

令和 9 年度 豊橋技術科学大学第 3 年次入学者選抜学力検査問題

一 般 科 目 （ 英 語 ）

注 意 事 項

- 1 試験開始の合図まで、この問題冊子と解答用紙を開いてはいけません。
- 2 問題冊子の枚数は、表紙、草稿用紙を含めて 10 枚です。
- 3 問題冊子とは別に解答用紙（マークシート）が 1 枚あります。
- 4 問題は聴き取りテストを含め 5 問あります。全問解答してください。
- 5 試験開始の合図の後すぐに、解答用紙の所定の箇所に氏名・受験番号を記入・マークしてください。
- 6 解答は解答用紙の所定の箇所にマークしてください。正しく記入・マークされていない場合は、採点できないことがあります。
- 7 落丁、乱丁、印刷不鮮明の箇所などがあれば、ただちに申し出てください。
- 8 問題冊子の余白は草稿用として使用しても構いません。
- 9 この試験は、聴き取りテストを含みます。聴き取りテストは、10 時 00 分から始まります。
- 10 聴き取りテスト終了後、解答終了の合図があるまでは、訂正、清書などに適宜利用してください。
- 11 試験終了時刻まで退出してはいけません。
- 12 問題冊子は持ち帰ってください。

(草 稿 用 紙)

[1] 英文を読み設問に答えよ。

A daily cup of tea could help you to enjoy better health late in life -- however if you're not a tea drinker, there are other things you can add to your diet.

The key is flavonoids, which are naturally occurring substances found in many common foods and beverages 1 black and green tea, apples, nuts, citrus fruit, berries and more.

They have long been known to have many health benefits -- however new Edith Cowan University (ECU) research shows they may be even better for us than previously thought.

The Heart Foundation supported a study of 881 elderly women (median age of 80), which found they were far less likely to have extensive build-up of abdominal aortic calcification (AAC)^[注1] if they consumed a high level of flavonoids in their diet.

AAC is the calcification of the abdominal aorta -- the largest artery in the body which supplies oxygenated blood from the heart to the abdominal organs and lower limbs -- and is a predictor of cardiovascular^[注2] risk such as heart attack and stroke.

It has also been found to be a reliable predictor for late-life dementia.

ECU Nutrition and Health Innovation Research Institute researcher and study lead Ben Parmenter said while there were many dietary sources of flavonoids, some had particularly high amounts.

"In most populations, a small group of foods and beverages -- uniquely high in flavonoids -- contribute the bulk of total dietary flavonoid intake," he said.

"The main contributors are usually black or green tea, blueberries, strawberries, oranges, red wine, apples, raisins/grapes and dark chocolate."

The flavonoid family

There are many different types of flavonoids, such as flavan-3-ols and flavonols, which the study indicated appear to also have a relationship with AAC.

Study participants who had a higher intake of total

flavonoids, flavan-3-ols and flavonols were 36-39 per cent less likely to have extensive AAC.

Black tea was the study cohort's main source of total flavonoids and was also associated with significantly lower odds of extensive AAC.

Compared with respondents who didn't drink tea, participants who had two-to-six cups per day had 16-42 per cent less chance of having extensive AAC.

However, some other dietary sources of flavonoids such as fruit juice, red wine and chocolate, did not show a significant beneficial association with AAC.

Not just tea

2 black tea was the main source of flavonoids in the study--likely due to the age of the participants--Mr Parmenter said people could still benefit from flavonoids without putting the kettle on.

"Out of the women who don't drink black tea, higher total non-tea flavonoid intake also appears to protect against extensive calcification of the arteries," he said.

"This implies flavonoids from sources other than black tea may be protective against AAC when tea is not consumed."

Mr. Parmenter said this was important as it allows non-tea drinkers to still benefit from flavonoids in their diet.

"In other populations or groups of people, such as young men or people from other countries, black tea might not be the main source of flavonoids," he said.

"AAC is a major predictor of vascular disease events, and this study shows intake of flavonoids, that could protect against AAC, are easily achievable in most people's diets."

'Higher habitual dietary flavonoid intake associates with less extensive abdominal aortic calcification in a cohort of older women' was published in *Arteriosclerosis, Thrombosis, and Vascular Biology*.

[注 1] abdominal aortic calcification (AAC)= 腹部大動脈石灰化

[注 2] cardiovascular = 心血管の/循環器の

(How black tea may help you have a healthier life as you age by Edith Cowan University from Edith Cowan University, updated on May 3. 2023.
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設問 1 本文の内容と一致すればTを，一致しなければFを選べ。

1. Flavonoids are added into black or green tea during the manufacturing process.
2. The abdominal aorta carries blood with oxygen to the legs.
3. Most people get most of the flavonoids in their diet from only a few different foods.
4. Drinking two or more cups of tea can lower your risk of AAC build-up.
5. Drinking tea is the only effective way to get enough flavonoids.

設問 2 下線を引いた語について，文中の意味に最も近いものをA～Dから一つ選び，記号で答えよ。

1. substances
A. foods
B. elements
C. machinery
D. additives
2. reliable
A. dependable
B. communicative
C. occasional
D. sensible
3. indicated
A. stopped
B. promised
C. rejected
D. showed
4. significant
A. substantial
B. partial
C. nominal
D. spatial
5. achievable
A. believable
B. sizable
C. reachable
D. learnable

設問3 文中の 1 に入れるべき語句として最も適切なものを，A～Dから一つ選び，記号で答えよ。

- | | |
|-------------|------------|
| A. where is | B. such as |
| C. so that | D. for it |

設問4 文中の 2 に入れるべき語として最も適切なものを，A～Dから一つ選び，記号で答えよ。

- | | |
|-------------|--------------|
| A. However, | B. Moreover, |
| C. Though | D. Since |

設問5 本文の要旨として最もふさわしいものをA～Dから一つ選び，記号で答えよ。

- A. Elderly people need to drink more tea, black or green, to improve their health.
- B. Flavonoids, together with food and beverages, are beneficial to your health.
- C. Getting enough flavonoids in your diet is a realistic goal.
- D. A daily intake of flavonoids can significantly reduce AAC, lowering cardiovascular risks.

[2] 空所に入れるべき最も適切な語を A ~ C より一つ選び、記号で答えよ。

1. His jokes about the American were in poor .
A. taste B. feeling C. smell
2. The word means someone who is receiving medical treatment.
A. patient B. victim C. rival
3. Can you give me for a dollar?
A. chance B. change C. choice
4. We will keep your cat until you get back.
A. company B. campaign C. candidate
5. Tom got from his job yesterday for laziness.
A. embraced B. admired C. fired
6. My wife is indifferent philosophical problems.
A. as B. in C. to
7. People are from a shortage of water.
A. suffering B. interesting C. delighting
8. He a lot of information from the teacher.
A. got B. taught C. inquired

[3] 空所に入れるべき最も適切な語句を A ~ C から選べ。

1. London is a thriving city, is the home for many professional football clubs.
A. which B. in which C. where
2. Ken a degree by the end of next year.
A. has been awarded B. is awarded
C. will have been awarded
3. The manager decided to have Edward the job.
A. finished B. finishing C. finish
4. From April 1st, customer needs to pay an additional fee for plastic bags.
A. several B. each C. many
5. Ann: "Will you be available for a meeting Tuesday morning?"
Tom: "Sorry. How about meeting in the afternoon instead?"
A. in B. at C. on
6. The sales staff in this company can proceed at their own pace they meet their sales quota.
A. as far as B. as long as C. as if
7. It is difficult to catch all the with this little cast net.
A. fish B. clam C. octopus
8. The interpreter tried his best to translate the words extremely .
A. careful B. carefully C. care

[4] 和文と同じ意味になるように、() 内の語を正しく並べ替えて英文を完成せよ。解答は数字で答えよ。

1. 早く来る必要はないが、遅れてはいけない。

You (1. have 2. early 3. get 4. don't 5. here 6. to), but you shouldn't be late.

2. 今年も税金が高くなる可能性はかなり低い。

It's (1. that 2. quite 3. be 4. will 5. unlikely 6. taxes) higher again this year.

3. 熊はどうやって冬眠するのだろうか。

How (1. bears 2. to 3. manage 4. do 5. in 6. hibernate) winter?

4. 私が家を引っ越すって誰が言ったの？ そんなことはない！

Tell me (1. who 2. was 3. told 4. I 5. that 6. you) moving house. It's not true!

5. 今日の事件が起こるまで、私たちは失敗したことがなかった。

We (1. before 2. never 3. a 4. mistake 5. made 6. had) today's incident.

[5]

聴き取りテスト

英文が 2 度読まれる。続いて、その内容についての質問がそれぞれ 2 度読まれる。質問に対する正しい答えを A ～ C から選べ。

I.

1.

- A. Batteries are complex
- B. No oil changes
- C. No tailpipes

2.

- A. Under 200 miles
- B. About 250 miles
- C. Over 300 miles

II.

1.

- A. Core
- B. Crust
- C. Mantle

2.

- A. 70
- B. 2,900
- C. 5,000

III.

1.

- A. 9
- B. 10
- C. 11

2.

- A. Wine
- B. Beans
- C. Wheat

問題聞き取りテスト スクリプト

Listening

Passage 1

A: Hey, have you thought about switching to an electric car?

B: Yeah, I've considered it. The biggest pro for me is the environmental benefit--no tailpipe emissions. This means cleaner air.

A: That's true! Plus, they're cheaper to run. Electricity costs less than gas, and maintenance is lower since there're no oil changes or complex engines.

B: Good point. But what about the cons? The upfront cost is still high, even with government incentives.

A: That's a fair concern, though prices are dropping as technology improves. The bigger issue for me is charging--long trips require planning because charging stations aren't as widespread as gas stations.

B: Right, and charging takes way longer than filling a tank. Even fast charging can take 30 minutes, compared to five at a gas pump.

A: True, but if you charge at home overnight, it's convenient for daily use. Battery life is also improving--some EVs now get 300+ miles per charge.

B: Still, battery production isn't perfectly eco-friendly. Mining lithium and other materials has environmental and ethical concerns.

A: Definitely a downside. But as recycling improves and alternative batteries develop, that could change.

B: Overall, I think EVs are the future, but there are still hurdles to overcome.

A: Agreed--the pros outweigh the cons, but it's not a perfect solution yet.

Question 1: According to the conversation, which of the following is a reason why maintenance costs are lower for electric cars?

- A. Batteries are complex
- B. No oil changes
- C. No tailpipes

Question 2: According to the conversation, how far can the best EVs travel on a single charge?

- A. Under 200 miles
- B. About 250 miles
- C. Over 300 miles

Passage 2

The Earth is composed of several distinct layers, each with unique properties. The outermost layer, the crust, is a thin, solid shell of rock, ranging from 5 to 70 kilometers thick. Beneath it lies the mantle, a thick layer of semi-solid rock that extends about 2,900 kilometers deep. The upper mantle is rigid, while the lower mantle flows slowly, driving tectonic plate movement. Below the mantle is the outer core, a liquid layer of molten iron and nickel that generates Earth's magnetic field. At the center lies the inner core, a solid ball of iron and nickel under extreme pressure, with temperatures reaching over 5,000°C. These layers vary in composition, density, and temperature, shaping Earth's geology and magnetic activity. Understanding them helps scientists explain earthquakes, volcanoes, and the planet's formation.

Question 1: Which layer is a solid shell of rock?

- A. Core
- B. Crust
- C. Mantle

Question 2: In the passage, which of the following numbers referred to temperature?

- A. 70
- B. 2,900
- C. 5,000

Passage 3

The Azores, an autonomous region of Portugal, is a stunning archipelago of nine volcanic islands in the North Atlantic Ocean. Known for their dramatic landscapes, the islands feature lush green valleys, crater lakes, and geothermal hot springs formed by ancient volcanic activity. The highest peak, Mount Pico, rises 2,351 meters above sea level, offering breathtaking views. The Azores are also a haven for wildlife, including whales, dolphins, and rare seabirds, making them a top ecotourism destination. The climate is mild year-round, with frequent rain keeping the islands vibrant and fertile. Locals maintain a strong cultural identity, blending Portuguese traditions with unique island customs, cuisine, and festivals. Sustainable tourism and agriculture, particularly dairy and wine production, drive the economy. With their untouched beauty and adventure opportunities--from hiking to diving--the Azores remain one of Europe's best-kept secrets.

Question 1: How many islands make up the Azores?

A. 9

B. 10

C. 11

Question 2: In the passage, what agricultural product from the Azores is mentioned?

A. Wine

B. Beans

C. Wheat