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Academic Reading Practice Test 26

Reading Passage 1

Questions 1-12

You should spend about 20 minutes on Questions 1-12 which are based on Reading Passage 1.

Questions 1-4

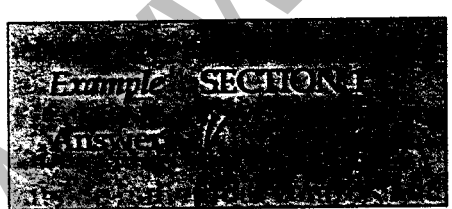
The reading passage below has five sections.

Choose the most suitable heading for each section from the list of headings below. Write the appropriate numbers (i-viii) in boxes 29-32 on your answer sheet.

NB There are more headings than sections, so you will not use all of them. You may use any of the headings more than once.

List of headings

(i) The workers and their families
(ii) The managers of the Snowy Mountains Scheme
(iii) The workers' problems
(iv) The unique nature of the scheme
(v) Why the Snowy Mountains Scheme began
(vi) The people who came to the Snowy Mountains Scheme
(vii) Learning a new language
(viii) The dangers of the job



1. SECTION 2
2. SECTION 3
3. SECTION 4
4. SECTION 5

The Dams that Tamed Australia

Section 1

Inland Australia has had a problem with drought from the time of white settlement in 1788 until today, and this is why the Snowy Mountains Scheme was conceived and founded. Before the Snowy Scheme a large proportion of the snow-fields on the roof of Australia melted into the Snowy River every year, and the water flowed into the sea, not into the dry interior where people needed it so desperately. This was first recognised by the Polish geologist and explorer Strezlecki in 1840, who commented that there could be no development of the inland without irrigation. The rivers would have to be diverted if irrigation were to succeed.

Before Federation in 1901, Australia consisted of a group of colonies, all anxious to protect their own interests. After Federation the states retained rights to the water, and thus to what might happen to the rivers. Arguments between New South Wales, Victoria and South Australia led to a deadlocked Premiers' Conference in 1947. Despite this serious dispute the Federal Parliament passed the Snowy Mountains Hydro-electric Power Act just two years later, on July 7. The project was officially commenced on October 17 that year, barely three months after the Act had been passed.

The scheme set out to harness water for electricity and to divert it back to the dry inland areas for irrigation. To do this, thousands of kilometres of tunnels had to be drilled through the mountains, and sixteen major dams and seven hydro-electric power stations built over a period of nineteen years. The first of these was Guthega Power Station, commissioned in 1954, and the last, Tumut III.

Section 2

The Snowy Mountains Scheme was to alter the face of Australia forever. One important change was the recruitment of people from outside Australia to work on the scheme. In 1949, while the world was still recovering from the effects of World War II (1939 to 1945), the Australian government needed immense numbers of people to work on the Snowy. It sought labour from overseas, and 60,000 of the 100,000 people who worked on the scheme came from outside the country.

They came from thirty different countries: from Italy, Yugoslavia, and Germany, from sophisticated cities like Budapest, Paris and Vienna, and from tiny hamlets. These European workers left countries which had fought against each other during the war, and which had vastly different cultures, and they found themselves in a country which was still defining itself. They were adventurous young men, some highly skilled, some not, and they came to a place which offered both enormous challenges and primitive conditions. Many were housed in tents in the early days of the scheme, although some fortunate men were placed in barracks. The food was basic, female company extremely scarce and entertainment lacking.

Section 3

Many new arrivals spoke only limited English, and were offered English classes after work. The men needed primarily to understand safety instructions, and safety lectures were conducted in English and other languages. In fact a great deal of communication underground was by sign language, especially when the conditions were noisy. The signs were peculiar to the business at hand: for instance, a thumb placed near the mouth meant water, but did not indicate whether the water was needed on the drill the man was using, or for a drink.

The constant reference to the men who worked on the Snowy is appropriate because few women worked on the scheme, and those who were employed usually held office jobs. Women, however, were active in the community, and the members of the Country Women's Association gave English lessons. Other English instruction was provided by The Australian Broadcasting Commission which ran daily broadcasts to help the newcomers with the language.

Section 4

These circumstances could have caused great social trouble, but there were relatively few serious problems. The men worked long and hard, and many saved their money with a view to settling in Australia or returning home. At a reunion in 1999 many were happy to remember the hardships of those days, but it was all seen through a glow of achievement. This satisfaction was felt not only by the men who worked directly on the project, but by the women, many of whom had been wives and mothers during the scheme, and indicated that they had felt very much part of it.

The children of these couples went to school in Happy Jack, a town notable for having the highest school in Australia, and the highest birthrate. In one memorable year there were thirty babies born to the eighty families in Happy Jack. Older children went to school in Cooma, the nearest major town.

Section 5

The scheme is very unlikely to be repeated. The expense of putting the power stations underground would now be prohibitive, and our current information about ecology would require a different approach to the treatment of the rivers. Other hydro-electric schemes like the Tennessee Valley Authority preceded the Snowy Mountains Scheme, and others have followed. The Snowy Mountains Scheme is the only hydro-electric scheme in the world to be totally financed from the sale of its electricity.

As well as being a great engineering feat, the scheme is a monument to people from around the world who dared to change their lives. Some are living and working in Australia, many have retired there, some have returned to their countries of origin. Every one of them contributed to altering Australian society forever.

Questions 5-8

Complete the table below. Write a date or event for each answer. Use no more than ***THREE WORDS OR NUMBERS*** *for each answer.*

Write your answers in boxes 5-8 on your answer sheet.

	DATE (Year)	EVENT
5		White settlement begins
[redacted]	[redacted]	[redacted]
6		Snowy Mountains Scheme begins
7		Tumut III Power Station commissioned
8	1999	

Questions 9-12

Do the following statements agree with the views of the writer? In boxes 37-40 on your answer sheet write:

YES *if the statement agrees with the writer*
NO *if the statement does not agree with the writer*
NOT GIVEN *if there is no information about this in the passage*

9. The Snowy Mountains Scheme was designed to meet Australia's energy needs.

10. Few women played a direct part in the development of the Snowy Mountains Scheme.

11. The Snowy Mountains Scheme has led to a new set of environmental problems.

12. The Snowy Mountains Scheme may be considered the beginning of a multicultural Australia.

Reading Passage 2

You should spend about 20 minutes on Questions 13-26 which are based on Reading Passage 2.

Power from the Earth

A. Geothermal power refers to the generation of electrical power from the tapping of heat sources found well below the earth's surface. As most people know, if a hole were to be drilled deep into the earth, extremely hot, molten rock would soon be encountered. At depths of 30 to 50 km, temperatures exceeding 1000 degrees Celsius prevail. Obviously, accessing such temperatures would provide a wonderful source for geothermal power. The problem is, such depths are too difficult to access - drilling down some 30 or more kilometers is simply too costly with today's technology.

B. Fortunately, sufficiently hot temperatures are available at considerably shallower depths. In certain areas, where the earth's surface has been altered over time - through, for example, volcanic activity - temperatures exceeding 300 degrees Celsius can be found at depths of a mere 1 to 3 km, which can be feasibly accessed. These particular areas are potentially ideal for the generation of electricity through geothermal means.

C. It is possible to explain geothermal power generation as a steam power system that utilizes the earth itself as a boiler. When water is sent down to the depths of 1 to 3 km, it returns to the surface as steam and is capable of generating electricity. Electricity generated in this manner hardly produces any carbon dioxide or other waste materials. If the steam and hot water are routed back underground, the generation of electricity can be semipermanent in nature.

D. Furthermore, geothermal power can provide a stable supply of electricity unlike other natural energy sources such as solar power and wind power, which both rely heavily on weather conditions. Accordingly, the generation of electricity through geothermal power is four to five times more efficient than through solar power. As for wind power, geothermal power is some two times more cost effective. Only the generation of hydroelectric power comes close - the cost of power production from each is about the same.

E. Although geothermal power generation appears to be a most attractive option, development has been slow. The world's first successful attempt at geothermal power generation was accomplished in Italy in 1904. Power generation in Japan first started in 1925 at Beppu City. Since that time, countries as diverse as Iceland and New Zealand have joined the list of nations tapping this valuable source of energy. In the year 2000, Beppu City hosted the World Geothermal Congress, whose goal was to promote the adoption of geothermal energy production throughout the world.

F. The international geothermal community at the World Geothermal Congress 2000 called upon the governments of nations to make strong commitments to the development of their indigenous geothermal resources for the benefit of their own people, humanity, and the environment. However, several factors are still hindering the development of geothermal power generation. Firstly, it has a low density of energy which makes it unsuitable for large-scale production in which, for example, over 1 million kilowatts need to be produced. Secondly, the cost is still high when compared to today's most common sources of energy production: fossil fuels and atomic energy.

G. A further consideration is the amount of risk involved in successfully setting up a new geothermal power production facility. The drilling that must extend 2,000 to 3,000 m below the surface must be accurate to within a matter of just a few meters one side or the other of the targeted location. To achieve this, extensive surveys, drilling expertise and time are needed. It is not uncommon for a project to encompass ten years from its planning stage to the start of operations. The extent of the risks involved is clear.

H. Although it has long been considered a resource-poor nation, Japan, which is thought to have about 10% of the world's geothermal resources, may well have considerable advantages for tapping into geothermal power. It does have one of the longest serving power stations using geothermal energy. The station, built in 1966, pointed the way to the future when the country was affected by the two global oil shocks in the 1970s. Now there are some 17 plants in operation throughout the country which are responsible for a total output of over 530,000 kilowatts. This figure, though impressive, accounts for a mere 0.4% of Japan's total generation of electricity.

I. Clearly then, further progress needs to be made in the development of geothermal energy. As long as costs remain high in comparison to other sources of energy, geothermal power will struggle to match the efficiency of existing power sources. Further research and innovation in the field, as well as government support and a sense of urgency, are needed to help propel geothermal energy towards its promising future.

Questions 13-18

Reading Passage 2 has 9 paragraphs labelled ***A-I.***

Which paragraphs contain the following information?

Write the appropriate letters ***A-I*** *in boxes 13 to 18 on your answer sheet.*

13. History of the development of geothermal power

14. One country's use of geothermal power

15. Comparisons between various energy sources
16. How geothermal energy can produce electricity
17. Conditions which permit access to geothermal power
18. Problems of geothermal exploration

Questions 19-26

Do the following statements agree with the information given in the passage "Power from the Earth"?

In boxes 19-26 on your answer sheet write

YES	*if the statement agrees with the writer*
NO	*if the statement does not agree with the writer*
NOT GIVEN	*if there is no information about this in the passage*

19. Accessing geothermal energy at depths greater than 3 km is currently not possible.
20. Geothermal power is unlikely to be economically sensible while carbon fuel is available.
21. The generation of geothermal power does produce some byproducts damaging to the environment.
22. The World Geothermal Congress has been able to raise money for research in this area.
23. Geothermal energy is still relatively expensive to generate.
24. It can take a decade to develop a single geothermal power station.
25. Japan will soon be capable of generating one quarter of its energy needs using geothermal energy.
26. The future of geothermal energy depends upon the decline of fossil fuel resources.

Reading Passage 3

You should spend about 20 minutes on Questions 27-40 which are based on Reading Passage 3.

Are we Managing to Destroy Science?

[The government in UK was concerned about the efficiency of Research institutions and set up a Research Assessment Exercise (RAE) to consider what was being done in each university. The article which follows is a response to the imposition of the RAE.]

MICHAEL J LARKIN

In the year ahead, the UK government is due to carry out the next Research Assessment Exercise (RAE). The goal of this regular five-yearly check up of the university sector is easy to understand - perfection, of a kind, in public sector research. But perfection extracts a high price. In the case of the RAE, one risk attached to this is the creation of a tyrannical management culture that threatens the future of imaginative science.

Academic institutions are already preparing for the RAE with some anxiety - understandably so, for the financial consequences of failure are severe. Departments with a current rating of four or five (research is rated on a five point scale, with five the highest) must maintain their score or face a considerable loss of funding. Meanwhile, those with ratings of two or three are fighting for their survival.

The pressures are forcing research management onto the defensive. Common strategies for increasing academic output include grading individual researchers every year according to RAE criteria, pressurising them to publish anything regardless of quality, diverting funds from key and expensive laboratory science into areas of study such as management, and even threatening to close departments. Another strategy being readily adopted is to remove scientists who appear to be less active in research and replace them with new, probably younger, staff.

Although such measures may deliver results in the RAE, they are putting unsustainable pressure on academic staff. Particularly insidious is the pressure to publish. Put simply, RAE committees in the laboratory sciences must produce four excellent peer-reviewed publications per member of staff to meet the assessment criteria. Hence this is becoming a minimum requirement for existing members of staff, and a benchmark against which to measure new recruits.

But prolific publication does not necessarily add up to good science. Indeed, one young researcher was told in an interview for a lectureship that, "although your publications are excellent unfortunately there are not enough of them. You should not worry so much about the quality of your publications."

In a recent letter to *Nature* I analysed the publication records of ten senior academics in the area of molecular microbiology. All of them are now in very senior positions in universities or research institutes, with careers spanning a total of 262 years. All have achieved considerable status and respect within the UK and worldwide. However, their early publication records would preclude them from academic posts if the present criteria were applied.

Although the quality of their work was clearly outstanding - they initiated novel and perhaps risky projects early in their careers which have since been recognised as research of international importance - they generally produced few papers over the first ten years after completing their PhDs. Indeed, over this period, they have an average gap of 3.8 years without publication or production of a cited paper. In one case there was a five-year gap. Although these enquiries were limited to my own area of research, it seems that this model of career progression is widespread in all of the chemical and biological sciences.

It seems that the atmosphere surrounding the RAE may be stifling talented young researchers or driving them out of science altogether. We urgently need a more considered and careful nurturing of our young scientific talent. A new member of academic staff in the chemical or biological laboratory sciences surely needs a commitment to resources over a five- to ten-year period to establish their research. Senior academics managing this situation might be well advised to demand a long-term view from the government.

Unfortunately, management seems to be pulling in the opposite direction. Academics have to deal with more students than ever and the paperwork associated with teaching quality assessments is increasing. On top of that, the salary for university lecturers starts at only £16,665 (rising to £29,048). Tenure is rare, and most contracts are offered on a temporary contract basis. With the mean starting salary for new graduates now close to £18,000, it is surprising that anybody still wants a job in academia.

It need not be like this. As part of my duties with the QUESTOR Centre (Queen's University Environmental Science and Technology Research Centre), I have dealings with many senior research managers in the chemical and water industries. The overall impression is that the private sector has a much more sensible and enlightened long-term view of research priorities. Why can the universities not develop the same attitude?

Tyrannies need managers, and these managers will make sure they survive when those they manage are lost. Research management in UK universities is in danger of evolving into such a tyranny that it will allow little time for careful thinking and teaching, and will undermine the development of imaginative young scientists.

Dr Larkin is a senior lecturer in microbiology at The Queen's University Belfast.

Questions 27-34

Complete the summary below. Choose ***NO MORE THAN ONE WORD*** *from the box below for each answer, and write them in boxes 27-34 on your answer sheet.*

rated academic publish carried business
disagree worried strict excited scientific conducted
negotiate counterproductive published expensive
retrain complex abstract popular replace

The next Research Assessment Exercise (RAE) is due to be ____**(27)**____ next year. Already, universities in the UK are ____**(28)**____ about the exercise. It involves individual departments being ____**(29)**____ for their ability to measure up to specified criteria. The purpose of the exercise is to increase ____**(30)**____ output, yet the author considers the exercise to be counterproductive.

To meet the ____**(31)**____ criteria, some departments will force their staff to ____**(32)**____ anything. Others may reallocate funds toward subjects that are less ____**(33)**____ than laboratory science. One further approach is to ____**(34)**____ existing staff.

Question 35-40

Do the following statements agree with the views of the writer in Reading Passage 3? In boxes 35-40 on your answer sheet write:

YES	*if the statement agrees with the writer*
NO	*if the statement does not agree with the writer*
NOT GIVEN	*if there is no information about this in the passage*

35. The current management of research projects is unlikely to produce good science.

36. Good researchers are usually good teachers.

37. Good researchers are usually prolific publishers.

38. People in industry seem to understand the long-term nature of research.

39. We can hope for more exciting research under the influence of industry.

40. Managers/management may be the only winners under the new system.