

C 6 英 語

この冊子は、英語の問題で 1 ページより 12 ページまであります。

〔注 意〕

- (1) 試験開始の指示があるまで、この冊子を開いてはいけません。
- (2) 監督者から受験番号等記入の指示があったら、解答用マークシートに受験番号と氏名を記入し、さらに受験番号をマークしてください。
- (3) 解答は、所定の解答用マークシートにマークしたものが採点されます。
- (4) 解答用マークシートについて
 - ① 解答用マークシートは、絶対に折り曲げてはいけません。
 - ② マークには黒鉛筆(H BまたはB)を使用してください。指定の黒鉛筆以外でマークした場合、採点できないことがあります。
 - ③ 誤ってマークした場合は、消しゴムで丁寧に消し、消しくずを完全に取り除いたうえで、新たにマークしてください。
 - ④ 解答欄のマークは、横 1 行について 1 箇所に限ります。2 箇所以上マークすると採点されません。あいまいなマークは無効となるので、はっきりマークしてください。
 - ⑤ 解答用マークシート上部に記載されている解答上の注意事項を、必ず読んでから解答してください。
- (5) 試験開始の指示があったら、初めに問題冊子のページ数を確認してください。
ページの落丁・乱丁、印刷不鮮明等に気づいた場合は、手を挙げて監督者に知らせてください。
- (6) 問題冊子は、試験終了後、持ち帰ってください。

1

Read the article in sections and answer the questions following each section.

(76 points)

[1] Who was Piltdown Man?

On 18 December 1912 newspapers throughout the world ran some sensational headlines — mostly along the lines of: '*Missing Link Found — Darwin's Theory Proved.*'

That same day, at a meeting of the Geological Society in London, fragments of a fossil skull and jawbone were unveiled^(あ) to the world. These fragments were quickly attributed to 'the earliest Englishman — Piltdown Man,' although the find was officially named *Eoanthropus dawsoni* after its discoverer, Charles Dawson. Dawson was an amateur archaeologist, said to have stumbled across^(い) the skull in a gravel pit* at Barkham Manor, Piltdown, in Sussex.

Some 40 years later, however, on 21 November 1953, a team of English scientists dramatically exposed Piltdown Man as a deliberate fraud. Instead of being almost a million years old, the skull fragments were found to be 500 years old, and the jaw in fact belonged to an orang-utan. So what had really happened?

(Notes)

gravel pit : a place where small stones [gravel] can be gathered for building materials

(1) Which of the items below are the closest in meaning to the underlined parts (あ) and (い)? Choose one for each from the choices and mark the number on your Answer Sheet.

(あ) *unveiled*; (い) *stumbled across*

1 happened to find

2 happened to run

3 made publicly known

4 made useful

- (2) The following sentence restates some of the points in this section.
Which of the items below correctly fills in the blank? Mark the number
on your Answer Sheet.

The fossil fragments found at Piltdown were ().

- 1 as famous as Charles Dawson
- 2 confused with *Eoanthropus dawsoni*
- 3 known as Piltdown Man
- 4 mixed with the earliest Englishman

[2] Search for missing link

The story of Piltdown Man came out at just the time when scientists were in a desperate race to find the missing link in the theory of evolution. Since Charles Darwin had published his theory on the origin of species in 1859, the hunt had been on for clues to the ancient ancestor that linked apes to humans.

Sensational finds of fossil ancestors, named Neanderthals, had already occurred in Germany and France. British Scientists, however, were desperate to prove that Britain had also played its part in the story of human evolution, and Piltdown Man was the answer to their prayers — because of him, Britain could claim to be the birthplace of mankind.

- (3) Which of the items below are the closest in meaning to the underlined parts (う) and (え)? Choose one for each from the choices and mark the number on your Answer Sheet.

(う) *desperate*; (え) *theory*

- | | |
|------------|--------------------------|
| 1 frantic | 2 rapid progress |
| 3 relaxing | 4 scientific description |

- (4) The following part of a sentence expresses the meaning of the underlined part (A). Which of the items below correctly fill in the blanks? Choose one for each blank from the choices and mark the number on your Answer Sheet.

scientists had been (a) evidence of ancient species that would help reveal (b)

(a)

- | | |
|----------------|------------------|
| 1 able to find | 2 doubtful of |
| 3 looking for | 4 satisfied with |

(b)

- 1 the extinction of apes before humans
- 2 the main differences between apes and humans
- 3 the parallel developments of apes and humans
- 4 the process of evolution from apes to humans

- (5) The following sentence restates some of the points in this section. Which of the items below correctly fills in the blank? Mark the number on your Answer Sheet.

British scientists were in search of the missing link in Britain because they wanted to prove that Britain was () in the evolution of mankind.

- | | |
|-------------|-----------|
| 1 actual | 2 extreme |
| 3 important | 4 typical |

[3] Discoveries

Charles Dawson had made a name for himself by finding fossils in Sussex, and passing them on to Sir Arthur Smith Woodward at what is now the Natural History Museum, London. Dawson now claimed that at some point before 1910, a workman had handed him a dark-stained and thick piece of human skull. He said that recognising that this might be part of an ancient human, he had continued to dig at the site and collected more pieces of skull.

On 14 February 1912, he wrote to Woodward with news of exciting discoveries, and that summer Woodward joined him to excavate at Piltdown. They found more fragments of skull, and the bones and teeth of extinct British animals such as elephants, rhinos and beavers. They also found primitive stone tools, and a remarkable ape-like jaw.

On the basis of these finds, Woodward constructed a skull that seemed to supply the missing link in the evolutionary path between humans and the apes. With a brain the same size as that of modern humans, and a very ape-like jaw, Piltdown Man was born.

(6) Which of the items below is the closest in meaning to the underlined part (B)? Mark the number on your Answer Sheet.

- | | |
|---------------------------------|--------------------------|
| 1 acquired a reputation | 2 applied for membership |
| 3 helped create the institution | 4 used a false identity |

(7) Which of the items below is the closest in meaning to the underlined part (C)? Mark the number on your Answer Sheet.

- 1 although he wanted to remember
- 2 although he wondered
- 3 because he needed to confirm
- 4 because he realised

(8) Which of the items below are the closest in meaning to the underlined parts (お) and (か)? Choose one for each from the choices and mark the number on your Answer Sheet.

(お) *excavate*; (か) *extinct*

1 died-out

2 dig

3 end

4 old-fashioned

[4] Doubts and further finds

Some overseas experts were sceptical of the match between the skull and jaw. They argued that they represented separate human and ape fossils, and had become mixed in the same fossil deposit. In 1913, however, Dawson and Woodward made further finds at Piltdown, including one of a canine tooth*.

This was of an intermediate size, between that of an ape's and a human's tooth, exactly as Woodward had predicted on his model of Piltdown Man. This seemed to confirm that the jaw was from an intermediate ape-man creature, not an ape.

Then in 1915 Dawson claimed to have found another molar tooth*, and some skull pieces, just two miles from the original Piltdown dig site. These looked similar to those of Piltdown Man, and the find was ^(き) dubbed Piltdown Man II. With two family members and the ^(く) backing of the Natural History Museum, Piltdown Man thus became generally accepted.

For the next 40 years, Piltdown Man remained a key member of the human family tree, although in the early 1920s and 30s, other fossils being discovered around the world didn't seem to fit with his physiology.

(D)

(Notes)

canine tooth : pointed tooth of a mammal; dog tooth

molar tooth : grinding tooth at the back of a mammal's mouth

- (9) Which of the items below are the closest in meaning to the underlined parts (き) and (く)? Choose one for each from the choices and mark the number on your **Answer Sheet**.

(き) *dubbed*; (く) *backing*

1 called

2 mistaken

3 rejection

4 support

- (10) Put the words in the brackets below into the correct order so that the following part of a sentence expresses the meaning of the underlined part (D). Mark the numbers correctly, from top to bottom, on your **Answer Sheet**.

didn't seem to (1 characteristics 2 have 3 physical
4 similar 5 that 6 were) to Piltdown Man's

- (11) The following sentence restates some of the points in this section. Which of the items below correctly fills in the blank? Choose one from the choices and mark the number on your **Answer Sheet**.

At first, some specialists in other countries were () that the skull and jaw were from the same creature.

1 hopeful

2 sure

3 unaware

4 unconvinced

[5] Exposure

It was not until new technology for the dating of fossils was developed, in the late 1940s, that Piltdown Man came to be seriously questioned once again. In 1949, Dr Kenneth Oakley, a member of the staff at the Natural History Museum, tested the Piltdown fossils and found that the skull and jaw were not that ancient.

He joined forces with Professor Joe Weiner and Sir Wilfrid Le Gros Clark from Oxford, to apply stringent tests to all the Piltdown remains. They realised that the ^(f)human-like wear pattern on the teeth had been ^(E)created by artificially filing down the teeth from an orang-utan jaw. The skull pieces were found to have come from an unusually thick-boned — but quite recent — human skull. It had simply been boiled and stained to match the colour and ^(c)antiquity of the Piltdown gravels.

Although many of the mammal fossils were genuine, they had also been stained to match the skull and came from all over the world. It turned out that ^(F)every single one of the 40 odd finds at Piltdown had been planted.

On 21 November 1953 the news broke, and ^(G)headline writers revelled in the Natural History Museum's embarrassment: 'Fossil Hoax Makes Monkeys Out Of Scientists!' Weiner and Oakley quickly began an investigation to uncover the identity of the hoaxer. Who had had the access, the expertise and the motive to carry out such an outrageous forgery?

(12) Which of the items below are the closest in meaning to the underlined parts (f) and (c)? Choose one for each from the choices and mark the number on your Answer Sheet.

(f) *stringent*; (c) *antiquity*

1 great age

2 immaturity

3 strict

4 terribly managed

- (13) Put the words in the brackets below into the correct order so that the following part of a sentence expresses the meaning of the underlined part (E). Mark the numbers correctly, from top to bottom, on your Answer Sheet.

the damage on the teeth had been artificially created so (1 like
2 look 3 that 4 they 5 those 6 would) of humans

- (14) What can we conclude from the underlined part (F)? Choose one from the choices and mark the number on your Answer Sheet.

- 1 all the 40 or so finds at Piltdown had been grown
- 2 all the 40 or so finds at Piltdown were deceptive
- 3 all the 40 or so finds at Piltdown would be discovered
- 4 all the 40 or so finds at Piltdown would have been old

- (15) The following parts of a sentence express the meanings of the first and the second halves of the underlined part (G). Which of the items below correctly fill in the blanks? Choose one for each blank from the choices and mark the number on your Answer Sheet.

first half

headline writers ((a)) the ((b)) the Natural History Museum:

second half

[a joke that means] 'the fossil trick shows how stupid scientists are!'

- | | |
|----------------------------|--------------------------|
| 1 misunderstood purpose of | 2 took great pleasure in |
| 3 troubled situation of | 4 were unhappy about |

(16) The following sentence restates some of the points in this section. Which of the item below correctly fills in the blank? Mark the number on your Answer Sheet.

By the late 1940s, ()

- 1 the age of the Piltdown fossils could be scientifically examined
- 2 the fossils from Piltdown were used to criticise the new analytical tools
- 3 more fossils were found at Piltdown thanks to the development of new technology
- 4 the Piltdown fossils were scientifically proven to be ancient

{ 6 } Suspects

— The amateur accused

Weiner set off in pursuit of Charles Dawson. He was the one person who was always present when the discoveries were made, and after his premature death from septicaemia in 1916 no more finds were (㉔) made at Piltdown. There was, however, serious doubt about (㉕) he had sufficient knowledge to fake the bones that had deceived so many scientists.

— The writer accused

The most famous name linked to the Piltdown forgery is that of Sir Arthur Conan Doyle, creator of the fictitious sleuth Sherlock Holmes. Conan Doyle lived near to Piltdown, and was a member of the same archaeological society (㉖) Charles Dawson. As a doctor and fossil collector he had the relevant knowledge to pull off the hoax. In one of his most famous novels, *The Lost World*, published around the time when Piltdown was found, he wrote about the supposed survival into modern times of dinosaurs and ape-men — and included a tantalising line about bones being as easy (㉗) fake as a photograph.

— An insider job?

There have also always been rumours that the forgery was perpetrated by somebody inside the Natural History Museum with a grudge* against Sir Arthur Smith Woodward. One man, Martin Hinton, was a volunteer at the museum when Piltdown was discovered — ((ㇵ)) was known to have fallen out with Woodward over payment for his work. A trunk belonging to Hinton was discovered in the museum — containing fossil animal bones, stained and deliberately cut to see ((ㇵ)) far the stain had penetrated. However, no-one can say whether Hinton was staining material to plant at Piltdown, or just conducting his own tests on how Piltdown was forged.

No single suspect satisfactorily explains all the complexities of the hoax. And it seems that we may never know the identity of the Piltdown hoaxer — it remains one of the most fascinating and intriguing scientific hoaxes of all time.

(Notes)

grudge : a persistent feeling of ill will or resentment resulting from a past insult or injury

(Adapted from 'Piltdown Man: Britain's Greatest Hoax')

(17) Which of the items below correctly fill in the blanks ((ㇵ)) to ((ㇵ))? Choose one for each blank from the choices and mark the number on your Answer Sheet. Use six of the eight items.

1 as

2 ever

3 how

4 however

5 to

6 whether

7 which

8 who

- 2** Put the words in the brackets below into the correct order. Mark the numbers correctly, from top to bottom, on your Answer Sheet. (24 points)

Fish could vanish from huge stretches of the ocean for tens of thousands of years unless we drastically reduce our carbon emissions.

Gary Shaffer of the University of Copenhagen, Denmark, and his colleagues used computer models to analyse the long-term impact of global warming on the oceans, looking up to 100,000 years into the future. This is important because less oxygen dissolves in warmer water, affecting (1 the amount 2 can 3 life 4 the oceans 5 of 6 support).⁽¹⁾

To estimate just how much oxygen will be lost, the team used two existing scenarios of future fossil fuel burning published by the Intergovernmental Panel on Climate Change: a worst case scenario in which we burn three quarters of the Earth's fossil fuel reserves over the coming century, and a mid-range scenario in which we burn only a quarter of reserves. In both cases, (1 assumed 2 burning 3 is 4 it 5 that 6 then stops).⁽²⁾

Under the worst-case scenario, average ocean oxygen levels will fall by up to 40%, and there will be a 20-fold expansion in the area of 'dead zones,' like those already discovered in the eastern Pacific and northern Indian Ocean, (1 for 2 little 3 oxygen 4 there is 5 too 6 where) fish to survive.⁽³⁾ Even in the mid-range scenario, dead zones would expand by a factor of 3 or 4*. Cold, deep waters will also be affected if warming stifles* the currents that deliver oxygen to greater depths.

Shaffer's projections suggest that the oxygen content in surface layers will dip* to its lowest levels during the 22nd century, and in deep water a thousand years later. Recovery (1 be 2 levels 3 pre-industrial 4 to 5 very slow 6 will):⁽⁴⁾ 'Even after 100,000 years, oxygen levels will only have recovered by around 90%,' he says.

(Notes)

by a factor of 3 or 4 : three or four times

stifle : prevent

dip : fall