

Name: _____ () Date: _____
Class: _____

B2 level

No. of Words: 891

Read the following passage and answer the questions that follow. (29 marks)

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

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- [1] It was history in the making, and considerably sooner than many people had expected. The fifteenth of March saw the conclusion of a five-match series of games between South Korean Lee Se-dol, considered one of the world's best players of the ancient Chinese board game Go, and AlphaGo, a system developed by Google-owned DeepMind. After Lee had won the fourth game, which took observers and computer programmers by surprise, the computer sealed a 4–1 victory in a contest described by some as the spectacle between artificial intelligence (AI) and human.
- [2] Lee remained in his seat as the results of the draining, emotional battle were announced, his eyes swelling with tears. In the post-game press conference, he apologized to the Korean public and the wider Go community for losing the match, tapping an undeniable melancholy among all those spectators who gathered to watch the match inside Seoul's Four Seasons Hotel. 'I failed,' he said. 'I felt sorry that the match is over and it ended like this. I wanted it to end well.'
- [3] The top-rated Go player could well have been apologizing to the entire humankind, for alarmists deem it the last frontier between AI and the naturally evolved sort. AlphaGo's victory — victory of a non-human entity — is a stark demonstration of the rapidly growing power of modern artificial intelligence.
- [4] A widely popular board game in East Asia, Go is known for its complexity unparalleled in other games such as chess. With only a handful of rules to observe, Go could be mistaken as a simple game to the casual eye, especially when comparing it with the numerous restrictive rules of chess. This simplicity, however, is deceptive. In truly simple games like noughts and crosses, every possible outcome can be calculated, and this brute-force approach means a computer can determine the best possible move in any given situation. Lying at the heart of Go's intricacy are the countless possibilities its 19×19 grid opens up. While games like draughts and chess can be 'solved' by modern-day computers, the previously invincible mathematical brute force is rendered useless on Go, as every single move leads to about 250 other possible legal moves. This means the number of possible moves is nearly a hundred of orders of magnitude more than the number of atoms in the observable universe, making it almost impossible to program.

[5] Creating a program that beats a Go master has long been a holy grail for computer scientists, in particular researchers who specialize in artificial intelligence. Ever since 1997, when IBM's supercomputer Deep Blue claimed the scalp of chess champion Garry Kasparov, the focus of some fractions of AI research has shifted to cracking the exponentially more complicated game of Go. Chess programs have evolved so much over the years that they are now better than any human. Compared with Go, teaching computers chess is a no-brainer. However, until the advent of Google's AlphaGo, the game remained an enigma to AI researchers because many experts struggled — and probably still do to this day — to pinpoint exactly how it works. The game has then taken the place of chess in helping scientists figure out how far AI can go.

[6] While it is generally agreed that Go is a board game in which strategy and tactics collide with intuition and cunning, the game also appears not to have any hard and fast rules, nor are the 'strategies' any more specific than what looks more like the players' sixth sense. 'Even the best 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 a big conundrum to data-crunching computers.

[7] What the team of programmers at Google's DeepMind succeeded in doing was much more than creating something that could bring the world's best Go player to his knees. They demonstrated that artificial intelligence has started to acquire human faculties, most notably intuition. AlphaGo is special in that it has been designed to develop its own intuition about how to play the game — to discover for itself the rules that human players understand but fail to explain. The technique used to develop the program is called deep learning, where the system is first trained to mimic human play and extract features, principles and rules of thumb. It then plays against another slightly tweaked version of itself, which generates copious training data.

[8] With Google's success in creating a computer program capable of winning a game that hinges on little more than feel, many people wonder how the relationship between man and machine will play out. Scientists believe AI still has a long way to go to cross over into the human realm. The main obstacle AI has yet to surmount is its inability to truly understand human language and the infinite layers of nuance we add to it. This explains 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? Quite promising, as those who create it might say. But before we woefully kneel down before the artificial intelligence we very ingeniously created ourselves, let us remember that life is a little more than 19×19 grid. After all, AI still struggles with most things human — well, at least for the time being.

Comprehension

1. Why did the writer say 'It was history in the making' (line 1)?
- A. It was the first game between a human being and a computer.
 B. It was the first victory of artificial intelligence over human intelligence.
 C. It was the first board game played by a computer and a human being.
 D. The competition between a human being and a computer finished sooner than people had expected.
- A B C D
☐ ☐ ☐ ☐

2. When was the last game between Lee Se-dol and AlphaGo played?
- _____

3. Why was it so surprising that Lee won the fourth game?
- _____
- _____

4. Complete the summary of paragraph 2 by choosing a word from the eight options given below. Write the correct word in the space provided. Each word can be used ONCE only.

(3 marks)

apologetic	ashamed	conceited	elated
exhausted	regretful	saddened	thrilled

Lee was obviously (i) _____ after the games with AlphaGo. He also felt (ii) _____ for having lost to a computer. All those who watched the games are (iii) _____ by his losing.

5. Based on paragraphs 2 and 3, 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) Lee felt that he had failed because he allowed the match to be over.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ii) The post-game press conference was held at Four Seasons Hotel.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
iii) AlphaGo shows a marked progress in the performance of AI.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
iv) Lee apologized to the entire humankind for losing the games.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. What does 'it' (line 15) refer to? _____

7. Why is the simplicity of Go deceptive? Summarize the idea in your own words.
- _____
- _____

8. When is the 'invincible mathematical brute force' (line 25) useful?
- _____

9. Find a phrase in paragraph 5 which suggests something that people have always wanted to achieve.
- _____

10. Which of the following is implied in paragraph 5?
Put a tick (✓) next to the TWO that apply. (2 marks)
- i) Deep Blue was the first computer taught to play chess games. _____
 - ii) There is no doubt that a computer can win a game of chess against any human beings today. _____
 - iii) Computers do not need to be taught how to play chess now. _____
 - iv) AlphaGo has solved some of the mysteries surrounding Go. _____

11. What does 'claimed the scalp' (line 31) mean? _____

12. Below is a summary of paragraph 6. In three of the lines, there is ONE mistake. If you find a mistake, underline the mistake and replace the word with one that expresses the correct idea. Write the word in the space on the right. If there is no mistake, put a tick (✓) in the space. The first has been done for you. (4 marks)

	Summary	Correction
e.g.	What makes Go <u>easy</u> for computers is that the 'strategies'	<i>difficult</i>
i)	required to win the game is often the player's common sense,	
ii)	which can be reduced to hard data for computers because	
iii)	Go players can't always describe how they play, and	
iv)	as a result, scientists don't know how to teach their computers.	

13. According to paragraph 7, what has DeepMind's AI done? (2 marks)
- i) _____
 - ii) _____

14. How is AlphaGo's intuition developed?

15. How does the writer describe Go in paragraph 8?

16. Why is it so difficult to produce natural-sounding translations? (2 marks)
- i) _____
 - ii) _____

17. What is the irony mentioned in paragraph 9?

18. What is the writer's answer to the question 'What does the future hold for artificial intelligence' (line 59)?

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Answer key

1. B
2. 15 March (lines 1–2)
3. The first three victories seemed to have proved the computer better and so nobody expected Lee to win in the fourth game.
4. (i) exhausted (line 8)
(ii) apologetic (line 9)
(iii) saddened (line 10)
5. (i) F (line 12)
(ii) NG
(iii) T (lines 16–17)
(iv) F (line 14)
6. The game between AI vs. human mind (line 15)
7. It has very few rules to observe (line 19) but the number of possible moves in a game is more than one can imagine (lines 27–28).
8. In games like noughts and crosses (line 21), draughts and chess (line 24)
9. holy grail (line 29)
10. (i)
(ii) ✓ (lines 33–34)
(iii)
(iv) ✓ (lines 35–37)
11. win a victory over
- 12.

	Summary	Correction
e.g.	What makes Go easy for computers is that the 'strategies'	<i>difficult</i>
i)	required to win the game is often the player's common sense,	sixth (line 41)
ii)	which can be reduced to hard data for computers because	cannot (line 44)
iii)	Go players can't always describe how they play , and	think (line 42)
iv)	as a result, scientists don't know how to teach their computers.	✓

13. (i) Beaten the world's best Go player (line 46)
(ii) Shown that AI has started to acquire human faculties (e.g. intuition) (lines 47–48)
14. By mimicking human play first to extract features, principles and rules of thumb, and then plays against itself to generate training data (lines 50–52)
15. A game that hinges on little more than feel (lines 53–54)
16. (i) Computers cannot truly understand human language (lines 56–57)
(ii) Small changes in language use may mean very different things (line 57)
17. We are clever enough to create artificial intelligence but it is out-performing us (lines 60–61), like in the games of chess and Go.
18. He believes that in the near future, there are still human qualities that AI cannot master, but in the future, it is possible that AI supersedes human beings. (line 62)