IELTS ACADEMIC · READING PASSAGE 2 · QUESTIONS 1–14 · SUGGESTED TIME: 20 MINUTES

READING PASSAGE 2

The Master's Eye

What the memory of chess players reveals about the nature of skill

A It is widely assumed that a chess grandmaster must be blessed with an exceptional memory, or with sheer mental power of a kind the rest of us lack. The truth, as a series of well-known experiments has shown, is stranger and more interesting. What sets the master apart is not a more capacious memory but a different way of seeing — one that can be acquired only through long experience, and that quietly transforms what the eye takes in.

B The first clues came from the work of a Dutch psychologist who was himself a strong player. He set out to discover how the thinking of masters differed from that of ordinary club players, expecting to find that the masters calculated far more moves and looked much further ahead. To his surprise, they did neither: masters and good amateurs searched through the possibilities in much the same way. What distinguished the masters was the speed with which they grasped the essential features of a position and settled on a promising move. To probe this further, he showed players a position taken from a real game for only a few seconds, then removed it and asked them to reconstruct it from memory. The masters reproduced it almost perfectly; the weaker players managed only a small fraction of the pieces.

C This looked, at first, like clear proof of a superior memory. But in the early 1970s two American researchers devised an ingenious control that overturned the obvious reading. They repeated the memory test, but with a single crucial change: alongside positions drawn from genuine games, they presented positions in which the very same pieces had been scattered at random across the board. Their aim was to discover whether the masters' advantage really lay in memory itself, or in something about the meaning of what they were being shown.

D The outcome was decisive. On the positions taken from real games, the masters' familiar superiority returned in full. On the random positions, however, it simply collapsed: the masters recalled no more — or barely more — than the novices. Had the masters merely possessed better memories, they ought to have excelled at both kinds of position. The fact that their advantage vanished the moment the arrangement ceased to be meaningful showed that raw memory was not the explanation at all.

E What, then, was? The researchers proposed that years of play had taught the masters to see the board not as some thirty separate pieces but as a small number of familiar patterns — clusters that recur across thousands of games. Where a novice saw a knight in one place and a pawn in another, a master saw a single recognisable formation. Because each such cluster, or "chunk", counts as one item rather than many, a master could hold an entire position within the same ordinary limits of short-term memory that constrain everyone else. A strong player, it has been estimated, has tens of thousands of these patterns stored away. A randomly arranged board belongs to no game and matches none of them, which is precisely why the master's advantage disappears.

F The same finding has since been reproduced, with the same result, in fields far removed from chess — among doctors reading medical scans, musicians, electronics technicians, and players of other games. In every case the expert's striking memory turns out to be confined to material that is meaningful within the domain, and to evaporate when that material is scrambled. Expertise, on this view, is less a matter of general mental power than of a vast and well-organised store of domain-specific knowledge, built up slowly through years of practice.

Nor does it transfer: a grandmaster has no special advantage in remembering a random list of numbers, or, for that matter, a random chessboard.

G The picture is not quite as clean as the classic experiment once suggested. Later studies, using far larger numbers of players, have found that experts retain a small advantage even on random positions — for a board scattered at random will, by chance, still contain the occasional fragment that an experienced eye recognises. The central lesson, however, has held firm. What looks from the outside like a prodigious memory is, on closer inspection, the fruit of pattern and practice. The master remembers more not because the mind can hold more, but because experience has taught it to see more in a single glance.

TRUE / FALSE / NOT GIVEN

Questions 1–5. *Do the following statements agree with the information given in Reading Passage 2? Tick (✓) one box for each statement.*

1. The Dutch psychologist expected masters to search many more moves ahead than weaker players.

☐ TRUE ☐ FALSE ☐ NOT GIVEN

2. On the randomly arranged positions, the masters recalled far more pieces than the novices did.

☐ TRUE ☐ FALSE ☐ NOT GIVEN

3. A chess master has a strong advantage in memorising a random list of numbers.

☐ TRUE ☐ FALSE ☐ NOT GIVEN

4. The same memory effect has been observed in areas of expertise other than chess.

☐ TRUE ☐ FALSE ☐ NOT GIVEN

5. Chess masters are, on average, more intelligent than people who do not play chess.

☐ TRUE ☐ FALSE ☐ NOT GIVEN

MULTIPLE CHOICE

Questions 6–9. *Choose the correct letter,* ***A****,* ***B****,* ***C*** *or* ***D****.*

6. What did the Dutch psychologist find about how masters and weaker players think?

- **A** Masters considered far more possible moves than weaker players
- **B** Masters and good amateurs searched the possibilities in much the same way
- **C** Weaker players grasped the key features of a position more quickly
- **D** Masters relied mainly on memorising long sequences of moves

7. Why did the researchers include randomly arranged positions in their experiment?

- **A** To make the test more difficult for every player
- **B** To find out whether the masters' advantage depended on the position being meaningful
- **C** To measure how quickly players could place the pieces
- **D** To compare chess with other board games

8. According to the chunking explanation, how does a master hold an entire position in mind?

- **A** By having a much larger short-term memory than other people
- **B** By memorising each piece separately and very rapidly
- **C** By recognising the pieces as a few familiar patterns rather than many separate items
- **D** By writing the position down before it is removed

9. What does the writer conclude about the nature of expertise?

- **A** It depends on an unusually powerful general memory
- **B** It comes mainly from a large, well-organised store of domain-specific knowledge
- **C** It transfers easily from one field to another
- **D** It is mostly a matter of natural talent rather than practice

SENTENCE COMPLETION

Questions 10–11. *Complete the sentences below. Choose* ***NO MORE THAN TWO WORDS*** *from the passage for each answer.*

10. Because each chunk counts as a single item, a master can hold a whole position within the ordinary limits of _____.

11. Each familiar grouping of pieces that a master recognises is called a _____.

MATCHING INFORMATION

Questions 12–14. *The reading passage has seven paragraphs,* ***A–G****. Which paragraph contains the following information? Write the correct letter,* ***A–G****.*

12. An account of how the researchers changed the earlier memory test. _____

13. A list of other fields in which the same effect has been observed. _____

14. A qualification noting that experts keep a small advantage even with random material. _____

ANSWER KEY

For teacher / self-study use. Fold or detach before distributing to students.

Q	ANSWER	PARA	EXPLANATION
1	**TRUE**	**B**	He expected masters to calculate more moves and look further ahead (his expectation, later overturned). The statement is about the expectation, not the finding.
2	**FALSE**	**D**	On random positions the masters' advantage collapsed; they recalled no more than the novices.
3	**FALSE**	**F**	A master has no special advantage in remembering a random list of numbers.
4	**TRUE**	**F**	The same effect appears among doctors, musicians, technicians and others.
5	**NOT GIVEN**	—	The passage never compares masters' general intelligence with that of non-players. (A "chess equals intelligence" trap; "less a matter of mental power" in F is about the source of skill, not an IQ comparison.)
6	**B**	**B**	Masters and good amateurs searched in much the same way. A is the expectation that proved false.
7	**B**	**C**	The random positions tested whether the advantage lay in memory itself or in the meaning of the material.
8	**C**	**E**	A few familiar patterns rather than many items. A is explicitly denied (the same ordinary limits as everyone).
9	**B**	**F**	A large, well-organised store of domain-specific knowledge. A, C and D are each contradicted.
10	**short-term memory**	**E**	"within the same ordinary limits of short-term memory".
11	**chunk**	**E**	"each such cluster, or 'chunk'".
12	**C**	**C**	The introduction of randomly arranged positions as a control.
13	**F**	**F**	Doctors, musicians, electronics technicians, other games.
14	**G**	**G**	The small residual advantage on random positions.

APPROXIMATE IELTS BAND EQUIVALENCE (14 QUESTIONS)

SCORE	14	13	12	11	10–9	8–7	6–5	≤4
BAND	9.0	8.5	8.0	7.5	7.0–6.5	6.0–5.5	5.0	<5.0