READING TEST

# QUESTIONS 1-14

You are advised to spend about 15 minutes on Questions 1-14 which refer to Reading Passage 1 below.

READING PASSAGE 1

# FINDING THE LOST FREEDOM

1. The private car is assumed to have widened our horizons and increased our mobility. When we consider our children's mobility, they can be driven to more places (and more distant places) than they could visit without access to a motor vehicle. However, allowing our cities to be dominated by cars has progressively eroded children's independent mobility. Children have lost much of their freedom to explore their own neighbourhood or city without adult supervision. In recent surveys, when parents in some cities were asked about their own childhood experiences, the majority remembered having more, or far more, opportunities for going out on their own, compared with their own children today. They had more freedom to explore their own environment.
2. Children's independent access to their local streets may be important for their own personal, mental and psychological development. Allowing them to get to know their own neighbourhood and community gives them a 'sense of place'. This depends on 'active exploration', which is not provided for when children are passengers in cars. (Such children may see more, but they learn less.) Not only is it important that children be able to get to local play areas by themselves, but walking and cycling journeys to school and to other destinations provide genuine play activities in themselves.
3. There are very significant time and money costs for parents associated with transporting their children to school, sport and to other locations. Research in the United Kingdom estimated that this cost, in 1990, was between 10 billion and 20 billio n pounds. (A I P P G)
4. The reduction in children's freedom may also contribute to a weakening of the sense of local community. As fewer children and adults use the streets as pedestrians, these streets become less sociable places. There is less opportunity for children and adults to have the spontaneous of community. This in itself may exacerbate fears associated with assault and molestation of children, because there are fewer adults available who know their neighbours' children, and who can look out for their safety.
5. The extra traffic involved in transporting children results in increased traffic congestion, pollution and accident risk. As our roads become more dangerous, more

parents drive their children to more places, thus contributing to increase d levels of danger for the remaining pedestrians. Anyone who has experienced either the reduced volume of traffic in peak hour during school holidays, or the traffic jams near schools at the end of a school day, will not need convincing about these points. Thus, there are also important environmental implications of children's loss of freedom.

1. As individuals, parents strive to provide the best upbringing they can for their children. However, in doing so, (e.g. by driving their children to sport, school or recreation) parents may be contributing to a more dangerous environment for children generally. The idea that 'streets are for cars and back yards and playgrounds are for children' is a strongly held belief, and parents have little choice as individuals but to keep their children off the streets if they want to protect their safety.
2. In many parts of Dutch cities, and some traffic calmed precincts in Germany, residential streets are now places where cars must give way to pedestrians. In these areas, residents are accepting the view that the function of streets is not solely to provide mobility for cars. Streets may also be for social interaction, walking, cycling and playing. One of the most important aspects of these European cities, in terms of giving cities back to children, has been a range of 'traffic calming' initiatives, aimed at reducing the volume and speed of traffic. These initiatives have had complex interactive effects, leading to a sense that children have been able to 'recapture' their local neighbourhood, and more importantly, that they have been able to do this in safety. Recent research has demonstrated that children in many German cities have significantly higher levels of freedom to travel to places in their own neighbourhood or city than children in other cities in the world. (ai p p g . co m)
3. Modifying cities in order to enhance children's freedom will not only benefit children. Such cities will become more environmentally sustainable, as well as more sociable and more livable for all city residents. Perhaps it will be our concern for our children's welfare that convinces us that we need to challenge the dominance of the car in our cities.

# Questions 1-5

*Read statements 1 -5 which relate to Paragraphs 1,2, and 3 of the reading passage. Answer ? if the statement is true, F if the statement is false, or NI if there is no information given in the passage. Write your answers in the spaces numbered 1-5 on the answer sheet. One has been done for you as an example.*

*Example*: The private car has made people more mobile. *Answer*: **?**

* 1. The private car has helped children have more opportunities to learn.
  2. Children are more independent today than they used to be.
  3. Walking and cycling to school allows children to learn more.
  4. Children usually walk or cycle to school.
  5. Parents save time and money by driving children to school.

# Questions 6-9

*In Paragraphs 4 and 5, there are FOUR problems stated. These problems, numbered as questions 6-9, are listed below. Each of these problems has a cause, listed A-G. Find the correct cause for each of the problems and write the corresponding letter A- G, in the spaces numbered 6 -9 on the answer sheet. One has been done for you as an example.*

## There are more causes than problems so you will not use all of them and you may use any cause more than once.

Problems

*Example:* low sense of community feeling

* 1. streets become less sociable
  2. fewer chances for meeting friends
  3. fears of danger for children
  4. higher accident risk

# Questions 10-14

Causes

*Answer*: **F**

**A** few adults know local children

**?** fewer people use the streets

**?** increased pollution

**D** streets are less friendly

**E** less traffic in school holidays **F** reduced freedom for children **G** more children driven to school

*Questions 10 -14 are statement beginnings which represen t information given in Paragraphs 6, 7 and 8. In the box below, there are some statement endings numbered i-x. Choose the correct ending for each statement. Write your answers i-x, in the spaces numbered 10 -14 on the answer sheet. One has been done for you as an example.*

## There are more statement endings than you will need.

*Example*: By driving their children to school, parents help create … *Answer* : **i**

* 1. Children should play ...
  2. In some German towns, pedestrians have right of way …
  3. Streets should also be used for ...
  4. Reducing the amount of traffic and the speed is ...
  5. All people who live in the city will benefit if cities are ...

# List of statement endings

1. ... a dangerous environment.
2. ... modified.
3. ... on residential streets.
4. ... modifying cities. **v** ... neighbourhoods. **vi** ... socialising.
5. ... in backyards.
6. ... for cars.
7. ... traffic calming.
8. ... residential

# Questions 15-28

READING PASSAGE 2

# RISING SEA

**Paragraph 1**. INCREASED TEMPERATURES

The average air temperature at the surface of the earth has risen this century, as has the temperature of ocean surface waters. Because water expands as it heats, a warmer ocean means higher sea levels. We cannot say definitely that the temperature rises are due to the greenhouse effect; the heating may be part of a ‘natural’ variability over a long time-scale that we have not yet recognized in our short 100 years of recording. However, assuming the build up of greenhouse gases is responsible, and that the warming will continue, scientists – and inhabitants of low -lying coastal areas – would like to know the extent of future sea level rises. (A I P PG . c om)

# Paragraph 2.

Calculating this is not easy. Models used for the purpose have treated the ocean as passive, stationary and one-dimensional. Scientists have assumed that heat simply diffused into the sea from the atmosphere. Using basic physical laws, they then predict how much a known volume of water would expand for a given increase in temperature. But the oceans are not one-dime nsional, and recent work by oceanographers, using a new model which takes into account a number of subtle facets of the sea – including vast and complex ocean currents – suggests that the rise in sea level may be less than some earlier estimates had predicted.

# Paragraph 3.

An international forum on climate change, in 1986, produced figures for likely sea- level rises of 20 cms and 1.4 m, corresponding to atmospheric temperature increases of 1.5 and 4.5C respectively. Some scientists estimate that the ocean warming resulting from those temperature increases by the year 2050 would raise the sea level by between 10 cms and 40 cms. This model only takes into account the temperature

effect on the oceans; it does not consider changes in sea level brought about by the melting of ice sheets and glaciers, and changes in groundwater storage. When we add on estimates of these, we arrive at figures for total sea-level rises of 15 cm and 70 cm respectively.

# Paragraph 4.

It’s not easy trying to model accurately the enormous complexities of the ever- changing oceans, with their great volume, massive currents and sensitively to the influence of land masses and the atmosphere. For example, consider how heat enters the ocean. Does it just ‘diffuse’ from the warmer air vertically into the water, and heat only the surface layer of the sea? (Warm water is less dense than cold, so it would not spread downwards). Conventional models of sea -level rise have considered that this the only method, but measurements have shown that the rate of heat transfer into the ocean by vertical diffusion is far lower in practice than the figures that many modelers have adopted.

# Paragraph 5.

Much of the early work, for simplicity, ignored the fact that water in the oceans moves in three dimensions. By movement, of course, scientists don’t mean waves, which are too small individually to consider, but rather movement of vast volumes of

water in huge currents. To understand the importance of this, we now need to consider another process – advection. Ima gine smoke rising from a chimney. On a still day it will slowly spread out in all directions by means of diffusion. With a strong directional wind, however, it will all shift downwind, this process is advection – the transport of properties (notably heat a nd salinity in the ocean) by the movement of bodies of air or water, rather than by conduction or diffusion.

# Paragraph 6.

Massive ocean currents called gyres do the moving. These currents have far more capacity to store heat than does the atmosphere. Indeed, just the top 3 m of the ocean contains more heat than the whole of the atmosphere. The origin of gyres lies in the fact that more heat from the Sun reaches the Equator than the Poles, and naturally heat tends to move from the former to the latter. War m air rises at the Equator, and draws more air beneath it in the form of winds (the “Trade Winds”) that, together with other air movements, provide the main force driving the ocean currents.

# Paragraph 7.

Water itself is heated at the Equator and moves poleward, twisted by the Earth’s rotation and affected by the positions of the continents. The resultant broadly circular movements between about 10 and 40 North and South are clockwise in the Southern Hemisphere. They flow towards the east at mid latitudes in the equatorial region.

They then flow towards the Poles, along the eastern sides of continents, as warm currents. When two different masses of water meet, one will move beneath the other,

depending on their relative densities in the subduction process. The densities are determined by temperature and salinity. the convergence of water of different densities from the Equator and the Poles deep in the oceans causes continuous subduction. This means that water moves vertically as well as horizontally. Cold water from the Poles travels as depth – it is denser than warm water – until it emerges at the surface in another part of the world in the form of a cold current.

**Paragraph 8.** HOW THE GREEN HOUSE EFFECT WILL CHANGE OCEAN TEMPERATURES

Ocean currents, in three dimensions, form a giant ‘conveyor belt’, distributing heat from the thin surface layer into the interior of the oceans and around the globe. Water may take decades to circulate in these 3-D gyres in the lop kilometer of the ocean, and centuries in the deep water. With the increased atmospheric temperatures due to the greenhouse effect, the oceans conveyor belt will carry more heat into the interior. This subduction moves heat around far more effectively than simple diffusion. Because warm water expands more than cold when it is heated, scientists had presumed that the sea level would rise unevenly around the globe. It is now believed that these inequalities cannot persist, as winds will act to continuously spread out the water expansion. Of course, of global warming changes the strength and distribution of the winds, then this ‘evening-out’ process may not occur, and the sea level could rise more in some areas than others.

# Questions 15-20

*There are 8 paragraphs numbered 1-8 in Reading Passage 2. The first paragraph and the last paragraph have been given headings. From the list below numbered A-I, choose a suitable heading for the remaining 6 paragraphs. Write your answers A-I, in the spaces numbered 15-20 on the answer sheet.*

## There are more headings than paragraphs, so you will not use all the headings.

**List of headings**

**A** THE GYRE PRINCIPLE

**B** THE GREENHOUSE EFFECT

**C** HOW OCEAN WATERS MOVE

**D** STATISTICAL EVIDENCE

**E** THE ADVECTION PRINCIPLE

**F** DIFFUSION VERSUS ADVECTION

**G** FIGURING THE SEA LEVEL CHANGES

**H** ESTIMATED FIGURES

**I** THE DIFFUSION MODEL

* 1. Paragraph 2
  2. Paragraph 3
  3. Paragraph 4
  4. Paragraph 5
  5. Paragraph 6
  6. Paragraph 7

# Questions 21 and 22

*Answer questions 21 and 22 by selecting the correct answer to complete each sentence according to the information given in the reading passage. Write your answers ?, ?, ? or D in the spaces numbered 21 and 22 on the answer sheet.*

* 1. Scientists do not know for sure why the air and surface of ocean temperatures are rising because:

**A** there is too much variability

**?** there is not enough variability

**?** they have not been recording these temperatures for enough time

**D** the changes have only been noticed for 100 years

* 1. New research leads scientists to believe that:

**A** the oceans are less complex

**?** the oceans are more complex

**?** the oceans will rise more than expected **D** the oceans will rise less than expected **Question 23**

*Look at the following list of factors A-F and select THREE which are mentioned in*

*the reading passage which may contribute to the rising ocean levels. Write the THREE corresponding letters A-F, in the space numbered 23 on the answer sheet.* **List of factors**

**A** thermal expansion

**?** melting ice

**?** increased air temperature

**D** higher rainfall

**E** changes in the water table **F** increased ocean movement **Questions 24-28**

*Read each of the following statements, 24-28. According to the information in the reading passage, if the statement is true, write T, if it is false, write F and if there is no information about the statement in the reading passage, write N1. Write your answers in the spaces numbered 24 -28 on the answer sheet.*

* + 1. The surface layer of the oceans is warmed by the atmosphere.
    2. Advection of water changes heat and salt levels.
    3. A gyre holds less heat than there is in the atmosphere.
    4. The process of subduction depends on the water density.
    5. The sea level is expected to rise evenly over the Earth's surface

# QUESTIONS 29 -40

You are advised to spend about 20 minutes on Questions 29-40 which refer to Reading Passage 3 below.

READING PASSAGE 3

# NEW RULES EQR THE PAPER GAME

1. Computerised data storage and electronic mail were to have heralded the paperless office. But, contrary to expectations, paper consumption throughout the world shows no sign of abating. In fact, consumption, especially of printing and writing papers, continues to increase. World demand for paper and board is now expected to grow faster than the general economic growth in the next 15 years. Strong demand will be underpinned by the growing industrialization of South-East Asia, the re-emergence of paper packaging, greater use of facsimile machines and photocopiers, and the popularity of direct-mail advertising. It is possible that by 2007, world paper and board demand will reach 455 million tonnes, compared with 241 million tonnes in 1991.
2. The pulp and paper industry has not been badly affected by the electronic technologies that promised a paperless society. But wha t has radically altered the industry's structure is pressure from another front—a more environmentally conscious society driving an irreversible move towards cleaner industrial production. The environmental consequences of antiquated pulp mill practices and technologies had marked this industry as one in need of reform. Graphic descriptions of deformed fish and thinning populations, particularly in the Baltic Sea where old pulp mills had discharged untreated effluents for 100 years, have disturbed the international community.
3. Until the 1950s, it was common for pulp mills and other industries to discharge untreated effluent into rivers and seas. The environmental effects were at the time either not understood, or regarded as an acceptable cost of economic prosperity in an increasingly import-oriented world economy. But greater environmental awareness has spurred a fundamental change in attitude in the community, in government and in industry itself.
4. Since the early 1980s, most of the world -scale pulp mills in Scandinavia and North America have modernised their operations, outlaying substantial amounts to improve production methods. Changes in mill design and processes have been aimed at minimising the environmental effects of effluent discharge while at the same time

producing pulp with the whiteness and strength demanded by the international market. The environmental impetus is taking this industry even further, with the focus now on developing processes that may even eliminate waste-water discharges. But the ghost of the old mills continues to haunt the industry today. In Europe, companies face a flood of environment-related legislation. In Germany, companies are now being held responsible for the waste they create.

1. Pulp is the porridge-like mass of plant fibres from which paper is made. Paper makers choose the type of plant fibre and the processing methods, depending on what the end product will be used for: whether it is a sturdy packing box, a smooth sheet of writing paper or a fragile tissue. In wood, which is the source of about 90% of the world's paper production, fibres are bound together by lignin, which gives the unbleached pulp a brown colour. The pulping stage separates the wood into fibres so they are suitable for paper making. Pulping can be done by mechanical grinding, or by chemical treatment in which woodchips are 'cooked' with chemicals, or by a combination of both methods.
2. Kraft pulping is the most widely used chemical process for producing pulp with the strength required by the high-quality paper market. It is now usually carried out in a continuous process in a large vessel called a digester. Woodchips are fed from a pile into the top of the digester. In the digester, the chips are cooked in a solution called white liquor, nosed of caustic soda (sodium hydroxide) sodium sulphide. The chips are cooked at high temperatures of up to 170° ? for up to three hours. The pulp is then washed and rate from the spent cooking liquor which has turned dark and is now appropriately ailed black liquor. An important feature of kraft pulping is a chemical recovery system which recycles about 95% of the cooking chemicals and produces more than enough energy to run the mill. In a series of steps involving a furnace and tanks, some of the black liquor is transformed into energy, while some is regenerated into the or iginal white cooking liquor. The recovery system is an integral part of production in the pulp and paper industry. The pulp that comes out has little lignin left in the fibres. Bleaching removes the last remaining lignin and brightens the pulp. Most modern mills have modified their pulping processes to remove as much of the lignin as possible before the pulp moves to the bleaching stage.

# Questions 29-32

*Below is a list of possible factors, A-G, which will influence the amount of paper being used in the future. From the list, choose FOUR factors which are mentioned in Paragraph 1 of the reading passage. Write your answers A-G, in the spaces numbered 29 -32 on the answer sheet.*

# List of factors

**A** more people read newspapers

**?** increased use of paper bags

**C** increased book production for education

**D** wider use of sign post advertising

**E** increased use of fax machines

**F** wider use of leaflet advertising

**G** greater use of duplicating machines

# Questions 33-35

*The following THREE statements are summaries of Paragraphs 2, 3 and 4 respectively. However, they are incomplete. Complete each of the statements using NO MORE THAN THREE WORDS FROM THE TEXT. Write your answers in the spaces numbered 33 -35 on the answer sheet.*

* 1. The international community has begun to demand ...
  2. In the past, the environmental effects of pulp mill practices, were probably a price to pay for ...
  3. Some paper mills have recently modernised their mill design in order to decrease...

# Questions 36-40

*Below is a list of possible steps in the kraft process of turning wood chips into paper. They are numbered 1-8. Only FIVE of the steps listed below are mentioned in the passage. The steps are not listed in the correct order. Decide which steps are mentioned and write th em in the correct order. Write the appropriate number for each step in the correct order in the spaces numbered 36-40 on the answer sheet*.

1. the chips are cooked
2. the fibres are bound by lignin
3. the pulp is bleached
4. woodchips are put into a pile
5. the pulp is dried
6. the pulp is removed from the black liquor
7. the chips are put into the white liquor
8. the pulp is washed