

令和6年度 公立学校教員採用候補者選考試験問題

英 語

1 / 9 枚中

注意 答はすべて解答用紙の解答欄に記入すること。

(放送による問題について)

- ・第1問題及び第2問題は放送による問題とする。
- ・放送は試験開始 25 分後に始める。
- ・第1問題の放送を終了してから約 10 秒後に第2問題の放送を始める。
- ・メモをとってもかまわない。

(語数の制限のある問題について)

- ・コンマ、ピリオド、疑問符等は語数に入れないものとする。

第1問題 放送される(1)～(5)の英文を聞き、英文の内容に合うものとして最も適切なものをア～エの中から一つずつ選び、記号で答えよ。なお、英文は1回ずつ放送され、選択肢は放送されない。

- (1) ア The first *Harry Potter* book was printed in 1997.
イ J.K. Rowling bought the most expensive book at auction.
ウ The first *Harry Potter* book was published by a Texas-based auctioneer.
エ J.K. Rowling wrote six books about a young wizard in 2021.
- (2) ア Xiang Xiang is a popular giant panda from China.
イ Xiang Xiang was born in Japan in 2017.
ウ Xiang Xiang was supposed to stay in Japan for five years.
エ Xiang Xiang was made to postpone her departure because of her disease.
- (3) ア New hybrid vegetables are reported in the US.
イ The new hybrid vegetables are made by combining two different plants.
ウ Kalettes are a mix between kale and cauliflower.
エ Sam likes cooking and using the new hybrid vegetables.
- (4) ア "Easy wins" are tasks that are difficult to accomplish and don't bring positive results.
イ "Bang for your buck" means getting worse results for the same amount of effort.
ウ More people prefer doing short, intense exercises to doing long-term exercises.
エ Exercising a little bit each day can be more effective than intensive exercise.
- (5) ア If trees have memory systems, they can change their behavior to live with stressful environments.
イ The hypothesis that trees have memory systems has nothing to do with their status in the food chain.
ウ The immune system of the trees does not lead to the existence of their memory system.
エ Trees do not have to be patient with the environment because they can get nutrition from the soil and water.

第2問題 放送される(1)、(2)の英文を聞き、英文の要旨となるよう、空所に適切な英語を5語以上10語以下で答えよ。
なお、英文は2回放送される。1回目の放送の10秒後に2回目放送され、その30秒後に二つ目の英文が放送される。

- (1) The flipped classroom approach is popular in foreign language teaching. In this approach, students _____ (5語以上10語以下) _____ and engage in collaborative learning activities in class. Although the flipped classroom approach is shown to be effective on average or higher proficiency learners, its effectiveness on low proficiency students must be explored as well as such factors as _____ (5語以上10語以下) _____.

(メモ欄)

The flipped classroom approach is popular in foreign language teaching. In this approach, students _____⁵ _____
_____¹⁰ and engage in collaborative learning activities in class. Although the flipped classroom approach is shown to be effective on average or higher proficiency learners, its effectiveness on low proficiency students must be explored as well as such factors as _____
_____⁵ _____
_____¹⁰.

- (2) A significant flood is occurring in Queensland, Australia. Residents have been _____ (5語以上10語以下) _____ heavy rain and two large crocodiles swimming in the floodwaters. Almost 100 people have been airlifted to safety. The amount of water _____ (5語以上10語以下) _____ remain above major flood levels for days.

(メモ欄)

A significant flood is occurring in Queensland, Australia. Residents have been _____⁵ _____
_____¹⁰ heavy rain and two large crocodiles swimming in the floodwaters. Almost 100 people have been airlifted to safety. The amount of water _____⁵ _____
_____¹⁰ remain above major flood levels for days.

第3問題 次の(1)～(7)の()に入る適切な語句をア～エの中から一つずつ選び、記号で答えよ。

- (1) A: How about driving somewhere for a change?
B: Sorry, I'm not () for it.
ア feeling イ mood ウ condition エ up
- (2) A: It's on me.
B: No. You treat me whenever we eat out.
A: Well, OK. Then, let's () the check.
ア draw イ split ウ have エ pay

- (3) A: It's not my title that (). That's for sure!
 B: I definitely think your title is very important. With it, everyone will recognize you.
 ア does イ counts ウ scalls エ appears
- (4) A: What's the matter, Bob? You look so miserable.
 B: Leave (). It's none of your business.
 ア it behind イ it at that ウ me alone エ me cold
- (5) A: The government launched a campaign to () physical exercise among children.
 B: That's a great initiative. Encouraging kids to be active and healthy is so important for their development.
 ア promote イ manipulate ウ moderate エ suppress
- (6) A: He got ahead () his colleagues. He should be ashamed of himself.
 B: Yeah, it's really disappointing when someone advances their career by undermining others.
 ア at the expense of イ for the sake of ウ on behalf of エ at the mercy of
- (7) A: I felt utterly out of place among those () people.
 B: Don't worry about it. Everyone feels that way sometimes. Just be yourself and people will appreciate your authenticity.
 ア stubborn イ pessimistic ウ sophisticated エ outdated

第4問題 次の(1)、(2)に答えよ。

- (1) 次の英文は、ウェットティッシュ(wet wipes)に関するニュース記事の抜粋である。これを読んで、内容と一致するものをア～オの中から一つ選び、記号で答えよ。

Plastic wet wipes ban planned in England to tackle pollution

**Wet wipes containing plastic will be banned in England under plans to tackle water pollution, environment minister
 Theresa Coffey has told BBC News.**

The ban on plastic-based wipes should come into force in the next year following a consultation, Ms Coffey said. It is part of a wider plan to improve water quality in England, where no river or waterway is considered clean. But opposition and environment groups criticised the plan as weak.

Wet wipes flushed down toilets cause 93% of sewer blockages including so-called fatbergs and cost around £100m a year to clear up, according to Water UK which represents the water industry.

Around 90% of wipes contained plastic in 2021, although there are now some alternatives available to buy. The plastics do not break down and over time the wipes become snagged and stick together, causing sewage to stop moving through pipes.

"Our proposal is to ban plastic from wet wipes," Ms Coffey told BBC News, adding that a short consultation needed to take place first. "It's a legal requirement to make sure that we can go ahead with any ban," she said.

The government first said in 2018 that it planned to eliminate plastic waste including wet wipes. In a 2021 government consultation on banning wet wipes, 96% of people said they supported the idea. Earlier this year the government decided against banning wet wipes, following another consultation.

In Wales a proposed ban on plastic in wet wipes has not yet been implemented. The Scottish government consulted on a ban but has not taken further action.

Some companies, including Boots and Tesco, have already stopped the sale of wet wipes which contain plastic from their shops.

The wet wipes ban is part of a broader strategy, called Plan for Water, which the Department for Environment, Food and Rural Affairs (Defra) wants to improve England's water quality. It includes a potential ban on some types of so-called forever chemicals or PFAS, tackling pollution from farming and run-off from road traffic.

Pollution from intensive farming, in particular from chicken farms, is the most common way rivers are being contaminated, according to a parliamentary report from 2022.

The government announced on Sunday that water companies could face unlimited fines for releasing untreated sewage into rivers and seas without good reason. Figures show an average of 825 sewage spills per day into England's waterways in the last year.

- ア As the water in England is very clean, residents must not throw anything in rivers.
- イ As we can easily pick wet wipes out of the piping, we should remove them by ourselves.
- ウ Plastic wet wipes clog the piping because the plastics are insoluble in water.
- エ Wet wipes containing plastic are now illegal.
- オ The most polluted water is released by the wet wipes companies.

(2) 次の英文は、線形回帰に関するホームページの抜粋である。これを読んで、内容と一致するものをア～オの中から二つ選び、記号で答えよ。

What Is Linear Regression?

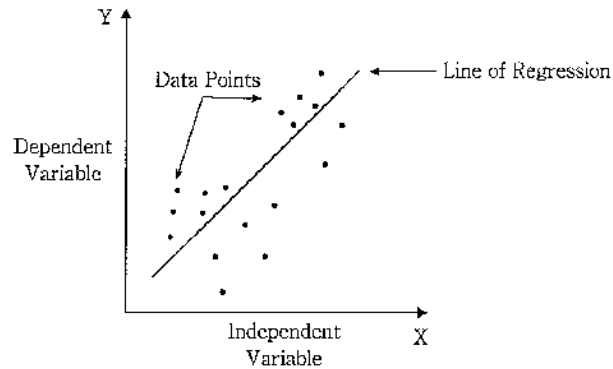
Linear regression is an algorithm that provides a linear relationship between an independent variable and a dependent variable to predict the outcome of future events. It is a statistical method used in data science and machine learning for predictive analysis.

The independent variable is also the predictor or explanatory variable that remains unchanged due to the change in other variables. However, the dependent variable changes with fluctuations in the independent variable. The regression model predicts the value of the dependent variable, which is the response or outcome variable being analyzed or studied.

Thus, linear regression is a supervised learning algorithm that simulates a mathematical relationship between variables and makes predictions for continuous or numeric variables such as sales, salary, age, product price, etc.

This analysis method is advantageous when at least two variables are available in the data, as observed in stock market forecasting, portfolio management, scientific analysis, etc.

A sloped straight line represents the linear regression model.



In the above figure,

- X-axis = Independent Variable
- Y-axis = Output / Dependent Variable
- Line of Regression = Best fit line for a model

Here, a line is plotted for the given data points that suitably fit all the issues. Hence, it is called the 'best fit line.' The goal of the linear regression algorithm is to find this best fit line seen in the above figure.

Key benefits of linear regression

Linear regression is a popular statistical tool used in data science, thanks to the several benefits it offers, such as:

1. Easy implementation

The linear regression model is computationally simple to implement as it does not demand a lot of engineering overheads, neither before the model launch nor during its maintenance.

2. Interpretability

Unlike other deep learning models (neural networks), linear regression is relatively straightforward. As a result, this algorithm stands ahead of black-box models that fall short in justifying which input variable causes the output variable to change.

3. Scalability

Linear regression is not computationally heavy and, therefore, fits well in cases where scaling is essential. For example, the model can scale well regarding increased data volume (big data).

4. Optimal for online settings

The ease of computation of these algorithms allows them to be used in online settings. The model can be trained and retrained with each new example to generate predictions in real-time, unlike the neural networks or support vector machines that are computationally heavy and require plenty of computing resources and substantial waiting time to retrain on a new dataset. All these factors make such computing-intensive models expensive and unsuitable for real-time applications.

The above features highlight why linear regression is a popular model to solve real-life machine learning problems.

- ア In linear regression, the variables to be predicted are called independent variables, including sales, salaries, and product prices.
- イ In linear regression, the predicted variables are plotted on the Y-axis.
- ウ In linear regression, analysts use hypothetical data to find the value that best fits the ideal value.
- エ Linear regression has a simple algorithm and it is easy to interpret.
- オ Linear regression is computationally demanding and takes time to obtain results.

第5問題 次の問に答えよ。

問1 次の英文を読んで、後の(1)、(2)に答えよ。解答はア～エの中から一つずつ選び、記号で答えよ。

Having a lot of money is a sign of social status and power. However, most average people in developed countries have less money now than they had a few decades ago. On the other hand, a small group of people have become extraordinarily wealthy.

In modern society, many Americans believe that everyone has an equal chance for financial success. They think that the reason people get rich is because they work hard, while poor people are lazy. But is this true? Researchers at the University of California at Berkeley did a study about the psychology of wealth in order to find out the differences between the rich and the poor.

In the study, researchers conducted several different experiments with different groups of volunteers. Participants were randomly divided into two groups: "wealthy" and "average." In one of the experiments, two people played a board game using play money. The "wealthy" player began the game with more money than the "average" player. The rules of the game were also unequal in that the "wealthy" player got extra chances to win. In this way, of course the "wealthy" player had a big advantage and always beat the "average" player. What surprised the researchers was what happened after each game was over. In every game, the "wealthy" player actually felt that he had won because he was a more skillful player, not just because he had been given an advantage over the "average" player from the start.

In a further experiment, the scientists left bowls of candy in an empty interview room. The participants were told that the candy was for some children taking part in the next experiment. While alone in the room (being recorded with a hidden camera), the people who had been in the "wealthy" group were more likely to take some of the candy for themselves, while the "average" people left it for the children. What do you think the researchers concluded based on this combination of test results?

(1) Why do Americans tend to think people become rich?

- ア They were born under a lucky star.
- イ They were born with wealthy parents.
- ウ They work much harder than poor people.
- エ They regard money as a sign of social status.

(2) Which of the following is an appropriate title for this passage?

- ア The psychology of wealth and its effect
- イ Playing board games with an advantage
- ウ Kindness to children versus adults in advantage people
- エ People in developed countries who have become poorer

問2 次の英文を読んで、後の(1)、(2)に答えよ。解答はア～エの中から一つずつ選び、記号で答えよ。

In a recent issue of the journal *Nature*, Dr Batchelor and colleagues detail their study of a swathe of seafloor off the central Norwegian coast, which reveals insights into ice sheet behavior in the process of retreats. The research focuses on over 7,600 ladder-like ridges found in the seafloor's muddy sediments. These ridges are thought to be remnants of a massive Northern European ice sheet that existed 20,000 years ago. The scientists interpreted these ridges to be features that are created at an ice grounding zone, where glacier ice flowing off the land becomes buoyant and begins to float as it enters the ocean. The ice moves up and down with the tides every day, and this movement makes it press against the ground over and over again. This creates the wavy patterns called corrugations.

For these patterns to be preserved, the ice must be in a retreat, and the tidal "clock" thus provides a rate for this reversal. The researchers found that the ancient European ice sheet retreated rapidly at speeds between 55 and 610 meters per day, with the fastest rates observed in areas where the seafloor was relatively flat. In these locations, ice above are more uniform in thickness, and less melting is needed for the ice to float and facilitate its retreat.

Similar corrugations have been detected on the Antarctic seafloor, but their extent is more limited. The Norwegian study area provides a clearer understanding of how quickly ice can retreat in a warming climate.

Today, scientists use satellites to monitor the grounding zones in Antarctica's ocean terminating glaciers. The spacecraft can trace where the ice is being lifted and lowered on the tides.

The fastest retreat has been observed at Pope Glacier in the west of the continent, with an average rate of 33 meters per day measured over 3.5 months in 2017.

Scientists are worried about large glaciers in Antarctica because these glaciers could potentially cause environmental catastrophe. One of them is Thwaites, which is the size of Britain and could raise global sea levels half a meter if it were to completely melt. Dr Frazer Christie, a co-author of the study, notes that a conduit-like channel located four kilometers inland of Thwaites' current grounding line is the perfect setting for a rapid, buoyancy-driven retreat. Even a short-lived retreat could significantly impact the glacier's future dynamics.

While Drs Batchelor and Christie assert that their findings will help refine the computer models used to predict Antarctica's fate in a warming world, Prof Julian Dowdeswell, another co-author, emphasizes the importance of studying the geological past to foresee what's possible in the future, as satellite records are very short - only 40 years or so.

(1) According to this passage, which of the following is a correct statement?

- ア An ancient glacier in Norway has generated corrugations by repeatedly patting the sediments.
- イ The ice retreats rapidly in places where the seafloor is uneven.
- ウ Thwaites Glacier concerns scientists as the fastest retreat has been seen there.
- エ Monitoring glacier movement can be utilized to predict future weather.

(2) Which of the following is an appropriate title for this passage?

- ア Melting glacier leads to Norwegian sea level rising
- イ Movement of glacier directly affects global warming
- ウ Observing Antarctic glacier helps understand what happened in Norwegian seafloor
- エ Norwegian seafloor holds clue to Antarctic melting

第6問題 次の英文を読み、後の問に答えよ。

Japan's government is proposing a new plan to attract 400,000 foreign students and send 500,000 Japanese students abroad annually over the next ten years, aiming to further internationalize the country's higher education. Prime Minister Fumio Kishida announced the initiative in response to challenges like declining birthrates, wage stagnation, and reduced student mobility during the pandemic. Kishida tasked education ministry head Keiko Nagaoka with developing a more detailed proposal by the end of April.

The plan follows heavy criticism of Japan's strict pandemic-era border closures, which barred most foreign students and academics from entering the country. As a result, the number of foreign students in Japan dropped to around 230,000 in 2022, down from 310,000 in 2019. Additionally, the number of Japanese students studying abroad long-term decreased from 80,000 in the early 2000s to around 60,000 in 2012.

The government intends to address barriers like language and customs by expanding English education and promoting international understanding, as well as improving support for foreign students seeking post-graduation employment in Japan. The plan also draws inspiration from countries such as Australia, the United States, South Korea, Germany and France.

Experts like Hilary Holbrow, an assistant professor of Japanese Politics and Society at Indiana University, argue that Japan's human resource challenges are already being addressed due to economic need rather than government policies. The share of companies hiring foreign university graduates has more than doubled, reflecting the labor market's natural demand under demographic decline.

Hiroshi Ota, a professor of international education at Hitotsubashi University in Tokyo, highlights the need for a long-term macro policy to attract people from all over the world to Japan for education, business, and society. He also points out the challenge of encouraging more Japanese students to pursue international experiences, as over 60% of high school students surveyed in Japan said they didn't want to study abroad.

While universities like International Christian University and Sophia University have already recovered their pre-pandemic enrollment of foreign students, the main challenge remains convincing Japanese students to study abroad. The government's new plan aims to provide broader perspectives and experiences for the younger generation in Japan and promote a more globally-minded future.

問1 Which of the following is an appropriate summary of this passage?

- ア English proficiency is required in Japanese companies that employ many international students.
- イ The number of exchange students from foreign countries is decreasing due to the pandemic.
- ウ Japan aims to send more Japanese students abroad to boost higher education internationalization.
- エ Many Japanese high school students are eager to study abroad.

英 語

9 / 9 枚中

問2 次の質問に英語で答えよ。

What do you think of Japanese students studying abroad? Write your opinion in 80 – 100 words.