Text 3

The text below is about climate change and how it affects mankind. Read it carefully and answer Questions 14 – 19.

1 Changes relating to the climate are a natural occurrence and have been taking place since the earth was created which was roughly 4.6 billion years ago. For example, the British Isles have experienced an abundant amount of alteration in the climate since they were created, over half a billion years ago. What used to be the British Isles was once covered in rainforest, and much of the climate was tropical in nature. At which point, oil and coal that we use for electricity were created. Soon, it will be vital to take a look at some of the most recent energy smart solutions available today.

2 Pangaea was being formed, and 260 million years before, the British Isles had moved into the middle of the continent, and it turned into a desert. The conditions had drastically become altered, and the desert made the transformation once again to a tropical existence. At that point, the dinosaurs were becoming extinct. The earth began to get frigid, known appropriately as the Ice Age. 15,000 years ago was the latest Ice Age, but Britain has been warming up steadily from that point. Many natural climate changes take place in what appear to be tiny increments, which allow for adaptation to take place among animals and plants. Unfortunately, this incremental process of change is getting faster, so it is vital that each one of us learns the ways in which we can contribute to slowing down global warming and lessening its effects.

3 Global warming refers to the process of the earth's temperature increase, and for the last 15,000 years, the temperature has been slowly increasing. One major culprit of this process is seen notably with regards to the Greenhouse Effect. Without this natural process, the earth's temperature would be 118 degrees centigrade, instead of its current temperature of +15 degrees centigrade. Nitrous oxide, methane, and carbon dioxide are the fundamental gases that have caused this process to take place. Basically, a blanket is formed around the earth, which keeps the remaining heat inside, and this has been at a constant level for many years. Roughly 200 years ago, the greenhouse effect had begun increasing dramatically, due to man-made greenhouse gases, which are the result of burning fossil fuels, gas, coal, and oil; this releases greater amounts of gases into the atmosphere, which directly increases the size of the blanket of gases around the earth.

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4 In the UK, climate is changing rapidly. There are longer lasting heat waves, and in Scotland snow melted entirely on some of the highest mountains. Winters, recently, have seen less precipitation, and projections point to many winters without snow. Flash flooding is a huge issue in the UK, which causes sea levels to rise and coastlines to erode. Our homes produce almost a third of the offensive carbon dioxide that enters the atmosphere, and almost another third comes from transportation domestically. The ways in which to lower dioxide emissions are numerable, some of which include using energy-efficient products, generating one's own renewable energy, utilising grants for efficiency measures, insulating the home, and finding alternative transportation methods. All of these small, individual changes can create a positive lasting impact on the environment.

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Section C [25 marks]

14 'the British Isles have experienced an abundant amount of alteration in the climate' (lines 3 – 4).

List the changes in the terrain as a result of the alteration.

Original terrain	
First alteration	
Second alteration	

[3]

15 What is the reason for the dinosaurs 'becoming extinct' (line 14)?

..... [1]

16 Why is it a matter of urgency that individuals help to 'contribute to slowing down globing warming' (lines 20 – 21)?

..... [1]

17 What causes the 'Greenhouse Effect' (line 25)?

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..... [2]

18 Here is a part of a conversation between two students, Adam and Aliya, who have read the article.

Adam : Changes in climate are a natural occurrence.

Aliya : People have accelerated the process.

(i) Identify two examples from paragraphs 1 and 2 that Adam can give to support his view.

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..... [2]

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(ii) Identify an example from paragraph 4 that Aliya can use to support her view.

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..... [1]

19 **Using your own words as far as possible,** summarise the causes and effects of the intensified climate change.

Use only information from paragraphs 3 and 4.

Your summary must be in continuous writing (not note form). It must not be longer than 80 words (not counting the words given to help you begin).

The increase in the earth's temperature is .....

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..... [15]

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