TMPS医学館　過去問解説図書館

英　語

近畿大学医学部　2025年度型
そっくり類題セット

※ これは近畿大学の入試問題ではありません。
2025年度の出題形式（設問の数・設問の型）をもとに、
TMPS医学館が題材・英文・選択肢を新しく作成したオリジナル問題です。
英文中の人物・団体は架空です。

試験時間の目安：60分

大問	ページ	時間配分の目安
Ⅰ Sections A–C（空所補充・同義語・文脈）	2	12分
Ⅱ Sections D–E（長文・デジタルツイン）	3	13分
Ⅲ Sections F–G（長文・免疫学の見直し）	4	15分
Ⅳ Section H（長文・垂直農法）	5	15分

注意事項

1. 問題は全39問のマーク式。(1)〜(15)は選択肢ア〜エ、(16)〜(39)は選択肢ア〜オから、最も適切なものを1つ選ぶ。
2. 見直しの5分を含め、60分で解くことを想定している。
3. 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 Sections A–C（空所補充・同義語・文脈）

Follow instructions in sections A–C and answer the following items. Ensure that your choices correspond to the correct number on the marksheet.

(A) Complete the following sentences with the best word.

(1) After weeks of discussion, the team finally came up **(1)** a workable solution.
ア on　イ over　ウ in　エ with

(2) A: “Why was the match cancelled?”B: “Heavy snow **(2)** the field unusable.”
ア rendered　イ proposed　ウ resolved　エ declared

(3) The professor **(3)** his students to submit the report by Friday.
ア insisted　イ urged　ウ suggested　エ hoped

(4) She **(4)** her quick recovery to regular exercise and good sleep.
ア prefers　イ introduces　ウ owes　エ assumes

(B) Choose the answer that is closest in meaning to the underlined word or phrase.

(5) The team finished the project <u>ahead of schedule</u>.
ア behind the plan
イ without any plan
ウ earlier than planned
エ according to the plan

(6) The panel <u>dismissed</u> the proposal as unrealistic.
ア discussed　イ delayed　ウ revised　エ rejected

(C) Complete the following paragraphs with the best word.

Bees are often described as the unsung **(7)** of agriculture. A single hive can pollinate millions of flowers in a day, and roughly one third of the crops that feed humans **(8)** on this service. As wild bee populations **(9)**, farmers have begun to rent managed hives.

In 1998, a farmer in northern France **(10)** a small wooden chest buried beneath his barn. Inside lay a manuscript that had **(11)** hidden for nearly 600 years. Scholars were astonished that the ink had **(12)** so well, as most documents of that age have faded **(13)** recognition.

Scientists remain **(14)** about the results, as the trial was small, but officials insist **(15)** releasing the data next month.

(7) ア heroes　イ victims　ウ rivals　エ tenants

(8) ア insist　イ conclude　ウ approve　エ depend

(9) ア flourish　イ multiply　ウ decline　エ celebrate

(10) ア undertook　イ underlined　ウ unleashed　エ unearthed

(11) ア pretended　イ prevented　ウ remained　エ released

(12) ア survived　イ persuaded　ウ preserved　エ perceived

(13) ア beyond　イ into　ウ toward　エ within

(14) ア casual　イ capable　ウ curious　エ cautious

(15) ア in　イ at　ウ to　エ on

II Sections D–E（長文・デジタルツイン）

Read the passage below and follow instructions in sections D and E. Ensure that your choices correspond to the correct number on the marksheet.

P1: A “digital twin”is a (16)virtual copy of a physical object, building, or system that is kept up to date with data from its real-world counterpart. The term joins “digital,”meaning computer-based, and “twin,”which signals that the copy mirrors something that actually exists. Unlike a simple drawing, a digital twin changes as the original changes.

P2: Digital twins rely on two components working together. The first is a network of sensors attached to the real object, which measure things such as temperature, vibration, and pressure and send the readings to a computer. The second is a simulation model that uses those readings to predict what the object will do next. When the prediction differs from what the sensors later report, engineers correct the model, and the cycle repeats. Over time, the model’s forecasts become more reliable.

P3: Factories were the first to use the technology, but it is now used to (17)scrutinize far more than machinery. City planners test traffic patterns on virtual streets before changing a single traffic light, and airline engineers monitor the condition of a jet engine in mid-flight. Such uses can save money, because problems are found before the real equipment breaks down.

P4: Hospitals have recently (18)adopted the idea. By combining a patient’s scans, blood tests, and heart-rate data, doctors can build a personal model and try a treatment on it before giving it to the patient. Some researchers hope this will reduce side effects. Others warn that the models contain sensitive personal data, which must be protected from hackers and misuse.

P5: Teachers are also exploring digital twins. A medical student, for instance, can practise a surgical procedure on a virtual organ as often as needed without any risk to a living person. Because the model reacts to every mistake, the student receives immediate feedback and can improve steadily. Experts agree, however, that a virtual organ can never fully replace real clinical experience.

(D) Find the underlined words in the passage and choose the best substitute.

(16) Which choice is closest in meaning to virtual in paragraph 1 (P1)?
ア permanent　イ simplified　ウ identical　エ historical　オ computer-made

(17) Which choice is closest in meaning to scrutinize in paragraph 3 (P3)?
ア replace　イ inspect　ウ invent　エ delay　オ praise

(18) Which choice is closest in meaning to adopted in paragraph 4 (P4)?
ア turned down　イ handed over　ウ looked after　エ made up　オ taken up

(E) Choose the best answer to the following:

(19) According to the passage, which combination of components is central to a digital twin?
ア sensors and a simulation model
イ cameras and a printer
ウ speakers and a microphone
エ a battery and a motor
オ a keyboard and a screen

(20) In what way does the correction of the model by engineers affect the digital twin, according to the passage?
ア It stops the sensors from sending data.
イ It gradually makes the forecasts more reliable.
ウ It turns the model into a physical object.
エ It removes the need for any simulation.
オ It makes the real object change its shape.

(21) According to the passage, what concern is raised about the use of digital twins in hospitals?
ア They cost more than any surgery.
イ They cannot be used on adults.
ウ Sensitive personal data may be misused.
エ They always increase side effects.
オ They replace all doctors.

(22) According to the passage, how might digital twins benefit education?
ア by removing the need for exams
イ by allowing students to practise procedures without risk to patients
ウ by teaching students to repair sensors
エ by replacing teachers with virtual assistants
オ by printing textbooks automatically

(23) According to the passage, how can digital twins improve treatment?
ア by choosing a hospital automatically
イ by lowering the price of medicine
ウ by shortening the time doctors spend with patients
エ by letting doctors try a treatment on a personal model first
オ by removing scans and blood tests

III Sections F–G（長文・免疫学の見直し）

Read the passage below and follow instructions in sections F and G. Ensure that your choices correspond to the correct number on the marksheet.

P1: For decades, the dominant view in immunology has been that the immune system exists mainly to defend the body against invading microbes. Yet new findings arriving from neighbouring (24)strands of research, including microbiology and neuroscience, are beginning to challenge this narrow picture. An alternative view is taking shape, in which the immune system is also understood as a partner that helps to maintain the communities of microbes living inside us.

P2: We are a group of researchers who first met five years ago to discuss these discoveries. Since then we have worked to build a broader framework, which we call the cooperative immunity approach, and to set out its assumptions and predictions. At its core, the approach holds that key (25)pillars of health, ones that cannot be explained by defence alone, must be built into the theory. We believe that this approach will clarify how the body stays healthy. We argue that the immune system is shaped by the microbes it lives with, not simply “switched on”by infection. Microbes and immune cells adjust to each other, and in doing so they change the environment of the gut.

P3: The number of scientists asking for change is growing quickly. Strong encouragement comes from related disciplines, in particular nutrition science, but also genetics, psychology, and medicine. We contend that immunology will benefit fully only if it takes in lessons from these fields. The evidence behind our (26)stance grows stronger every year.

P4: Even so, merely mentioning the approach often provokes a heated, sometimes hostile, response from established immunologists. Discussions too often turn into argument, with accusations of confusion or misrepresentation. Some fear that grants will be lost if outsiders enter the field. Yet we believe that a shared effort, not a defensive wall, is the best way to serve patients.

(F) Find the underlined words in the passage and choose the best substitute.

(24) Which choice is closest in meaning to strands in paragraph 1 (P1)?
ア ropes イ hairs ウ branches エ colonies オ wires

(25) Which choice is closest in meaning to pillars in paragraph 2 (P2)?

ア elements イ rules ウ symbols エ gates オ stones

(26) Which choice is closest in meaning to stance in paragraph 3 (P3)?
ア posture イ speed ウ distance エ footing オ viewpoint

(G) Choose the best answer to the following:

(27) According to the passage, what was the purpose of establishing the cooperative immunity approach?
ア to show that infection never causes disease
イ to defend the traditional view of immunology
ウ to build a broader framework in which the immune system is shaped by its microbial partners
エ to persuade hospitals to buy new equipment
オ to reduce funding for microbiology

(28) Which of the following statements is best supported by the information provided in the passage?
ア The approach is accepted by all immunologists.
イ The approach was proposed more than twenty years ago.
ウ Immunology has stopped studying infection.
エ The approach is likely to clarify how the body stays healthy.
オ Nutrition scientists oppose the approach.

(29) According to the passage, why does the current thinking in immunology need to be revised?
ア Because infections have disappeared.
イ Because the present view treats the immune system too narrowly, as only a defence.
ウ Because doctors no longer use microscopes.
エ Because every theory must change every five years.
オ Because microbes have stopped living in the gut.

(30) According to the passage, what is the relative importance of the cooperative immunity approach?
ア It guarantees funding for immunologists.
イ It ends all arguments between scientists.
ウ It replaces the study of the gut with the study of the brain.
エ It builds on the defence view and adds the role of microbial partners.
オ It proves that nutrition has no effect on health.

(31) What does the author mean by “not simply ‘switched on’by infection”in paragraph 2 (P2)?
ア The immune system works only when an infection occurs.
イ The immune system is also influenced by the microbes it lives with.
ウ Infections can never be avoided.
エ The immune system can be turned on by electricity.
オ Microbes have no effect on the body.

IV Section H（長文・垂直農法）

Read the article below and follow instructions in section H. Ensure that your choices correspond to the correct number on the marksheet.

P1: In a warehouse outside Rotterdam, a start-up called GreenStack showed off what might be the future of food. Rows of lettuce grew on shelves stacked eight levels high, lit by purple LEDs and fed by a mist of nutrient-rich water. The demonstration farm produced as much lettuce as a field fifty times its size, which raises a serious question: is it time to bring farming indoors and build tall farms in the middle of cities?

P2: “It isn’t new science, it’s a logistics problem,”says GreenStack engineer Marta Visser. “Everyone knows plants can grow under lamps. Doing it cheaply is the challenge.”The need for food closer to consumers, falling energy prices, and better lighting technology could, supporters believe, finally make

the model work. “Once a big supermarket chain signs a contract, the sector will take off,”says investor Daniel Okoro.

P3: Major obstacles remain, including whether crops other than leafy greens can be grown profitably, and whether staff can stay healthy working long shifts under artificial light and in humid air. But the idea is moving from small trials to larger commercial projects. The Dutch government, which sponsored the Rotterdam demonstration, will next year propose a national plan of pilot farms to test the concept. Japan, Singapore, and the UAE already have several operating farms.

P4: Interest in growing food indoors first surged in the 1960s, when researchers imagined sealed greenhouses for polar stations. But early prototypes were too expensive to run: the electricity bill alone could have exceeded the value of the harvest. The idea was shelved and, according to analyst Hana Kimura, remains a niche curiosity for many agricultural scientists. Today, lighting technology has changed beyond recognition. Kimura says the efficiency of LED lamps has risen by 40 percent over the past decade, while their prices have fallen sharply. Sensors for water and nutrients are cheap, and robots now sow and harvest trays without human hands.

P5: But the biggest obstacle has been the cost of construction. A farm tall enough to feed a mid-sized city needs thousands of shelves, pipes, and lamps fitted by hand, demanding years of building work. “It would require a huge up-front investment,”says Visser. Cheaper LEDs have made the notion seem less far-fetched. “It’s changing the equation,”Kimura says. “Economics is everything.”

P6: Better engineering could make those economics more favourable. Visser says GreenStack’s farm is only 30 percent efficient overall, comparing the energy stored in the plants with the electricity consumed. Fields in sunny regions do better, but only during the growing season. If indoor farms can reach 50 percent efficiency, recent studies say, they could compete with field vegetables on price. And unlike a field, an indoor farm can harvest every week of the year, whatever the weather. Lighter shelving will also improve the calculation. “Stackable trays,”pizza-box-sized units with lamps on top and water channels below, could help. Link hundreds of these together and they form the basis of a tower farm without a lot of heavy framework.

P7: The drawback of stackable trays is that heat from the lamps builds up between the layers, so the upper shelves become warmer than the lower ones. To keep the temperature even, a farm needs fans that move air through every level, with the added benefit that moving air can also strengthen the plant stems. A 2021 study by Kimura put forward a design in which a central duct with thousands of tiny vents sends cool air to each tray.

P8: If an indoor farm ever does go commercial, the water it uses will need to be recycled efficiently. In a recent pilot, Teresa Lund’s team at a Danish university recycled 90 percent of the water in a 500-square-metre farm, and teams in Japan and Singapore report similar results. But current pumps and filters lose about a fifth of the electricity they take in. For indoor farming, Lund says, pumping needs 90 percent efficiency, “ideally 95.”

P9: The hygiene of tall farms also needs testing. Most designs aim to keep the air so clean that any worker or visitor who enters brings in only a tiny, hopefully harmless, number of spores. Cleanroom entrances are cheap to build, but they “need a lot of space,”Visser says, although she adds that you could place them in a basement or on the roof.

(H) Choose the best answer to the following:

(32) What technology did the GreenStack engineers demonstrate in Rotterdam that could shape the future of food?

ア growing lettuce in open fields using purple lamps
イ building greenhouses on the roofs of supermarkets
ウ transporting lettuce by refrigerated trucks
エ growing crops on stacked shelves lit by LEDs and fed by a nutrient mist

オ harvesting crops with the help of weather forecasts

(33) What are two main concepts discussed in paragraph 2 (P2)?

ア established science and a practical problem of cost
イ old farmers and young investors
ウ clean energy and fashionable lamps
エ modern art and large harvests
オ traditional fields and indoor sports

(34) According to paragraph 3 (P3), what concern is associated with working on a tall indoor farm?

ア too much noise from the robots
イ the risk of falling from the shelves
ウ the health of staff working under artificial light and humid air
エ the loss of customers to supermarkets
オ the danger of fire from the lamps

(35) According to paragraphs 4 (P4) and 5 (P5), what have been the primary practical challenges of indoor farming?

ア the arrival of cheaper LEDs
イ lack of interest from farmers
ウ inability to grow any crop indoors
エ high operating and construction costs
オ difficulty in finding customers

(36) According to the article, what advantage does an indoor farm have over a field?

ア lower electricity costs
イ ability to harvest crops throughout the year regardless of weather
ウ no need for any water
エ fewer workers in sunny regions
オ a larger area of land

(37) What is the rhetorical purpose of paragraph 7 (P7)?

ア to explain how the layers of a farm produce their own electricity
イ to explain how a design can solve a heat problem of stackable trays
ウ to explain why plants prefer warm air
エ to describe a study on manually cooled trays
オ to explain the particular advantages of lighter shelving

(38) What is one current limitation of recycling water in indoor farms, as mentioned in paragraph 8 (P8)?

ア recycling only 50 percent of the water
イ competition among universities
ウ the small size of the farms
エ doubt whether farms can be built in Japan
オ loss of about a fifth of the electricity by pumps and filters

(39) What point is made in paragraph 9 (P9) regarding the entrances used to keep farms clean?

ア They are cheap to build but need a lot of space.
イ They are highly dangerous to workers.
ウ They can only be built in basements.
エ They are too expensive for any farm.
オ They are made of living plants.

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