

# IELTS Academic Reading Sample 92 - Flawed Beauty: the problem with toughened glass

## Flawed Beauty: the problem with toughened glass

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On 2nd August 1999, a particularly hot day in the town of Cirencester in the UK, a large pane of toughened glass in the roof of a shopping centre at Bishops Walk shattered without warning and fell from its frame. When fragments were analysed by experts at the giant glass manufacturer Pilkington, which had made the pane, they found that minute crystals of nickel sulphide trapped inside the glass had almost certainly caused the failure.

'The glass industry is aware of the issue,' says Brian Waldron, chairman of the standards committee at the Glass and Glazing Federation, a British trade association, and standards development officer at Pilkington. But he insists that cases are few and far between. 'It's a very rare phenomenon,' he says.

Others disagree. 'On average I see about one or two buildings a month suffering from nickel sulphide related failures,' says Barrie Josie, a consultant engineer involved in the Bishops Walk investigation. Other experts tell of similar experiences. Tony Wilmott of London-based consulting engineers Sandberg, and Simon Armstrong at CladTech Associates in Hampshire both say they know of hundreds of cases. 'What you hear is only the tip of the iceberg,' says Trevor Ford, a glass expert at Resolve Engineering in Brisbane, Queensland. He believes the reason is simple: 'No-one wants bad press.'

Toughened glass is found everywhere, from cars and bus shelters to the windows, walls and roofs of thousands of buildings around the world. It's easy to see why. This glass

These crystals can exist in two forms: a dense form called the alpha phase, which is stable at high temperatures, and a less dense form called the beta phase, which is stable at room temperatures. The high temperatures used in the toughening process convert all the crystals to the dense, compact alpha form. But the subsequent cooling is so rapid that the crystals don't have time to change back to the beta phase. This leaves unstable alpha crystals in the glass, primed like a coiled spring, ready to revert to the beta phase without warning.

When this happens, the crystals expand by up to 4%. And if they are within the central, tensile region of the pane, the stresses this unleashes can shatter the whole sheet. The time that elapses before failure occurs is unpredictable. It could happen just months after manufacture, or decades later, although if the glass is heated - by sunlight, for example - the process is speeded up. Ironically, says Graham Dodd, of consulting engineers Arup in London, the oldest pane of toughened glass known to have failed due to nickel sulphide inclusions was in Pilkington's glass research building in Lathom, Lancashire. The pane was 27 years old.

Data showing the scale of the nickel sulphide problem is almost impossible to find. The picture is made more complicated by the fact that these crystals occur in batches. So even if, on average, there is only one inclusion in 7 tonnes of glass, if you experience one nickel sulphide failure in your building, that probably means you've got a

has five times the strength of standard glass, and when it does break it shatters into tiny cubes rather than large, razor-sharp shards. Architects love it because large panels can be bolted together to make transparent walls, and turning it into ceilings and floors is almost as easy.

It is made by heating a sheet of ordinary glass to about 620°C to soften it slightly, allowing its structure to expand, and then cooling it rapidly with jets of cold air. This causes the outer layer of the pane to contract and solidify before the interior. When the interior finally solidifies and shrinks, it exerts a pull on the outer layer that leaves it in permanent compression and produces a tensile force inside the glass. As cracks propagate best in materials under tension, the compressive force on the surface must be overcome before the pane will break, making it more resistant to cracking.

The problem starts when glass contains nickel sulphide impurities. Trace amounts of nickel and sulphur are usually present in the raw materials used to make glass, and nickel can also be introduced by fragments of nickel alloys falling into the molten glass. As the glass is heated, these atoms react to form tiny crystals of nickel sulphide. Just a tenth of a gram of nickel in the furnace can create up to 50,000 crystals.

problem in more than one pane. Josie says that in the last decade he has worked on over 15 buildings with the number of failures into double figures.

One of the worst examples of this is Waterfront Place, which was completed in 1990. Over the following decade the 40 storey Brisbane block suffered a rash of failures. Eighty panes of its toughened glass shattered due to inclusions before experts were finally called in. John Barry, an expert in nickel sulphide contamination at the University of Queensland, analysed every glass pane in the building. Using a studio camera, a photographer went up in a cradle to take photos of every pane.

These were scanned under a modified microfiche reader for signs of nickel sulphide crystals. 'We discovered at least another 120 panes with potentially dangerous inclusions which were then replaced,' says Barry. 'It was a very expensive and time-consuming process that took around six months to complete.' Though the project cost A\$1.6 million (nearly £700,000), the alternative - re-cladding the entire building - would have cost ten times as much.

### Questions 14-17

Look at the following people and the list of statements below.

Match each person with the correct statement.

Write the correct letter **A-H** in boxes **14-17** on your answer sheet.

- 14 Brian Waldron
- 15 Trevor Ford
- 16 Graham Dodd
- 17 John Barry

**List of Statements**

- A suggests that publicity about nickel sulphide failure has been suppressed
- B regularly sees cases of nickel sulphide failure
- C closely examined all the glass in one building
- D was involved with the construction of Bishops Walk
- E recommended the rebuilding of Waterfront Place
- F thinks the benefits of toughened glass are exaggerated
- G claims that nickel sulphide failure is very unusual
- H refers to the most extreme case of delayed failure

**Questions 18-23**

Complete the summary with the list of words **A-P** below.

Write your answers in boxes **18-23** on your answer sheet.

**Toughened Glass**

Toughened glass is favoured by architects because it is much stronger than ordinary glass, and the fragments are not as 18 ..... when it breaks. However, it has one disadvantage: it can shatter 19 .....

This fault is a result of the manufacturing process. Ordinary glass is first heated, then cooled very 20 .....

The outer layer 21.....before the inner layer, and the tension between the two layers which is created because of this makes the glass stronger. However, if the glass contains nickel sulphide impurities, crystals of nickel sulphide are formed. These are unstable, and can expand suddenly, particularly if the weather is 22..... If this happens, the pane of glass may break. The frequency with which such problems occur is 23 ..... by glass experts. Furthermore, the crystals cannot be detected without sophisticated equipment.

- |                       |                   |                    |                     |
|-----------------------|-------------------|--------------------|---------------------|
| <b>A</b> numerous     | <b>B</b> detected | <b>C</b> quickly   | <b>D</b> agreed     |
| <b>E</b> warm         | <b>F</b> sharp    | <b>G</b> expands   | <b>H</b> slowly     |
| <b>I</b> unexpectedly | <b>J</b> removed  | <b>K</b> contracts | <b>L</b> disputed   |
| <b>M</b> cold         | <b>N</b> moved    | <b>O</b> small     | <b>P</b> calculated |

**Questions 24-26**

Do the following statements agree with the information given in Reading Passage 83?

In boxes **24-26** 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

**24** Little doubt was expressed about the reason for the Bishops Walk accident.

**25** Toughened glass has the same appearance as ordinary glass.

**26** There is plenty of documented evidence available about the incidence of nickel sulphide failure.

**Answer:**

14. G 15. A 16. H 17. C 18. sharp 19. unexpectedly 20. quickly 21. contracts 22. warm 23.  
disputed 24. TRUE 25. NOT GIVEN 26. FALSE

# IELTS Academic Reading Sample 93 - The Impact of Wilderness Tourism

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You should spend about 20 minutes on Questions **1-13**, which are based on Reading Passage 93 on the following pages.

## The Impact of Wilderness Tourism

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### A

The market for tourism in remote areas is booming as never before. Countries all across the world are actively promoting their 'wilderness' regions - such as mountains, Arctic lands, deserts, small islands and wetlands - to high-spending tourists. The attraction of these areas is obvious: by definition, wilderness tourism requires little or no initial investment. But that does not mean that there is no cost. As the 1992 United Nations Conference on Environment and Development recognized, these regions are fragile (i.e. highly vulnerable to abnormal pressures) not just in terms of their ecology, but also in terms of the culture of their inhabitants. The three most significant types of fragile environment in these respects, and also in terms of the proportion of the Earth's surface they cover, are deserts, mountains and Arctic areas. An important characteristic is their marked seasonality, with harsh conditions prevailing for many months each year. Consequently, most human activities, including tourism, are limited to quite clearly defined parts of the year. Tourists are drawn to these regions by their natural landscape beauty and the unique cultures of their indigenous people. And poor governments in these isolated areas have welcomed the new breed of 'adventure tourist', grateful for the hard currency they bring. For several years now, tourism has been the prime source of foreign exchange in Nepal and Bhutan. Tourism is also a key element in the economies of Arctic zones such as Lapland and Alaska and in desert areas such as Ayers Rock in Australia and Arizona's Monument Valley.

### B

Once a location is established as a main tourist destination, the effects on the local community are profound. When hill-farmers, for example, can make more money in a few weeks working as porters for foreign trekkers than they can in a year working in their fields, it is not surprising that many of them give up their farm-work, which is thus left to other members of the family. In some hill-regions, this has led to a serious decline in farm output and a change in the local diet, because there is insufficient labour to maintain terraces and irrigation systems and tend to crops. The result has been that many people in these regions have turned to outside supplies of rice and other foods.

In Arctic and desert societies, year-round survival has traditionally depended on hunting animals and fish and collecting fruit over a relatively short season. However, as some inhabitants become involved in tourism, they no longer have time to collect wild food; this has led to increasing dependence on bought food and stores. Tourism is not always the culprit behind such changes. All kinds of wage labour, or government handouts, tend

to undermine traditional survival systems. Whatever the cause, the dilemma is always the same: what happens if these new, external sources of income dry up? The physical impact of visitors is another serious problem associated with the growth in adventure tourism. Much attention has focused on erosion along major trails, but perhaps more important are the deforestation and impacts on water supplies arising from the need to provide tourists with cooked food and hot showers. In both mountains and deserts, slow-growing trees are often the main sources of fuel and water supplies may be limited or vulnerable to degradation through heavy use.

## C

Stories about the problems of tourism have become legion in the last few years. Yet it does not have to be a problem. Although tourism inevitably affects the region in which it takes place, the costs to these fragile environments and their local cultures can be minimized. Indeed, it can even be a vehicle for reinvigorating local cultures, as has happened with the Sherpas of Nepal's Khumbu Valley and in some Alpine villages. And a growing number of adventure tourism operators are trying to ensure that their activities benefit the local population and environment over the long term. In the Swiss Alps, communities have decided that their future depends on integrating tourism more effectively with the local economy. Local concern about the rising number of second home developments in the Swiss Pays d'Enhaut resulted in limits being imposed on their growth. There has also been a renaissance in communal cheese production in the area, providing the locals with a reliable source of income that does not depend on outside visitors. Many of the Arctic tourist destinations have been exploited by outside companies, who employ transient workers and repatriate most of the profits to their home base. But some Arctic communities are now operating tour businesses themselves, thereby ensuring that the benefits accrue locally. For instance, a native corporation in Alaska, employing local people, is running an air tour from Anchorage to Kotzebue, where tourists eat Arctic food, walk on the tundra and watch local musicians and dancers. Native people in the desert regions of the American Southwest have followed similar strategies, encouraging tourists to visit their pueblos and reservations to purchase high-quality handicrafts and artwork. The Acoma and San Ildefonso pueblos have established highly profitable pottery businesses, while the Navajo and Hopi groups have been similarly successful with jewellery. Too many people living in fragile environments have lost control over their economies, their culture and their environment when tourism has penetrated their homelands. Merely restricting tourism cannot be the solution to the imbalance, because people's desire to see new places will not just disappear. Instead, communities in fragile environments must achieve greater control over tourism ventures in their regions; in order to balance their needs and aspirations with the demands of tourism. A growing number of communities are demonstrating that, with firm communal decision-making, this is possible. The critical question now is whether this can become the norm, rather than the exception.

### Questions 1-3

*Reading Passage 82 has three paragraphs, A-C.*

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

Write the correct number *i-vi* in boxes **1-3** on your answer sheet.

### List of Headings

- i The expansion of international tourism in recent years
- ii How local communities can balance their own needs with the demands of wilderness tourism
- iii Fragile regions and the reasons for the expansion of tourism there
- iv Traditional methods of food-supply in fragile regions
- v Some of the disruptive effects of wilderness tourism
- vi The economic benefits of mass tourism

1 Section A

2 Section B

3 Section C

### Questions 4-9

Do the following statements reflect the claims of the writer in Reading Passage 82?

In boxes **4-9** on your answer sheet, write

**YES** if the statement reflects the claims of the writer

**NO** if the statement contradicts the claims of the writer

**NOT GIVEN** if it is impossible to say what the writer thinks about this

**4** The low financial cost of setting up wilderness tourism makes it attractive to many countries.

**5** Deserts, mountains and Arctic regions are examples of environments that are both ecologically and culturally fragile.

**6** Wilderness tourism operates throughout the year in fragile areas.

**7** The spread of tourism in certain hill-regions has resulted in a fall in the amount of food produced locally.

**8** Traditional food-gathering in desert societies was distributed evenly over the year.

**9** Government handouts do more damage than tourism does to traditional patterns of food-gathering.

### Questions 10-13

Choose **ONE WORD** from Reading Passage 82 for each answer.

Write your answers in boxes **10-13** on your answer sheet.

**The positive ways in which some local communities have  
responded to tourism**

People/Location	Activity
Swiss Pays d'Enhaut	Revived production of 10 .....
Arctic communities	Operate 11.....businesses
Acoma and San Ildefonso	Produce and sell 12 .....
Navajo and Hopi Activity	Produce and sell 13 .....

**Answer:**

1. iii 2. v 3. ii 4. YES 5. YES 6. NO 7. YES 8. NO 9. NOT GIVEN 10. cheese 11. tourist/  
tourism/tour businesses 12. pottery 13. jewelry/ jewellery

# IELTS Academic Reading Sample 94 - The Return of Artificial Intelligence

## The Return of Artificial Intelligence

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It is becoming acceptable again to talk of computers performing human tasks such as problem-solving and pattern-recognition

**A** After years in the wilderness, the term 'artificial intelligence' (AI) seems poised to make a comeback. AI was big in the 1980s but vanished in the 1990s. It re-entered public consciousness with the release of AI, a movie about a robot boy. This has ignited public debate about AI, but the term is also being used once more within the computer industry. Researchers, executives and marketing people are now using the expression without irony or inverted commas. And it is not always hype. The term is being applied, with some justification, to products that depend on technology that was originally developed by AI researchers. Admittedly, the rehabilitation of the term has a long way to go, and some firms still prefer to avoid using it. But the fact that others are starting to use it again suggests that AI has moved on from being seen as an over-ambitious and under-achieving field of research.



**B** The field was launched, and the term 'artificial intelligence' coined, at a conference in 1956 by a group of

researchers that included Marvin Minsky, John McCarthy, Herbert Simon and Alan Newell, all of whom went on to become leading figures in the field. The expression provided an attractive but informative name for a research programme that encompassed such previously disparate fields as operations research, cybernetics, logic and computer science. The goal they shared was an attempt to capture or mimic human abilities using machines. That said, different groups of researchers attacked different problems, from speech recognition to chess playing, in different ways; AI unified the field in name only. But it was a term that captured the public imagination.

**C** Most researchers agree that AI peaked around 1985. A public reared on science-fiction movies and excited by the growing power of computers had high expectations. For years, AI researchers had implied that a breakthrough was just around the corner. Marvin Minsky said in 1967 that within a generation the problem of creating 'artificial intelligence' would be substantially solved. Prototypes of medical-diagnosis programs and speech recognition software appeared to be making progress. It proved to be a false dawn. Thinking computers and household robots failed to materialise, and a backlash ensued. 'There was undue optimism in the early 1980s; says David Leaky, a researcher at Indiana University. 'Then when people realised these were hard problems, there was retrenchment. By the late 1980s, the term AI was being avoided by many researchers, who opted instead to align themselves with specific sub-disciplines such as neural networks, agent technology, case-based reasoning, and so on.

**D** Ironically, in some ways AI was a victim of its own success. Whenever an apparently mundane problem was solved, such as building a system that could land an aircraft unattended, the problem was deemed not to have been AI in the first place. 'If it works, it can't be AI; as Dr Leaky characterises it. The effect of repeatedly moving the goal-posts in this way was that AI came to refer to 'blue-sky' research that was still years away from commercialisation. Researchers joked that AI stood for 'almost implemented'. Meanwhile, the technologies that made it onto the market, such as speech recognition, language translation and decision-support software, were no longer regarded as AI. Yet all three once fell well within the umbrella of AI research.

**E** But the tide may now be turning, according to Dr Leake. HNC Software of San Diego, backed by a government agency, reckon that their new approach to artificial intelligence is the most powerful and promising approach ever discovered. HNC claim that their system, based on a cluster of 30 processors, could be used to spot camouflaged vehicles on a battlefield or extract a voice signal from a noisy background - tasks humans can do well, but computers cannot. 'Whether or not their technology lives up to the claims made for it, the fact that HNC are emphasising the use of AI is itself an interesting development; says Dr Leaky.

**F** Another factor that may boost the prospects for AI in the near future is that investors are now looking for firms using clever technology, rather than just a clever business model, to differentiate themselves. In

particular, the problem of information overload, exacerbated by the growth of e-mail and the explosion in the number of web pages, means there are plenty of opportunities for new technologies to help filter and categorise information - classic AI problems. That may mean that more artificial intelligence companies will start to emerge to meet this challenge.

**G** The 1969 film, *2001: A Space Odyssey*, featured an intelligent computer called HAL 9000. As well as understanding and speaking English, HAL could play chess and even learned to lipread. HAL thus encapsulated the optimism of the 1960s that intelligent computers would be widespread by 2001. But 2001 has been and gone, and there is still no sign of a HAL-like computer. Individual systems can play chess or transcribe speech, but a general theory of machine intelligence still remains elusive. It may be, however, that the comparison with HAL no longer seems quite so important, and AI can now be judged by what it can do, rather than by how well it matches up to a 30-year-old science-fiction film. 'People are beginning to realise that there are impressive things that these systems can do; says Dr Leake hopefully.

#### **Questions 27-31**

*Reading Passage 81 has seven paragraphs, A-G.*

*Which paragraph contains the following information?*

*Write the correct letter A-G in boxes 27-31 on your answer sheet.*

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

**27** how AI might have a military impact

**28** the fact that AI brings together a range of separate research areas

**29** the reason why AI has become a common topic of conversation again

**30** how AI could help deal with difficulties related to the amount of information available electronically

**31** where the expression AI was first used

#### **Questions 32-37**

Do the following statements agree with the information given in Reading Passage 81?

In boxes **32-37** 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

**32** The researchers who launched the field of AI had worked together on other projects in the past.

**33** In 1985, AI was at its lowest point.

- 34** Research into agent technology was more costly than research into neural networks.
- 35** Applications of AI have already had a degree of success.
- 36** The problems waiting to be solved by AI have not changed since 1967.
- 37** The film 2001: A Space Odyssey reflected contemporary ideas about the potential of AI computers.

**Questions 38-40**

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

*Write your answers in boxes 38-40 on your answer sheet.*

- 38** According to researchers, in the late 1980s there was a feeling that
- A a general theory of AI would never be developed.
  - B original expectations of AI may not have been justified.
  - C a wide range of applications was close to fruition.
  - D more powerful computers were the key to further progress.
- 39** In Dr Leake's opinion, the reputation of AI suffered as a result of
- A changing perceptions.
  - B premature implementation.
  - C poorly planned projects.
  - D commercial pressures.
- 40** The prospects for AI may benefit from
- A existing AI applications.
  - B new business models.
  - C orders from Internet-only companies.
  - D new investment priorities.

**Answer:**

27. E 28. B 29. A 30. F 31. B 32. NOT GIVEN 33. FALSE 34. NOT GIVEN 35. TRUE 36.  
FALSE 37. TRUE 38. B 39. A 40. D

# IELTS Academic Reading Sample 95 - Disappearing Delta

## Disappearing Delta

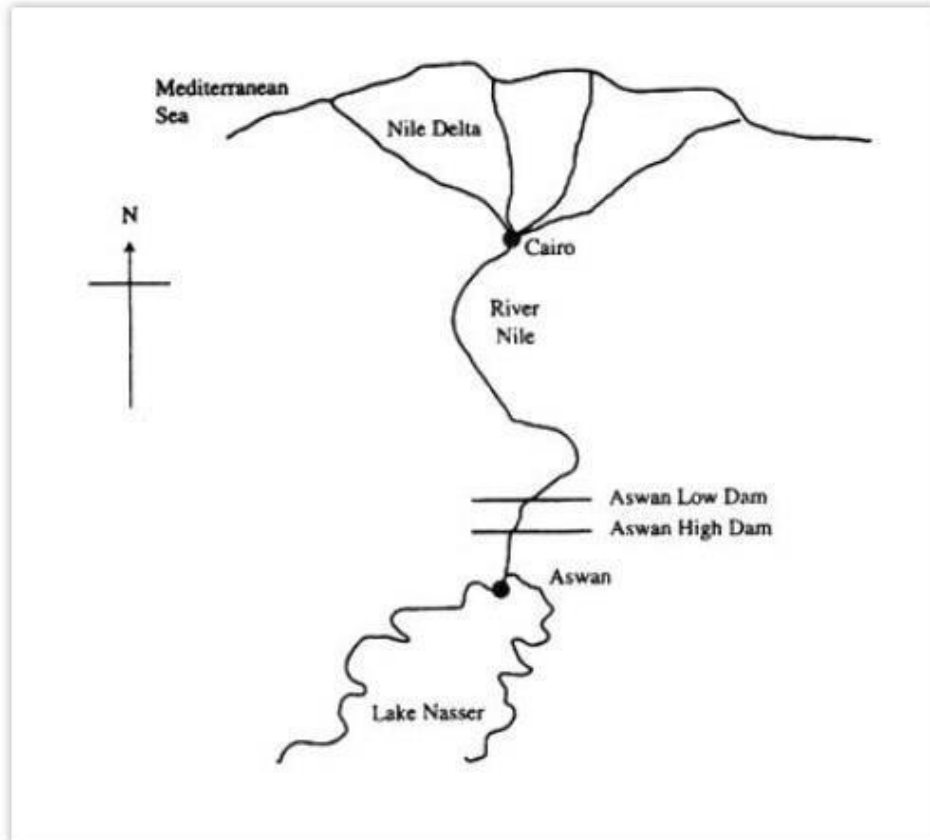
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### A

The fertile land of the Nile delta is being eroded along Egypt's Mediterranean coast at an astounding rate, in some parts estimated at 100 metres per year. In the past, land scoured away from the coastline by the currents of the Mediterranean Sea used to be replaced by sediment brought down to the delta by the River Nile, but this is no longer happening.

### B

Up to now, people have blamed this loss of delta land on the two large dams at Aswan in the south of Egypt, which hold back virtually all of the sediment that used to flow down the river. Before the dams were built, the Nile flowed freely, carrying huge quantities of sediment north from Africa's interior to be deposited on the Nile delta. This continued for 7,000 years, eventually covering a region of over 22,000 square kilometres with layers of fertile silt. Annual flooding brought in new, nutrient-rich soil to the delta region, replacing what had been washed away by the sea, and dispensing with the need for fertilizers in Egypt's richest food-growing area. But when the Aswan dams were constructed in the 20th century to provide electricity and irrigation, and to protect the huge population centre of Cairo and its surrounding areas from annual flooding and drought, most of the sediment with its natural fertilizer accumulated up above the dam in the southern, upstream half of Lake Nasser, instead of passing down to the delta.



### C

Now, however, there turns out to be more to the story. It appears that the sediment-free water emerging from the Aswan dams picks up silt and sand as it erodes the river bed and banks on the 800-kilometre trip to Cairo. Daniel Jean Stanley of the Smithsonian Institute noticed that water samples taken in Cairo, just before the river enters the delta, indicated that the river sometimes carries more than 850 grams of sediment per cubic metre of water - almost half of what it carried before the dams were built. 'I'm ashamed to say that the significance of this didn't strike me until after I had read 50 or 60 studies,' says Stanley in *Marine Geology*. There is still a lot of sediment coming into the delta, but virtually no sediment comes out into the Mediterranean to replenish the Coastline. So this sediment must be trapped on the delta itself.'

### D

Once north of Cairo, most of the Nile water is diverted into more than 10,000 kilometres of irrigation canals and only a small proportion reaches the sea directly through the rivers in the delta. The water in the irrigation canals is still or very slow-moving and thus cannot carry sediment, Stanley explains. The sediment sinks to the bottom of the canals and then is added to fields by farmers or pumped with the water into the four large freshwater lagoons that are located near the outer edges of the delta. So very little of it actually reaches the coastline to replace what is being washed away by the Mediterranean currents.

## E

The farms on the delta plains and fishing and aquaculture in the lagoons account for much of Egypt's food supply. But by the time the sediment has come to rest in the fields and lagoons it is laden with municipal, industrial and agricultural waste from the Cairo region, which is home to more than 40 million people.

'Pollutants are building up faster and faster' says Stanley.

Based on his investigations of sediment from the delta lagoons, Frederic Siegel of George Washington University concurs. 'In Manzalah Lagoon, for example, the increase in mercury, lead, copper and zinc coincided with the building of the High Dam at Aswan, the availability of cheap electricity, and the development of major power-based industries he says. Since that time the concentration of mercury has increased significantly. Lead from engines that use leaded fuels and from other industrial sources has also increased dramatically. These poisons can easily enter the food chain, affecting the productivity of Fishing and Farming. Another problem is that agricultural wastes include fertilizers which stimulate increases in plant growth in the lagoons and upset the ecology of the area, with serious effects on the fishing industry.'

## F

According to Siegel, international environmental organisations are beginning to pay lesser attention to the region, partly because of the problems of erosion and pollution of the Nile delta, but principally because they fear the impact this situation could have on the whole Mediterranean coastal ecosystem. But there are no easy solutions. In the immediate future, Stanley believes that one solution would be to make artificial floods to flush out the delta waterways, in the same way that natural floods did before the construction of the dams. He says, however, that in the long term an alternative process such as desalination may have to be used to increase the amount of water available, 'In my view, Egypt must devise a way to have more water running through the river and the delta' says Stanley. Easier said than done in a desert region with a rapidly growing population.

### Questions 14-17

You should spend about 20 minutes on Questions **14-26**, which are based on Reading Passage 2 on the following pages.

Reading Passage 80 has six paragraphs, **A-F**.

Choose the correct heading for paragraphs **B** and **D-F** from the list of headings below..

Write the correct number **i-viii** in boxes **14-17** on your answer sheet.

### List of Headings

- 
- i** Effects of irrigation on sedimentation

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  - ii** The danger of flooding the Cairo area

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  - iii** Causing pollution in the Mediterranean

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  - iv** Interrupting a natural process

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  - v** The threat to food production

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  - vi** Less valuable sediment than before

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  - vii** Egypt's disappearing coastline

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  - viii** Looking at the long-term impact

**Example Paragraph A Answer vii**

14 Paragraph B

**Example Paragraph C Answer vi**

15 Paragraph D

16 Paragraph E

17 Paragraph F

**Questions 11-13**

Do the following statements reflect the claims of the writer in Reading Passage 2?

In boxes **18-23** on your answer sheet, write

**YES** if the statement reflects the claims of the writer

**NO** if the statement contradicts the claims of the writer

**NOT GIVEN** if it is impossible to say what the writer thinks about this

**18** Coastal erosion occurred along Egypt's Mediterranean coast before the building of the Aswan dams.

**19** Some people predicted that the Aswan dams would cause land loss before they were built.

- 20 The Aswan dams were built to increase the fertility of the Nile delta.
- 21 Stanley found that the levels of sediment in the river water in Cairo were relatively high.
- 22 Sediment in the irrigation canals on the Nile delta causes flooding.
- 23 Water is pumped from the irrigation canals into the lagoons.

**Questions 24-26**

Complete the summary of paragraphs **E** and **F** with the list of words **A-H** below.  
Write the correct letter **A-H** in boxes **24-26** on your answer sheet.

In addition to the problem of coastal erosion, there has been a marked increase in the level of **24**.....contained in the silt deposited in the Nile delta. To deal with this, Stanley suggests the use of **25**..... in the short term, and increasing the amount of water available through **26** .....in the longer term.

- |                            |                       |                             |                         |
|----------------------------|-----------------------|-----------------------------|-------------------------|
| <b>A</b> artificial floods | <b>B</b> desalination | <b>C</b> delta waterways    | <b>D</b> natural floods |
| <b>E</b> nutrients         | <b>F</b> pollutants   | <b>G</b> population control | <b>H</b> sediment       |

**Answer:**

14. iv 15.i 16. v 17. viii 18. YES 19. NOT GIVEN 20. NO 21. YES 22. NOT GIVEN 23. YES 24. (F) pollutant 25. (A) artificial floods 26. (b) desalination