

Name: _____ () Date: _____
 Class: _____

Read the following passage and answer the questions that follow. (24 marks)

B1 level

No. of Words: 778

Google's AlphaGo cruises to 4–1 victory against Go grand master

18 March 2016

[1] The fifteenth of March saw a historic moment when a machine beat a man in the ancient Chinese board game Go for the first time. Over the five courses of the game, South Korean Go grand master Lee Se-dol lost three straight times. Despite a win over Google DeepMind's AlphaGo program in the fourth game, Lee was unable to hold off his opponent's comeback in the final game. The results were regarded as a milestone in the development of artificial intelligence (AI).

[2] Having tried the best he could in the draining, emotional battle, Lee remained in his seat and his eyes swelled with tears as the game's results were announced. In a post-game press conference, he expressed his regrets over losing the match, creating an undeniable sadness among those who gathered to watch the match at the Four Seasons Hotel in Seoul. 'I failed,' he said. 'I felt sorry that the match is over and it ended like this. I wanted it to end well.'

[3] AlphaGo's victory, which computer programmers had once believed would take at least another decade to achieve, provides a testament of the rapidly growing power of modern artificial intelligence.

[4] Originated in East Asia, Go has long been considered one of the most challenging board games in the world. With only a handful of rules to follow, the mind-boggling Go could be mistaken for a simple game to those who do not know it, especially when it is compared with the numerous restrictive rules of chess. In truly simple games like noughts and crosses, every possible outcome can be calculated. What makes Go intricate is the countless possibilities provided by its 19×19 grid. While games like draughts and chess can be 'solved' by modern-day computers, the same calculation method is useless on Go, as every single move leads to about 250 other possible moves, compared with only 20 in chess.

[5] Ever since computer software was adopted in playing board games in the 1990s, a program that is capable of playing Go has been a holy grail for computer scientists, in particular researchers who specialize in AI. After IBM's supercomputer Deep Blue won chess champion Garry Kasparov in 1997, researchers shifted the focus to tackling the more complicated game of Go. Compared with Go, teaching computers chess is a no-brainer. Chess programs have evolved so much over the years that they are now better than any human being. It had almost taken 20 years for AI researchers to get the grips with the complexities of Go. Until the arrival of Google's AlphaGo, the game remained a mystery to AI researchers because many experts struggled to pinpoint exactly how it works, and probably many still do to this day.

[6] While it is generally agreed that in Go, strategy and tactics collide with intuition and cunning, the game also appears not to have any hard and fast rules, and the ‘strategies’ appear not to be any more specific than what looks more like the players’ sixth sense. ‘Even the best
35 players struggle to describe exactly what they are doing,’ says Miles Brundage, an AI researcher at Arizona State University. According to Brundage, Go players frequently turn to ‘general principles’ and ‘intuition’, which is something very difficult for data-crunching computers to master.

[7] The achievement of the programmers at Google’s DeepMind was more than creating
40 something that could defeat a top-rated Go player. They demonstrated that AI can acquire mental faculties, one of the many traits of human intelligence. AlphaGo is designed to be able to learn from playing against a slightly tweaked version of itself, which generates training data to develop its own intuition about how to play the game — to discover strategies that human players understand but fail to explain.

[8] With Google’s success in creating a computer program capable of winning a game that depends very much on intuition, many people wonder how the relationship between man and machine will develop. Scientists believe AI still has a long way to go before ‘becoming human’. The main obstacle AI has yet to overcome is its inability to truly understand human language —
45 how words can take on different meanings with small changes in language use. This explains
50 why to this day there has not been a machine capable of producing natural-sounding translations.

[9] What does the future hold for artificial intelligence? Those who create it might say, ‘Quite promising.’ But before we admit defeat before the artificial intelligence we ingeniously created ourselves, let us remember that life is a little more than 19×19 grid. AI still has a lot of hoops to
55 jump through before becoming an equal to human intelligence.

Comprehension

1. Why is 15 March an 'historic moment' (line 1)?

2. Where was the last game between Lee Se-dol and AlphaGo held?

3. What does 'this' (line 11) refer to?

4. Which of the following is true about paragraph 2?

- A. The Koreans were disappointed at Lee's performance.
B. Lee thought he had not given the game his best effort.
C. Lee was exhausted after the game.
D. Lee thought he would lose all five games.

A	B	C	D
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. Why would Go be mistaken for a simple game?

6. How do modern-day computers play board games like chess and draughts?

7. Based on the information in paragraphs 3–4, decide whether the following statements are **True**, **False**, or the information is **Not Given**. Blacken ONE circle only for each statement. (4 marks)

	T	F	NG
i) AlphaGo's triumph over Lee surprised computer programmers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ii) Chess is the first board game a computer tried to play.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
iii) Computers can calculate the best moves to win a game on Go.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
iv) Chess has more rules than Go.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8. Find a word in paragraph 4 that means 'complex'.

9. Complete the following sentence.

The holy grail for AI researchers is _____.

10. Based on the information in paragraph 5, complete the text by writing ONE word to fill in each blank. You should make sure that your answers are grammatically correct, paying attention to word form, plurals, etc. (4 marks)

Since the 1990s, AI researcher has been trying to create (i) _____ that could beat humans in board games. World class chess champion Garry Kasparov was probably the first human being to (ii) _____ to a computer, but today, chess programs can (iii) _____ any human opponents. It will take some time before the same can be said about Go as it is a much more (iv) _____ game than chess.

11. Which word or phrase in paragraph 5 means the same as 'understand'?

12. According to paragraph 6, why is it difficult to teach computers to play Go?

13. What is the significance of Google's success in creating a computer program capable of winning Go?

14. How did programmers train AlphaGo to play Go?

15. Identify three traits of human intelligence mentioned in the text. (3 marks)

i) _____

ii) _____

ii) _____

16. To say that AI 'still has a lot of hoops to jump through' (lines 53–54) suggests that realizing the dream of AI having human qualities ...

A. takes a lot of work.

B. is not likely to happen.

C. is an easy task.

D. requires a large team of scientists to work together.

A	B	C	D
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Answer key

1. It is the date when a machine beat a man in the ancient Chinese board game Go for the first time.
(lines 1–2)
2. At the Four Seasons Hotel in Seoul (line 10)
3. Lee losing the match (line 9)
4. C (lines 7–8)
5. It only has a few rules to follow (line 16), but each single move leads to about 250 other possible moves (lines 21–22).
6. By calculating every possible outcome (lines 18–19)
7. (i) T (lines 11–12)
(ii) NG
(iii) F (line 21)
(iv) T (lines 16–18)
8. intricate (line 19)
9. a program that is capable of playing Go (lines 23–24)
10. (i) software (line 23)
(ii) lose (line 25)
(iii) beat (line 28)
(iv) complex (line 29)
11. get the grips with (lines 29)
12. Go players frequently turn to ‘general principles’ and ‘intuition’, which is something very difficult to turn to data for computers to process. (lines 36–38)
13. It shows that AI can acquire mental faculty, which is a trait of human intelligence. (lines 40–41)
14. They programmed AlphaGo such that it can play against a slightly tweaked version of itself and learn from the experience. (lines 41–43)
15. (i) Acquiring mental faculties (lines 40–41)
(ii) Being able to play games that require intuition (line 43)
(iii) Understanding how word meanings can differ with small changes in language use (line 49)
16. A