

滋賀医科大学

令和4年度
医学科一般選抜(前期日程)

問題冊子

英 語

(注 意)

1. 問題冊子は試験開始の合図があるまで開かないこと。
2. 問題冊子は表紙のほか9ページである。
3. 試験中に問題冊子及び解答用紙の印刷不鮮明、ページの落丁・乱丁等に気付いた場合は、手を挙げて監督者に知らせること。
4. 解答用紙のすべてに受験番号及び氏名をはっきり記入すること。
5. 解答はすべて解答用紙の所定の解答欄に明瞭に記入すること。
6. 解答に関係のないことを書いた答案は、無効にすることがある。
7. 本学受験票を机の右上に出しておくこと。
8. 試験時間は90分である。
9. 問題冊子は持ち帰ってもよいが、解答用紙は持ち帰らないこと。

英 語 (3 問題)

- I. 次の文章を読んで、下の設問に本文の内容に沿って答えよ。記号以外の解答は全て日本語ですること。右側に*印のある語(句)には注がある。 (配点 76 点)

For the first time ever, researchers have fully mapped “Genghis (also called Chinggis) Khan’s Wall,” a section of the Great Wall that resides mostly outside of present-day China along the Mongolian Steppe. Gideon Shelach-Lavi, an archaeology* professor at Hebrew University of Jerusalem, led the international research team, which included colleagues from Yale University and the Mongolian Academy of Sciences, and published their findings in the latest edition of *Antiquity*.

The famous “Great Wall of China” actually consists of several fortifications*, built bit by bit from ancient times up until the 17th century A.D. Shelach-Lavi and his team studied the northern phase of this wall-building. Appropriately named by researchers “The Northern Line,” this section extends 737 kilometers and is mostly located in Mongolia, with some sections in Russia and China, an area that used to be home to nomadic* tribes that routinely raided* Imperial China. It is known to have been built between the 11th and 13th centuries, an era that saw the rise of Genghis Khan.

The common view by researchers has been that this section of the wall was built to defend the local population from the Great Khan and his nomadic raiders. However, Shelach-Lavi’s findings suggest that defense was not the primary function of these fortifications. “Our analysis of the wall suggests that it was not built to defend against large invading armies or even against nomadic raids into sedentary* lands. Instead, it was made to monitor and control the movements of nomadic populations and their herds*,” explained Shelach-Lavi.

Despite the apparent importance of the Northern Line, its construction is not mentioned in any known contemporary documents¹. It was also neglected by later researchers, often only receiving a light mention² in textbooks. “This huge structure is extremely mysterious,” said Shelach-Lavi. He and his colleagues set out to change that³, systematically mapping the Northern Line over several years. In addition to aerial views supplied by drones, they conducted a detailed survey of a small part of the wall and nearby structures. This⁴ allowed them to investigate objects made by people and left behind, and to study the construction of the wall.

The team of researchers first identified 72 structures along the wall. By examining the placement and building style of the wall and its associated structures, the international team of archaeologists revealed the Northern Line's primary role: to expand the influence of the Khitan-Liao Empire*, one of the Imperial dynasties* in the region, by controlling and monitoring the nomads that lived along its northern territory.

Significantly, many of the wall's structures were not located at high, strategic points, which would have been critical for military defense. Instead, they were located at lower altitudes*, likely closer to roads and other sites that would aid in population control. Migrations* of nomadic populations were likely a major concern, as harsh winters and extreme seasonal changes might have led the empire to restrict southward travel by those looking for resources. Also, the wall itself was relatively low, about two meters high, which is not tall enough to be a barrier against invading armies. "Our study suggests that the assumption that these were all military structures needs to be challenged," said Shelach-Lavi. "We need to study the structures and their context to better understand the reasons they were built," he added.

Furthermore, the team noticed that those 72 structures running along the wall were arranged during construction to sit around 30 kilometers apart from each other. A statement by the Hebrew University explained that this pattern matches with building patterns in the Khitan-Liao era of East Asian rule. "This indicates that the wall was likely built in a single, organized phase, likely during the Khitan-Liao Empire," the statement said.

Genghis Khan lived from 1162 to 1225 A.D., well after the period of rule of the Khitan-Liao Empire in East Asia from 907 to 1125 A.D. This latest research thus allows us to reason that the wall's construction occurred before he was even a threat. It was only in 1206 that Genghis Khan, whose name is actually a title meaning "Ocean Emperor," united warring tribes to take control. While Genghis Khan's descendants continued to expand his empire until it reached from China to Hungary, the tomb of the Ocean Emperor himself has yet to be discovered.

As for Shelach-Lavi and his fascination with the Great Wall, the fact that it is only mentioned briefly in historical accounts was both hard to understand and fascinating. That no dynasty ever took credit for it only furthered his curiosity. Ultimately, he finds contemporary significance in this piece of ancient history. "For us, the question was who built it and why," he said. "If we think about it, the question of why people build walls is still of significance to this day."

(出典 : <https://www.bfhu.org/great-wall-outside-of-china-mapped-for-first-time/><https://allthatsinteresting.com/why-was-the-great-wall-of-china-built> より改変引用。)

注：

archaeology* = 考古学

fortification(s)* = 要塞, 防御施設

nomadic* = 遊牧民の, 放浪生活の

raid(ed)* = 襲撃する

sedentary* = 定住性の, 移住しない

herd(s) = 家畜の群れ

Khitan-Liao Empire* = 契丹・遼帝国 (中国北部を支配した遊牧民に
よって築かれた王朝)

dynasties* > dynasty = 王朝

altitude(s)* = 海拔

migration(s)* = 移住, 移動

設問 1. The Northern Line

- A. was built after the 13th century.
- B. is still under construction.
- C. marked the boundary of Imperial China.
- D. was built in the area where nomadic tribes were active.

設問 2. What does underlined item contemporary documents mean?
1

- A. records made around the time of the wall's construction
- B. texts written in modern times
- C. the latest historical evidence
- D. old texts that have been updated

設問 3. What does underlined item light mention mean in this context?
2

設問 4. What does underlined item that refer to in this context?
3

設問 5. What does underlined item This refer to?
4

設問 6. Underlined item critical means
5

- A. properly analytical.
- B. very dangerous.
- C. extremely important.
- D. wonderfully precise.

設問 7. Why did nomadic people and herds head south beyond the Northern Line?

設問 8. Translate underlined item ⁶ Furthermore, the team noticed that those 72 structures running along the wall were arranged during construction to sit around 30 kilometers apart from each other.

設問 9. What does underlined item ⁷ warring mean?

- A. courageous B. conflicting C. demanding D. greedy

設問10. Translate underlined item ⁸ While Genghis Khan's descendants continued to expand his empire until it reached from China to Hungary, the tomb of the Ocean Emperor himself has yet to be discovered.

設問11. What does underlined item ⁹ took credit mean in this context?

設問12. What does underlined item ¹⁰ contemporary significance mean?

設問13. Why has the Northern Line been commonly called "Genghis Khan's Wall"?

設問14. List three pieces of evidence suggesting that the Northern Line was not built for defense against Genghis Khan's raiders.

Ⅱ. 次の文章を読んで、下の設問に本文の内容に沿って答えよ。記号以外の解答は全て日本語であること。右側に*印のある語(句)には注がある。 (配点 84 点)

If you want to run a successful business, it is important to provide a valuable service, advertise it well and do your best to get out what you put in. You should also try to make sure your customers do not eat you. This is especially true if you are “a cleaner shrimp.” These industrious crustaceans* set up cleaning stations — depressions in rocks in which they can go for safety — in tropical coral reefs*, where they pick parasites* and dead skin off the fish, eels* and turtles that seek them out for this purpose.

They get food, but it is a dangerous job. Some of these clients — that is the scientific term — are many times the shrimp’s size, and if such a client is hungry, it might start to see the little guy crawling all over it as less of a helper, and more of a snack. What is a hardworking shrimp to do? According to a paper published in *Biology Letters*, one species has a strategy: Choose your clients carefully and, when necessary, do a special dance.

Eleanor Caves, a bioscientist at the University of Exeter, has been puzzled by cleaner shrimp for years. Although shrimp’s bright colors and tank maintenance skills make them popular aquarium* pets, they are “highly understudied” in the wild, she said. The relationship between cleaner shrimp and their clients is generally considered a mutualism: an association between two species where both benefit. In this case, the shrimp gets a meal, and the fish gets a touch-up. Other mutualistic teams include ants and acacia trees, bees and flowers, and anemones and clown fish*.

However, it is more difficult to understand teamwork between cleaner shrimp and, say, goatfish, which Dr. Caves said are known to eat crustaceans. “It’s hard to know how such a system could evolve,” she said. “The cleaner shrimp should really not be cleaning at all, because they ought to just get eaten.” In this study, Dr. Caves and her colleagues focused on a hard-to-find species, *Lysmata amboinensis*, or the Pacific cleaner shrimp. The team located two shrimp-staffed cleaning stations on a reef in the Red Sea near Eilat, Israel, and trained cameras on them. After filming and watching 242 fish visits, they noticed that the cleaner shrimp turned down potentially predatory clients 75 percent of the time — far more often than they did harmless ones. Fair enough.

However, when a shrimp did take on a more frightening client, it often began the exchange with a signal: It would bend its front legs and wave them back and forth. Pacific cleaner shrimp have white front legs that contrast with the rest of their body; in videos, it looks like they are performing a special solo dance. “It’s amazing how much it stands out, even at depth,” Dr. Caves said.

The researchers then exposed cleaner shrimp in their lab to various silhouettes* meant to represent clients of different sizes. The shrimp leg-waved in response to shapes that blocked out more light, as a larger fish would. They seemed to be reacting as if they sensed danger and the leg dance would work as a signal that they were there to perform a service for the fish.

The experiment joins a few others that have sought to uncover how these shrimp are able to work with clients across a significant power differential. The researchers have “confirmed that some cleaner shrimp are able to show discrimination in their cleaning service” and introduced the idea that a client’s size might inspire the decision to signal, said Lucille Chapuis, a researcher at the University of Exeter, who was not involved in the paper but has studied comparable behavior in other cleaner shrimp species.

Signaling may also help to explain another mystery: why cleaner shrimp look so bright and colorful when they themselves are colorblind. All those bright colors and patterns may be necessary to get a message across to fish that differentiates the shrimp from prey, Dr. Caves said. Perhaps it is what customer service looks like when your life depends on it.

¹⁴
(出典：https://www.nytimes.com/2019/09/19/science/cleaner-shrimp.html より改変引用。)

注：

crustacean (s) * = 甲殻類

tropical coral reefs* = 熱帯のサンゴ礁

parasite (s) * = 寄生虫

eel (s) * = ウナギ [魚]

aquarium* = 水槽、水族館

[sea] anemones and clown fish* = イソギンチャクや(それと共生する) クマノミ

silhouette* = シルエット、輪郭

設問 1. Describe how cleaner shrimp get their food.

設問 2. Explain the meaning of underlined item do your best to get out what you put in.
1

設問 3. Explain what underlined item this purpose is.
2

設問 4. What does underlined item these clients refer to?
3

設問 5. What does underlined item the little guy refer to?
4

設問 6. Translate underlined item less of a helper, and more of a snack in this context.
5

設問 7. Why are shrimp popular as aquarium pets?

設問 8. What does underlined item in the wild mean?
6

- A. without discipline B. while dancing freely
C. in a natural setting D. in a tank

設問 9. Explain underlined item mutualism.
7

設問 10. Which of the following does underlined item touch-up suggest?
8

- A. massage B. improvement C. approach D. signal

設問 11. Translate underlined item The cleaner shrimp should really not be cleaning at all, because they ought to just get eaten.
9

設問 12. What does underlined item turned down mean?
10

- A. refused B. swam below C. accepted D. disturbed

設問 13. What does underlined item stands out mean?
11

- A. is noticeable B. reaches out C. steps forward D. goes out

設問 14. What does underlined item shapes that blocked out more light mean?
12

- A. brighter shapes B. darker shadows C. larger shapes D. smaller shadows

設問15. What does underlined item others mean?

13

- A. other clients
- B. other experiments
- C. other kinds of shrimp
- D. other people

設問16. Choose the statement that best matches the passage:

- A. Cleaner shrimp, when hungry, go out of their holes looking for parasite-laden fish.
- B. Cleaner shrimp do not clean such predatory fish as goatfish.
- C. Cleaner shrimp are colorful because they want to scare dangerous clients away.
- D. The relationship between cleaner shrimp and fish resembles relationships in an economic market.

設問17. Translate underlined item Perhaps it is what customer service looks like when your life depends on it.

14

Ⅲ. 以下の文章は、筆者がアラスカに住む先住民族と一緒に暮らしながら、感じたことを書き記したものである。あなたの解釈が分かるように英訳せよ。ただし()の中は訳さなくてよい。

(配点 40 点)

「夏が去り、霜が最初のキスをすると、ブルーベリーの実は甘くなる」
そんな言い方を人々はする。

(中略)

彼ら(アラスカに住む先住民族)は、漠然とした、本能的な自然への恐れを持っている。日常生活の中での、ひとつひとつの小さな関わり。そこにタブーという説明のつかない自然との約束がある。それは僕たちが失くしてしまった、生き続けてゆくための、ひとつの力のような気がする。

アラスカは、木の実の季節になった。

(出典：星野道夫『アラスカ 風のような物語』[小学館文庫]より改変引用。)

