 and 113 and answer Questions 28–40.

### KAURI GUM – a piece of New Zealand's history

#### A

The kauri tree is a massive forest tree native to New Zealand. Kauri once formed vast forests over much of the north of the country. Whereas now it is the wood of the kauri which is an important natural resource, in the past it was the tree's sap (the thick liquid which flows inside a tree) which, when hardened into gum, played an important role in New Zealand's early history.

After running from rips or tears in the bark of trees, the sap hardens to form the lumps of gum which eventually fall to the ground and are buried under layers of forest litter. The bark often splits where branches fork from the trunk, and gum accumulates there also.

The early European settlers in New Zealand collected and sold the gum. Gum fresh from the tree was soft and of low value but most of the gum which was harvested had been buried for thousands of years. This gum came in a bewildering variety of colours, degree of transparency and hardness, depending on the length and location of burial, as well as the health of the original tree and the area of the bleeding. Highest quality gum was hard and bright and was usually found at shallow depth on the hills. Lowest quality gum was soft, black or chalky and sugary and was usually found buried in swamps, where it had been in contact with water for a long time. Long periods in the sun or bush fires could transform dull, cloudy lumps into higher quality transparent gum.

#### B

Virtually all kauri gum was found in the regions of New Zealand where kauri forests grow today – from the middle of the North Island northwards. In Maori and early European times up until 1850, most gum collected was simply picked up from the ground, but, after that, the majority was recovered by digging.

#### C

The original inhabitants of New Zealand, the Maori, had experimented with kauri gum well before Europeans arrived at the beginning of the nineteenth century. They called it *kapia*, and found it of considerable use.

Fresh gum from trees was prized for its chewing quality, as was buried gum when softened in water and mixed with the juice of a local plant. A piece of gum was often passed around from mouth to mouth when people gathered together until it was all gone, or when they tired of chewing, it was laid aside for future use.

Kauri gum burns readily and was used by Maori people to light fires. Sometimes it was bound in grass, ignited and used as a torch by night fishermen to attract fish.



**D**

The first kauri gum to be exported from New Zealand was part of a cargo taken back to Australia and England by two early expeditions in 1814 and 1815. By the 1860s, kauri gum's reputation was well established in the overseas markets and European immigrants were joining the Maoris in collecting gum on the hills of northern New Zealand. As the surface gum became more scarce, spades were used to dig up the buried 'treasure'. The increasing number of diggers resulted in rapid growth of the kauri gum exports from 1,000 tons in 1860 to a maximum of over 10,000 tons in 1900.

For fifty years from about 1870 to 1920, the kauri gum industry was a major source of income for settlers in northern New Zealand. As these would-be farmers struggled to break in the land, many turned to gum-digging to earn enough money to support their families and pay for improvements to their farms until better times arrived. By the 1890s, there were 20,000 people engaged in gum-digging. Although many of these, such as farmers, women and children, were only part-time diggers, nearly 7,000 were full-timers. During times of economic difficulty, gum-digging was the only job available where the unemployed from many walks of life could earn a living, if they were prepared to work.

**E**

The first major commercial use of kauri gum was in the manufacture of high-grade furniture varnish, a kind of clear paint used to treat wood. The best and purest gum that was exported prior to 1910 was used in this way. Kauri gum was used in 70% of the oil varnishes being manufactured in England in the 1890s. It was favoured ahead of other gums because it was easier to process at lower temperatures. The cooler the process could be kept the better, as it meant a paler varnish could be produced.

About 1910, kauri gum was found to be a very suitable ingredient in the production of some kinds of floor coverings such as linoleum. In this way, a use was found for the vast quantities of poorer quality and less pure gum, that had up till then been discarded as waste. Kauri gum's importance in the manufacture of varnish and linoleum was displaced by synthetic alternatives in the 1930s.

**F**

Fossil kauri gum is rather soft and can be carved easily with a knife or polished with fine sandpaper. In the time of Queen Victoria of England (1837–1901), some pieces were made into fashionable amber beads that women wore around their necks. The occasional lump that contained preserved insects was prized for use in necklaces and bracelets. Many of the gum-diggers enjoyed the occasional spell of carving and produced a wide variety of small sculptured pieces. Many of these carvings can be seen today in local museums.

Over the years, kauri gum has also been used in a number of minor products, such as an ingredient in marine glue and candles. In the last decades it has had a very limited use in the manufacture of extremely high-grade varnish for violins, but the gum of the magnificent kauri tree remains an important part of New Zealand's history.

**Questions 28–33**

The text has six sections, **A–F**.

Which section contains the following information?

*Write the correct letter, **A–F**, in boxes 28–33 on your answer sheet.*

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

- 28 an example of a domestic product made of high-quality gum
- 29 factors affecting gum quality
- 30 how kauri gum is formed
- 31 how gum was gathered
- 32 the main industrial uses of the gum
- 33 recent uses of kauri gum

## Questions 34–39

Look at the following events in the history of kauri gum in New Zealand (Questions 34–39) and the list of time periods below.

Match each event with the correct time period, **A–I**.

Write the correct letter, **A–I**, in boxes 34–39 on your answer sheet.

- 34 Kauri gum was first used in New Zealand.
- 35 The amount of kauri gum sent overseas peaked.
- 36 The collection of kauri gum supplemented farmers' incomes.
- 37 Kauri gum was made into jewellery.
- 38 Kauri gum was used in the production of string instruments.
- 39 Most of the kauri gum was found underground.

### List of Time Periods

- |          |                            |          |  |
|----------|----------------------------|----------|--|
| <b>A</b> | before the 1800s           | <b>B</b> | in 1900                                    |
| <b>C</b> | in 1910                    | <b>D</b> | between the late 1800s and the early 1900s |
| <b>E</b> | between the 1830s and 1900 | <b>F</b> | in 1814 and 1815                           |
| <b>G</b> | after 1850                 | <b>H</b> | in the 1930s                               |
| <b>I</b> | in recent times            |          |  |

## Question 40

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

Write the correct letter in box 40 on your answer sheet.

- 40** What was most likely to reduce the quality of kauri gum?

- A** how long it was buried
- B** exposure to water
- C** how deep it was buried
- D** exposure to heat

## WRITING

### WRITING TASK 1

You should spend about 20 minutes on this task.

***You are going to another country to study. You would like to do a part-time job while you are studying, so you want to ask a friend who lives there for some help.***

***Write a letter to this friend. In your letter***

- ***give details of your study plans***
- ***explain why you want to get a part-time job***
- ***suggest how your friend could help you find a job***

Write at least 150 words.

You do **NOT** need to write any addresses.

Begin your letter as follows:

**Dear .....**,

### WRITING TASK 2

You should spend about 40 minutes on this task.

Write about the following topic:

***In many countries, the amount of crime is increasing.***

***What do you think are the main causes of crime?***

***How can we deal with those causes?***

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

Write at least 250 words.

# General Training Reading and Writing Test B

## READING

### SECTION 1 Questions 1–14

Read the text below and answer Questions 1–7.

## PASSPORT APPLICATION

You will need to fill in an application for a passport in the following circumstances: if you are applying for a passport for the first time, if you wish to replace your current passport, if your passport has expired, or if it has been lost or stolen. Your application form must be completed in your own handwriting.

As proof of your citizenship and identity, you must enclose either your passport or your birth certificate. All documents must be originals; these will be returned with your passport.

The standard time to process an application is up to 10 working days. The processing begins from when we have received the completed application form. Applicants should expect delays if the Passport Office receives a form with missing information. Extra time should be allowed for delivery to and from the Passport Office.

Please provide two identical passport photos of yourself. Both photos must be the same in all respects and must be less than 12 months old.

Ask someone who can identify you to fill in the 'Proof of Identity' information and identify one of your photos. This person will be called your witness and needs to meet the following requirements: a witness must be aged 16 years or over, be contactable by phone during normal office hours and be the holder of a valid passport. A witness should fill in the 'Proof of Identity' page in their own handwriting. A witness must also write the full name of the person applying for the passport on the back of one of the photos, sign their own name and date the back of the same photo. Photos with this identifying information written in the applicant's own handwriting will not be accepted.

**Questions 1–7**

Do the following statements agree with the information given in the text on page 117?

In boxes 1–7 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 A husband can fill in an application form for his wife.
- 2 Photocopies of documents are acceptable in some circumstances.
- 3 An incomplete application will affect processing time.
- 4 The passport photos included with your application must be in colour.
- 5 A witness can be a relative of the applicant.
- 6 Anyone acting as a witness must have a passport.
- 7 The passport applicant must sign their name on the back of both photos.

## Questions 8–14

The text on page 120 has seven sections, A–G.

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

Write the correct number, i–x, in boxes 8–14 on your answer sheet.

### List of Headings

- i Departure procedures
- ii Observation area
- iii Baggage services
- iv Meeting facilities
- v Healthcare services
- vi Flight information
- vii Currency exchange
- viii Health and safety advice
- ix Departure fees
- x Tourist travel centre

- 8 Section A
- 9 Section B
- 10 Section C
- 11 Section D
- 12 Section E
- 13 Section F
- 14 Section G

# Auckland International Airport Services

- A** The second floor of the international terminal offers a view of the airfield and all incoming and outgoing flights. There is a café situated here as well as a restaurant, which is available for all airport visitors to use.
- B** We are open for all international flights and provide a comprehensive service for visitors to the city. Brochures on a range of attractions are available, and we also offer a booking service for accommodation and transport. Shuttle buses into the city centre are provided at a competitive price.
- C** Passengers who require urgent medical attention should dial 9877 on any public telephone in the terminal. The airport pharmacy is located on the ground floor near the departure lounge, and stocks a comprehensive range of products.
- D** Departing passengers can completely seal their luggage or packages in recyclable polythene to protect them from damage. Luggage storage, charged at \$10 per hour, is available on the first floor. Transit passengers have free access to storage facilities.
- E** Every international passenger, with the exception of children under 12 years of age and transit passengers in Auckland for less than 24 hours, is required to make a payment of \$25 when leaving the country. This can be arranged at the National Bank on the ground floor.
- F** As Auckland International Airport has adopted the 'quiet airport' concept, there are usually no announcements made over the public address system. Details of all arrivals and departures are displayed on the monitors located in the terminal halls and lounge areas.
- G** The airport caters for the needs of business travellers and has several rooms available for seminars or business gatherings. These are located adjacent to the airport medical centre on the first floor. For information and bookings please contact the Airport Business Manager on extension 5294.

## SECTION 2 Questions 15–27

Read the text below and answer Questions 15–20.

***Shooting Star is an organisation which offers special training for school leavers.***



### Planning a Gap Year



The best reason to take a gap year between school and work or higher education is to improve your CV with experience overseas. This is why some school leavers in Britain now consider a year out to be essential. Many want to travel, with Sydney the favourite destination. Shooting Star is an organisation that helps school leavers by offering training followed by appropriate employment.

We at Shooting Star offer much more than a trip abroad. At Shooting Star you acquire skills that lead to interesting jobs both for your gap year and future holidays. Magazines are full of 'Wanted' adverts for washing up in a restaurant. Well, we don't do that – it's not our idea of excitement. We offer school leavers the chance for outdoor adventure, to teach things like sailing and snowboarding. No choice, really! In your year out you train, travel and work; you can combine work with pleasure and reap the rewards. You could become an experienced yacht skipper or instructor and many people go on to spend their future holidays being paid to enjoy their favourite sport.

Australians and New Zealanders travel to Europe and North America in large numbers to gain overseas experience. Those who qualify with Shooting Star are very soon using their skills in jobs they could only dream about before, working outdoors and seeing more of the world. Wherever you come from, a gap year with Shooting Star means professional training and international adventure.

Top tips for a successful gap year:

- ★ Design your gap year in outline before applying for a permanent job or a college place. Human Resources officers or Admissions tutors will be impressed by a thought-out plan.
- ★ What's more important to you – travel or work experience? You can be flexible with travel plans but you must research job opportunities in advance. Go to our website and click on Recruitment for ideas.
- ★ Who do you know who has taken a gap year before? Shooting Star can put you in touch with someone who has just completed one.
- ★ Sort out the admin in plenty of time – air tickets, visas, insurance and medical matters such as vaccinations for some destinations. These are your responsibility.
- ★ Who is in charge of your affairs while you are away? There will be forms to fill and letters to answer.
- ★ Allow plenty of time to settle back home on your return – and don't be surprised if it takes some time to readjust to everyday life!

**Questions 15–20**

Do the following statements agree with the information given in the text on page 121?

*In boxes 15–20 on your answer sheet, write*

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

- 15 For some young British people, the purpose of a gap year is to improve their academic qualifications.
- 16 Shooting Star finds employment for young people in the catering industry.
- 17 Training with Shooting Star can be expensive.
- 18 New trainees find it easy to get the sort of work they want.
- 19 New trainees who want work experience should check out vacancies before they depart.
- 20 Shooting Star helps with travel arrangements.

## Questions 21–27

Read the text below and answer Questions 21–27.

# Succeeding at Interviews

- A** Getting invited to an interview means you have passed the first hurdle – your application must have made a good impression. Now you need to prepare yourself for the interview to make sure you make the most of this opportunity. There are a number of things you can do.
- B** Firstly you can do some research. Find out about the employer and the job, ask for an information pack or speak to people you know who work for the company. Try to plan for the interview by asking who will be interviewing you and whether there will be a test to take.
- C** Prepare for questions you might be asked. Some common ones are the reason why you want the job, whether you have done this kind of work before, what your strengths and weaknesses are, and which leisure pursuits you enjoy.
- D** Another important point is never to run the risk of arriving late. For example, consider making a ‘dummy run’ in advance to see how long the journey will take. Check out public transport or, if you are going by car, the nearest parking. Aim to arrive about 10 minutes before the interview is due to start.
- E** It is also crucial to give plenty of thought to what you are going to wear. This will depend on the job you are going for. There is no need to buy a new outfit, but aim to look neat and tidy. Remember, if you look good it will help you feel good.
- F** You need to make a good impression. Interviews can vary from a relatively informal ‘one-to-one’ chat to a very formal panel situation. Whatever the circumstances, you will give yourself an advantage by being friendly and polite, by making eye contact with the interviewer and by selling yourself by focusing on your strengths.
- G** There are also things you should avoid doing at your interview. First of all, don’t exaggerate. For example, if you don’t have the exact experience the employer is looking for, say so and explain you are willing to learn. Don’t simply give ‘yes’ and ‘no’ answers, but answer questions as fully as you can. And lastly don’t forget to ask questions as well as answering them.
- H** One final thing to remember: it is important to show good team spirit, that you possess good people skills and that you are friendly and approachable. Finally, remember to be enthusiastic and show that you can be flexible.

**Questions 21–27**

The text on page 123 has eight sections, **A–H**.

Which section mentions the following?

*Write the correct letter, **A–H**, in boxes 21–27 on your answer sheet.*

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

- 21** the importance of good manners
- 22** using your contacts
- 23** giving adequate responses
- 24** getting on well with colleagues
- 25** the information you may need to provide
- 26** being honest with the interviewer
- 27** being punctual

## SECTION 3 Questions 28–40

Read the text on pages 125 and 126 and answer Questions 28–40.

# Serendipity – accidental discoveries in science

What do photography, dynamite, insulin and artificial sweetener have in common? Serendipity! These diverse discoveries, which have made our everyday living more convenient, were discovered partly by chance. However, Louis Pasteur noted the additional requirement involved in serendipity when he said, '... chance favours only the prepared mind'.

The discovery of modern photography provides an example of serendipity. In 1838, L. J. M. Daguerre was attempting to 'fix' images onto a copper photographic plate. After adding a silver coating to the plate and exposing it to iodine vapour, he found that the photographic image was improved but still very weak. Desperate after an investigation lasting several months, Daguerre placed a lightly exposed photographic plate in the cupboard in which laboratory chemicals such as alcohol and collodion were stored. To his amazement, when he removed the plate several days later, Daguerre found a strong image on its surface.

This image had been created by chance. It was at this point that Louis Pasteur's 'additional requirement' came into play: Daguerre's training told him that one or more of the chemicals in the cupboard was responsible for intensifying the image. After a break of two weeks, Daguerre systematically placed new photographic plates in the cupboard, removing one chemical each day. Unpredictably, good photographic images were created even after all chemicals had been removed. Daguerre then noticed that some mercury had spilled onto the cupboard shelf, and he concluded that the mercury vapour must have improved the photographic result. From this discovery came the universal adoption of the silver-mercury process to develop photographs.

Daguerre's serendipitous research effort was rewarded, a year later, with a medal conferred by the French government. Many great scientists have benefited from serendipity, including Nobel Prize winners. In fact the scientist who established the Nobel Prize was himself blessed with serendipity. In 1861, the Nobel family built a factory in Stockholm to produce nitroglycerine, a colourless and highly explosive oil that had first been prepared by an Italian chemist fifteen years earlier. Nitroglycerine was known to be volatile and unpredictable, often exploding as a result of very small knocks. But the Nobel family believed that this new explosive could solve a major problem facing the Swedish State Railways – the need to dig channels and tunnels through mountains so that the developing railway system could expand.

However, as turnover increased, so did the number of accidental explosions resulting from the use of nitroglycerine. Some people blamed the people who used the explosive more than the substance itself, because nitroglycerine had become popular for inappropriate purposes such as polishing the leather of shoes.

At the age of thirty, Alfred Nobel made the first of his major inventions: an innovative blasting cap, a device designed to control the nitroglycerine explosion. Nobel was also determined to discover a way to make this explosive safer to manufacture, transport and use. Firstly, he experimented with adding chemicals to nitroglycerine, but because the chemicals required huge amounts of resources and energy to wash out, this process was considered to be impractical. He then tried to use fibrous material such as sawdust, charcoal or paper to stabilise the explosive, but these combustible materials tended to catch fire when placed near nitroglycerine. As an alternative, he added powdered brick dust to tame the explosive, as he knew that brick dust would not catch fire. However, the brick dust reduced the explosive power of the product, and so was also found to be unsatisfactory.

According to one version of how the eventual solution was found, a metal container of nitroglycerine sprang a leak, and some of the liquid soaked into packaging material that lay around the container. Nobel immediately set to work to examine the connection between the two materials and found that when the packaging material was mixed with nitroglycerine it could be pressed into a compact solid. This solid retained the explosive power of the liquid, but was entirely safe and reliable because it would not ignite until set off by a blasting cap.

As a scientist who had worked systematically towards a solution for a number of years, Nobel immediately understood the importance of this discovery. But the discovery had only come about because of his perseverance. Through Nobel's clear vision, systematic research and his quick grasp of the significance of his discovery, he set himself apart from the many scientists who were not 'fortunate' enough to create new products that would make them famous.

Alfred Nobel, a lifelong pacifist, hoped that his explosive would be a powerful deterrent to warfare. Nobel sought to achieve permanent worldwide peace. In setting up the Nobel Foundation and the Nobel Peace Prizes, he hoped to accomplish what he had not been able to do during his lifetime: to encourage research and activities that would bestow the 'greatest benefit to mankind', especially peace and fraternity between nations. His vision was of a peaceful world.

## Questions 28–31

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

Write the correct letter, **A–G**, in boxes 28–31 on your answer sheet.

- |  |  |
|--|--|
| 28 Nobel found that adding chemicals         | 30 Nobel found that adding brick dust                    |
| 29 Nobel found that adding sawdust and paper | 31 Nobel found that mixing nitroglycerine with packaging |

- |   |   |
|---|---|
| <b>A</b> decreased the energy of the explosion. | <b>E</b> made the process safer.                    |
| <b>B</b> lengthened the time required.          | <b>F</b> increased the flammability of the mixture. |
| <b>C</b> made the process unworkable.           | <b>G</b> resulted in lower reliability.             |
| <b>D</b> reduced the manufacturing costs.       |   |

## Questions 32–37

Look at the following statements (Questions 32–37) and the list of options below.

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

Write the correct letter, **A**, **B** or **C**, in boxes 32–37 on your answer sheet.

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

- |  |
|--|
| 32 He recognised the significance of an unexpected result.                     |
| 33 He depended on the help of colleagues to solve a problem.                   |
| 34 He used different methods to find a solution to the problem.                |
| 35 He was encouraged to do this research by his government.                    |
| 36 He received an award in recognition of his scientific work.                 |
| 37 He worked for a long time to find a way of keeping a process under control. |

### List of Options

- |          |                                    |
|----------|------------------------------------|
| <b>A</b> | true of both Daguerre and Nobel    |
| <b>B</b> | true of neither Daguerre nor Nobel |
| <b>C</b> | true of only one of them           |

Questions 38–40

Complete the summary below.

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

Write your answers in boxes 38–40 on your answer sheet.

## Daguerre's Experiments

Daguerre's work illustrated the comment made by Louis Pasteur that in order to take full advantage of a lucky discovery, scientists need to have a 38 ..... . He found that exposure to 39 ..... had the desired effect on a silver-coated photographic plate, but only to a very limited extent. To his great surprise the image then became much clearer when it was stored in a cupboard. By a process of elimination, he discovered that collodion and alcohol were not responsible for this improvement. In fact, the removal of all the 40 ..... did not affect the quality of the image. It was some spilt mercury that had produced the effect.

**WRITING****WRITING TASK 1**

You should spend about 20 minutes on this task.

***You and some friends ate a meal at a restaurant to celebrate a special occasion, and you were very pleased with the food and service.***

***Write a letter to the restaurant manager. In your letter***

- give details of your visit to the restaurant***
- explain the reason for the celebration***
- say what was good about the food and the service***

Write at least 150 words.

You do **NOT** need to write any addresses.

Begin your letter as follows:

**Dear Sir or Madam,**

**WRITING TASK 2**

You should spend about 40 minutes on this task.

Write about the following topic:

***Some parents buy their children a large number of toys to play with.***

***What are the advantages and disadvantages for the child of having a large number of toys?***

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

Write at least 250 words.

## GENERAL TRAINING TEST A

### **Section 1, Questions 1–14**

- 1 TRUE  
2 FALSE  
3 NOT GIVEN  
4 TRUE  
5 FALSE  
6 TRUE  
7 NOT GIVEN  
8 C  
9 E  
10 D  
11 E  
12 C  
13 E  
14 G

### **Section 2, Questions 15–27**

- 15 decision maker  
16 impact  
17 opening  
18 white envelope  
19 brochure

- 20 (free) sample  
21 response rate  
22 (international) profile  
23 publications  
24 website content  
25 audience  
26 purpose  
27 post-graduate

### **Section 3, Questions 28–40**

- 28 E  
29 A  
30 A  
31 B  
32 E  
33 F  
34 A  
35 B  
36 D  
37 E  
38 I  
39 G  
40 B

### **If you score...**

0–16	17–28	29–40
<p>you are unlikely to get an acceptable score under examination conditions and we recommend that you spend a lot of time improving your English before you take IELTS.</p>	<p>you may get an acceptable score under examination conditions but we recommend that you think about having more practice or lessons before you take IELTS.</p>	<p>you are likely to get an acceptable score under examination conditions but remember that different institutions will find different scores acceptable.</p>

## GENERAL TRAINING TEST B

### Section 1, Questions 1–14

- 1 FALSE
- 2 FALSE
- 3 TRUE
- 4 NOT GIVEN
- 5 NOT GIVEN
- 6 TRUE
- 7 FALSE
- 8 ii
- 9 x
- 10 v
- 11 iii
- 12 ix
- 13 vi
- 14 iv

### Section 2, Questions 15–27

- 15 FALSE
- 16 FALSE
- 17 NOT GIVEN
- 18 TRUE
- 19 TRUE

- 20 FALSE
- 21 F
- 22 B
- 23 G
- 24 H
- 25 C
- 26 G
- 27 D

### Section 3, Questions 28–40

- 28 C
- 29 F
- 30 A
- 31 E
- 32 A
- 33 B
- 34 C
- 35 B
- 36 C
- 37 C
- 38 prepared mind
- 39 iodine vapour/vapor
- 40 chemical/chemicals

### If you score...

0–18	19–30	31–40
you are unlikely to get an acceptable score under examination conditions and we recommend that you spend a lot of time improving your English before you take IELTS.	you may get an acceptable score under examination conditions but we recommend that you think about having more practice or lessons before you take IELTS.	you are likely to get an acceptable score under examination conditions but remember that different institutions will find different scores acceptable.