

2022 年度入学試験問題

英 語

(60 分)

注 意 事 項

1. 試験開始の合図があるまで、この問題冊子は開かないでください。
2. この問題冊子は 11 ページあります。試験中、ページの脱落等に気づいた場合は、手を挙げて監督者に知らせてください。
解答用紙(マークシート)の汚れなどに気づいた場合も、同様に知らせてください。
3. 解答用紙(マークシート)は折り曲げたり、汚したりしないでください。
4. 解答は、すべて解答用紙(マークシート)に記入し、解答用紙(マークシート)の枠外には、なにも書かないでください。
5. 試験問題は、1. ～ 40. まであります。
解答用紙(マークシート)には、問題番号が 1 ～ 50、選択肢が①～⑩まで印刷されていますが、解答にあたっては、1. ～ 40. までの各設問に指示された選択肢の数の中から選んで解答してください。
6. マークは必ず HB の黒鉛筆を使用し、訂正する場合は、完全に消してからマークしてください。
7. 監督者の指示に従って、解答用紙(マークシート)に解答する科目・受験番号をマークするとともに、受験番号および氏名を記入してください。
8. 解答する科目、受験番号、解答が正しくマークされていない場合は、採点できないことがあります。
9. 試験終了後、問題冊子は持ち帰ってください。

I. 次の英文を読んでA. とB. の問いに答えなさい。

In the first half of the 20th century, science fiction familiarized the world with the concept of artificially intelligent robots. It began with the “heartless” Tin man from *The Wizard of Oz**¹ and continued with the humanoid robot in *Metropolis**². By the 1950s, we had a generation of scientists, mathematicians, and philosophers with the concept of artificial intelligence or AI culturally assimilated in their minds. One such person was Alan Turing, a young British scholar who explored the mathematical possibility of artificial intelligence. Turing suggested that humans use available information as well as reason in order to solve problems and make decisions, so why can't machines do the same thing? This was the logical framework of his 1950 paper, “Computing Machinery and Intelligence” in which he discussed how to build intelligent machines and how to test their intelligence.

We now live in the age of “big data,” an age in which we can collect huge sums of information too big for a person to process. The application of artificial intelligence in this regard has already been quite fruitful in several industries such as technology, banking, marketing, and entertainment. Even if algorithms*³ don't improve much, big data and massive computing allow artificial intelligence to learn. While there may be evidence that the speed of computer evolution is slowing down a bit, it is clear that the rate of data growth has not lost its momentum. Breakthroughs in computer science, mathematics, or neuroscience all have the potential to break through the ceiling of the limits of computer evolution.

So what will the future bring? In the immediate future, AI will deal with language. This seems to be the next big thing. In fact, it has already begun. I can't remember the last time I called a company and directly spoke with a human. These days, machines are even calling me! One could imagine interacting with an expert system in a fluid conversation or having a

conversation in two different languages being translated in real-time. We can also expect to see driverless cars on the road in the next twenty years. This is a conservative forecast. In the long term, the goal is “artificial general intelligence.” That is a machine that surpasses human cognitive abilities*4 in all tasks. This is like the intelligent robots we are used to seeing in movies. To me, it seems unlikely that this would be accomplished in the next 50 years. Even if the capability is there, the ethical questions would serve as a strong barrier against realization. Before that time comes, we will need to have a serious conversation about machine policy and ethics. These are () fundamentally human subjects. Even so, for now, we’ll allow AI to steadily improve in society.

The History of Artificial Intelligence by Rockwell Anyoha, from Science in the News, Aug 28, 2017.

*1 the “heartless” Tin man from *The Wizard of Oz* : 1900年初版の小説『オズの魔法使い』(およびそれをもとにした映画などの作品)に登場する「心がない」ブリキの木こり

*2 the humanoid robot in *Metropolis* : 1927年公開の映画『メトロポリス』に登場する人型ロボット。人型ロボットを歴史上初めて映像化したもの

*3 algorithms : アルゴリズム, 演算

*4 cognitive abilities : 認知能力

A. 次の 1. ~ 5. の問いの答えとして最も適切なものを①~④から1つ選び, その番号を解答欄にマークしなさい。

1. Which is closest in meaning to the underlined part “assimilated in their minds”?

① familiar to them

② sophisticated with them

③ invented by them

④ escalated into them

2. What does the underlined part “the same thing” mean?
- ① to solve problems and make decisions only to use information and reason
 - ② to gather information and reason to explore problems and postpone decisions
 - ③ to use information and reason so as to solve problems and make decisions
 - ④ to explore problems and postpone decisions to gather information and reason
3. Which is closest in meaning to the underlined part “the rate of data growth has not lost its momentum”?
- ① the data growth has not been slowing down
 - ② the data processing has not been speeding up
 - ③ the data size has been shrinking down
 - ④ the data growth cannot be measured
4. What does the author mean with the underlined part “This is a conservative forecast”?
- ① He imagines that driverless cars could be on the road in exactly 20 years
 - ② He denies that driverless cars will be on the road in less than 20 years
 - ③ He estimates that driverless cars will be on the road in less than 20 years
 - ④ He feels that it could take much longer than 20 years for driverless cars to be on the road

5. Which is the best word to fill in the blank of the underlined sentence “These are () fundamentally human subjects.”?

- ① both ② either ③ neither ④ every

B. 次の 6. ～15. の英文が本文の内容と合致していれば①を，合致していなければ②を解答欄にマークしなさい。

6. The concept of robots with AI was introduced in science fiction in the early twentieth century.
7. Alan Turing was the first scholar to build a practical machine with artificial intelligence.
8. The age of “big data” allows us to collect more information than humans can process.
9. Artificial intelligence has been helpful in several industries, including technology, banking, marketing, and entertainment.
10. Any research cannot break through the ceiling of the limits of computer evolution.
11. The author hates telephone answering machines.
12. No one believes that having self-driving cars on public roads is really achievable.
13. In the long term, the goal is to create artificial intelligence that can exceed human cognitive abilities in every task.

14. The author suggests that the application of “artificial general intelligence” will be realized within 50 years.

15. Even if we can create AI that exceeds human abilities, it is important to discuss ethical matters.

※ Rockwell Anyoha, “The History of Artificial Intelligence.” *Science in the News*.
(Harvard University)を参考に作成
<https://sitn.hms.harvard.edu/flash/2017/history-artificial-intelligence/>(最終閲覧
日 2021 年 9 月 27 日)

Ⅱ. 次の 16. ～31. の英文の下線部に入る最も適切な語(句)を①～④から1つ選び、その番号を解答欄にマークしなさい。

16. Soon after he walked into the restaurant, John ordered French fries and a large cup of soda in _____ to a hamburger.

- ① addition ② charge ③ favor ④ spite

17. I love Cathy even though we have nothing in _____.

- ① common ② equal ③ general ④ share

18. Edward was late for the meeting _____ usual, so the chairperson advised him to come earlier next time.

- ① as ② for ③ in ④ like

19. The latest model of the laptop series is lighter than the former one _____ 200 grams.

- ① at ② by ③ for ④ in

20. This Italian restaurant you took us to today is _____ than the one we went to last month.

- ① as nicer ② far nicer ③ less nicer ④ very nicer

21. In the newspaper, the reporter described the politician as being _____ than intelligent.

- ① clever ② cleverer
③ even clever ④ more clever

22. Daniel seemed _____ to hear that his father had been involved in a train accident.
- ① shock ② shocked ③ shocking ④ shockingly
23. She is the medical specialist _____ we have been looking, so we are thinking of hiring her.
- ① at whom ② for whom ③ that ④ whomever
24. However hard I tried, I _____ succeeded in opening the box.
- ① almost ② even ③ never ④ still
25. If she keeps doing well in sales, the company _____ her a big raise in salary by next April.
- ① gives ② is given
③ will be given ④ will have given
26. We lost our way, and to make matters _____, it began to snow heavily.
- ① bad ② badly ③ worse ④ the worst
27. The writer always feels refreshed in nature, so she enjoyed _____ alone in the woods that day too.
- ① at walking ② walk ③ walking ④ to walk
28. We usually keep the front door _____ all day long for security reasons.
- ① lock ② locked ③ locking ④ to lock
29. According to the researchers, our future depends on _____ we can prevent the warming of the earth.
- ① which ② that ③ what ④ whether

30. The baby panda was born _____ the night of January 1st and is now growing well at the zoo.

- ① at ② in ③ on ④ until

31. We'll go jogging if it _____ raining by this afternoon.

- ① has stopped ② stop
③ will have stopped ④ will be stopped

Ⅲ. 次の 32. ~36. の各組の英文がほぼ同じ意味になるように、下線部に入る最も適切な語(句)を①~④から1つ選び、その番号を解答欄にマークしなさい。

32. A) Finally, we decided to buy that beautiful house and to move to the city.
B) Finally, we _____ up our mind to buy that beautiful house and to move to the city.
① kept ② made ③ put ④ took
33. A) In spite of poverty, Andrew often says that he is satisfied with his life.
B) _____ he is poor, Andrew often says that he is satisfied with his life.
① As ② However ③ Since ④ Although
34. A) Is there any reason why you behaved rudely at the party yesterday?
B) Is there any reason _____ your rude manner at the party yesterday?
① about ② for ③ of ④ to
35. A) I was about to leave home for the soccer club when the phone rang from the coach.
B) I was _____ the point of leaving home for the soccer club when the phone rang from the coach.
① by ② in ③ on ④ to
36. A) This is the most interesting book that I have ever read.
B) This is more interesting than _____ that I have ever read.
① any other book ② every other book
③ no other books ④ some other books

39. ① by means ② machine “reading” ③ may already be
④ of OCR ⑤ well developed

(OCRを用いた「読み取り」機能はすでに十分なものとなっているかもしれない)

40. ① heavy investment ② despite
③ limited ④ machine “reading” comprehension
⑤ remains

(莫大な資金投資にもかかわらず、「読み取り」機能の読解力には依然として限界がある)

※ Belinda Jack, *Reading: A Very Short Introduction*. (Oxford University Press, 2019)を参考に作成