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**Academic
Reading
Practice Test
8**

ACADEMIC READING PRACTICE TEST 8

READING PASSAGE 1

Questions 1 - 13

You should spend about 20 minutes on **Questions 1 – 13** which are based on Reading Passage 1 below.

Myxomatosis is a highly lethal disease affecting rabbits caused by the myxoma virus. The disease was uncovered in South America in 1896 where it had a devastating effect on the rabbit population there. It was found that it was mainly the European rabbit imported early that century that contracted the disease as resistance had been built up by the local populations.

Up until recently rabbits have been extensively hunted for both their fur and their meat. This activity as well as the presence of other predators such as foxes and feral cats acted in the past to keep down the population of rabbits and man is still the main predator in South American countries. However, in other countries man has had a less and less important role as a predator and has in fact helped to reduce the population of the rabbits' natural predators through habitat destruction, urbanisation and cultivation. These changes have resulted in a precarious balance of the rabbit population in many areas where any factors enhancing rabbit survival can result in a huge population boom. Rabbits compete with livestock and native herbivores for food. They are highly selective grazers that concentrate on the most nutritious plants, including seedlings, and eat them to below ground level. This can change the species composition of pastures and reduce productivity. They act as competition for hares and other herbivores and grazing animals, reducing the agricultural output of the land.

The European wild rabbit was introduced into Australia in 1759 when Thomas Austin imported 24 rabbits from England where it was also an exotic animal, having been introduced from Spain during the Norman conquests. He released the rabbits onto his property for sport hunting. The rabbit spread so rapidly that it reached the Queensland - New South Wales border by 1886. Almost all of the rabbits in Australia are descendants of the 24 original rabbits and are genetically homogenous. This fact beyond all others might be the cause of the spectacular effect the introduction of the virus had on the rabbit population as a whole. The lack of any herbivores capable of competing with the rabbit for food and burrows resulted in the decline of many species of native wildlife. This applied particularly to the small ground-dwelling mammals of the arid lands. This situation was made worse by the lack of a large population of predators able to deal with this new prey. However, to the human population of Australia, all of this was irrelevant next to the economic loss caused by rabbits grazing on pasture used by sheep and other herbivores, reducing the number of sheep capable of grazing per acre, and the loss of wool and revenue thus caused.

It was not until 1950 that myxomatosis was successfully released among Australian rabbits. This occurred after much debate, experimentation of what the effects of such a drastic move would be and political wrangling. After a slow start the initial results fulfilled all expectations with a mortality rate of over 90%. The virus spread most quickly during the summer when the mosquito population was at its maximum, resulting in very successful transmission of the virus between separate colonies. Myxomatosis is accompanied by a profuse ocular discharge as well as a discharge from skin lesions, both of which are rich in virus. These discharges allow transmission of the virus by direct contact. Transmission via the respiratory tract is also possible if rare. Infection does not occur by feeding and therefore there is no faecal-oral transmission.

A wide number of mosquitoes, fleas, ticks, mites and lice have also been shown to be vectors. This allows the spread of the virus to take place between colonies of rabbits and in the case of the fleas, allows rabbits from a different colony to become infected by coming into contact with flea-infested carcasses of rabbits in warrens where all the occupants have been killed by myxomatosis some months previously.

The initial Australian epidemic continued during the next few years, spreading and remaining highly virulent, especially in the summers when the mosquito population was at its highest. Epidemics were often started by the continued inoculation by farmers of the wild rabbit population every summer and spring, a method still used today. However, the capacity for the virus to survive over the winter favoured a less lethal disease, and this, combined with genetic resistance, has resulted in a much reduced mortality rate, even though sporadic outbreaks of the original virulent virus sometimes occur.

Rabbits which recover from myxomatosis are immune to re-infection for the rest of their lives. Also immune mothers pass passive immunity to their young. However, due to the short lifetimes of rabbits, often little more than a year in the wild, this has little effect in practice. Of more importance has been the in-built genetic immunity of certain rabbits in the population. Survival of these rabbits, combined with their high reproduction rate and the death of the competition, meant that a population of genetically more resistant rabbits was quickly built up.

Today myxomatosis in Australia kills only about 40% of infected rabbits but rabbit numbers are much lower than they would have been in the absence of this disease. However, they still are a major pest in Australia and other methods for their eradication are being investigated.

Questions 1 - 5

Look at the following 10 statements **A - J**. According to Reading Passage 1, **FIVE** statements are **TRUE**. The other **FIVE** statements are either **FALSE** or the information is not given in the passage. Choose from the appropriate letters **A - J** which statements are true and write them on your answer sheet for questions **1 - 5**. The answers may be written in any order.

- A** Predators helped keep Australian rabbit numbers in check before the population boom.
- B** Rabbits can still infect other rabbits after they have died from myxomatosis.
- C** The rabbit is not a native animal to England.
- D** Rabbits that recover from myxomatosis can still die if they are re-infected.
- E** Enthusiastic support of myxomatosis introduction into Australia ensured that the introduction process went forward quickly.
- F** Selected wild Australian rabbits are injected every year with the myxoma virus.
- G** Discharge from the eyes of infected rabbits contributes to the spread of myxomatosis.
- H** Interbreeding with Asian rabbit breeds has helped boost the Australian rabbits' immunity to myxomatosis.
- I** 60% of Australian rabbits are now unaffected by myxomatosis.
- J** The main reason for releasing myxomatosis into Australia was financial.

Questions 6 - 12

Using **NO MORE THAN THREE WORDS OR A NUMBER** from Reading Passage 1, answer the following questions.

Write your answers in boxes **6 - 12** on your answer sheet.

- 6 Where are humans still the main threat to rabbits?
- 7 Apart from damage to their natural environment, what **TWO** other factors have reduced the amount of animals that feed on rabbits?

- 8 Why were rabbits originally taken to Australia?
- 9 What are **TWO** things that rabbits challenge other Australian plant eating animals for?
- 10 Which Australian raw material was particularly affected by the increase in Australian rabbit numbers?
- 11 What helped the spread of myxomatosis during the Australian summers?
- 12 What other factor has united with a more harmless form of the myxoma virus to allow more Australian rabbits to survive myxomatosis infection?

Questions 13

From the list below choose the most suitable title for Reading Passage 1. Write the appropriate letter (**A - E**) in box **13** on your answer sheet

- A A Threat to Humanity
- B Australian Diseases
- C The Disease that Saved Australian Farmers
- D The Genetics of Australian Rabbits
- E The Pathology of Rabbit Infections

You should spend about 20 minutes on Questions 14 – 26 which are based on Reading Passage 2 on the following page.

The Cause of the Next Ice Age?

If you look at a globe, you'll see that the latitude of much of Europe and Scandinavia is the same as that of Alaska and permafrost-locked parts of northern Canada and central Siberia. Yet Europe has a climate more similar to that of the United States than northern Canada or Siberia. It turns out that our warmth is the result of ocean currents that bring warm surface water up from the equator into northern regions that would otherwise be so cold that even in summer they'd be covered with ice. The current of greatest concern is often referred to as the Great Conveyor Belt which includes what we call the Gulf Stream. This is mostly driven by the force created by differences in water temperatures and salinity. The North Atlantic Ocean is saltier and colder than the Pacific. As a result, the warm water of the Great Conveyor Belt evaporates out of the North Atlantic leaving behind saltier waters which are cooled by the cold continental winds off the northern parts of North America. Salty, cool waters settle to the bottom of the sea, most at a point a few hundred kilometres south of the southern tip of Greenland, producing a whirlpool of falling water that's 5 to 10 miles across. This falling column of cold, salt-laden water pours itself to the bottom of the Atlantic, where it forms a great undersea river forty times larger than all the rivers on land combined, flowing south down to and around the southern tip of Africa where it finally reaches the Pacific. Amazingly, the water is so deep and so dense that it often doesn't surface in the Pacific for as much as a thousand years after it first sank in the North Atlantic off the coast of Greenland.

The out-flowing undersea river of cold, salty water makes the level of the Atlantic fractionally lower than that of the Pacific, drawing in a strong surface current of warm, fresher water from the Pacific to replace the outflow of the undersea river. This warmer, fresher water slides up through the South Atlantic, loops around North America where it's known as the Gulf Stream, and ends up off the coast of Europe. By the time it arrives near Greenland, it's cooled off and evaporated enough water to become cold and salty and sink to the ocean floor, providing a continuous feed for that deep-sea river flowing to the Pacific. These two flows - warm, fresher water in from the Pacific, which then grows salty and cools and sinks to form an exiting deep sea river - are known as the Great Conveyor Belt.

Prior to the last decades it was thought that the periods between glaciations and warmer times in North America, Europe, and North Asia were gradual. We knew from the fossil record that the Great Ice Age period began a few million years ago and during those years there were times when for hundreds or thousands of years North America, Europe, and Siberia were covered with thick sheets of ice year round. In between these icy times, there were periods when the glaciers thawed, bare land was exposed, forests grew, and land animals (including early humans) moved into these northern regions. Most scientists figured the transition time from icy to warm was gradual, lasting dozens to hundreds of years and nobody was sure exactly what had caused it. Recently however, scientists have been shocked to discover that the transitions from ice age-like weather to contemporary-type weather usually took only two or three years. Something was flipping the weather of the planet back and forth with a rapidity that was startling.

What brought on this sudden effect was that the warm-water currents of the Great

Conveyor Belt had shut down. Once the Gulf Stream was no longer flowing, it only took a year or three for the last of the residual heat held in the North Atlantic Ocean to dissipate into the air over Europe and then there was no more warmth to moderate the northern latitudes. When the summer stopped in the north, the rains stopped around the equator. At the same time that Europe was plunged into an Ice Age, the Middle East and Africa were ravaged by drought and wind-driven firestorms. If the Great Conveyor Belt, which includes the Gulf Stream, were to stop flowing today, the result would be sudden and dramatic. Winter would set in for the eastern half of North America and all of Europe and Siberia and never go away. Within three years, those regions would become uninhabitable and nearly two billion humans would starve, freeze to death or have to relocate. Civilization as we know it probably couldn't withstand the impact of such a crushing blow.

Most scientists involved in research on this topic agree that the culprit is global warming, which melts the icebergs on Greenland and the Arctic icepack and thus flushes cold, fresh water down into the Greenland Sea from the north diluting its salinity. When a critical threshold is reached, the climate will suddenly switch to an ice age that could last minimally 700 or so years, and maximally 100,000 years. No one knows when it will happen but what's almost certain is that if nothing is done about global warming, it will happen sooner rather than later.

Questions 14 - 18

Read the passage *The Cause of the Next Ice Age?* again and look at the statements below.

In boxes **14 - 18** on your answer sheet write:

TRUE *if the statement is true*

FALSE *if the statement is false*

NOT GIVEN *if the information is not given in the text*

- 14 Another name for the Great Conveyor Belt is the better known name the Gulf Stream.
- 15 The surface of the Atlantic Ocean is higher than the surface of the Pacific Ocean.
- 16 The last time the Great Conveyor Belt shut down it caused the deaths of thousands.
- 17 The arrival of cooler water in the Pacific Ocean affects the weather there too.
- 18 Global warming has caused the North Atlantic Ocean to become less salty.

Questions 19 - 23

Complete each of the following statements (Questions 19 - 23) with words taken from Reading Passage 2.

Write **NO MORE THAN THREE WORDS** for each answer.

Write your answers in boxes **19 - 23** on your answer sheet.

- 19 The author points out the reason why Europe is not _____ like other countries of the same latitude.
- 20 The author likens the north – south flow of the Great Conveyer Belt to a _____.
- 21 Scientist can date the last great Ice Age thanks to _____.
- 22 Lately there has been a _____ discovery that the change from today's temperate style weather to ice age weather was in fact a fast change.
- 23 The author identifies the _____ for the possible shutting down of the Great Conveyer Belt as being global warming.

Questions 24 - 26

Using **NO MORE THAN THREE WORDS OR A NUMBER** from Reading Passage 2, answer the following questions.

Write your answers in boxes **24 - 26** on your answer sheet.

- 24 What do the sinking waters create on the surface of the North Atlantic Ocean?
- 25 How long can it take for water leaving the surface near Greenland to travel through the Great Conveyer Belt to the surface of the Pacific Ocean?
- 26 If the Great Conveyer Belt stopped, what would be the maximum amount of time for it to stop heating northern Europe?

You should spend about 20 minutes on **Questions 27 – 40** which are based on Reading Passage 3 on the following pages.

Malaria

A

Approximately 300 million people worldwide are affected by malaria and between 1 and 1.5 million people die from it every year. Previously extremely widespread, malaria is now mainly confined to Africa, Asia and Latin America. The problem of controlling malaria in these countries is aggravated by inadequate health structures and poor socio-economic conditions. The situation has become even more complex over the last few years with the increase in resistance to the drugs normally used to combat the parasite that causes the disease.

B

Malaria is caused by protozoan parasites of the genus Plasmodium. Four species of Plasmodium can produce the disease in its various forms: plasmodium falciparum, plasmodium vivax, plasmodium ovale and plasmodium malaria. Plasmodium falciparum is the most widespread and dangerous of the four: untreated it can lead to fatal cerebral malaria. Malaria parasites are transmitted from one person to another by the female anopheline mosquito. The males do not transmit the disease as they feed only on plant juices. There are about 380 species of anopheline mosquito, but only 60 or so are able to transmit the parasite. Their sensitivity to insecticides is also highly variable.

C

Plasmodium develops in the gut of the mosquito and is passed on in the saliva of an infected insect each time it takes a new blood meal. The parasites are then carried by the blood into the victim's liver where they invade the cells and multiply. After nine to sixteen days they return to the blood and penetrate the red cells where they multiply again, progressively breaking down the red cells. This induces bouts of fever and anaemia in the infected individual. In the case of cerebral malaria the infected red cells obstruct the blood vessels in the brain. Other vital organs can also be damaged often leading to the death of the patient.

D

Malaria is diagnosed by the clinical symptoms and microscopic examination of the blood. It can normally be cured by anti-malarial drugs. The symptoms - fever, shivering, pain in the joints and headache - quickly disappear once the parasite is killed. In certain regions, however, the parasites have developed resistance to certain anti-malarial drugs, particularly chloroquine. Patients in these areas require treatment with other more expensive drugs. In endemic regions where transmission rates are high, people are continually infected so that they gradually develop immunity to the disease. Until they have acquired such immunity, children remain highly vulnerable. Pregnant women are also highly susceptible since the natural defence mechanisms

are reduced during pregnancy.

E

Malaria has been known since time immemorial but it was centuries before the true causes were understood. Surprisingly in view of this some ancient treatments were remarkably effective. An infusion of qinghao containing artemisinin has been used for at least the last 2000 years in China and the antifebrile properties of the bitter bark of *Cinchona Ledgeriana* were known in Peru before the 15th century. Quinine, the active ingredient of this potion, was first isolated in 1820 by the pharmacists. Although people were unaware of the origin of malaria and the mode of transmission, protective measures against the mosquito have been used for many hundreds of years. The inhabitants of swampy regions in Egypt were recorded as sleeping in tower-like structures out of the reach of mosquitoes, whereas others slept under nets as early as 450 B.C.

F

Malaria has social consequences and is a heavy burden on economic development. It is estimated that a single bout of malaria costs a sum equivalent to over 10 working days in Africa. The cost of treatment is between \$US0.08 and \$US5.30 according to the type of drugs prescribed as determined by local drug resistance. In 1987 the total cost of malaria - health care, treatment, lost production, etc. - was estimated to be \$US800 million for tropical Africa and this figure is currently estimated to be more than \$US1800 million.

G

The significance of malaria as a health problem is increasing in many parts of the world. Epidemics are even occurring around traditionally endemic zones in areas where transmission had been eliminated. These outbreaks are generally associated with deteriorating social and economic conditions and the main victims are underprivileged rural populations. Economic and political pressures compel entire populations to leave malaria free areas and move into endemic zones. People who are non-immune are at high risk of severe disease. Unfortunately, these population movements and the intensive urbanisation are not always accompanied by adequate development of sanitation and health care. In many areas conflict, economic crises and administrative disorganization can result in the disruption of health services. The absence of adequate health services frequently results in recourse to self-administration of drugs often with incomplete treatment. This is a major factor in the increase in resistance of the parasites to previously effective drugs.

H

The hope of global eradication of malaria was finally abandoned in 1969 when it was recognised that this was unlikely ever to be achieved. Ongoing control programs remain essential in endemic areas. In all situations control programs should be based on half a dozen objectives: provision of early diagnosis, prompt treatment to all people at risk, selective application of sustainable preventive measures, vector control adapted to the local situations, the development of reliable information on infection risk and assessment of living conditions of concerned populations. Malaria is a complex disease but it is a curable and preventable one.

Questions 27 - 33

The reading passage on *Malaria* has 8 paragraphs (A – H).

From the list of headings below choose the most suitable headings for paragraphs B – H.

Write the appropriate number (i – xi) in boxes 27 – 33 on your answer sheet.

NB There are more headings than paragraphs, so you will not use them all.

- | | |
|------|--|
| i | Old Remedies |
| ii | Fatality Rates |
| iii | Shifting Demographics Cause Further Problems |
| iv | The Current Situation |
| v | The Bug and its Carriers |
| vi | Total Elimination of Malaria |
| vii | Tackling Malaria Today |
| viii | Transmission to Humans and Effects |
| ix | Local African Medicine |
| x | Malaria's Effect on the Community |
| xi | Identification |

Example

Answer

Paragraph A

iv

27 Paragraph B

28 Paragraph C

- 29 Paragraph D
- 30 Paragraph E
- 31 Paragraph F
- 32 Paragraph G
- 33 Paragraph H

Questions 34 - 36

Do the following statements agree with the views of the writer of Reading Passage 3 *Malaria*?

In Boxes 34 - 36 write:

- YES** *if the statement agrees with the writer*
- NO** *if the statement doesn't agree with the writer*
- NOT GIVEN** *if it is impossible to say what the writer thinks about this*

- 34 Ancient Peruvian doctors were famous for their malarial treatment.
- 35 Children are always under great threat from malaria.
- 36 Poorer people are usually more at risk from malaria.

Questions 37 - 40

Complete the following statements (Questions 37 - 40) with the best ending from the box below (A - H) according to the information in the reading passage *Malaria*.

Write the appropriate letter (A - H) in boxes 37 - 40 on your answer sheet.

There are more sentence endings (A - H) than questions so you will not need to use them all.

- 37 Anopheline mosquitoes...
- 38 Parasites located in victims' livers...
- 39 Unfinished courses of anti-malarial drugs...
- 40 Control programs to protect people from malaria...

- A** ...have finally been eradicated.
- B** ...are not always affected by insecticides.
- C** ...are the results of incompetent doctors.
- D** ...are always female.
- E** ...have been taken for hundreds of years.
- F** ...should be based on seven clear goals.
- G** ...have resulted in parasitic resistance to treatment.
- H** ...are later found again in the bloodstream.