TUTORIAL NO 03 /START GENERAL READING

LIST OF HEADINGS

**Questions 10-13**  
Look at the extract from a brochure on the following page.

From the list of headings below, choose the most suitable headings for Sections **C-F.**

Write the appropriate numbers i-viii in boxes 10-13 on your answer sheet.

**Example**                                                                      **Answer**

**Section A                                                                         viii**

10 Section  **C**  
11 Section  **D**  
12 Section  **E**  
13 Section  **F**

|  |
| --- |
| **List of Headings**  **i**Payment options  **ii**Save money by not paying interest  **iii**Choosing your style of furniture  **iv**Free advice on furnishing your home  **V**Location of stores  **vi**Applying for a card  **vii**Ordering furniture from home  **viii**A wide range of furniture |

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Fabulous Furniture

**Section A**

Have you ever wanted to buy a small bedside table? Or a dinner table for 20 people? If you want it, we’ve got it! Fabulous Furniture has Australia’s widest choice of furniture.

**Section B**

If you visit a Fabulous Furniture store, you can have your furniture - right now - using our Fabulous Furniture Credit Card. When you see something you really want, you can have it straight away, and pay later.

**Section C**

Unlike most cards, the Fabulous Furniture Credit Card offers a full 60-day interest-free period on every Fabulous purchase - no matter when you make your purchase. This leaves you with more money to spend on other things.

**Section D**

• You may choose to pay the full amount within 60 days. In this case, you pay no interest.  
• You may spread your payments over a longer period. In this case, interest will be charged after the initial 60-day interest-free period.

**Section E**

Application is absolutely free! Nor are there any annual fees or administration fees. Just fill in the application form and bring it to your nearest Fabulous Furniture store. Your application will be processed promptly and you can begin making purchases immediately after your application is approved.

**Section F**

We have stores in every major city, so you’re never far away from a Fabulous Furniture store. For our addresses, just check in your local telephone directory.

10 ii  (Save money by not paying interest) 11 i (Payment options)  
12 vi  (Applying for a card) 13 v   ( Location of stores)

STUDENT CLUBS AND SOCIETIES

Desperate to find friends with common interests?

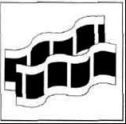
Urgently in need of student contacts around college?

Looking for different cultural and religious experiences?

Wanting some good discussion?

*Don’t look any further!*

**JOIN A CLUB OR SOCIETY AND HAVE FUN!**

**A**..................................................................................  
This club was first started by a group of friends who enjoyed going to the cinema. When our trips became more frequent we realised that there must be others who also shared our love of movies. This club is for those people. Membership gives wide access to other activities like basketball and football as well as barbeques and other social functions. We don’t just enjoy movies.

**B**.................................................................................  
The association has many opportunities to debate and we are a non-political unbiased international organisation which aims to promote international awareness on campus. We establish links and access to the organisation’s agencies and other internationalist organisations and their resources. Our plans this year include discussion groups, guest speakers and to build a model of the UN General Assembly.

**C**................................................................................  
Whether for fun or debating experience, we discuss everything from personal experience, future society or feminism. This year we plan an internal competition, weekly debates and beginners’ lessons as well as chances to compete nationally. Whether it be to improve your verbal or social skills the society provides both!

**D**....................................................................................  
Want to be a movie star? Then go somewhere else! On the other hand, want to work really hard for great rewards? Then come and join the club where the interesting theatre is created. We usually put on three productions each year. So if you like to write, paint, act, direct or do anything in the theatre, come and put your name down with us.

**If you are interested in joining any of these clubs, you can leave a message for the  
President at the CAS Office in the Student Union Building.  
And don’t forget the CAS Ball is an annual event!  
This year it’s being held on 22 December!**

**Questions 14-17**  
Read the notice on the following page about Student Clubs and Societies. The notice has four main paragraphs A-D. Choose the most suitable heading for each paragraph from the list of headings below.  
Write the appropriate numbers i-x in boxes 14-17 on your answer sheet.

|  |
| --- |
| **List of Headings**  i English Society ii Education Club iii Film Appreciation Society iv Drama Society v Music Club vi Games Society vii Women’s Club viii Debating Club ix United Nations Student Club x Technical Students’ Club |

14 Paragraph  **A**  
15 Paragraph  **B**  
16 Paragraph  **C**  
17 Paragraph  **D**

14 iii     // Film Appreciation Society 15 ix     // United Nations Student Club  
16 viii   // Debating Club 17 iv     // Drama Society

**Questions 27-32:**  
The Reading Passage on the following pages has seven paragraphs (**A-G**). Choose the most suitable headings for paragraphs **A-B** and **D-G** from the list of headings below.

Write the appropriate numbers (**i-ix**) in boxes **27-32** on your answer sheet.  
***NB*** There are more headings than paragraphs: so you will not use all of them.  
  
***List of Headings***  
i  Robots working together  
ii  Preparing LGVs for take-over  
iii  Looking ahead  
iv The LGVs' main functions  
v  Split location for newspaper production  
vi Newspapers superseded by technology  
vii Getting the newspaper to the printing centre  
viii Controlling the robots  
ix Beware of robots!

***Example                               Answer***  
Paragraph***C*ix**

**27** Paragraph  **A**  
**28** Paragraph  **B**  
**29** Paragraph  **D**  
**30** Paragraph  **E**  
**31** Paragraph  **F**  
**32** Paragraph  **G**

ROBOTS AT WORK

**A**  
The newspaper production process has come a long way from the old days when the paper was written, edited, typeset and ultimately printed in one building with the journalists working on the upper floors and the printing presses going on the ground floor. These days the editor, subeditors and journalists who put the paper together are likely to find themselves in a totally different building or maybe even in a different city. This is the situation which now prevails in Sydney. The daily paper is compiled at the editorial headquarters, known as the prepress centre, in the heart of the city, but printed far away in the suburbs at the printing centre. Here human beings are in the minority as much of the work is done by automated machines controlled by computers.

**B**  
Once the finished newspaper has been created for the next morning’s edition, all the pages are transmitted electronically from the prepress centre to the printing centre. The system of transmission is an update on the sophisticated page facsimile system already in use in many other newspapers. An imagesetter at the printing centre delivers the pages as films. Each page takes less than a minute to produce, although for colour pages four versions, once each for black, cyan, magenta and yellow are sent. The pages are then  processed into photographic negatives and the film is used to produce aluminium printing plates ready for the presses.  
  
**C**  
A procession of automated vehicles is busy at the new printing centre where the Sydney Morning Herald is printed each day. With lights flashing and warning horns honking, the robots (to give them their correct name, the LGVs or laser guided vehicles) look for all the world like enthusiastic machines from a science fiction movie, as they follow their own random paths around the plant busily getting on with their jobs. Automation of this kind is now standard in all modern newspaper plants. The robots can detect unauthorised personnel and alert security staff immediately if they find an “intruder”; not surprisingly, tall tales are already being told about the machines starting to take on personalities of their own.  
  
**D**  
The robots’ principal job, however, is to shift the newsprint (the printing paper) that arrives at the plant in huge reels and emerges at the other end sometime later as newspapers. Once the size of the day’s paper and the publishing order are determined at head office, the information is punched into the computer and the LGVs are programmed to go about their work. The LGVs collect the appropriate size paper reels and take them where they have to go. When the press needs another reel its computer alerts the LGV system. The Sydney LGVs move busily around the press room fulfilling their two key functions to collect reels of newsprint either from the reel stripping stations or from the racked supplies in the newsprint storage area. At the stripping station, the tough wrapping that helps to protect a reel of paper from rough handling is removed. Any damaged paper is peeled off and the reel is then weighed.

**E**  
Then one of the four paster-robots moves in. Specifically designed for the job, it trims the paper neatly and prepares the reel for the press. If required the reel can be loaded directly onto the press; if not needed immediately, an LGV takes it to the storage area. When the press computer calls for a reel, an LGV takes it to the reel loading area of the presses. It lifts the reel into the loading position and places it in the correct spot with complete accuracy. As each reel is used up, the press drops the heavy cardboard core into a waste bin. When the bin is full, another LGV collects it and deposits the cores into a shredder for recycling.  
  
**F**  
The LGVs move at walking speed. Should anyone step in front of one or get too close, sensors stop the vehicle until the path is clear. The company has chosen a laser guide function system for the vehicles because, as the project development manager says “The beauty of it is that if you want to change the routes, you can work out a new route on your computer and lay it down for them to follow”. When an LGV’s batteries run low, it will take itself offline and go to the nearest battery maintenance point for replacement batteries. And all this is achieved with absolute minimum human input and a much reduced risk of injury to people working in the printing centres.

**G**  
The question newspaper workers must now ask, however, is, “how long will it be before the robots are writing the newspapers as well as running the printing centre, churning out the latest edition every morning?”

27. v28. vii29. iv30. i31. viii32. iii

**List of Headings**

**i**  Recognition of your achievements  
**ii**  Courses start every week  
**iii**  Other services/Pastoral care/Personal arrangements  
**iv**  A personal approach  
**v**  Two meals every day  
**vi** First-class staff  
**vii** Up-to-date classroom practice  
**viii**  Discovering a new language  
**ix** Monitored achievement

**21  Paragraph  B  
22 Paragraph  C  
23  Paragraph  D  
24  Paragraph  E  
25  Paragraph  F  
26  Paragraph  G**

**GOOD REASONS FOR CHOOSING   
ATLAS ENGLISH LANGUAGE COLLEGE**

On an English course with Atlas English Language College, you improve your language skills and make friends from all over the world!  
  
**A** Because Atlas courses start every Monday of the year, there's bound to be one that fits in with your academic, personal or professional commitments. Whatever your level of language ability, from beginner to advanced, you can choose to study for any length of time, from two weeks to a full year. Courses match a range of individual requirements, from intensive examination preparation to short summer programmes. Most courses commence at 9 am and run till 3 pm.  
  
**B** If you take an intensive full-time course, we will help you to select the Special Interest Options which best suit your goals. From then on, our teacher will discuss your work with you on a weekly basis. This means that you should develop the language skills you need and that you are helped to study at your own pace.  
  
**C** The popularity and success of any language school depend greatly on the quality of the teachers and the methods they employ. All Atlas teachers have specialist qualifications in the teaching of English to foreign students and are all native speakers. We employ only experienced professionals with a proven record of success in the classroom.  
  
**D** Atlas's teaching methodology is constantly revised as more is discovered about the process of learning a new language. Our teachers have access to an extensive range of materials, including the very latest in language teaching technology.  
  
**E** On your first day at school, you will take a test which enables our Director of Studies to place you at the appropriate study level. Your progress will be continuously assessed and, once you have achieved specific linguistic goals, you will move up to a higher level of study.  
  
**F** Every Atlas course fee includes accommodation in carefully selected homestay families. Breakfast and dinner each day are also included, so you need have no concerns about having to look for somewhere to live once you get to the school.  
  
**G** On completion of any Intensive, Examination or Summer course, you will receive the Atlas Course Certificate of Attendance. On completion of a four-week course or longer, you will also receive the Atlas Academic Record that reflects your ability in every aspect of the language from conversation to writing. Such a record will allow you to present your linguistic credentials to academic institutions or potential employers around the world.

21. iv22. vi23. vii24. ix25. iii26. i

**List of Headings**

**i.    American water withdrawal  
ii.    Economic pricing  
iii.    What the future holds  
iv.    Successful measurestaken by some  
v.    The role of research  
vi.    The thirsty sectors  
vii.    Ways of reducing waste  
viii.    Interdependence of natural resources  
ix.    The demands of development  
x.    The consequences for agriculture**  
  
28.  Paragraph  A  
29.  Paragraph  B  
30.  Paragraph  C  
31.  Paragraph  D  
32.  Paragraph  E  
33.  Paragraph  F  
34.  Paragraph  G

**THE WATER CRISIS**

**Greater efficiency in water use is needed to meet the growing demands of a changing world**

**A.**  
Per capita water usage has been on an upward trend for many years. As countries industrialise and their citizens become more prosperous, their individual water usage increases rapidly. Annual per capita water withdrawals in the USA, for example, are about 1,700 cubic metres, four times the level in China and fifty times the level in Ethiopia. In the 21st century, the world's limited supply of renewable fresh water is having to meet demands of both larger total population and increased per capita consumption. The only practical ways to resolve this problem in the longer term are economic pricing in conjunction with conservation measures.  
  
**B.**  
Agriculture consumes about 70% of the world's fresh water, so improvements in irrigation can make the greatest impact. At present, average efficiency in the use of irrigated water in agriculture may be as low as 50%. Simple changes could improve the rate substantially, though it is unrealistic to expect very high levels of water-use efficiency in many developing countries, faced as they are with a chronic lack of capital and a largely untrained rural workforce. After agriculture, the industry is the second biggest user of water and, in terms of value added per litre used, is sixty times more productive than agriculture. However, some industrial processes use vast amounts of water. For example, production of 1 kg of aluminium might require 1,500 litres of water. Paper production too is often very water-intensive. Though new processes have greatly reduced consumption, there is still plenty of room for big savings in industrial uses of water.  
  
**C.**  
In rich countries, water consumption has gradually been slowed down by price increases and the use of modern technology and recycling. In the USA, industrial production has risen fourfold since 1950, while water consumption has fallen by more than a third. Japan and Germany have similarly improved their use of water in manufacturing processes. Japanese industry, for example, now recycles more than 75% of process water. However, industrial water consumption is continuing to increase sharply in developing countries. With domestic and agricultural demands also increasing, the capacity of water supply systems is under growing strain.  
  
**D.**  
Many experts believe that the best way to counter this trend is to impose water charges based on the real cost of supplies. This would provide a powerful incentive for consumers to introduce water-saving processes and recycling. Few governments charge realistic prices for water, especially to farmers. Even in rich California, farmers get water for less than a tenth of the cost of supply. In many developing countries there is virtually no charge for irrigation water, while energy prices are heavily subsidised too (which means that farmers can afford to run water pumps day and night). Water, which was once regarded as a free gift from heaven, is becoming a commodity which must be bought and sold on the open market just like oil. In the oil industry, the price increases which hit the market in the 1970s, coupled with concerns that supplies were running low, led to new energy conservation measures all over the world. It was realised that investing in new sources was a far more costly option than improving the efficiency of use. A similar emphasis on conservation will be the best and cheapest option for bridging the gap between water supply and demand.  
  
**E.**  
One way to cut back on water consumption is simply to prevent leaks. It is estimated that in some of the biggest cities of the Third World, more than half of the water entering the system is lost through leaks in pipes, dripping taps and broken installations. Even in the UK, losses were estimated at 25% in the early 1990s because of the failure to maintain the antiquated water supply infrastructure. In addition, huge quantities of water are consumed because used water from sewage pipes, storm drains and factories is merely flushed away and discharged into rivers or the sea. The modern approach, however, is to see used water as a resource which can be put to good use - either in irrigation or, after careful treatment, as recycled domestic water. Israel, for instance, has spent heavily on used water treatment. Soon, treated, recycled water will account for most farm irrigation there. There are other examples in cities such as St Petersburg, Florida, where all municipal water is recycled back into domestic systems.  
  
**F.**  
Another way of conserving water resources involves better management of the environment generally. Interference with the ecosystem can have a severe effect on both local rainfall patterns and water run-off. Forest clearings associated with India's Kabini dam project reduced local rainfall by 25%, a phenomenon observed in various other parts of the world where large-scale deforestation has taken place. Grass and other vegetation act as a sponge which absorbs rainfall both in the plants and in the ground. Removal of the vegetation means that rainfall runs off the top of the land, accelerating erosion instead of being gradually fed into the soil to renew groundwater.  
  
**G.**  
Global warming is bound to affect rainfall patterns, though there is considerable disagreement about its precise effects. But it is likely that, as sea levels rise, countries in low-lying coastal areas will be hit by seawater penetration of groundwater. Other countries will experience changes in rainfall which could have a major impact on agricultural yield - either for better or for worse. In broad terms, it is thought that rainfall zones will shift northwards, adding to the water deficit in Africa, the Middle East and the Mediterranean - a grim prospect indeed.

28. ix29. vi30. iv31. ii32. vii33. viii34. iii

**Questions 21-26**  
The text on Atlas English Language College on the following page has seven paragraphs (**A-G**).  
Choose the most suitable headings for paragraphs **B-G** from the list of headings below.  
  
Write the appropriate numbers (**i-ix**) in boxes **21-26** on your answer sheet.  
***NB****There are more headings than paragraphs, so you will not use all of them.*  
List of headings  
  
**i. Methods of applying colour patterns to cloth**  
**ii. The origins and use of factory-made cloth**  
**iii. Specialist training for quilt and coverlet makers**  
**iv. Two types of quilt construction  
   v. The production of rawmaterials**  
**vi. Dyeing techniques used in America**  
**vii. The rising price of manufactured textiles  
viii. Sources of natural dyes in America  
  ix. The development of weaving techniques**  
  
28. Paragraph A ...................  
29. Paragraph B ...................  
30. Paragraph C ...................  
31. Paragraph D ...................  
32. Paragraph E ...................  
33. Paragraph F ...................  
34. Paragraph G ...................

**North American Quilts and Coverlets**

**Paragraph A:**  
The craft traditions which early American colonists from Europe brought to the ‘New World’ centred primarily around the use of linen and wool. These familiar choices were then adapted to America, whose climate and environment enabled the introduction and raising of sheep for wool and, in some areas – though with less success – the growing of flax for linen. The cultivation of silk – an exotic fibre originally brought from China – was attempted for a short time only in the northern states, although by the nineteenth-century silk was being used extensively. Cotton thrived in the southern region, but was restricted to small-scale home production until the late eighteenth and early nineteenth centuries, when the invention of new mechanical equipment facilitated its harvesting, spinning, and weaving on a large scale.  
  
**Paragraph B:**  
Quilts and coverlets were created from both homemade and commercially produced cloth. During the early colonial period (seventeenth century) and into the new republic (1776 onwards), most commercial fabric was imported from England. Even goods that had been produced in other regions, such as the popular dye-printed calicoes from India and woven silks from China, were brought into America via English ships. These were used in making quilts and also influenced American quilt design. Eventually, by the mid-nineteenth century, most of the fabrics found in quilts were industrially produced, and reflected the taste and achievements of the American textile industry. Specialty fabrics, particularly silk ribbons, had become popular by the second half of the nineteenth century.  
  
**Paragraph C:**  
Prior to the development of synthetic dyes in the nineteenth century, early American dyers utilized substances obtained from a variety of plants and animals, to create a wide-ranging colour palette. Red colours ranged from the orange-red hue produced from the madder root to the brilliant scarlet made from cochineal, the scale insect that grows on the cactus from Central and South America. Most of the blue colours were from indigo leaves, and browns derived from a variety of sources, including substances called tannins found in oak trees.  
  
**Paragraph D:**  
Unwoven yarn or finished cloth was coloured by immersing it into containers of hot dye solution. Numerous shades of colour could be achieved, depending on the quality of the dyes, the purity of water, the type of utensils used (a copper kettle, for example, could affect the colour), and the addition of specific metallic salts to create a strong colour which would not fade in light. These salts, along with other additives such as vinegar or ash, were essential to the dyeing process. The dyeing of textiles with natural dyes was both an art and a science. Indigo blue, for example, with its complex chemistry, required a series of steps in order to produce a durable, lightfast blue colour. Turkey Red was another complicated dye process. Originating in India, it was a method that involved immersing the cloth several times into oils, milk fats or dung. Toward the end of the eighteenth century, books were published on the science and philosophy of dyes, thus heralding a period of experimentation, and the creation of a whole new category of synthetic dyes that flourished at the end of the nineteenth century, and continue to be used today.  
  
**Paragraph E:**  
Methods of applying designs onto the surface of fabrics ranged from hand painting and stencilling 2 to block and roller printing. Block printing involved the use of carved wooden blocks. The surfaces of the blocks were covered with the dye which were thickened with gum Arabic or other starchy substances, and pressed directly onto the cloth. Some quilts were made with floral designs from block-printed fabrics. Etched plates of copper were also used for printing, and in 1783 technological developments led to covering cylindrical rollers with etched copperplates for continuous printing, a process called roller printing. This new technology enabled printers to produce more yardage at a much faster rate.  
  
**Paragraph F:**  
The creation of complex quilts composed of many small pieces of cloth – known as patchwork – requires systematic organization. A template might be used for creating the basic design unit, such as a square, diamond, or hexagon. The template – sometimes a heavy card or paper – ensured an even, regular unit size, thus enabling the quilter to join together the many pieces of fabric, following an overall design arrangement. Appliquéd quilts, also made by using fabric pieces, were put together in a different manner. Appliqué is a versatile technique, enabling the sewer to compose visual patterns with multiple layers of single-colour and printed fabrics, creating depth in the overall composition.  
  
**Paragraph G:**  
For American woven blankets, simple weaves were woven on simple looms. Creating designs in geometric patterning resulted from a weaver’s meticulous attention to the loom’s operation, along with the artistic use of contrasting colours and materials to highlight the pattern effects. Floral and larger-scale pictorial images generally required more complex patterning mechanisms. For example, the Jacquard mechanism, developed by French weaver Joseph-Marie Jacquard in the late eighteenth century, used a series of cards with pre-punched holes that would control the threads as they were woven on the loom. An early forerunner of the computer, the Jacquard loom was introduced to American weavers by the 1820s, and used extensively to produce woven coverlets with both large- and small-scale designs.

28. v29. ii30. viii31. vi32. i33. iv34. ix

**List of Headings**  
i  Recognition of your achievements  
ii  Courses start every week  
iii  Other services/Pastoral care/Personal arrangements  
iv  A personal approach  
v  Two meals every day  
vi  First-class staff  
vii  Up-to-date classroom practice  
viii  Discovering a new language  
ix  Monitored achievement

**21  Paragraph  B  
22 Paragraph  C  
23  Paragraph  D  
24  Paragraph  E  
25  Paragraph  F  
26  Paragraph  G**

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**B** If you take an intensive full-time course, we will help you to select the Special Interest Options which best suit your goals. From then on, our teacher will discuss your work with you on a weekly basis. This means that you should develop the language skills you need and that you are helped to study at your own pace.  
  
**C** The popularity and success of any language school depend greatly on the quality of the teachers and the methods they employ. All Atlas teachers have specialist qualifications in the teaching of English to foreign students and are all native speakers. We employ only experienced professionals with a proven record of success in the classroom.  
  
**D** Atlas's teaching methodology is constantly revised as more is discovered about the process of learning a new language. Our teachers have access to an extensive range of materials, including the very latest in language teaching technology.  
  
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*[adapted with permission from a brochure published by EF Education]*

21 iv 22 vi 23 vii 24 ix 25 iii 26 i

**Questions 28-31**  
The Reading Passage has four sections **A-D**.  
Choose the most suitable heading for each section from the list of headings below.  
Write the appropriate numbers **i-viii** in boxes **28-31** on your answer sheet.

***List of Headings***  
  
**i  Global warming  
ii  The dangers of the coal industry  
iii  Superclean coal  
iv  Environment protection measures  
v  Coal as an energy source  
vi  Coal and the enhanced greenhouse effect  
vii  Research and development  
viii  Mining site drainage**

28  Section  **A**  
29  Section  **B**  
30  Section  **C**  
31  Section  **D**

**A** Coal is expected to continue to account for almost 27 per cent of the world’s energy needs. However, with growing international awareness of pressures on the environment and the need to achieve sustainable development of energy resources, the way in which the resource is extracted, transported and used is critical.  
  
A wide range of pollution control devices and practices is in place at most modern mines and significant resources are spent on rehabilitating mined land. In addition, major research and development programmes are being devoted to lifting efficiencies and reducing emissions of greenhouse gases during coal consumption. Such measures are helping coal to maintain its status as a major supplier of the world’s energy needs.  
  
**B**  The coal industry has been targeted by its critics as a significant contributor to the greenhouse effect. However, the greenhouse effect is a natural phenomenon involving the increase in global surface temperature due to the presence of greenhouse gases - water vapour, carbon dioxide, tropospheric ozone, methane and nitrous oxide - in the atmosphere. Without the greenhouse effect, the earth’s average surface temperature would be 33-35 degrees C lower, or -15 degrees C. Life on earth, as we know it today, would not be possible.  
  
There is concern that this natural phenomenon is being altered by a greater build-up of gases from human activity, perhaps giving rise to additional warming and changes in the earth’s climate. This additional build-up and its forecast outcome has been called the enhanced greenhouse effect. Considerable uncertainty exists, however, about the enhanced greenhouse effect, particularly in relation to the extent and timing of any future increases in global temperature.  
  
Greenhouse gases arise from a wide range of sources and their increasing concentration is largely related to the compound effects of increased population, improved living standards and changes in lifestyle. From a current base of 5 billion, the United Nations predicts that the global population may stabilise in the twenty-first century between 8 and 14 billion, with more than 90 per cent of the projected increase taking place in the world’s developing nations. The associated activities to support that growth, particularly to produce the required energy and food, will cause further increases in greenhouse gas emissions. The challenge, therefore, is to attain a sustainable balance between population, economic growth and the environment.  
  
The major greenhouse gas emissions from human activities are carbon dioxide (CO2), methane and nitrous oxide. Chlorofluorocarbons (CFCs) are the only major contributor to the greenhouse effect that does not occur naturally, coming from such sources as refrigeration, plastics and manufacture. Coal’s total contribution to greenhouse gas emissions is thought to be about 18 per cent, with about half of this coming from electricity generation.  
  
**C**  The world-wide coal industry allocates extensive resources to researching and developing new technologies and ways of capturing greenhouse gases. Efficiencies are likely to be improved dramatically, and hence CO2 emissions reduced, through combustion and gasification techniques which are now at pilot and demonstration stages.  
  
Clean coal is another avenue for improving fuel conversion efficiency. Investigations are under way into super clean coal (3-5 per cent ash) and ultraclean coal (less than 1 per cent ash). Superclean coal has the potential to enhance the combustion efficiency of conventional pulverised fuel power plants. Ultraclean coal will enable coal to be used in advanced power systems such as coal-fired gas turbines which, when operated in combined cycle, have the potential to achieve much greater efficiencies.  
  
**D**  Defendants of mining point out that, environmentally, coal mining has two important factors in its favour. It makes only temporary use of the land and produces no toxic chemical wastes. By carefully pre-planning projects, implementing pollution control measures, monitoring the effects of mining and rehabilitating mined areas, the coal industry minimises the impact on the neighbouring community, the immediate environment and long-term land capability.  
  
Dust levels are controlled by spraying roads and stockpiles, and water pollution is controlled by carefully separating clean water runoff from runoff which contains sediments or salt from mine workings. The latter is treated and re-used for dust suppression. Noise is controlled by modifying equipment and by using insulation and sound enclosures around machinery.  
  
Since mining activities represent only a temporary use of the land, extensive rehabilitation measures are adopted to ensure that land capability after mining meets agreed and appropriate standards which, in some cases, are superior to the land’s pre-mining condition. Where the mining is underground, the surface area can be simultaneously used for forests, cattle grazing and crop raising, or even reservoirs and urban development, with little or no disruption to the existing land use. In all cases, mining is subject to stringent controls and approvals processes.  
  
In open-cut operations, however, the land is used exclusively for mining but land rehabilitation measures generally progress with the mine’s development. As core samples are extracted to assess the quality and quantity of coal at a site, they are also analysed to assess the ability of the soil or subsoil material to support vegetation. Topsoils are stripped and stockpiled prior to mining for subsequent dispersal over rehabilitated areas. As mining ceases in one section of the open-cut, the disturbed area is reshaped. Drainage within and off the site is carefully designed to make the new land surface as stable as the local environment allows: often dams are built to protect the area from soil erosion and to serve as permanent sources of water. Based on the soil requirements, the land is suitably fertilised and revegetated.

**Questions 1 – 8**  
The IELTS reading sample passage has nine paragraphs **A – I**.  
From the list below choose the most suitable headings for **B – I**.

Write the appropriate number (***i – xiv***) beside in boxes ***1 – 8*** on your answer sheet.  
  
**NB** There are more headings than paragraphs, so you do not have to use them all.

**List of headings**

|  |
| --- |
| i    The traveler’s character. ii    Disproportionate growth. iii   Pilots and aircrew. iv    Additional action. v    Smaller seats. vi    Uncomfortable aeroplanes vii   Origins. viii   A major threat. ix    Demands for change. x     Business people. xi    The roots of the problem. xii   The pace of life. xiii   Links to the surroundings. xiv   Personal experience. |

*Example:*  Paragraph      **A**       Answer:  **vii**

**Air Rage**

(**A**) The first recorded case of an airline passenger turning seriously violent during a flight, a phenomenon now widely known as “air rage”, happened in 1947 on a flight from Havana to Miami. A drunk man assaulted another passenger and bit a flight attendant. However, the man escaped punishment because it was not then clear under whose legal control a crime committed on plane was, the country where the plane was registered or the country where the crime was committed. In 1963, at the Tokyo convention, it was decided that the laws of the country where the plane is registered take precedence.  
  
(**B**) The frequency of air rage has expanded out of proportion to the growth of air travel. Until recently few statistics were gathered about air rage, but those that have been indicated that passengers are increasingly likely to cause trouble or engage in violent acts. For example, in 1998 there were 266 air rage incidents out of approximately four million passengers, a 400% increase from 1995. In the same period, American Airlines showed a 200% rise. Air travel is predicted to rise by 5% internationally by 2010 leading to increased airport congestion. This, coupled with the flying public’s increased aggression, means that air rage may become a major issue in coming years.  
  
(**C**) Aside from discomfort and disruption, air rage poses some very real dangers to flying. The most extreme of these is when out of control passengers enter the cockpit. This has actually happened on a number of occasions, the worst of which have resulted in the death and injury of pilots or the intruder taking control of the plane, almost resulting in crashes. In addition, berserk passengers sometimes attempt to open the emergency doors while in flight, putting the whole aircraft in danger. These are extreme examples and cases of air rage more commonly result in physical assaults on fellow passengers and crew such as throwing objects, punching, stabbing or scalding with hot coffee.  
  
(**D**) The causes of air rage are not known for certain, but it is generally thought that factors include: passenger behavior and personality, the physical environment and changes in society. A recent study has identified the issues that start the incidents to be as follows.

Alcohol                      25%  
Seating                     16%  
Smoking                   10%  
Carry on luggage      9%  
Flight attendants       8%  
Food                          5%

(**E**) One of the major causes seems to be the passenger’s behavior or their personality. Fear of flying and the feeling of powerlessness associated with flying can lead to irritable or aggressive passengers. Also, alcohol consumed on a plane pressurized to 8000ft affects the drinker more quickly and the effects are stronger. Many people do not take account of this and drinking may increase any negative reaction to the flying environment they have, which, combined with the lowering of their inhibitions, may cause air rage. Smoking withdrawal, which some liken in severity to opiate withdrawal, is another major cause of air rage incidents. Passengers caught smoking in the toilets occasionally assault flight attendants and have been known to start fires. When conflicts occur in these conditions, they can escalate into major incidents if the passenger has a violent personality or a fear of flying and because of the enclosed nature of a plane offers no option of retreat as would be natural in a “fight or flight” reaction.  
  
(**F**) Some people feel that the physical environment of a plane can lead to air rage. Seats on most airlines have become smaller in recent years as airlines try to increase profits. This leads to uncomfortable and irritated passengers. Also, space for carry on luggage is often very small. Because up to 8% of checked-in luggage is lost, misdirected or stolen, passengers have been trying to fit larger carry on items into these small storage areas and this can lead to disputes that can escalate into air rage. Airlines could also be to blame by raising passengers’ expectations too high with their marketing and advertising. Many air rage incidents start when disappointed passengers demand to be reseated. Finally, there is some evidence to show that low oxygen levels can raise aggression level and make people feel more desperate. Airlines have lowered oxygen levels to save money. Now the level of oxygen in the air that the pilots breathe is ten times higher than in cabin class.  
  
(**G**) Another reason that has been suggested is that society is getting ruder and less patient. The increased congestion at airports, longer queues and increased delays have only added to this. In addition, some air rage incidents have been linked to the demanding nature of high achieving business people, who do not like people telling them what to do and resent the power that the cabin staff have over them. For them, a flight attendant is a waiter or waitress who should do what the passenger wants.  
  
(**H**) The strongest calls for action to control air rage have come from pilots and aircrew. The International Transport Workers’ Federation argues that there are too many loopholes that let people escape punishment and that the penalties are too light. They want to notify all passengers of the penalties for air rage before taking off, rather than after the passenger begins to cause serious problems, when it may be too late. The Civil Aviation Organisation has been organizing international cooperation and penalties have increased in recent years. The most severe punishment so far has been a 51-month jail sentence, a fine to pay for the jet fuel used and 200 hours community service for a man who attempted to enter the cockpit and to open the emergency door of a domestic US flight.  
  
(**I**) Various other measures are being used to control air rage. Aircrews are getting training on how to calm passengers and how to predict where incidents might result in air rage and take action to prevent this. Other measures include strengthening doors to stop people entering the cockpit, training crew in the use of plastic restraints to tie down unruly passengers and having pilots divert their planes if passengers cause problems. Banning passengers who are guilty of air rage from flying has also been tried to a lesser extent

1. ii   2. viii   3. xiii   4. xi    5. vi   6. i   7. ix   8. iv

**Questions 1-6**  
The reading passage has six paragraphs **A-F**.  
  
Choose the most suitable heading for each paragraph from the list of headings below.  
Write the correct number **i-ix** in your answer sheet.  
  
**List of Headings**  
  
i.  Fountain pens are history.  
ii.  Fame at last for the Biro brothers.  
iii.  A holiday helps bring the biro to America.  
iv.  A second design and a new country.  
v. War halts progress.  
vi.  Dissatisfaction leads to a new invention.  
vii.  Big claims bring big crowds.  
viii.  A government request brings a change of ownership.  
ix.  Many patents and many problems.  
  
1   Paragraph A  
2   Paragraph B  
3   Paragraph C  
4   Paragraph D  
5   Paragraph E  
6   Paragraph F

**The history of the biro**

**A**.  One chilly autumn morning in 1945, five thousand shoppers crowded the pavements outside Gimbels Department Store in New York City. The day before, Gimbels had taken out a full-page newspaper advertisement in the New York Times, announcing the sale of the first ballpoint pens in the United States. The new writing instrument was heralded as "fantastic ... miraculous ... guaranteed to write for two years without refilling!" Within six hours, Gimbels had sold its entire stock of ten thousand ballpoints at $12.50 each - approximately $130 at today's prices.  
  
**B**.  In fact, this 'new' pen was not new after all, and was just the latest development in a long search for the best way to deliver ink to paper. In 1884 Lewis Waterman had patented the fountain pen, giving him the sole rights to manufacture it. This marked a significant leap forward in writing technology, but fountain pens soon became notorious for leaking. In 1888, a leather tanner named John Loud devised and patented the first "rolling-pointed marker pen" for marking leather. Loud's design contained a reservoir of ink in a cartridge and a rotating ball point that was constantly bathed on one side with ink.  Loud's pen was never manufactured, however, and over the next five decades, 350 additional patents were issued for similar ball-type pens, though none advanced beyond the design stage. Each had their own faults, but the major difficulty was the ink: if the ink was thin, the pens leaked, and if it was too thick, they clogged. Depending on the climate or air temperature, sometimes the pens would do both.  
  
**C**.  Almost fifty years later, Ladislas and Georg Biro, two Hungarian brothers, came up with a solution to this problem. In 1935 Ladislas Biro was working as a journalist, editing a small newspaper. He found himself becoming more and more frustrated by the amount of time he wasted filling fountain pens with ink and cleaning up ink smudges. What's more, the sharp tip of his fountain pen often scratched or tore through the thin newsprint paper. Ladislas and Georg (a chemist) set about making models of new pen designs and creating better inks to use in them. Ladislas had observed that the type of ink used in newspaper printing dried rapidly, leaving the paper dry and smudge-free. He was determined to construct a pen using the same type of ink. However, the thicker ink would not flow from a regular pen nib so he had to develop a new type of point. Biro came up with the idea of fitting his pen with a tiny ball bearing in its tip. As the pen moved along the paper, the ball bearing rotated and picked up ink from the ink cartridge which it delivered to the paper.  
  
**D**.  The first Biro pen, like the designs that had gone before it. relied on gravity for the ink to flow to the ball bearing at the tip. This meant that the pens only worked when they were held straight up, and even then the ink flow was sometimes too heavy, leaving big smudges of ink on the paper. The Biro brothers had a rethink and eventually devised a new design, which relied on capillary action rather than gravity to feed the ink. This meant that the ink could flow more smoothly to the tip and the pen could be held at an angle rather than straight up. In 1938, as World War II broke out, the Biro brothers fled to Argentina, where they applied for a patent for their pen and established their first factory.  
  
**E.** The Biros' pen soon came to the attention of American fighter pilots, who needed a new kind of pen to use at high altitudes. Apparently, it was ideal for pilots as it did not leak like the fountain pen and did not have to be refilled frequently. The United States Department of War contacted several American companies, asking them to manufacture a similar writing instrument in the U.S. Thus fortune smiled on the Biro brothers in May 1945, when the American company 'Eversharp' paid them $500,000 for the exclusive manufacturing and marketing rights of the Biro ballpoint for the North American market. Eversharp were slow to put their pen into production, however, and this delay ultimately cost them their competitive advantage.  
  
**F**.  Meanwhile, in June 1945 an American named Milton Reynolds stumbled upon the Biro pen while on vacation in Buenos Aires. Immediately seeing its commercial potential, he bought several pens and returned to Chicago, where he discovered that loud's original 1888 patent had long since expired. This meant that the ballpoint was now in the public domain, and he, therefore, wasted no time making a copy based on the Biro design. Establishing his pen company with just $26,000, Reynolds quickly set up a factory with 300 workers who began production on 6th October 1945, stamping out pens from precious scraps of aluminum that hadn't been used during the war for military equipment or weapons. Just 23 days later, it was Reynolds' ballpoint pen that caused the stampede at Gimbels Department Store. Following the ballpoint's debut in New York City, Eversharp challenged Reynolds in the law courts, but lost the case because the Biro brothers had failed to secure a U.S. patent on their invention.

1. vii     2. ix     3. vi     4. iv     5. viii    6. Iii

**Questions 1-6**  
Reading Passage 1 has seven paragraphs (**A-G**).  
Choose the most suitable heading for each paragraph from the list of headings below.  
Write the appropriate numbers (**i-xi**) in boxes **1-6** on your answer sheet. Paragraph **C** has been done for you as an example.

***NB*** *There are more headings than paragraphs so you will not use all of them. You may use any heading more than once.*

**List of Headings**

|  |
| --- |
| i Grammar is corrected ii New method of research iii Technology learns from dictionaries iv Non-verbal content v The first study of spoken language vi Traditional lexicographical methods vii Written English tells the truth viii New phrases enter dictionary ix A cooperative research project x Accurate word frequency counts xi Alternative expressions provided |

1  Paragraph  A  
2  Paragraph  B  
  
**Example                                  Answer:**  
Paragraph C                                xi  
  
3  Paragraph  D  
4  Paragraph  E  
5  Paragraph  F  
6  Paragraph  G

**Spoken Corpus Comes To Life**

**A** The compiling of dictionaries has been historically the provenance of studious professorial types - usually bespectacled - who love to pore over weighty tomes and make pronouncements on the finer nuances of meaning. They were probably good at crosswords and definitely knew a lot of words, but the image was always rather dry and dusty. The latest technology, and simple technology at that, is revolutionising the content of dictionaries and the way they are put together.  
  
**B** For the first time, dictionary publishers are incorporating real, spoken English into their data. It gives lexicographers (people who write dictionaries) access to a more vibrant, up-to-date vernacular language which has never really been studied before. In one project, 150 volunteers each agreed to discreetly tie a Walkman recorder to their waist and leave it running for anything up to two weeks. Every conversation they had was recorded. When the data was collected, the length of tapes was 35 times the depth of the Atlantic Ocean. Teams of audio typists transcribed the tapes to produce a computerised database of ten million words.

**C** This has been the basis - along with an existing written corpus - for the Language Activator dictionary, described by lexicographer Professor Randolph Quirk as “the book the world has been waiting for”. It shows advanced foreign learners of English how the language is really used. In the dictionary, keywords such as “eat” are followed by related phrases such as “wolf down” or “be a picky eater”, allowing the student to choose the appropriate phrase.  
  
**D** “This kind of research would be impossible without computers,” said Delia Summers, a director of dictionaries. “It has transformed the way lexicographers work. If you look at the word “like”, you may intuitively think that the first and most frequent meaning is the verb, as in “I like swimming”. It is not. It is the preposition, as in: “she walked like a duck”. Just because a word or phrase is used doesn’t mean it ends up in a dictionary. The sifting out process is as vital as ever. But the database does allow lexicographers to search for a word and find out how frequently it is used - something that could only be guessed at intuitively before.

**E** Researchers have found that written English works in a very different way to spoken English. The phrase “say what you like” literally means “feel free to say anything you want”, but in reality it is used, evidence shows, by someone to prevent the other person voicing disagreement. The phrase “it”s a question of crops up on the database over and over again. It has nothing to do with enquiry, but it’s one of the most frequent English phrases which has never been in a language learner’s dictionary before: it is now.  
  
**F** The Spoken Corpus computer shows how inventive and humorous people are when they are using language by twisting familiar phrases for effect. It also reveals the power of the pauses and noises we use to play for time, convey emotion, doubt and irony.

**G** For the moment, those benefiting most from the Spoken Corpus are foreign learners. “Computers allow lexicographers to search quickly through more examples of real English,” said Professor Geoffrey Leech of Lancaster University. “They allow dictionaries to be more accurate and give a feel for how language is being used.” The Spoken Corpus is part of the larger British National Corpus, an initiative carried out by several groups involved in the production of language learning materials: publishers, universities and the British Library

1 vi 2 ii3 x4 viii5 iv6 ix

Succeeding in the title role

*Magazine circulations are in the millions and advertising  
revenue is rising despite the growth of TV and electronic  
media, reports David Short*

**A.** Print is not dead yet - at least not when it comes to magazines. Despite ever-growing competition from television and electronic media, a new report shows that worldwide advertising expenditure in consumer magazines has doubled over the past decade.

**В.**The report also shows that many magazines in Europe continue to enjoy circulations in the millions, despite the ever growing number of television channels, whether cable, satellite, terrestrial, analogue, or digital, and the incursion of the Internet. And new French research has revealed that magazines are still powerful tools for owners of brands.

**С**. Advertising expenditure worldwide was $225 billion last year, according to the report World Magazine Trends. $32 billion of this, or 14%, was taken by magazines. In Europe, the share of consumer magazine advertising expenditure was $12 billion or 21% of an estimated overall spend of $57 billion. But the share has dropped in the past 15 years from 30 per cent, with decline having been particularly severe in Belgium and Germany where commercial television was introduced relatively late.

**D**. However, the types of magazines which Europeans choose to flip through still varies dramatically according to country, with few signs that the European magazine with a common title is making inroads across nations. Interests which can create top-selling titles in one country are nowhere to be seen in the circulation lists of others.

**E**. But whatever their relative importance across Europe, magazines have one real advantage over broadcast media. For advertisers such as tobacco and alcohol producers, which are barred or severely restricted on television in some countries, magazines remain a safe haven for their messages.

**Questions 1-7:**  
The Reading Passage on the following pages has eight paragraphs (**A-H**). Choose the most suitable heading for each paragraph from the list of headings below. Write the appropriate numbers (**i-x**) in boxes 1-7 on your answer sheet There are more headings than paragraphs so you will not use all of them.  
You may use any heading more than once.

List of Headings

i)   Benefiting from an earlier model  
ii)  Important operative conditions  
iii)  Examining the public confusion  
iv) Where to go from here?  
v)  How it's all linked up  
vi) Finding a suitable location  
vii) Comparing wind speeds in Australian cities  
viii) Matching operational requirements with considerations of appearance  
ix) What makes Esperance different?  
x) What is a wind farm?

1 ix 2 I 3 v 4 ii 5 vi 6 viii 7 iv

New Book Releases

**A.**     This book describes the creativity of Aboriginal people living in the driest parts of Australia. Stunning reproductions of paintings, beautiful photography and informative text.

**B.**     Pocket-sized maps and illustrations with detailed information on the nesting sites and migration patterns of Australia. This is a classic booklet suitable for both beginner and expert.

**C.**     Packed full of information for the avid hiker, this book is a must. Photographs, maps and practical advice will guide your journeys on foot through the forests of the southern continent.

**D.**     More than an atlas - this book contains maps, photographs and an abundance of information on the land and climate of countries from around the globe.

**E.**    Australia's premier mountain biking guidebook - taking you through a host of national parks and state forests.

**F.**     Here's the A-Z of Australian native animals - take an in-depth look at their lives and characteristics, through fantastic photographs and informative text.

**G.**     Graphic artists have worked with researchers and scientists to illustrate how these prehistoric animals lived and died on the Australian continent.

**H.**     A definitive handbook on outdoor safety - with a specific focus on equipment, nutrition, first aid, special clothing and bush skills.

**I.**     Detailed guides to 15 scenic car tours that will take you onto fascinating wilderness tracks and along routes that you could otherwise have missed.

**Questions 8-14**  
The list of New Book Releases on the following page has nine book descriptions **A-I**.  
Choose the correct title for each book from the list of book titles below  
Write the correct number**i-xi** in boxes **8-14** on your answer sheet.

**List of Book Titles**  
i. Field Guide to Native Birds of Australia  
ii. The Bush on Two Wheels: 100 Top Rides  
iii. Bush Foods of Australian Aborigines  
iv. A Pictorial History of the Dinosaur in Australia  
v. Bush walking in Australia  
vi. World Geographica  
vii. Driving Adventures for 4-wheel-drive Vehicles  
viii. Survival Techniques in the Wild  
ix. Encyclopaedia of Australian Wildlife  
x. Guide to the Art of the Australian Desert  
xi. Field Guide to Animals of the World

8.       Book  A        
9.       Book  B       
10.     Book  C     
   
***Example     Book D     Answer vi***  
  
11.     Book  E       
12.     Book  F       
13.     Book  G       
14.     Book  H       
  
***Example     Book I     Answer vii***

8. x   9. i   10. v   11. ii   12. ix   13. iv   14. viii

**Questions 6-13**  
Look at the patient information leaflet on the following page.  
Match each of the following sentences with **TWO** possible endings **A-M** from the box below.  
  
Write the appropriate letters **A-M** in boxes **6-13** on your answer sheet.

***Example                                                                                  Answer***  
Borodine table should not be given to ......          **A** and **M**

**Questions 6 and 7**  
Borodine tablets might be used to treat......  
  
**Questions 8 and 9**  
You must ask your doctor before taking Borodine tablets if you are already being treated for ......  
  
**Questions 10 and 11**  
 You do not need to consult your doctor immediately if Borodine tablets give you ......  
  
**Questions 12 and 13**  
You must consult your doctor at once if you find Borodine tablets cause......

**Possible Endings**  
A  children under 12 years of age.  
B  a headache.  
C  an uncomfortable feeling in your stomach.  
D  symptoms similar to a cold.  
E  a change in your skin colour.  
F  anything treated by a prescription medicine.  
G  a kidney complaint.  
H  a whitening of the eyes.  
I  sore or broken skin.  
J  a fungal infection.  
K  a feeling of sadness.  
L  shortness of breath.  
M  a woman expecting a child.

ATIENT INFORMATION LEAFLET

***The name of your medicine is Borodine tablets.***

|  |
| --- |
| WHAT ARE ***Borodine***TABLETS USED FOR?  ***Borodine***tablets are used to help relieve hay fever and conditions due to allergies, in particular, skin reactions and a runny nose.  It is not recommended that ***Borodine***tablets are given to children under 12 years of age or pregnant or breastfeeding women.  BEFORE YOU TAKE ***Borodine***TABLETS  In some circumstances, it is very important not to take ***Borodine***tablets. If you ignore these instructions, this medicine could affect your heart rhythm.  Are you taking oral medicines for fungal infections?  Have you suffered a reaction to medicines containing ***Borodine***before?  Do you suffer from any liver, kidney or heart disease?  **If the answer to any of these questions is YES, do not take *Borodine*tablets before consulting your doctor.** |

6 & 7: D, I (In either order)  
8 & 9: G, J (In either order)  
10 & 11: B, C (In either order)  
12 & 13: E, K (In either order)