

2021年度

G 3

# 英 語

2月25日(木)

工 学 部

12 : 20~13 : 40

【前期日程】

## 注 意 事 項

### 試験開始前

- 1 監督者の指示があるまで、問題冊子、解答用紙に手を触れてはいけません。
- 2 監督者の指示に従って、全部の解答用紙(3枚)に受験番号を記入しなさい。

### 試験開始後

- 3 この問題冊子は、11ページあります。はじめに、問題冊子、解答用紙を確かめ、枚数の不足や、印刷の不鮮明なもの、ページの落丁・乱丁があった場合は、手をあげて監督者に申し出なさい。
- 4 解答はすべて解答用紙に記入しなさい。
- 5 問題は、声を出して読んではいけません。
- 6 配点は、比率(%)で表示してあります。

### 試験終了後

- 7 問題冊子は、必ず持ち帰りなさい。

1 Read the following passage and answer the questions. (30 %)

## 著作物引用のため非公表

## 著作物引用のため非公表

(Adapted from Roald Dahl's *James and the Giant Peach*, Puffin Books, 1996)

## Questions

1. Translate the underlined part of the following **into Japanese**, replacing “them” and “it” with the word each refers to: Quickly, Aunt Sponge and Aunt Spiker called in workers and <sup>(1)</sup>had them build a strong fence around the peach to save it from the crowd.
2. Why are the aunts described as “<sup>(2)</sup>greedy”? Choose the most appropriate answer from the following, and write (a), (b), (c), or (d).
  - (a) Because they hated the mass media coming to their garden.
  - (b) Because they loved the peach much more than others.
  - (c) Because they were angry and shouted at the crowd.
  - (d) Because they were happy collecting the fee.
3. Why is it that “<sup>(3)</sup>he stared straight ahead, hardly daring to breathe”? Choose one word from the passage to fill in the blank below.

Because he was (        ).
4. Why did he “<sup>(4)</sup>look around” at that point of the story? Answer **in Japanese**.
5. What did James find while he was touching the peach? Answer **in English**.
6. Write (T) for true or (F) for false for each of the following statements based on the story.
  - (a) Many people came to see the wildfire.
  - (b) The journalists with a camera agreed to pay a higher price.
  - (c) James was one of those who earned money by showing off the spectacle.
  - (d) James was made of iron, so he was attracted by the magnet.

2

Each sentence has four underlined items, (a), (b), (c), and (d). Identify the item that needs to be corrected. Then correctly rewrite the entire item without changing the meaning. (10 %)

Example: (a)It is very kind (b)at you to (c)come over here and offer (d)to help in the kitchen.

Answer:

Example:	
(b)	of

1. Maggie was (a)wondering how long she would have (b)to wait, when Terry came back from the telephone, (c)to look both sad and (d)disappointed.
2. A (a)growing number of college students (b)hopes to (c)work for an international company (d)after graduation.
3. There (a)might be events or happenings in our dreams (b)that we cannot understand, (c)no matter how much we analyze (d)it.
4. (a)According to a certain international education company, Japan (b)ranked around 50th (c)out of 100 countries (d)by which English is not the official language.
5. I'd like to be (a)helpful, but (b)I'm afraid I'm not (c)enough tall to (d)reach things in such a high place.

3 Read the following passage and answer the questions. (25 %)

## 著作物引用のため非公表

## 著作物引用のため非公表

\*sculptures：彫像

\*Trobrianders：トロブリアンド諸島民

\*Himba：ヒンバ族

(Adapted from Bruce Bower, “Ancient sculptures hint at universal facial expressions across cultures,” August 19, 2020, <https://www.sciencenews.org/article/ancient-sculptures-universal-human-facial-expressions-cultures>)

## Questions

1. According to the article, is each of the following statements true (T) or false (F)?

Write T or F.

- (a) The results of the study described in the article suggest that all human beings may share similar facial expressions, linked to emotions.
- (b) The researchers who did the study used facial expressions from very old sculptures and from modern ones.
- (c) The research described in the article provides evidence that facial expressions and the emotions connected with them are more varied than previously thought.
- (d) All of the researchers in the article agree that facial expressions represent the same emotional content in different cultures.

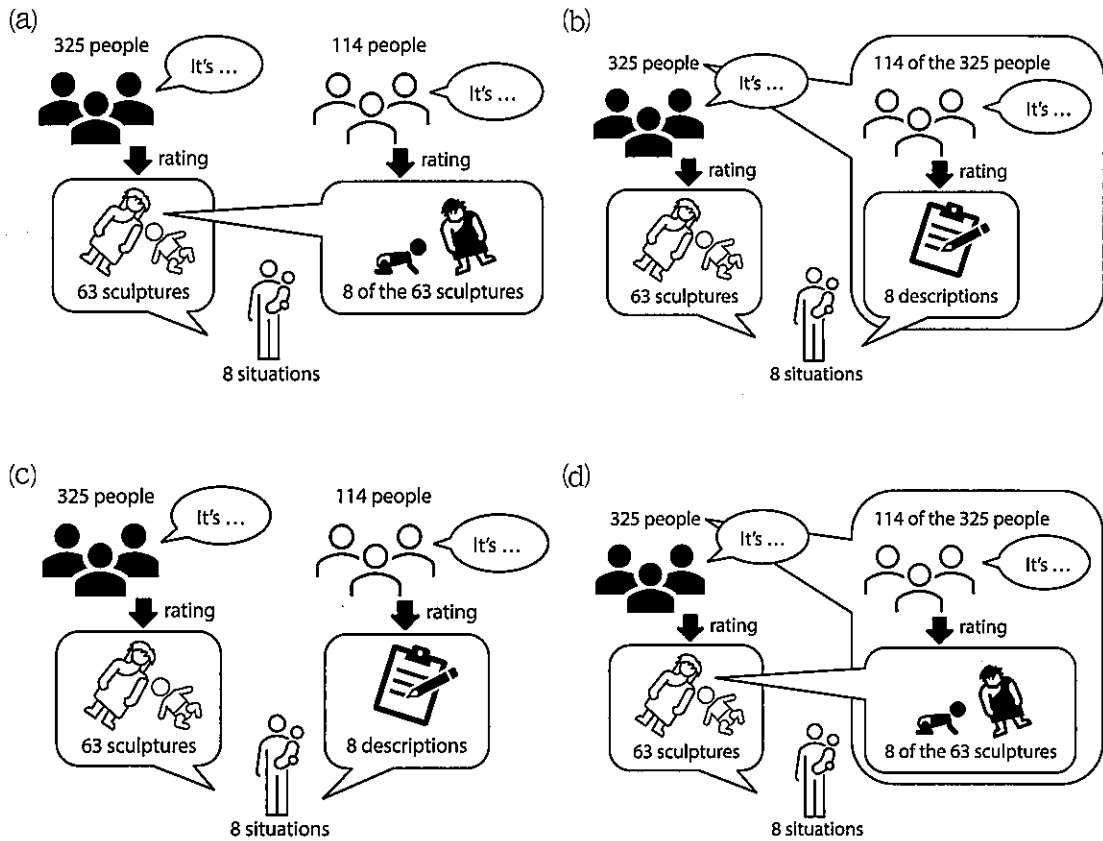
2. Give three examples of emotions expressed by facial expressions from the article.

Answer in English.

3. Translate the underlined part of the following **into Japanese**: The researchers regard their findings as a step toward understanding <sup>(1)</sup>how people who lived long ago, and who had no exposure to any modern culture, expressed certain emotions with their faces as Westerners now do.



4. According to the article, which of the following best shows the design of the experiment? Write (a), (b), (c), or (d).



5. Deborah Roberson argues “② If someone is unkind and in a bad mood most of the time, you are likely to be cautious with them even when they’re smiling.” Explain in **Japanese** why people in traditional societies are sometimes cautious with people who are smiling.

4

Choose the best word or phrase to complete the conversation. (10 %)

Adrian: So, we're going to the park today, right?

Kelly: Well, that was the plan, but it is supposed to rain.

Adrian: Maybe we ought to consider cancelling, then.

Kelly: But I really wanted to play <sup>(1)</sup> (chess/tennis/the piano)!

Adrian: To be honest, I don't even like sports. I was only going because you wanted to.

Kelly: I didn't know that about you. Let's skip it, then.

Adrian: Okay. How about going to the <sup>(2)</sup> (beach/library/shopping mall) instead?

Kelly: That sounds good. I need to buy some new shoes.

Adrian: Do you really? It seems like you have more than you need.

Kelly: No, I don't. I <sup>(3)</sup> (already/only/really) have three pairs of shoes.

Adrian: Anyway, should we take your car?

Kelly: Well, it <sup>(4)</sup> (has been cleaned/is being repaired/will be ready).

Adrian: Oh, we'll have to use mine, then.

Kelly: That's probably better anyway. You are a safer driver than me.

Adrian: You think so? I'm not so sure.

Kelly: You are. And let's go now. It'll be <sup>(5)</sup> (boring/lucky/pleasant) if we stay here.

5

Read the following passage and answer the questions. (25 %)

A Japanese supercomputer\* has taken the top prize in a famous global speed competition for the first time since 2011. Fugaku, as the supercomputer is called, achieved around 416 petaflops per second on the Top 500 List\*. A system capable of one-petaflop/sec speed can perform  $1.0 \times 10^{15}$  floating-point operations\* per second. To keep up with a one-petaflop/sec supercomputer, you'd have to perform one calculation every second for approximately 31 million years. Multiply that by 416, and that's one calculation every second for about 13.2 billion years.

This is the first time an Advanced Reduced instruction set computing Machine (ARM) supercomputer has taken the lead slot on the Top 500 List. Usually, ARM processors — which require fewer transistors\*, are cheaper, use less power, and create less heat — are limited to the world of mobile devices including smartphones, making Fugaku's win particularly significant.

The latest ranking included four supercomputers from the U.S., two from Italy, two from China, one from Japan, and one from Switzerland. Fugaku beat out its nearest competitor, Summit — an IBM\*-developed supercomputer — by 267 petaflops/sec. That supercomputer previously topped the Top 500 List, ranking in at 149 petaflops/sec.

\*supercomputer : 高性能計算機

\*Top 500 List : スーパーコンピュータの性能ランキング

\*floating-point operation : 浮動小数点計算(実数の計算), 例 :  $1.56 \times 3.14$

\*transistor : トランジスタ(スイッチのような素子)

\*IBM : 有名なコンピュータ企業

(Adapted from Courtney Linder, "Meet Fugaku, the New Fastest Computer in the World," *Popular Mechanics*, June 24, 2020, [www.popularmechanics.com](http://www.popularmechanics.com))

## Questions

1. According to the article, besides speed, what is the difference between Fugaku and previous top-ranking supercomputers? Answer within 30 characters (letters) **in Japanese**.
2. Based on the article, why do you think that ARM processors are used for mobile devices including smartphones? Answer within 40 characters (letters) **in Japanese**.
3. According to the article, what is the ratio of Fugaku's speed to the fastest supercomputer's speed in the previous competition? Please round your answer to one digit after the decimal point. (For example: 12.31 → 12.3, 4.45 → 4.5)