### 2024年度(令和6年度)

## 前 期 日 程

**活** (80分)

#### 注 意 事 項

- 1. 試験開始の合図があるまで、この問題冊子を開いてはいけません。
- 2. 問題冊子は、1ページから17ページまであります。解答用紙は、2枚からなっており、「1」はマーク式、「2」は記述式です。ページの脱落等に気付いたときは、手をあげて監督者に知らせなさい。
- 3. 監督者の指示に従って、すべての解答用紙の受験番号欄に受験番号を記入し、マーク欄にマークしなさい。
- 4. 解答はすべて、解答用紙の指定された欄にマーク又は記入しなさい。
- 5. 受験番号のマーク時及び解答用紙[1]の解答には、必ず黒鉛筆(H, F, HBに限る)及びプラスチック製の消しゴムを使用し、「マーク例」に従って、正しくマークしなさい。黒鉛筆以外のもの(シャープペンシル等)を使用してマークした場合、マークが薄い場合、一部分しかマークしていない場合、訂正箇所を消しゴムできれいに消していない(消し跡が残っている)場合は、マークが正しく読み取れず、採点できないことがあります。
- 6. 解答用紙の網掛け部分及び※を付した欄には、何も記入してはいけません。
- 7. 問題冊子の白紙と余白は下書きに適宜利用してもよいが、どのページも切り離してはいけません。
- 8. 試験終了後,この問題冊子は持ち帰りなさい。

Read the following text and answer the question below.

この部分に記載されている文章については、 著作権上公開することはできません。

【出典(一部改変): https://www.newscientist.com/】

Which of the following is the main idea of the text?

- A. As Mercury is at greatest elongation, you have a better chance than usual to see it.
- B. Mercury is closer to the sun, not to mention much smaller and fainter than Venus.
- C. Mercury is easier to see in the northern hemisphere because this half of Earth is currently angled towards the sun.
- D. You can see Mercury by looking towards the western horizon.

2	Read the following text and answer the question below.
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【出典(一部改変): https://japannews.yomiuri.co.jp/】

Which of the following statements is true?

- A. Asakawa created a suitcase that automatically moves and guides the user to the destination when the user speaks the destination.
- B. Asakawa developed new computer-based tools that further allowed her to gather information without assistance from others.
- C. Asakawa studied at a university in the US and was recognized as one of IBM's most outstanding engineers.
- D. Asakawa went to work for IBM after developing a Japanese digital Braille system.

3 Read the following text and answer the question below.

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【出典(一部改変): https://www.nytimes.com/】

Which of the following best fills [ X ]?

- A. we can ignore other species
- B. we cannot always be testing the same species
- C. we must do human subject trials
- D. we must study crows and chimpanzees

4 Choose the best answer from A—D to rearrange the following sentences in the best order.

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【出典(一部改変):https://www.success.com/】



Read the following text and choose the most appropriate word or phrase from A-D to fill in (1)-(10).

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【出典(一部改変): https://www.cnet.com/】

(1)	A. and	d	В.	so	C.	while	D.	yet
(2)	A. cau	ises	В.	decreases	C.	impacts	D.	needs
(3)	A. cor	nsider	В.	encourage	C.	forbid	D.	prefer
(4)	A. ma	.de	В.	make	C.	to make	D.	to making
(5)	A. fro	m	В.	in	C.	to	D.	with
(6)	A. cha	ances	В.	efforts	C.	mistakes	D.	use
(7)	A. asl	ced to	В.	had to	C.	let them	D.	made them
(8)	A. bet	ter	В.	easier	C.	harder	D.	worse
(9)	A. exp	olains	В.	supports	C.	tells	D.	warns
(10)	A. pro	oof	В.	risk	C.	signal	D.	weakness

Read the following text and answer the questions below.

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【出典(一部改変): https://www.nytimes.com/】

# 1 Choose the word or phrase from A-D which is closest in meaning to $\bigcirc -\bigcirc$ .

(1) A. boredom

C. memorization

② A. abused by

C. loved by

3 A. actively pursue

C. fight against

4 A. angry

C. too busy

⑤ A. positively present

C. spectacularly fail

B. excitement

D. terror

B. enthusiastic about

D. scared of

B. fall against

D. frightened of

B. fun

D. too simple

B. respond aggressively

D. succeed tremendously

#### 2 Choose the best answer for each question.

- (1) Who inspired Kate Biberdorf to study chemistry?
  - A. a meteorologist
  - B. her high school teacher
  - C. her mother
  - D. the news anchor

- (2) Why does Kate Biberdorf not fit the stereotype of a scientist?
  - A. She does experiments on TV.
  - B. She enjoys teaching.
  - C. She is from Texas.
  - D. She takes fashion seriously.
- (3) In what industry would Kate Biberdorf's graduate student research be most useful?
  - A. developing new medicines
  - B. food coloring and additives
  - C. military explosives
  - D. predicting the weather
- (4) In her current job, how many hours does Kate Biberdorf spend doing research?
  - A. four hours
  - B. half of her time
  - C. more than any of her other colleagues
  - D. zero
- (5) During the "thundercloud experiment" what information did Kate Biberdorf withhold?
  - A. She didn't tell people that chemistry is fun.
  - B. She didn't tell people that she was using poisonous chemicals.
  - C. She didn't tell people that the experiment was legal.
  - D. She didn't tell people that the experiment could cause an explosion.

#### $\mathbb{I}\!V$

#### Answer the questions below.

In order to live a healthy life, it is necessary to eat well. According to the Ministry of Health, Labor and Welfare, an adult man should have 65 grams of protein a day. Also, it is recommended to eat protein from both animals and vegetables. Recently, Hiroshi got a job in Tokyo, and he has started to live alone. He wants to ensure that he stays healthy, so he is very careful in following this recommendation and weighs his food. One morning, Hiroshi had two boiled eggs. For lunch, he had a plate of chicken salad which contained 100 grams of chicken without skin. He had 200 grams of tofu steak for dinner. One boiled egg weighs 50 grams and contains six grams of protein. Chicken without skin is usually recommended as a healthy option and 100 grams contains four times as much protein as one boiled egg. Tofu consists of a lot of water and has only seven grams of protein per 100 grams.

How many more grams of protein does Hiroshi need to take to satisfy the daily recommended amount of protein?

2 Mio is planning to have a concert at a local festival and is now making a program. She is going to divide the program into three sets: seven songs in the first set, eight songs in the second, and one song for an encore. Apart from practicing on her own, which can be done in a park, she needs to practice her songs with Kana, a pianist, in a studio. Renting a small studio with a piano costs 800 yen (tax included) for 30 minutes, but Kana insists that they should practice in a bigger studio, which costs three times as much as the small one. Kana estimates that each song will take half an hour to practice. So Mio can calculate the total hours of practice. Kana will not pay any money for the studio because it is Mio's concert. Mio has to pay all the studio rental charges, and she does not want to spend a lot of money. Her idea is to use the small studio in the beginning and then to move to the bigger one for the last quarter of the practice.

According to Mio's idea, how much money in total will Mio need to pay for the studios?

3 Today is Aya's birthday. Aya's birthday is a special occasion for her family. Her father baked a delicious cake, and they plan to have a small celebration with their closest relatives. Aya is excited to receive her birthday presents and spend time with her loved ones. She has always been close to her mother, who is her role model, and they share a special bond. Aya's mother, Tomo, is three times as old as Aya. Tomo is a successful businessperson who works hard to provide for her family. She is proud of her daughter and hopes that Aya will follow in her footsteps one day. Aya's father, Ken, is one year older than Tomo. In ten years, Tomo will be twice as old as Aya.

How old is Aya?

4 The following table shows the annual consumption of foods from the cereal group that includes rice, bread, and noodles for the years 2020–2022. The data were prepared by the Ministry of Internal Affairs and Communications based on statistics from five cities, Kyoto, Nagoya, Shizuoka, Tokyo, and Yamagata. These cities are shown by the letters A—E in the table.

この部分に記載されている文章については、 著作権上公開することはできません。

【データ出典(一部改変): https://www.stat.go.jp/】

Despite an increase in the consumption of bread, the consumption of rice remains the highest among cereals in all areas of the country. Kyoto is well known for its traditional Japanese cuisine among international tourists, but people there may want to try something different. They consume the highest amount of bread. Similarly, people in Yamagata may be tired of having delicious rice. They do indeed consume a lot of rice but also have the highest consumption of noodles among the five cities. Even though Shizuoka is not famous for rice production, Shizuoka consumes a higher quantity of rice than anywhere else in Japan. People in Tokyo and Nagoya spend almost the same amount of money in total, but people in Nagoya spend slightly less money than those in Tokyo.

Write A—E next to the name of the city on your answer sheet.

#### V

#### 以下の問いに答えなさい。

A 大学は 100 年を超える歴史のある大学です。キャンパスの敷地内には創立当時の趣のある歴史的建造物が残っています。近年、最新の研究をすすめるため、大型の研究施設の建設が計画され、十分な敷地確保の必要性から、この建造物を取り壊す案がでてきました。

あなたは、未来の技術を発展させるため、歴史的建造物を取り壊すことに賛成ですか、反対ですか。理由とともに意見を 60 語から 80 語の英語で述べなさい。