ANNOTATED READING PACK C1 LEVEL

Quantum Computing in Everyday Life: Myth vs. Reality

COMPREHENSION • VOCABULARY • DISCUSSION

INTERACTIVE ONLINE TEST

Take the full interactive test with instant feedback →

https://www.esl-tests.com/reading/c1/quantum-computing-everyday-life-myth-reality

Reading Passage

Read the passage carefully. Each paragraph is labelled with a letter for easy reference.

A

In recent years, quantum computing has captured the public imagination, often portrayed as a near-magical solution to the world's most complex problems. Headlines proclaim breakthroughs in speed, security, and artificial intelligence, leading many to believe that quantum computers are about to become everyday household devices. However, while the field is making significant progress, much of the hype surrounding its immediate impact on daily life is misguided. At its core, a quantum computer operates on principles entirely different from those of a classical computer. Traditional computers use bits, which represent either 0 or 1. In contrast, quantum computers use qubits, which can exist in multiple states at once due to a property known as superposition. Furthermore, qubits can be entangled, meaning the state of one qubit is dependent on the state of another, regardless of the distance between them. These properties allow quantum computers to perform certain calculations exponentially faster than classical systems. However, this doesn't mean quantum computers are "better" in every way. They excel at solving specific types of problems, such as factoring large numbers, optimizing complex systems, and simulating quantum physics. These tasks are crucial in fields like cryptography, pharmaceuticals, and logistics—but are rarely part of the average person's daily routine. A common misconception is that quantum computers will soon replace laptops, smartphones, and gaming consoles. In reality, current quantum machines are highly unstable and require extremely cold temperatures to function—close to absolute zero. They also demand environments free from even the slightest vibration or electromagnetic interference. These conditions make them impractical for home use and limit their accessibility to specialized research facilities or cloud-based quantum services. Moreover, programming a quantum computer is vastly more complicated than writing code for a classical one. It requires not only knowledge of quantum mechanics but also an understanding of advanced mathematical concepts. While there are efforts to create user-friendly platforms, we are still far from making quantum computing accessible to the general public in a meaningful way. That said, the technology could have indirect effects on daily life in the future. For instance, quantum simulations might accelerate drug discovery, leading to faster and more effective treatments. Logistics companies could use quantum algorithms to optimize delivery routes, potentially lowering shipping times and costs. Even financial institutions might harness quantum computing to improve market predictions and risk management. In essence, the current narrative around quantum computing often blurs the line between scientific promise and science fiction. While the technology holds transformative potential, it is unlikely to become a routine part of everyday life in the near future. Understanding its realistic capabilities—not just the speculative ones—is essential for informed public discourse and responsible policy-making.

Vocabulary Glossary

Key words and phrases from the passage. Study them before attempting the exercise below.

WORD / PHRASE	DEFINITION	EXAMPLE SENTENCE
captured	to have gotten someone's attention or interest	*The story of the hero captured the children's interest.*
portrayed	to show or describe someone or something in a certain way	*The movie portrayed the main character as a brave leader.*
superposition	a state where something can be in multiple positions or conditions at the same time	*In a game, a dice in superposition could show all numbers at once.*
entangled	when two things are connected in a way that the state of one affects the other	*The two friends were so close that their lives seemed entangled.*
misguided	based on wrong or incorrect ideas or beliefs	*He was misguided in thinking that he could finish the project in one day.*
exponentially	increasing or growing very quickly	*The population of the city grew exponentially over the last decade.*
vibration	a small, quick movement back and forth	*I could feel the vibration of the train as it passed by.*
speculative	based on guesses or ideas about what might happen or be true	*The plan to build a space hotel is still very speculative.*

Vocabulary Exercise — Fill in the Blank

Use one word or phrase from the glossary above to complete each sentence. Each item is used only once. Answers are on the final page.

1. The new art exhibit _____ many visitors with its bright colors and unique style.
2. The book _____ the villain as a misunderstood character.
3. In some stories, characters can be in a state of _____, making them unpredictable.
4. The twins were so _____ that they often finished each other's sentences.
5. Many people have _____ beliefs about the effects of eating chocolate daily.
6. Online sales have increased _____ in the past year, surprising many businesses.

Comprehension Questions

These questions are different from the online practice test. Choose the best answer (A, B, C, or D). Answers and explanations are on the final page.

Question 1

What is a key characteristic of qubits that differentiates them from classical bits?

A. They can exist in multiple states at once.

B. They are always in a state of absolute zero.

C. They operate without any external influence.

D. They are easier to program than classical bits.

Question 2

Why won't quantum computers replace everyday devices soon?

A. They are too slow for simple tasks.

B. They require very special conditions to work.

C. They can only do mathematical calculations.

D. They are too expensive for production.

Question 3

What does the author suggest about the current public narrative of quantum computing?

A. It is overly optimistic about immediate changes.

B. It accurately reflects the current state of technology.

C. It focuses too much on the negative aspects.

D. It is mainly concerned with scientific studies.

Question 4

Which industry might benefit from quantum computing's ability to optimize complex systems?

A. Education

B. Healthcare

C. Logistics

D. Entertainment

Question 5

What future impact of quantum computing does the author mention?

A. It will become cheaper than classical computers.

B. It will be a common household technology.

C. It could improve financial predictions.

D. It will replace all existing computers.

Discussion & Writing Prompts

Each prompt references a specific detail from the passage above. Use for classroom discussion or a short written response (150–200 words).

1. Paragraph 2 describes qubits using superposition and entanglement. How do you think these properties could change future technology development?

2. The passage mentions that quantum computers require extremely cold temperatures to function. What advancements do you think are needed to make them more practical?

3. According to paragraph 6, quantum computing might help in drug discovery. What other areas of healthcare do you think could benefit from this technology?

Answer Key

COMPREHENSION QUESTIONS

Q1 A	Q2 B	Q3 A	Q4 C	Q5 C

VOCABULARY EXERCISE

FIB1 captured	FIB2 portrayed	FIB3 superposition	FIB4 entangled
FIB5 misguided	FIB6 exponentially		

Comprehension Question Explanations

Why the correct answer is right — and why each wrong option is incorrect.

1. What is a key characteristic of qubits that differentiates them from classical bits?

✓ A — They can exist in multiple states at once. Qubits can exist in multiple states due to superposition, as mentioned in paragraph 2.

✗ B — They are always in a state of absolute zero. *Absolute zero is related to the environment quantum computers require, not qubits themselves.*

✗ C — They operate without any external influence. *Qubits are influenced by entanglement and superposition.*

✗ D — They are easier to program than classical bits. *Programming qubits is more complex, not easier.*

2. Why won't quantum computers replace everyday devices soon?

✓ B — They require very special conditions to work. Quantum computers need extremely cold temperatures and no interference, as explained in paragraph 4.

✗ A — They are too slow for simple tasks. *Quantum computers are fast for specific tasks, not slow.*

✗ C — They can only do mathematical calculations. *They can do more than just mathematical calculations.*

✗ D — They are too expensive for production. *Cost is not the primary reason mentioned; conditions are.*

3. What does the author suggest about the current public narrative of quantum computing?

✓ A — It is overly optimistic about immediate changes. The passage explains that the narrative blurs the line between promise and fiction, indicating it's overly optimistic.

✗ B — It accurately reflects the current state of technology. *The narrative does not accurately reflect the current state.*

✗ C — It focuses too much on the negative aspects. *The passage mentions hype, not an overly negative focus.*

✗ D — It is mainly concerned with scientific studies. *The narrative is more about public perception, not scientific studies.*

4. Which industry might benefit from quantum computing's ability to optimize complex systems?

✓ C — Logistics Logistics can use quantum algorithms for optimizing delivery routes, as mentioned in paragraph 6.

✗ A — Education *Education is not mentioned as directly benefiting from optimization.*

✗ B — Healthcare *While healthcare benefits from simulations, optimization is not the focus.*

✗ D — Entertainment *Entertainment is not discussed as benefiting from system optimization.*

5. What future impact of quantum computing does the author mention?

✓ **C — It could improve financial predictions.** The passage notes potential improvements in financial market predictions and risk management.

✗ **A — It will become cheaper than classical computers.** *Cost reduction is not mentioned as a future impact.*

✗ **B — It will be a common household technology.** *The passage indicates it won't be a common household item.*

✗ **D — It will replace all existing computers.** *It suggests quantum computers won't replace all existing computers.*

MORE C1 LEVEL READING PRACTICE

Sociology Trust Modern Societies — https://www.esl-tests.com/reading/c1/sociology-trust-modern-societies

Economics Global Art Market — https://www.esl-tests.com/reading/c1/economics-global-art-market

Digital Memory Technology Changing Human Recall — https://www.esl-tests.com/reading/c1/digital-memory-technology-changing-human-recall