公立大学中期日程

2024年度

＜工　学　部＞

外　国　語　問　題

（英　語）

注 意 事 項

1　問題冊子は，監督者が「解答始め」の指示をするまで開かないこと。

2　問題冊子は全部で8ページ，解答用紙は1枚である。脱落のあった場合には申し出ること。

3　解答用紙の所定欄に，受験番号（左右2箇所），氏名を必ず記入すること。

4　解答は，すべて解答用紙の所定欄に記入すること。

5　解答以外のことを書いたときは，該当箇所の解答を無効とすることがある。

6　解答終了後，配付された解答用紙は必ず提出すること。

7　問題冊子の余白は下書きに使用してもよい。

8　問題冊子は持ち帰ること。

（余　　白）

第１問　次の英文を読んで，設問に答えよ。　（90点）

We humans have a long history of pursuing neural*[1] enhancement—ways to improve the brains that evolution gave us. We train them to become more dependable and efficient allies in helping us to（　イ　）our goals. Law schools, business schools, and medical schools, music conservatories and athletic programs, all strive to harness the latent power of the human brain to deliver ever higher levels of achievement, to (1)provide an edge in a world that is increasingly competitive. Through the sheer force of human ingenuity, we have devised systems to free our brains of clutter, to help us keep track（　あ　）details that we can't trust ourselves to remember. All of these and other innovations are designed either to improve the brain we have, or to off-load some of its functions to external sources.

One of the biggest advances in neural enhancement occurred only 5,000 years ago, when humans discovered a game-changing way to increase the capacity of the brain's memory and indexing system. (2)The invention of written language has long been celebrated as a breakthrough, but relatively little has been made of what exactly were the first things humans wrote—simple recipes, sales receipts, and business inventories mostly. It was around 3000 BCE*[2] that our ancestors began to trade nomadic lifestyles for urban ones, setting up increasingly large cities and centers of commerce. The increased trade in these cities put a strain（　い　）individual merchants' memories and so early writing became an important component of recording business transactions. Poetry, histories, war tactics, and instructions for building complex construction projects came later.

Prior to the invention of writing, our ancestors had to rely on memory, sketches, or music to encode and preserve important information. Memory is fallible*[3], of course, but (3)not because of storage limitations so much as *retrieval* limitations. Some neuroscientists believe that nearly every conscious experience is stored somewhere in your brain; the hard part is finding it and pulling it out again.

Sometimes the information that comes out is incomplete, distorted, or misleading. Vivid stories that address a very limited and unlikely set of circumstances often pop to mind and overwhelm statistical information based on a large number of observations that would be far more accurate in helping us to make sound decisions about medical treatments, investments, or the trustworthiness of people in our social world. This fondness for stories is just one of many artifacts, side effects of the way our brains work.

It's helpful to（ ロ ）that our modes of thinking and decision-making evolved over the tens of thousands of years that humans lived as hunter-gatherers. Our genes*4 haven't fully caught up with the demands of modern civilization, but (4)fortunately human knowledge has—we now better understand how to overcome evolutionary limitations. This is the story of how humans have coped（ う ）information and organization from the beginning of civilization. It's also the story of how the most successful members of society—from successful artists, athletes, and warriors,（ え ）business executives and highly credentialed professionals—have learned to maximize their creativity, and efficiency, by organizing their lives so that they spend less time on the mundane, and more time on the inspiring, comforting, and rewarding things in life.

Cognitive psychologists have provided mountains of evidence over the last twenty years that memory is unreliable. And to（ ハ ）matters worse, we show staggering overconfidence in many recollections that are false. (5)It's not just that we remember things wrongly（which would be bad enough), but we don't even *know* we're remembering them wrongly, doggedly insisting that the inaccuracies are in fact true.

The first humans (6)（ ① ）（ ② ）（ ③ ）（ ④ ）（ ⑤ ）（ ⑥ ）（ ⑦ ）（ ⑧ ）around 5,000 years ago were in essence trying to increase the capacity of their hippocampus*5, part of the brain's memory system. They effectively extended the natural limits of human memory by preserving some

of their memories on clay tablets and cave walls, and later, papyrus and parchment. Later, we developed other mechanisms—such as calendars, filing cabinets, computers, and smartphones—to help us organize and store the information we've written down. When our computer or smartphone starts to（　ニ　）slowly, we might buy a larger memory card. That memory is both a metaphor and a physical reality. We are off-loading a great deal of the processing that our neurons would normally do to an external device that then becomes an extension of our own brains, a neural enhancer.

（出典：Daniel J. Levitin. *The Organized Mind: Thinking Straight in the Age of Information Overload*. Dutton, 2016）

*1　neural：神経（系）の

*2　BCE：紀元前

*3　fallible：誤りやすい

*4　gene：遺伝子

*5　hippocampus：海馬

問1　空所（　イ　）～（　ニ　）を補うのにそれぞれ最も適切な語を，次の１～５の中から選んで，その番号を記せ。ただし，同じ番号を繰り返し用いてはならない。

１．achieve　　２．gain　　３．make
４．run　　５．understand

問2　下線部(1)の言い換えとして最も適切なものを，次の１～４の中から選んで，その番号を記せ。

１．cause an effect
２．give an advantage
３．issue a challenge
４．produce a quality of sharpness

問3　空所（　あ　）～（　え　）を補うのにそれぞれ最も適切な語を，次の１～５の中から選んで，その番号を記せ。ただし，同じ番号を繰り返し用いてはならない。

１．in　　２．of　　３．on
４．to　　５．with

問4　下線部(2)を日本語に訳せ。

問5　下線部(3)が意味する内容を，40字以内の日本語で説明せよ。ただし，句読点も字数に入れる。

問６　下線部(4)の言い換えとして最も適切なものを，次の１～４の中から選んで，その番号を記せ。

１．by good luck, worldly knowledge has improved our genes to match the needs of past and present societies

２．happily, human intelligence has prevailed over our genes' limitations to meet the requirements of our civilization

３．luckily, artificial intelligence has overcome the restrictions of our genes to enable modern civilization to move forward

４．thankfully, human knowledge has hardly kept pace with the development and organization of modern civilization

問７　下線部(5)を日本語に訳せ。

問８　次の語を並べかえて，下線部(6)の空所（　①　）～（　⑧　）を補う場合，（　②　）（　④　）（　⑥　）にはそれぞれどの語が入るか，その番号を記せ。

１．down	２．figured	３．how
４．out	５．things	６．to
７．who	８．write	

問9　次の1～5のそれぞれの文について，本文の内容と一致する場合は○を，一致しない場合は×を記せ。

1．Finding information in the brain is easier than storing it.

2．The brain relies more on stories than on statistics to deal with important information.

3．The first things written were of little use in business transactions.

4．The part of the brain responsible for memory expanded rapidly with civilization.

5．Writing is one example of a neural enhancer.

第 2 問　次の日本文の下線部(1)と(2)を英語に訳せ。　（30点）

図書館の本は自分とは感覚の違う人が手に取る。(1)基本的に「借りている」という意識があれば，それなりにきれいに読もうとするはずなのだが，残念ながら利用者全員がそうではない。ごく普通の範囲だと私が感じても，それを汚く感じる人もいるだろう。(2)何であっても，ものを借りるのは，ある程度寛容でないと借りられない。それができないのであれば，自腹を切ってそのものを買えばいいだけだ。

（出典：群ようこ.『いかがなものか』. 集英社文庫，2023）