HACKERS TEST

READING PASSAGE

You should spend about 20 minutes on ***Questions 1-13***, which are based on Reading Passage on the following pages.

Questions 1-6

Reading Passage has six paragraphs, **A-F**.

Choose the correct heading for each paragraph from the list of headings below.

List of Headings

- **i.** Research into forest fragmentation and possible solutions
- **ii.** Deforestation in certain areas of the world
- **iii.** The history of land use patterns and their impact on forests
- **iv.** A study of forest fragmentation's destruction of native animals
- **v.** The scale of deforestation seen from space
- **vi.** An explanation of how deforestation began
- **vii.** Forest fragmentation's impact on entire ecosystems
- **viii.** Loss of intact forests and the need to address deforestation

1 Paragraph **A**

2 Paragraph **B**

3 Paragraph **C**

4 Paragraph **D**

5 Paragraph **E**

6 Paragraph **F**

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Forest Fragmentation: A Growing Concern

When forests become fragmented, the consequences for the local ecosystem are usually dire

A Deforestation has been occurring at an increasing rate in recent years, and this trend is alarming to ecologists due to its potentially devastating effect on ecosystems. The full extent of this deforestation has become obvious because of research conducted by a team led by Matthew Hansen, a remote sensing scientist, who reviewed more than 600,000 global satellite photographs produced by the US Geological Survey. The team estimated that approximately 2.3 million km² of land was deforested worldwide during a 13-year period. The researchers also produced the world's first high-resolution maps that show clearly where trees are growing and disappearing, and these maps showed some obvious patterns.

B For example, the data demonstrated that the vast majority of deforestation happened in subtropical and tropical areas, though the exact locations changed periodically. It was recently reported that, almost half of all humid tropical forest loss around the world occurred in Brazil alone. Alarmingly, a whopping 90 per cent of the forest cover in the Amazon has been cleared for crops, grazing, and urban development. Yet rates of deforestation in Brazil began to slow in recent years due to regulations and the activities of environmentalists, and Indonesia has now overtaken Brazil as the country with the highest rate of deforestation. The data also revealed that trees are disappearing more rapidly in lowland areas than on sloped terrain, as these areas are more accessible and more suitable for logging and development. Moreover, the study found that only in areas where the human population is scant do researchers find a continuous spread of virtually untouched forest.

C Continuous or intact forest is defined as an unbroken expanse of forest ecosystem at least 500 square kilometres in size, with little or no sign of human activity. Such ecosystems are capable of supporting a broad range of animal and plant species. They also play a crucial role in storing carbon, which aids in the control of global warming, and help to regulate the water cycle. Today, only 23.5 per cent of existing forest on Earth is intact; this is a mere 8.8 per cent of total land area. Recently, it was estimated that over the course of just over a decade, the world's intact forest was reduced by more than 7 per cent, whilst only 12 per cent of these forests were protected. Furthermore, the most recent rate was triple what it was 10 years earlier. The rapid vanishing of these intact forests demonstrates the dire necessity of confronting the issue of deforestation.

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D Yet in places of intense human activity, most of the forest cover is characterised by discontinuity. This is because only isolated sections, or fragments, remain when trees are cleared for other purposes. This consequence of deforestation is known as forest fragmentation, and it has repercussions that can dramatically impact the sustainability of the whole ecosystems. When the majority of trees are cut down, this leaves isolated patches of wooded land bound by completely different habitats, such as grassland. In the absence of trees, the earth becomes windswept and exposed to the elements. Laid bare to sunlight, these areas experience a rise in temperatures. These new conditions are devastating to herbaceous woodland plants, which cannot survive in these harsh conditions. Forest birds are left without a proper habitat for nesting, and predatory mammals that depend on dense forests no longer have cover to conceal their presence while hunting prey. These animals must leave and travel in search of a suitable habitat or they will perish. What was a vast expanse of forest becomes a patchwork that is not conducive to species that depend on the dense canopy and undergrowth of the inner forest.

E This negative effect on animals was witnessed by researchers observing native species in Thailand where a hydroelectric reservoir was constructed. Scientists from the University of California in San Diego began studying a dozen small native mammal species - composed of mice, rats, and tree shrews - in 1990 after the dam project flooded a national park, leaving approximately 90 forested islands in the newly made lake. Within 25 years, virtually all of the animals had disappeared, which was two to three times faster than the researchers had expected. 'It was like ecological Armageddon', said graduate student Luke Wilson. The fragmented forests simply lacked the resources to support the animals. It can thus be seen that fragmented forests result in a drastic reduction in native biodiversity.

F At present, studies on forest fragmentation focus on patterns of existing forest cover, how these patterns have been changing, and what effect these patterns have on the biodiversity of the forest ecosystem. However, some experts recommend an analysis of the forces driving fragmentation and a re-evaluation of how human activity might be altered to benefit industry and nature. One proposal, based on analysis of teak plantations in Benin, is to plant commercially valuable trees in planned corridors between areas of isolated natural forest. This would provide wood production and carry out the ecological function of helping to connect fragmented forest environments.

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Questions 7-13

Do the following statements agree with the information given in Reading Passage?

Write

TRUE	*if the statement agrees with the information*
FALSE	*if the statement contradicts the information*
NOT GIVEN	*if there is no information on this*

7 Over two million square kilometres of forest was lost in just over a decade.

8 The Amazon has maintained around 90 per cent of its forest cover despite deforestation.

9 Flat land is experiencing more rapid deforestation than areas with hills.

10 Less than 10 per cent of the Earth's ground is covered by intact forest.

11 Deforestation harms forest wildlife but benefits species fit for grassland.

12 Herbaceous plants do well in the additional sunlight when trees are cut.

13 Recently, Benin has begun policies to protect forest ecosystems.

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