

RIPPLE ENGLISH

ACTIVE LEARNING PROGRAM

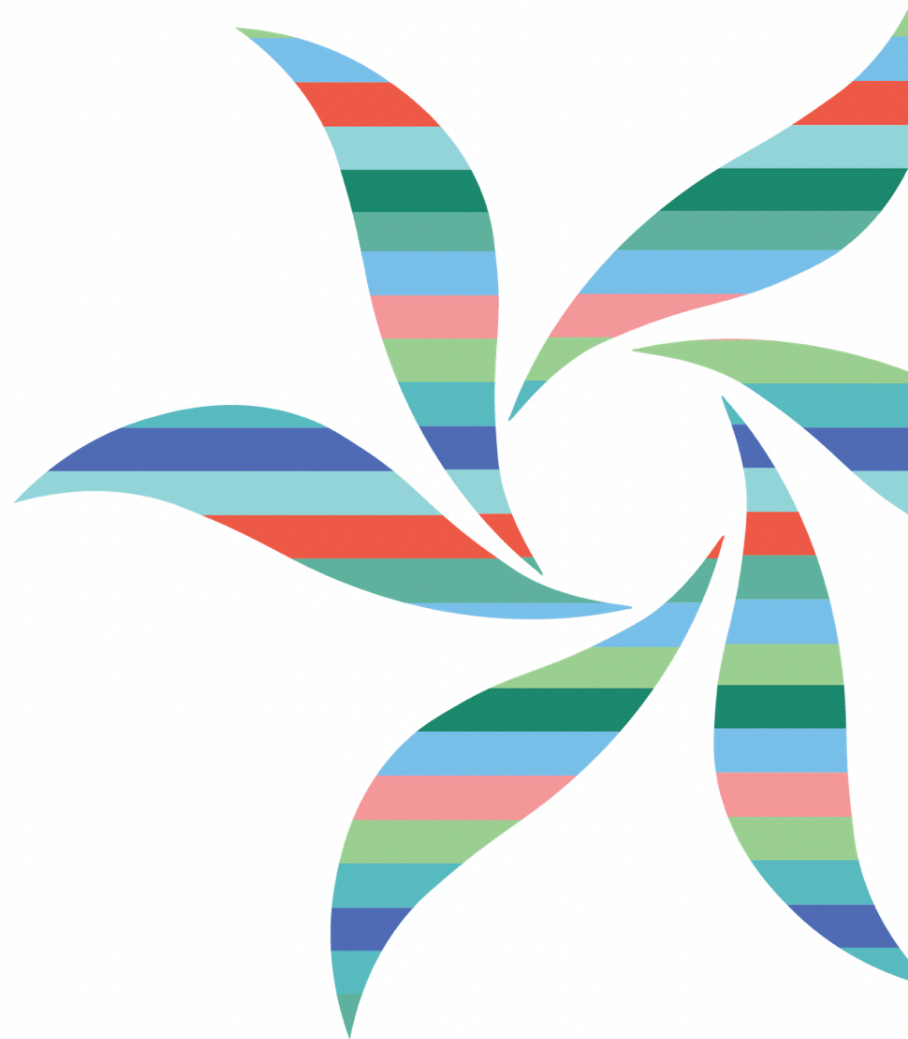
Workbook for:
“Science Fiction Shapes the Future”

問題は解きっぱなしにしないで！

英語資格試験の学習は、**解いた後の復習をしなければほとんど効果はありません。**

答え合わせをしておしまいせず、**テキストの音読練習やリスニング、多読学習などのインプット学習を何度も反復して記憶に定着させましょう。**ホームページからダウンロードできる音読練習用のテキストをぜひご活用ください。

また、数日置いてから再度解き直すのも効果的です。答えを記憶してしまっているかもしれませんが、**回答の根拠をなぞりながら繰り返し解くことで有効な復習になります！**



Science Fiction Shapes the Future

1. In the 21st century, science fiction is perhaps the most important genre in the arts. We are living a time where none of us truly understand how fast the world is changing. The radical transformation of society is attributed to the exponential progress of science and technology. Developments in AI and robotics are increasingly changing both our private and professional lives. Neuroscience and evolutionary psychology are shattering our illusion about human nature. Quantum mechanics and genetic engineering may totally replace the traditional concepts of the universe and life. However, the majority of the population don't read technical books and science journals on the latest technologies. Instead, they watch movies like *Matrix* and *Avatar*, and read novels such as *The Three-Body Problem*. Consequently, science fiction plays a key role in shaping how most people understand things such as artificial intelligence, bioengineering, and climate change. Science fiction has created our dreams and ideals for the future, provided insights into human nature and society, and sounded the alarm for potential challenges for humanity. What can we learn from science fiction?

- (1) According to paragraph 1, science fiction perhaps is the most important genre in the arts because
 - A. neuroscience and artificial intelligence are drastically changing the world.
 - B. most people are indifferent to the latest science and technologies.
 - C. it influences how we comprehend the latest science and technologies.
 - D. we can learn insight into human nature and society.

Iron Man (2008)

2. Perhaps no other movie in recent years has provided as much inspiration to entrepreneurs and technologists as *Iron Man* in 2008. Tony Stark is a billionaire and tech genius, and he fights villains with a high-tech flying suit of armor he invented by himself. He has his own personal assistant AI named J.A.R.V.I.S. Whether it is in the workshop or on battlefields, J.A.R.V.I.S. talks naturally with Stark with a witty, dry, and sarcastic sense of humor. Stark can describe potential inventions to his AI, and then they can team up on their design and construction.
 3. This cool and sophisticated **depiction** of AI stimulated the development in this field. As of 2023, the latest machine learning algorithms possess problem-solving capabilities equivalent to J.A.R.V.I.S. Text generative AIs including ChatGPT are only one step away from communicating like J.A.R.V.I.S. Speech recognition and text-to-speech software have also improved dramatically in recent years. 15 years after *Iron Man*, we already have individual technologies required for Stark's AI.
 4. Similarly, with the popularity of *the Jurassic Park* series, there was a growing interest among the public for ancient DNA research, leading the media to focus more on this field. As a result, more researchers entered this realm and research funding increased. Progress and invention are fueled by our excitement and curiosity, and these powerful emotions have often been provoked by inspiring fictions.
- (2) According to paragraph 2, what is the relationship between Stark and his AI?
 - A. They are hostile to each other.
 - B. The AI dispassionately supports Stark in the workshop and on battlefields.
 - C. The AI often provokes Stark into fury.
 - D. They work together to realize his idea through entertaining interactions.
 - (3) The word “depiction” in the passage is closest in meaning to
 - A. representation
 - B. explanation
 - C. scenery
 - D. prediction
 - (4) According to paragraph 4, which of the following did NOT happen with the popularity of *the Jurassic Park* series?
 - A. Studies on ancient DNA got spotlighted.
 - B. Ordinary people became intrigued in the field.
 - C. More people were attracted to work in the realm.
 - D. Researchers in this field got motivated.

Childhood's End (1952)

5. The 21st Century may be the last era where we live as Homo Sapiens. It doesn't mean that we would fail to survive, but rather we may evolve into something different. *Childhood's End* in 1952 by Arthur C. Clarke, renowned as a masterpiece in the history of science fiction, depicts the transformation of humanity. Humankind is composed of single individuals with a concrete identity. At the end of the story, however, newly-born children cease to be the individuals, and merge into the *Overmind*, a vast cosmic intelligence. They abandon their separated personality, becoming part of a single group consciousness. In other words, humanity evolves into a collective intelligence, where all individuals share their minds.
6. Does this sound ridiculous and outlandish? Today, humanity has already begun to behave as a single unified mind. When we choose a restaurant, we refer to reviews by millions of other anonymous individuals. When we buy something on Amazon or look for a video on Youtube, we follow suggestions by algorithms that learn from billions of other users. When a significant event occurs for humanity, numerous opinions and interpretations immediately emerge on social media and people around the world quickly form a consensus on the issue. People want to be part of the data flow; they record and share everything about their lives, and make choices based on these data from billions of other people. Once technologies like Brain-Computer Interfaces are put into practical use and enable our brains to directly connect to the Internet, the unification of humanity as a species will be virtually accomplished. Did the author foresee this trend back in 1952?
- (5) According to paragraph 5, what will be the endgame of humanity depicted in *Childhood's End*?
- A. Humanity becomes extinct.
 - B. Humanity collaborates together to tackle the existential issue.
 - C. Humanity is unified into greater existence.
 - D. Humanity evolves to acquire super intelligence.
- (6) According to paragraph 6, which of the following is NOT mentioned?
- A. Our brain could be linked seamlessly to the Internet in the future.
 - B. We became unable to make choices by ourselves.
 - C. We are voluntarily becoming a part of the unified network.
 - D. We rely on opinions of strangers in making decisions.

Inside Out (2015)

7. Disney has built its dominance by retelling one myth through different movies. In countless Disney films, the heroes face challenges, but they eventually **triumph** by finding their true self, following their hearts and making their own decisions. However, in 2015, the same studio released a movie that brutally shattered this myth.
8. *Inside Out* tells the story of an 11-year-old girl, Riley, who moves from Minnesota to San Francisco with her family. Officially, it is a comedic happy-ending story that depicts how she overcomes difficulties adjusting to her new life. But actually it is a suggestion that there is no free will based on the latest neuroscience. Unlike Elsa in *Frozen* or Rapunzel in *Tangled*, Riley never discovers her true self, nor does she make any free choices. Riley is in fact a huge robot controlled by various characters in her brain. The movie personifies biochemical mechanisms of the human brain as a set of cartoon characters, such as the yellow and cheerful *Joy*, the blue and gloomy *Sadness*, and so on. They watch over Riley's life on a huge screen in her brain's headquarters and control all of her moods, decisions, and behaviors by manipulating buttons and levers.
9. Throughout the whole movie, you will never find any single authentic self that integrates and determines Riley's identity. Rather, you will learn that her well-being depends on the effective interaction of neurological mechanisms that prompt various emotions. When *Joy* took a step back and *Sadness* pressed the button, Riley was able to confide her sorrow to her parents. Similarly, when you want to hug your family, it is not a reflection of your free choice, but because of the action of hormones like oxytocin. *Inside Out* became a blockbuster around the world, perhaps because it wrapped its neurological implications in a happy-ending taste. Most people don't want to hear the message that we are just biochemical algorithms.
- (7) The word "triumph" in the passage is closest in meaning to
- A. grow
 - B. gain support
 - C. overcome
 - D. change mind
- (8) According to paragraph 8, which of the following is true?
- A. Riley finally overcomes the difficulty by acquiring control over the brain.
 - B. Riley herself has not command over her life.
 - C. Riley is a personification of biochemical mechanisms of the human brain.
 - D. Riley's choices are predetermined.
- (9) According to paragraph 9, what is the source of Riley's happiness?
- A. Effective interplay of various brain functions.
 - B. Hostly confiding her emotions.
 - C. Wrapping negative things in happy and cheerful interpretations.
 - D. Having warm physical contact with her family.

The Circle (2013)

10. There is a famous saying that goes, “**the road to hell is paved with good intentions**,” and our path towards a dystopian future will indeed follow this quote. Numerous science-fiction writers have depicted potential dystopia, including *1984* by George Orwell. Many of these societies are obviously frightening, and ordinary people often struggle against suppression by the authorities. But that is not likely to happen in reality. Much more likely to happen is that people voluntarily move towards a nightmarish world. Our path to dystopia consists of a lot of steps, each of which looks quite beneficial and attractive. But once we have walked up through the entire staircase, we realize that it was the way to dystopia.
11. *The Circle* in 2013 portrays ordinary citizens who are willingly proceeding towards surveillance society. A big tech company named The Circle runs a social media platform, and the company asks people to share everything about their lives in exchange for convenience and entertainment. Users share their private lives to get a better reaction from other users. They give away their biometric data, such as their blood pressure levels, for better healthcare services. The citizens gradually accept surveillance cameras around the world, believing that transparency will reduce crimes and make society safer. Some people oppose such radical transparency, but they in turn come under suspicion that they must have something to hide. Consequently, people gradually and voluntarily step into a controlled society without any dictator or the secret police.
12. Today, Humanity is already on the way towards such a surveillance society. We are happy to give up our personal data in exchange for quick information, free email services, social approval, and funny cat videos. The early 16th century political philosopher Niccoló Machiavelli said that we should “learn the way to hell in order to flee from it.” As depicted in *The Circle*, the journey towards dystopia will not look horrifying, but rather irresistibly captivating.

(10) Which of the following text best expresses the essential message in the highlighted sentence in paragraph 10?

“the road to hell is paved with good intentions,”

- A. Authorities impose dystopian society with sincerity.
- B. The journey towards dystopia must look captivating.
- C. Dystopia and utopia look quite identical.
- D. We can avoid dystopian future by continuously making good choices.

(11) According to paragraph 11, how does the world move towards surveillance society in “*The Circle*”?

- A. By a large enterprise forcibly shifting the social structure.
- B. By a tech company manipulating users through its social media platform.
- C. By some people radically advocating transparency.
- D. By ordinary citizens willingly choosing to abandon privacy.

(12) In paragraph 12, what does Niccoló Machiavelli’s quote indicate?

- A. The way to nightmarish future must appear attractive than horrifying.
- B. Our effort to avoid the hell begins with choosing the right way.
- C. We need to know how we might possibly end up being in undesired situation.
- D. We will voluntarily walk towards dystopian future.

Answers

- (1) C
- (2) D
- (3) A
- (4) D
- (5) C
- (6) B
- (7) C
- (8) B
- (9) A
- (10) B
- (11) D
- (12) C

(1) 1 段落によると、SFが最も重要な芸術のジャンルである理由は

- A. neuroscience and artificial intelligence are drastically changing the world. (神経科学と人工知能が世界を大きく変えているから)
- B. most people are indifferent to the latest science and technologies. (ほとんどの人は最新の科学やテクノロジーに無関心だから)
- C. it influences how we comprehend the latest science and technologies. (私たちが最新の科学と技術をどのように理解するかに影響を与えるから)**
- D. we can learn insight into human nature and society. (人間の本性と社会についての洞察を学ぶことができるから)

(2) 2 段落によると、スタークと彼のAIはどのような関係か？

- A. They are hostile to each other. (彼らは敵対しあっている)
- B. The AI dispassionately supports Stark in the workshop and on battlefields. (AIは作業場でも戦場でも淡々とスタークをサポートする)
- C. The AI often provokes Stark into fury. (AIはしばしばスタークを怒らせる)
- D. They work together to realize his idea through entertaining interactions. (彼らは愉快なやり取りをしながらスタークのアイデアを協働して実現する)**

(3) 文中の“depiction (表現、描写)”に最も意味が近いのは

- A. representation (表現)**
- B. explanation (説明)
- C. scenery (風景)
- D. prediction (予測)

(4) 4 段落によると、次のうちジュラシック・パークの人気によって起きなかったことは？

- A. Studies on ancient DNA got spotlighted. (古代DNAの研究が注目を浴びるようになった)
- B. Ordinary people became intrigued in the field. (一般の人々がこの分野に興味を持つようになった)
- C. More people were attracted to work in the realm. (より多くの人がこの分野で働くことに魅力を感じた)
- D. Researchers in this field got motivated. (この分野の研究者たちのモチベーションが上がった)**

(5) 5 段落によると、『幼年期の終り』で描かれた人類の最終局面はどのようなものか？

- A. Humanity becomes extinct. (人類は絶滅する)
- B. Humanity collaborates together to tackle the existential issue. (人類は存続の危機に対処するために協力する)
- C. Humanity is unified into greater existence. (人類は大いなる存在に統合される)**
- D. Humanity evolves to acquire super intelligence. (人類は進化し超人的な知能を獲得する)

(6) 6 段落で言及されていないのはどれか？

- A. Our brain could be linked seamlessly to the Internet in the future. (我々の脳は将来インターネットにシームレスにつながる可能性がある)
 - B. We became unable to make choices by ourselves. (我々は自分自身で意思決定できなくなった)**
 - C. We are voluntarily becoming a part of the unified network. (我々は自発的に1つの統合されたネットワークの一部になりつつある)
 - D. We rely on opinions of strangers in making decisions. (我々は意思決定の際に見ず知らずの人たちの意見を当てにする)
- Bがややこしいが、YoutubeやAmazonの例など、他者やアルゴリズムを当てにする場面を言及しているが、意思決定能力を失ったとまでは言っていない。

(7) 文中の“triumph (克服する、勝利する)”に意味が最も近いのは

- A. grow (成長する)
- B. gain support (支援を得る)
- C. overcome (乗り越える)**
- D. change mind (考え方を変える)

(8) 8 段落の内容に合致するのは？

- A. Riley finally overcomes the difficulty by acquiring control over the brain. (ライリーは最終的に脳のコントロールを得て困難を克服する)
 - B. Riley herself has not command over her life. (ライリー自身は自分の人生をコントロールすることができない)**
 - C. Riley is a personification of biochemical mechanisms of the human brain. (ライリーは脳内の生化学メカニズムの擬人化だ)
 - D. Riley's choices are predetermined. (ライリーの意思決定は前もって決められている)
- D: 脳内のキャラクターがボタンやレバーで操作することによってライリーの行動が決まるので、宿命的に先にすべて決まっているわけではない。

(9) 9 段落によると、ライリーの幸福の源泉はなにか？

- A. Effective interplay of various brain functions. (脳のさまざまな機能の効果的な相互作用)**
- B. Mostly confiding her emotions. (正直に感情を打ち明けること)
- C. Wrapping negative things in happy and cheerful interpretations. (ネガティブなものごとを幸せて陽気な解釈で包み込むこと)
- D. Having warm physical contact with her family. (家族との温かいスキンシップ)

”her well-being depends on the effective interaction of neurological mechanisms that prompt various emotions.”の内容を言い換えているAが正解。

(10) 下線部の10段落における意図をもっともよく表しているのは？

“the road to hell is paved with good intentions,”
(地獄への道は善意で舗装されている)

- A. Authorities impose dystopian society with sincerity. (権力は誠実さからディストピア社会を押し付けてくる)、
 - B. The journey towards dystopia must look captivating.** (ディストピアへの道のりは魅力的に見えるに違いない)
 - C. Dystopia and utopia look quite identical. (ディストピアとユートピアは見分けがつかない)
 - D. We can avoid dystopian future by continuously making good choices. (良い意思決定をし続けることでディストピアの未来を避けることができる)
- Cもこの本文全体のインプリケーションとしては受け取れる内容ではあるが、下線部の意図として受け取るには無理がある。

(11) 11段落によると、『ザ・サークル』の中では世界はどのように監視社会に向かっていくか？

- A. By a large enterprise forcibly shifting the social structure. (大企業が社会構造を強制的に変えることによって)
- B. By a tech company manipulating users through its social media platform. (SNSを通じてユーザーを操作するテクノロジー企業によって)
- C. By some people radically advocating transparency. (透明性を過激に支持する一部の人々によって)
- D. By ordinary citizens willingly choosing to abandon privacy.** (プライバシーを放棄することを自ら選択する一般市民によって)

(12) 12段落のマキャベリの引用が示唆しているのは？

- A. The way to nightmarish future must appear attractive than horrifying. (悪夢のような未来への道のりは恐ろしいものではなく魅力的なものに見えるはずだ)
 - B. Our effort to avoid the hell begins with choosing the right way. (地獄を避ける努力の第一歩は正しい道を選ぶことから始まる)
 - C. We need to know how we might possibly end up being in undesired situation.** (我々がどのようにして望ましくない状況に陥り得るかを知っている必要がある)
 - D. We will voluntarily walk towards dystopian future. (我々は自発的にディストピアの未来に進んでいくだろう)
- A、Dはこのパートの趣旨ではあるが、マキャベリの引用が意味していることではない。