

英 語

順天堂大学医学部 2024 年度型 そっくり類題セット

※ これは順天堂大学の入試問題ではありません。
2024 年度の出題形式（大問の数・設問の型）をもとに、
TMPS 医学館が題材を変えて作成したオリジナル問題です（人物・団体は架空）。

試験時間の目安：80 分

大問	ページ	時間配分の目安
I （インタビュー・10 問）	1	15 分
II （長文・10 問）	3	14 分
III （長文・10 問）	5	13 分
IV （長文・10 問）	6	15 分
V （自由英作文）	9	20 分（見直し 3 分）

注意事項

- 大問 I ～IV は、各設問の選択肢 1～4 から最も適切なものを一つ選ぶ（マークシートを想定）。
- 大問 V の自由英作文は、導入・本論・結論のある 1 つの英文として書くこと。
- 解答・解説は、解説ページ（TMPS 医学館の過去問解説図書館）に掲載している。

I 次のインタビュー記事を読み、以下の設問に答えなさい。

The following is an interview with two physicians, conducted by a health magazine.

Last year, a growing number of hospitals began to hand out wearable devices to patients who had been sent home after heart surgery. We spoke to two physicians about what these devices can and cannot do. Dr. Naomi Calder is a cardiologist, and Dr. Idris Okafor works in primary care.

Calder: “The strength of a wearable is that it is always on. A clinic visit gives me one snapshot every few months, but a watch records thousands of heartbeats a day. When the rhythm changes,

the device detects it and sends an alert to our team, sometimes before the patient feels anything.” She is quick to add that the technology is not magic. “Our staff must still be meticulous about checking each alert, because a large share of them turn out to be false alarms.”

Okafor sees a different challenge. “My older patients are often reluctant to wear anything that tracks them. They worry about who will see their data,” he said. “We spend more time explaining privacy than explaining the heart.” To address this, his clinic created a one-page guide in plain language, and nurses sit with each patient to set up the device.

Both doctors agree that the most important change is cultural rather than technical. When data arrive daily, doctors can step in early, and small problems are less likely to grow into emergencies. “In the past we waited for patients to come to us,” Calder said. “Now we can reach out first.” Okafor warned, however, that outreach has a cost. “If every alert leads to a phone call, the staff will burn out. We need software that can sort the signals so that humans see only the ones that matter.” Such a tool, he said, could also curb unnecessary hospital visits and save money.

Asked about the gap between rich and poor patients, Calder admitted that it worries her. “A device that costs a month’s rent will never reach the people who need it most.” Okafor hopes that insurers will one day pay for devices the way they pay for medication. Until then, both doctors insist that the patient’s outcome, not the number of gadgets sold, should be the measure of success.

問1(1) The word meticulous is closest in meaning to _____.

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|-------------|-------------|
| 1. hasty | 2. thorough |
| 3. generous | 4. costly |

問1(2) The word reluctant is closest in meaning to _____.

- | | |
|--------------|------------|
| 1. eager | 2. certain |
| 3. unwilling | 4. curious |

問1(3) The word curb is closest in meaning to _____.

- | | |
|------------|-----------|
| 1. limit | 2. expand |
| 3. measure | 4. ignore |

問1(4) The word outcome is closest in meaning to _____.

- | | |
|------------|-----------|
| 1. request | 2. cause |
| 3. delay | 4. result |

問2(1) The wearable (A) changes in the heart’s rhythm and alerts the hospital team.

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|------------|------------|
| 1. detects | 2. ignores |
| 3. invents | 4. hides |

問2(2) Older patients are often anxious about the (B) of their personal data.

- | | |
|------------|----------|
| 1. price | 2. color |
| 3. privacy | 4. speed |

問2(3) Dr. Okafor hopes that insurers will pay (C) these devices as they pay for medication.

- | | |
|--------|---------|
| 1. for | 2. to |
| 3. at | 4. with |

問3(1) What does Dr. Calder say about the alerts sent by wearables?

1. Most of them are false alarms that staff can safely ignore.
2. Some of them arrive before the patient notices any symptoms.
3. They make it unnecessary for patients to visit the clinic.
4. They are rarely received by the hospital team.

問3(2) According to Dr. Okafor, why are some older patients unwilling to wear the devices?

1. They cannot afford the devices.
2. They believe the devices are not accurate.
3. They prefer to see a specialist.
4. They are worried about who can see their data.

問3(3) What does Dr. Okafor suggest is needed to prevent staff from burning out?

1. Software that sorts the signals for humans
2. More nurses working in the clinic
3. Fewer patients who use the devices
4. Cheaper devices for every patient

II

次の英文を読み、下記の設問に答えなさい。①～⑧は段落番号を表す。

① Far below the waves, on plains of mud and rock that no sunlight has ever touched, lie millions of metal-rich lumps called nodules. For decades they sat unnoticed. Now, as the demand for batteries grows, companies are eager to bring them up. But a simple question stands in the way: who has the right to take them?

② The answer begins with a treaty. In 1982, the United Nations Convention on the Law of the Sea (UNCLOS) divided the oceans into zones. Within 200 nautical miles of a coast, a country may use the water and the seabed for its own purposes. Beyond that lies the high seas, and the seabed there is described as the “common heritage of mankind.”

③ To manage this shared seabed, the convention created the International Seabed Authority (ISA), based in Jamaica. No company can work in the area without a contract from the ISA, and any profit is supposed to be shared with the world, including countries without a coastline. “It was a bold idea,” said Dr. Lena Marlowe, an ocean-law scholar at the University of Brightwell. “It still is.”

④ But the system has gaps. The ISA has issued many licenses for exploration, yet it has not finished the detailed rules for actual commercial mining. In 2021, a small island nation in the Pacific started a two-year clock that obliges the ISA to consider any mining application, whether or not the rules are ready.

⑤ Some countries argue that mining should be paused until its effects on marine life are better understood. Scientists warn that the deep sea is home to slow-growing animals, and that scars left on the seabed may take centuries to heal. “We are moving faster than our knowledge,” Marlowe said.

⑥ Others take a different view. They say that the minerals are needed to build electric cars and wind turbines, and that mining the seabed may cause less harm than digging up forests on land. The United States, which has not ratified UNCLOS, has also suggested that it could license its own companies under domestic law, a step many lawyers consider risky.

⑦ Unlike a flag planted on bare ground, a mining ship leaves physical marks, so disputes are unlikely to stay theoretical. A single license could affect fisheries thousands of kilometres away, and it is

unclear who would pay if something went wrong.

⑧ “This is not a problem for the distant future,” Marlowe said. “The ships are being built now.” Whatever the ISA decides in the coming years, the outcome will show whether the idea of a shared ocean can survive contact with commercial interest.

注1: nodule 団塊（金属を含む塊） 注2: obliges ～に義務づける 注3: ratified 承認した

問1(1) The word eager in paragraph ① is closest in meaning to _____.

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|-----------|-----------|
| 1. afraid | 2. unable |
| 3. keen | 4. slow |

問1(2) The word divided in paragraph ② is closest in meaning to _____.

- | | |
|-------------|--------------|
| 1. joined | 2. separated |
| 3. repeated | 4. measured |

問1(3) The word bold in paragraph ③ is closest in meaning to _____.

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|------------|------------|
| 1. cheap | 2. obvious |
| 3. careful | 4. daring |

問1(4) The word paused in paragraph ⑤ is closest in meaning to _____.

- | | |
|--------------|---------------|
| 1. hidden | 2. doubled |
| 3. suspended | 4. celebrated |

問1(5) The word heal in paragraph ⑤ is closest in meaning to _____.

- | | |
|------------|-----------|
| 1. recover | 2. appear |
| 3. spread | 4. repeat |

問2(1) According to the passage, what is true of the seabed beyond a country's 200-nautical-mile zone?

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|---|---|
| 1. Any country may mine it freely. | 2. It is treated as belonging to all of humanity. |
| 3. It is owned by the International Seabed Authority. | 4. It belongs to the nearest coastal country. |

問2(2) What is the role of the ISA?

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|--|--|
| 1. To pay for mining ships in developing countries | 2. To collect fees from fishing fleets |
| 3. To decide who may carry out activities on the shared seabed | 4. To protect the coastlines of island nations |

問2(3) What can be inferred from the move made by the island nation in 2021?

- | | |
|---|---|
| 1. It started a deadline that pushes the ISA to act on mining applications. | 2. It permanently banned mining in the Pacific. |
| 3. It ended the authority of the ISA. | 4. It reduced the number of exploration licenses. |

問2(4) Which of the following is mentioned as an argument in favor of seabed mining?

1. It will create new fishing grounds.
2. It will lower the temperature of the oceans.
3. It is cheaper than recycling old batteries.
4. It supplies minerals for electric cars and may cause less harm than mining on land.

問2(5) What does the passage suggest about the future of this issue?

1. It has already been settled by a treaty.
2. It will become urgent only in the distant future.
3. It is a pressing question whose outcome will test the idea of a shared ocean.
4. It is a minor concern compared with other problems of the sea.

III 次の英文を読み、下記の設問に答えなさい。①～⑥は段落番号を表す。

① A crow does not forget a face. In a long-running study led by Dr. Hiro Tanabe of the University of Westbury, researchers wore rubber masks while catching and tagging wild crows in a city park. Years later, when the same masks reappeared, crows that had never been caught scolded the wearer loudly, as if they too knew who the enemy was.

② Tanabe describes the result as “unsettling and wonderful at once.” His team recorded the birds’ reactions for six years. Crows that had been caught remembered the mask for at least five years, and the number of birds that scolded it kept growing. Many of the angry crows were young birds that had not even hatched at the time of the capture.

③ How did the news spread? The scientists believe there are two routes. Young crows learn by watching their parents react, while others pick up the alarm calls of their neighbors and link them to the mask they see. Brain scans of crows shown the dangerous mask showed more activity in regions linked to fear and memory than scans of birds shown a neutral mask.

④ The findings may help explain why crows live so successfully in cities. A species that can pass on knowledge about danger can adapt quickly when new hazards, such as cars or poison, appear.

⑤ Not everyone is convinced. Dr. Maria Quint, a behavior specialist at the Ardent Institute, praised the study but cautioned against reading too much into it. “Scolding a mask is not the same as holding a grudge,” she said. “A bird may simply react to anything that looks like a threat.” She also noted that the study followed crows in one city, so the result may not apply elsewhere.

⑥ Tanabe agrees that more work is needed. His next step is to test whether crows can recognize human faces in photographs, which would show that they do not depend on a single feature such as a mask. If they can, he says, we may need to rethink how much information birds take from the people around them.

注1: grudge 恨み 注2: hatch 孵化する

問1(1) The word unsettling in paragraph ② is closest in meaning to ____.

1. familiar
2. pleasing
3. disturbing
4. cheap

問1(2) The word hazards in paragraph ④ is closest in meaning to ____.

1. dangers
2. rewards
3. habits
4. tools

問1(3) The word convinced in paragraph ⑤ is closest in meaning to _____.

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|------------|--------------|
| 1. tired | 2. persuaded |
| 3. invited | 4. puzzled |

問1(4) The word cautioned in paragraph ⑤ is closest in meaning to _____.

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|------------|------------|
| 1. asked | 2. thanked |
| 3. invited | 4. warned |

問1(5) The word rethink in paragraph ⑥ is closest in meaning to _____.

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|---------------|-----------|
| 1. repeat | 2. resist |
| 3. reconsider | 4. report |

問2(1) What did the researchers find about the crows that had never been caught?

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|----------------------------------|--------------------------------|
| 1. They ignored the mask. | 2. They also scolded the mask. |
| 3. They flew away from the park. | 4. They were tagged later. |

問2(2) What does the study imply about the crows' memory?

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|-----------------------------------|-----------------------------------|
| 1. It can last for several years. | 2. It is stronger in older birds. |
| 3. It fades after about a year. | 4. It is limited to masks. |

問2(3) How might the news about the mask have spread among crows?

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|---|---|
| 1. Through chemical signals left on trees | 2. By crows reading the faces of the researchers |
| 3. By young crows learning from their parents' reactions and neighbors' alarm calls | 4. By the researchers teaching the crows in cages |

問2(4) What is implied by paragraph ④?

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|---|---|
| 1. Cities are safer than forests for crows. | 2. Crows are more intelligent than all other birds. |
| 3. Cars and poison are not a danger to crows. | 4. Sharing knowledge about danger helps crows live in cities. |

問2(5) Which of the following is closest to the argument made by Dr. Quint?

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|---|--|
| 1. The study proves that crows recognize faces. | 2. A crow's reaction does not necessarily show a lasting grudge. |
| 3. Crows in other cities ignore masks. | 4. The study was too short to be useful. |

IV

次の英文を読み、下記の設問に答えなさい。①～⑨は段落番号を表す。

① Axolotls, sometimes called “walking fish,” are small salamanders that can regrow a lost leg, a damaged heart, and even parts of their brain. Researchers at the Northfield Institute have now produced the most complete map yet of the axolotl genome, shedding light on how the animal performs such astounding feats.

② The task was far from easy. The axolotl genome is about ten times larger than the human one, and much of it is made of repeating sequences that confuse sequencing machines. Earlier attempts left many gaps. “It was like assembling a puzzle with thousands of nearly identical pieces,” said

geneticist Dr. Samira Voss, who led the project.

③ To solve the problem, the team combined two technologies: one that reads long stretches of DNA, and another that reads short stretches with high accuracy. The result is a genome with far fewer gaps than any earlier version. Axolotls have long fascinated doctors. Humans heal wounds by forming scars, while an axolotl simply regrows what it has lost, with bones, muscles, and nerves all in the right place.

④ Scientists hope that understanding this process could one day help patients with spinal injuries or damaged hearts. A few months ago, another group reported that axolotl cells placed in a mouse kept some of their ability to form new tissue. Such results are encouraging, though they remain far from clinical use.

⑤ Many scientists had assumed that regeneration must depend on a small set of genes found only in salamanders. The new genome challenges this view. Voss's team found that most of the genes involved in regrowth also exist in humans and other animals.

⑥ What differs is how those genes are switched on. After an injury, the axolotl activates a group of them in a precise order within hours, something mammals do not do. The team identified several stretches of DNA that act like switches, and showed that some of them become active only near wounds.

⑦ In an experiment, the researchers removed one of these switches from young axolotls. The animals grew normally, but their ability to regrow a limb was reduced by about half. "The switch is helpful, but it is not the whole story," Voss said.

⑧ The study also found that axolotls carry extra copies of genes that repair damaged DNA, which may protect cells during rapid growth. Whether these copies contribute to regeneration is not yet known.

⑨ Voss is cautious about the prospects for people. "We will not be regrowing human arms any time soon," she said. "But if we can learn when to turn the switches on, we may be able to help the body heal better than it does now." For now, the little salamander has again shown that nature still has many lessons to teach us.

注1: salamander サンショウウオの仲間 注2: sequence (塩基の) 配列 注3: regeneration 再生

問1(1) The word astonishing in paragraph ① is closest in meaning to ____.

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|-------------|------------|
| 1. ordinary | 2. amazing |
| 3. cruel | 4. silent |

問1(2) The word combined in paragraph ③ is closest in meaning to ____.

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|------------|----------|
| 1. limited | 2. sold |
| 3. joined | 4. broke |

問1(3) The word encouraging in paragraph ④ is closest in meaning to ____.

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|--------------|------------|
| 1. shocking | 2. boring |
| 3. confusing | 4. hopeful |

問1(4) The word precise in paragraph ⑥ is closest in meaning to ____.

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|-----------|-----------|
| 1. random | 2. exact |
| 3. rapid | 4. simple |

問2(1) According to the article, what did the researchers at the Northfield Institute achieve?

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|---|---|
| 1. They identified new species of salamander. | 2. They created a more complete map of axolotl DNA. |
| 3. They grew a human limb in a laboratory. | 4. They discovered why axolotls are so large. |

問2(2) What is implied by paragraphs ③ and ④?

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|--|--|
| 1. Axolotl research may become useful for treating human injuries. | 2. Axolotls are difficult animals to keep in laboratories. |
| 3. Humans will soon be able to regrow lost limbs. | 4. Scars are the best way for the body to heal. |

問2(3) What is the main point of paragraphs ⑤ through ⑧?

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|--|---|
| 1. Axolotls have genes that are found in no other animal. | 2. Axolotls are the only animals that can repair damaged DNA. |
| 3. New research has challenged an old assumption about regeneration. | 4. Gene switches are found only in salamanders. |

問2(4) Based on the article, which of the following statements is true?

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|--|---|
| 1. Removing a switch stopped limb regrowth completely. | 2. Humans do not have any of the genes used in regrowth. |
| 3. Axolotl cells cannot survive outside the animal. | 4. Some stretches of DNA become active only near a wound. |

問2(5) According to the article, what can be inferred about Dr. Voss?

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|--|--|
| 1. She expects people to regrow arms in the near future. | 2. She is hopeful about the research but realistic about its limits. |
| 3. She believes that extra repair genes are the cause of regeneration. | 4. She doubts that the research will ever help human patients. |

問2(6) Which of the following would be the best title for the article?

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|---|---|
| 1. Mapping the Secrets of a Self-Healing Animal | 2. Why Humans Cannot Regrow Their Limbs |
| 3. The Discovery of a New Salamander Species | 4. Gene Switches Are the Cure for Spinal Injuries |

V 自由英作文問題 下記テーマについて、英語で自分の考えを述べなさい。書体は活字体でも筆記体でもよいが、解答は所定の範囲内に収めなさい。

You are expected to write one complete essay. Your essay should include an introduction, main text, AND conclusion. Please write as if you are writing for someone who has not read the topic question.

Everyone belongs to groups that help shape who they are. Think about a group or community you have belonged to outside of school classes. Please describe how your experiences in that group (1) have shaped the way you listen to and learn from others and (2) will help you work with people of different backgrounds as a doctor. Exclude your family and your private tutors.

(解答欄) 19.8 cm × 22 行 (目安: 本番は 19.8 cm × 22 行)

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