滋賀医科大学

令和２年度

医学科一般入試(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＊印のある語には注がある。　（配点　74点）

[1] Richard Drew never wanted an office job. Yet the banjo-playing college dropout born 120 years ago would go on to spend some four decades working at one of America's largest companies, and would invent one of the best-selling and most well-known household products in history — Scotch transparent tape.

[2] Every year its manufacturer sells enough of it (1) to circle the Earth 165 times. Born in Saint Paul, Minnesota, on June 22, 1899, Drew spent his youth playing the banjo in dance halls, eventually earning enough money to attend the University of Minnesota, but he only lasted 18 months in the engineering program. He took a correspondence course in machine design, and was soon hired as a lab technician by the Minnesota Mining and Manufacturing Company, which was then in the business of manufacturing sandpaper. Transparent tape was not Drew's first brilliant invention. That was another household must-have: masking tape.

[3] In Drew's early days at the company he would deliver sandpaper samples to auto manufacturers, who used it for the painting process. In the 1920s, two-tone cars were trendy. Workers needed to mask off part of the car while they painted the other (2), and often used glued-on newspaper or strong wrapping paper for the job, but that was difficult to get off, and often resulted in a sticky mess. Drew walked into an auto body shop one day and heard the choicest curse words he had ever known coming from frustrated workers. So he promised a better solution.

[4] He spent the next two years developing a tape that was sticky yet easy to remove. He experimented with everything, from vegetable oil to natural tree gums. A company executive, William McKnight, told Drew to stop messing around and get back to his regular job, which he did, but Drew kept doing tape experiments on his own time.

[5] Eventually, in 1925, he found a winning formula: crepe paper backed with a certain wood glue mixture, but his first version of masking tape only had adhesive* on the edges. When the painters used it, it fell off. They allegedly (3) told Drew to take his "Scotch" tape back to the drawing board, using the term to mean "cheap," an insult aimed at the stereotype that Scottish people are excessively careful not to waste money and materials. The name, so to speak, stuck. (4) It would be used for the larger range of tapes made by his company. Drew received a patent for his masking tape in 1930.

[6] That same year, Drew came out with his waterproof transparent tape after months of work. The tape took advantage of newly invented cellophane, but the material was not easy to work with, often splitting or tearing in the machine. The adhesive was yellow-brown, which ruined the cellophane's transparency. Drew and his team went on to invent adhesive-coating machines and a new, colorless adhesive.

[7] The tape was released just as America fell into the Great Depression, a time when "mend and make do" (5) became a motto for many. People used Scotch tape for everything, from mending ripped clothing to capping milk bottles to fixing the shells of broken chicken eggs. At a time when many companies were going under, tape sales helped the company grow into the multibillion-dollar business it is today.

[8] William McKnight, the executive who had told Drew to stop his tape experiments, eventually moved up the ranks to board chairman. Through Drew, McKnight came to understand that letting researchers experiment freely could lead to innovation. He developed a policy known as the 15 percent rule, which allows engineers to spend 15 percent of their work hours on passion projects. "Encourage free, spontaneous experimentation," McKnight said. "If you put fences around people, you get sheep. Give people the room they need." (6)

[9] The 15 percent rule has deeply influenced Silicon Valley culture where many IT companies give their employees free time to experiment. The Scotch tape story is now a classic business school lesson, a story that teaches the value of instinct and serendipity, (7) which Drew once called "the gift of finding something valuable in something not even sought out."

[10] After his tape successes, Drew was selected to lead a Products Fabrication Laboratory for his company, where he was given free rein to develop new ideas. He and his team would file 30 patents, for inventions from face masks to reflective sheeting for road signs. He would also become known as a great teacher, someone who helped young engineers sharpen their instincts and develop their ideas.

[11] Drew retired in 1962 and died in 1980, at the age of 81. In 2007, he was installed into the National Inventors Hall of Fame. "Richard Drew embodied the essential spirit of the inventor, a person of vision who refused to quit," said executive Larry Wendling celebrating the occasion.

[12] Today, a sign at the company in Drew's hometown commemorates his most famous invention. It reads, in part: "Introduced during the Great Depression, Scotch Transparent Tape quickly filled the need of Americans to prolong the life of items they could not afford to replace."

(出典 https://www.smithsonianmag.com/innovation/how-invention-scotch-tape-led-revolution-how-companies-managed-employees-180972437/より改変引用)

注 adhesive＝粘着性の〔もの〕

設問 1. What does underlined item it (1) refer to in this context?

設問 2. On entering the company, what was Drew's first job assignment?

A. He was assigned the work of manufacturing sandpaper.

B. He began his experiments on Scotch tape.

C. He was first assigned the job of bringing sandpaper samples to auto body shops.

D. He started working on transparent tape at the company's request.

設問 3. What does underlined item the other (2) mean in this context?

A. the rest of the car surface

B. the other car

C. the part of the car to be left unpainted

D. some other parts of the car

設問 4. What does underlined item (3) allegedly mean in this context?

A. mildly　　B. strongly　　C. reportedly　　D. suddenly

設問 5. What does underlined item (4) The name, so to speak, stuck. mean in this context?

設問 6. What is the origin of the name "Scotch tape"?

設問 7. What does underlined item (5) mend and make do mean in this context?

設問 8. Why did Scotch tape sell well during the Great Depression, when people's buying power was low?

設問 9. What does underlined item (6) If you put fences around people, you get sheep. Give people the room they need. mean in this context?

設問10. What did McKnight expect from his workers by offering the 15% rule?

設問11. What does underlined item (7) serendipity mean in this context?

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すること。右側に＊印のある語には注がある。　(配点　86 点)

[1] Close to the north pole of the moon lies the crater* Anaxagoras, named for a Greek philosopher who lived in the fifth century B.C. The honor is fitting, as Anaxagoras the man was one of the first people in history to suggest the moon was a rocky body, not all too dissimilar from Earth. Lines of material thrown out during the impact that formed the crater extend 560 miles southward to the rim of another crater, this one named for Plato*.

[2] Like Plato, Anaxagoras the scholar did most of his work in Athens, but the similarities between the two men stop there. Plato suggested a mystical universe based on sacred geometric* forms, including perfectly circular orbits*. Plato avoided observation and experimentation, preferring to pursue a pure knowledge that he believed was deep-rooted in all humans. However, Anaxagoras, who died around the time Plato was born, was gifted in astronomy, an area of study of the planets and stars that requires careful observation and calculation to unlock the mysteries of the universe.

[3] During his time in Athens, Anaxagoras made several fundamental discoveries about the moon. He expanded upon an idea that had likely emerged among thinkers before him but was not widely accepted in his day(1): that the moon and the sun were not gods, but rather objects. This seemingly harmless belief would ultimately result in Anaxagoras' arrest and exile.

[4] Piecing together the lives of early philosophers(2) such as Anaxagoras, who is thought to have written just one book, lost to us today, can be a major challenge for historians. Modern scholars have only "fragments"(3) to describe the life of Anaxagoras — brief quotes from his teachings and short summaries of his ideas, cited within the works of scholars from later generations, such as Plato and Aristotle.

[5] Through patient observation, Anaxagoras came to believe that the moon was a rock, not totally unlike the Earth, and he even described mountains on the lunar* surface. The sun, he thought, was a burning rock. In Fragment 18, he says, "It is the sun that puts brightness into the moon." While Anaxagoras was not the first to realize that moonlight is reflected light from the sun, he was able to use this concept to correctly explain additional natural phenomena, such as eclipses* and lunar phases.

[6] Anaxagoras grew up during the Ionian Enlightenment, an intellectual revolution that began around 600 B.C. As a young man, he saw the cities of Athens and Sparta fight together to drive the Persian Empire out of Ionia. When he relocated to Athens, Anaxagoras and his contemporaries brought philosophy to the emerging Athenian democracy. Although many Greek philosophers of the sixth and fifth centuries B.C. believed in one or a few fundamental elements — such as water, air, fire and earth — Anaxagoras thought there must be an infinite number of elements. (4) This idea was his way of resolving an intellectual dispute concerning the nature of existence that had emerged between the naturalistic-minded philosophers of Ionia to the east and the mystical-minded philosophers to the west, in Greek-colonized Italy, such as Pythagoras* and his followers. Anaxagoras noticed that when the moon is on the opposite side of the Earth to the sun, the full face is lit up, predicting not only phases of the moon, but also how eclipses are possible.

[7] The moon's phases, Anaxagoras realized, were the result of different portions of it being lit by the sun from Earth's perspective. The philosopher also realized that the occasional darkening of the moon must result from the moon, sun and Earth lining up in such a way that the moon passes into the Earth's shadow — a lunar eclipse. When the moon passes directly in front of the sun, the skies darken during the daytime, a phenomenon Anaxagoras also described and that we now call a solar eclipse.

[8] Anaxagoras also worked hard to understand the origins and formation of the moon, a mystery that still challenges scientists today. The philosopher proposed that the moon was a big rock which the early Earth had flung into space. By describing the moon as a rock of earthly origin, and the sun as a burning rock, Anaxagoras moved beyond earlier thinkers, even those who realized the moon was a kind of reflector. (5) This forward thinking got Anaxagoras labeled as a chief denier of the idea that the moon and sun were gods.

[9] Such an idea should have been welcome in democratic Athens, but Anaxagoras was a teacher and friend of the influential statesman Pericles, and political groups would soon plan to destroy him. In power for over 30 years, Pericles would lead Athens into several unpopular wars. Unable to hurt the Athenian leader directly, Pericles' enemies went after his friends. Anaxagoras was arrested, tried and sentenced to death, apparently for breaking religious laws while promoting his ideas about the moon and sun. Considering that Pericles was too popular to attack directly, when they wanted to attack him they found the weakest link in his group. As a foreigner and intellectual with challenging new ideas, Pericles' friend and "science advisor" Anaxagoras was an obvious target.

[10] Still holding some political influence, Pericles was able to free Anaxagoras and get his death sentence reversed. Though his life was spared, the philosopher who questioned the idea of the moon being a godly object found himself pushed out of society. However, his ideas regarding eclipses and lunar phases would live on to this day, and for his recognition of the true nature of the moon, a lunar crater, visited by orbiting spacecraft some 2,400 years later, bears (6) the name Anaxagoras.

(出典 https://www.smithsonianmag.com/science-nature/...180972447/より改変引用)

注 crater＝クレーター。惑星・衛星の表面にみられる噴火口のように円形にくぼんだ地形。
Plato＝プラトン(427?–347? B.C., ギリシャの哲学者)
geometric＝幾何学(上)の，幾何学的な
orbit(s)＝軌道
lunar＝月の
eclipse(s)＝(太陽・月の)食
Pythagoras＝ピタゴラス(580?–500? B.C., ギリシャの哲学者・数学者)

設問 1. What would be the best title for this text?

A. The Contrasting Approaches to Astronomy of Plato and Anaxagoras
B. People's Beliefs about the Moon, Scientific and Otherwise, Have Evolved Over Time
C. Ancient Greek Philosopher Exiled for Claiming the Moon Was a Rock, Not a God
D. The Danger of Questioning Authority in Ancient Greece

設問 2. Explain the difference between Plato and Anaxagoras concerning their attitudes and methods of inquiry into the mysteries of the universe.

設問 3. What does underlined item in his day (1) mean in this context?

設問 4. What does underlined item Piecing together the lives of early philosophers (2) mean in this context?

設問 5. Describe what underlined item fragments (3) are in this context.

設問 6. What does underlined item This idea (4) refer to in this context?

設問 7. How did Anaxagoras explain the phases of the moon?

設問 8. Explain what Anaxagoras thought about the origin and formation of the moon.

設問 9. What does underlined item This forward thinking (5) refer to in this context?

設問10. Explain why Anaxagoras' association with Pericles led to the attack on the former.

設問11. What does underlined item bears (6) mean in this context?

A. calls　　B. carries　　C. fixes　　D. yields

設問12. How has Anaxagoras been honored in modern times for his contributions to our understanding of the moon, the planets, and the stars?

Ⅲ. 以下の文章を，著者の意図を解釈して英訳せよ。

(配点　40 点)

鳥は卵の中からぬけ出ようと戦う。卵は世界だ。生まれようと欲するものは，一つの世界を破壊しなければならない。

(友との)対話はすべてどんなに平凡な対話でも，私の心中の同一点をかすかながらたえずハンマーでたたいた。すべては私の形成を手伝ってくれた。すべては，私が皮を脱ぎ，卵の殻を破るのを手伝ってくれた。

(出典：ヘルマン・ヘッセ，『デミアン』　高橋健二訳，新潮文庫，より改変引用)