**COMPREHENSION AND CLOSE TEXT EXERCISES**

**I READING COMPREHENSION**

**Text 1**

**A**

Air pollution is increasingly becoming the focus of government and citizen concern around the globe. From Mexico City and New York, to Singapore and Tokyo, new solutions to this old problem are being proposed, Mailed and implemented with ever increasing speed. It is feared that unless pollution reduction measures are able to keep pace with the continued pressures of urban growth, air quality in many of the world’s major cities will deteriorate beyond reason.

**B**

Action is being taken along several fronts: through new legislation, improved enforcement and innovative technology. In Los Angeles, state regulations are forcing manufacturers to try to sell ever cleaner cars: their first of the cleanest, titled "Zero Emission Vehicles’, hove to be available soon, since they are intended to make up 2 per cent of sales in 1997. Local authorities in London are campaigning to be allowed to enforce anti-pollution lows themselves; at present only the police have the power to do so, but they tend to be busy elsewhere. In Singapore, renting out toad space to users is the way of the future.

**C**

When Britain’s Royal Automobile Club monitored the exhausts of 60,000 vehicles, it found that 12 per cent of them produced more than half the total pollution. Older cars were the worst offenders; though a sizeable number of quire new cars were also identified as gross polluters, they were simply badly tuned. California has developed a scheme to get these gross polluters off the streets: they offer a flat $700 for any old, run-down vehicle driven in by its owner. The aim is to remove the heaviest-polluting, most decrepit vehicles from the roads.

**D**

As part of a European Union environmental programme, a London council is resting an infra-red spectrometer from the University of Denver in Colorado. It gauges the pollution from a passing vehicle - more useful than the annual stationary rest that is the British standard today - by bouncing a beam through the exhaust and measuring what gets blocked. The councils next step may be to link the system to a computerised video camera able to read number plates automatically.

**E**

The effort to clean up cars may do little to cut pollution if nothing is done about the tendency to drive them more. Los Angeles has some of the world’s cleanest cars - far better than those of Europe - but the total number of miles those cars drive continues to grow. One solution is car-pooling, an arrangement in which a number of people who share the same destination share the use of one car. However, the average number of people in o car on the freeway in Los Angeles, which is 1.0, has been falling steadily. Increasing it would be an effective way of reducing emissions as well as easing congestion. The trouble is, Los Angeles  seem to like being alone in their cars.

**F**

Singapore has for a while had o scheme that forces drivers to buy a badge if they wish to visit a certain part of the city. Electronic innovations make possible increasing sophistication: rates can vary according to road conditions, time of day and so on. Singapore is advancing in this direction, with a city-wide network of transmitters to collect information and charge drivers as they pass certain points. Such road-pricing, however, can be controversial. When the local government in Cambridge, England, considered introducing Singaporean techniques, it faced vocal and ultimately successful opposition.

Part Two

The scope of the problem facing the world’s cities is immense. In 1992, the United Nations Environmental Programme and the World Health Organisation (WHO) concluded that all of a sample of twenty megacities - places likely to have more than ten million inhabitants in the year 2000 - already exceeded the level the WHO deems healthy in at least one major pollutant. Two-thirds of them exceeded the guidelines for two, seven for three or more.

Of the six pollutants monitored by the WHO - carbon dioxide, nitrogen dioxide, ozone, sulphur dioxide, lead and particulate matter - it is this last category that is attracting the most attention from health researchers. PM10, a sub-category of particulate matter measuring ten-millionths of a metre across, has been implicated in thousands of deaths a year in Britain alone. Research being conducted in two counties of Southern California is reaching similarly disturbing conclusions concerning this little- understood pollutant.

A world-wide rise in allergies, particularly asthma, over the past four decades is now said to be linked with increased air pollution. The lungs and brains of children who grow up in polluted air offer further evidence of its destructive power The old and ill, however, are the most vulnerable to the acute effects of heavily polluted stagnant air. It con actually hasten death, os it did in December 1991 when a cloud of exhaust fumes lingered over the city of London for over a week.

The United Nations has estimated that in the year 2000 there will be twenty-four mega-cities and a further eighty-five cities of more than three million people. The pressure on public officials, corporations and urban citizens to reverse established trends in air pollution is likely to grow in proportion with the growth of cities themselves. Progress is being made. The question, though, remains the same: ‘Will change happen quickly enough?’

## Questions 1-5

Look at the following solutions (Questions ***1-5***) and locations. Match each solution with one location.

Write the appropriate locations in boxes ***1-5*** on your answer sheet. You may use any location ***more than once.***

**LOCATIONS** Singapor, Tokyo, London, New York, Mexico City, Cambridge, Los Angeles

SOLUTIONS

**1** Manufacturers must sell cleaner cars ……………………

**2** Authorities want to have power to enforce anti-pollution laws. ……………………

**3** Drivers will be charged according to the roads they use ……………………

**4** Moving vehicles will be monitored for their exhaust emissions. …………………… **5** Commuters are encouraged to share their vehicles with others ……………………

## True, false, not given?

**6**……………………According to British research, a mere twelve per cent of vehicles tested produced over fifty per cent of total pollution produced by the sample group.

**7** ……………………It is currently possible to measure the pollution coming from individual vehicles whilst they are moving.

**8** …………………… Residents of Los Angeles are now tending to reduce the yearly distances they travel by car.

**9** …………………… Car-pooling has steadily become more popular in Los Angeles in recent years.

**10** ……………………Charging drivers for entering certain parts of the city has been successfully done in Cambridge, England.

Choose the appropriate letters ***A—D***

**11**  How many pollutants currently exceed WHO guidelines in all megacities studied?

A  one

B  two

C  three

D  seven

**12**  Which pollutant is currently the subject of urgent research?

A  nitrogen dioxide

B  ozone

C  lead

D  particulate matter

**13**  Which of the following groups of people are the most severely affected by intense air pollution?

**A**  allergy sufferers

B  children

C  the old and ill

D  asthma sufferers

### Key

|  |  |
| --- | --- |
| **1.** Los Angeles | **8.** NO |
| **2.** London | **9.** NO |
| **3.** Singapore | **10.** NO |
| **4.** London | **11.** A |
| **5.** Los Angeles | **12.** D |
| **6.** YES | **13.** C |
| **7.** YES |  |

**Text 2**

**A**

‘Hypotheses,’ said Medawar in 1964, ‘are imaginative and inspirational in character’; they are ‘adventures of the mind’. He was arguing in favour of the position taken by Karl Popper in The Logic of Scientific Discovery (1972, 3rd edition) that the nature of scientific method is hypothetico-deductive and not, as is generally believed, inductive.

**B**

It is essential that you, as an intending researcher, understand the difference between these two interpretations of the research process so that you do not become discouraged or begin to suffer from a feeling of ‘cheating’ or not going about it the right way.

**C**

The myth of scientific method is that it is inductive: that the formulation of scientific theory starts with the basic, raw evidence of the senses - simple, unbiased, unprejudiced observation. Out of these sensory data - commonly referred to as ‘facts’ — generalisations will form. The myth is that from a disorderly array of factual information an orderly, relevant theory will somehow emerge. However, the starting point of induction is an impossible one.

**D**

There is no such thing as an unbiased observation. Every act of observation we make is a function of what we have seen or otherwise experienced in the past. All scientific work of an experimental or exploratory nature starts with some expectation about the outcome. This expectation is a hypothesis. Hypotheses provide the initiative and incentive for the inquiry and influence the method. It is in the light of an expectation that some observations are held to be relevant and some irrelevant, that one methodology is chosen and others discarded, that some experiments are conducted and others are not. Where is, your naive, pure and objective researcher now?

**E**

Hypotheses arise by guesswork, or by inspiration, but having been formulated they can and must be tested rigorously, using the appropriate methodology. If the predictions you make as a result of deducing certain consequences from your hypothesis are not shown to be correct then you discard or modify your hypothesis. If the predictions turn out to be correct then your hypothesis has been supported and may be retained until such time as some further test shows it not to be correct. Once you have arrived at your hypothesis, which is a product of your imagination, you then proceed to a strictly logical and rigorous process, based upon deductive argument — hence the term ‘hypothetico-deductive’.

**F**

So don’t worry if you have some idea of what your results will tell you before you even begin to collect data; there are no scientists in existence who really wait until they have all the evidence in front of them before they try to work out what it might possibly mean. The closest we ever get to this situation is when something happens by accident; but even then the researcher has to formulate a hypothesis to be tested before being sure that, for example, a mould might prove to be a successful antidote to bacterial infection.

**G**

The myth of scientific method is not only that it is inductive (which we have seen is incorrect) but also that the hypothetico-deductive method proceeds in a step-by-step, inevitable fashion. The hypothetico-deductive method describes the logical approach to much research work, but it does not describe the psychological behaviour that brings it about. This is much more holistic — involving guesses, reworkings, corrections, blind alleys and above all inspiration, in the deductive as well as the hypothetic component -than is immediately apparent from reading the final thesis or published papers. These have been, quite properly, organised into a more serial, logical order so that the worth of the output may be evaluated independently of the behavioural processes by which it was obtained. It is the difference, for example between the academic papers with which Crick and Watson demonstrated the structure of the DNA molecule and the fascinating book The Double Helix in which Watson (1968) described how they did it. From this point of view, ‘scientific method’ may more usefully be thought of as a way of writing up research rather than as a way of carrying it out.

Choose the most suitable headings for paragraphs ***C-G*** from the list of headings below.

|  |  |
| --- | --- |
|  | **List of Headings** |
| **i** | The Crick and Watson approach to research |
| **ii** | Antidotes to bacterial infection |
| **iii** | The testing of hypotheses |
| **iv** | Explaining the inductive method |
| **v** | Anticipating results before data is collected |
| **vi** | How research is done and how it is reported |
| **vii** | The role of hypotheses in scientific research |
| **viii** | Deducing the consequences of hypotheses |
| **ix** | Karl Popper’s claim that the scientific method is hypothetico-deductive |
| **x** | The unbiased researcher |

In which ***TWO*** paragraphs in Reading Passage does the writer give advice directly to the reader?

***TRUE, FALSE******NOT GIVEN***

**8**………………………..Popper says that the scientific method is hypothetico-deductive.

**9**………………………..If a prediction based on a hypothesis is fulfilled, then the hypothesis is confirmed as true.

**10** ……………………….. Many people carry out research in a mistaken way.

**11**…………………………The ‘scientific method’ is more a way of describing research than a way of doing it.

Choose the appropriate letter A-D

Which of the following statements best describes the writer’s main purpose in Reading Passage?

A  to advise Ph.D students not to cheat while carrying out research

B  to encourage Ph.D students to work by guesswork and inspiration

C  to explain to Ph.D students the logic which the scientific research paper follows

D  to help Ph.D students by explaining different conceptions of the research process

### Key

|  |  |
| --- | --- |
| **1.** iv | **7.** B/F (in either order) |
| **2.** vii | **8.** YES |
| **3.** iii | **9.** NO |
| **4.** v | **10.** NOT GIVEN |
| **5.** vi | **11.** YES |
| **6.** B/F (in either order) | **12.** D |

**II Read the text carefully and fill in the blanks with the appropriate words:**

|  |
| --- |
| designed exposure inserted operated slots socket recessed insulated blades incorporate touching |

Generally **the** plug is the movable connector attached to an electrically ........................... device's mains cable, and the socket is fixed on equipment or a building structure and connected to an energised electrical circuit. The plug has protruding pins or (referred to as male) that fit into matching ........................... or holes (called female) in the sockets. Sockets are designed to prevent ........................... of bare energised contacts.

To reduce the risk of users accidentally ........................... energized conductors and thereby experiencing electric shock, plug and socket systems often ........................... safety features in addition to the ........................... slots or holes of the energized ............................ These may include plugs with ........................... sleeves, recessed sockets, sockets with blocking shutters, and sockets........................... to accept only compatible plugs ........................... in the correct orientation.

Key

Generally the plug is the movable connector attached to an electrically **operated** device's mains cable, and the socket is fixed on equipment or a building structure and connected to an energised electrical circuit. The plug has protruding pins or **blades** (referred to as *male*) that fit into matching **slots** or holes (called *female*) in the sockets. Sockets are designed to prevent **exposure** of bare energised contacts.

To reduce the risk of users accidentally **touching** energized conductors and thereby experiencing electric shock, plug and socket systems often **incorporate** safety features in addition to the **recessed** slots or holes of the energized **socket**. These may include plugs with **insulated** sleeves, recessed sockets, sockets with blocking shutters, and sockets **designed** to accept only compatible plugs **inserted** in the correct orientation.