

10. In the 19th century, the population of Ireland swelled, and the country turned to potato cultivation to feed the people. As much as 40 percent of the residents survived on a diet consisting almost entirely of potatoes. However, a blight lasting from 1845 to 1849 caused potatoes to become _____, whether raw or cooked.

- ① resilient ② ripened ③ inedible
④ impeccable ⑤ untarnished

11. Human nature and long distances have made exceeding the speed limit a cherished tradition in the state, so the legislators surprised no one when, acceding to public demand, they _____ increased penalties for speeding.

- ① rejected ② encountered ③ exploited
④ isolated ⑤ commemorated

12. This image of Mars as potentially harboring life persisted until July of 1965, when the Mariner probe sent back twenty-two close-up photographs of the surface. These pictures revealed a stark and barren landscape which was a far cry from the _____ Mars envisioned by many.

- ① fertile ② desolate ③ feasible
④ secular ⑤ eclectic

13. Put the following story into a logical order. [3.7점]

Around A.D. 100, a Chinese court official ground up a mash of mulberry bark, rags and fishnets, and invented paper. A few centuries later, someone – maybe a Buddhist monk who was tired of writing the same sacred text again and again – carved a sacred text into a block of wood and invented printing.

(A) Pretty soon, the government took over the business of printing paper money, and it spread throughout China. In an era when there was no mechanized transport, the ability to move value around on a few pieces of paper – rather than a wagon full of metal coins – was a breakthrough.

(B) A few centuries after that, a merchant in the capital of Sichuan set out to solve another problem: the money his customers were using was terrible. It was mostly iron coins, and it took a pound and a half of iron to buy a pound of salt. It would be the

modern equivalent of going grocery shopping with nothing but pennies.

(C) People started using the claim checks themselves to buy stuff, and paper money was born. It was a huge hit.

(D) So the merchant told his customers that they could leave their coins with him. In exchange, he gave them a claim check – a piece of paper that could be used to retrieve the coins.

- ① A-C-D-B ② B-A-D-C ③ B-D-C-A
④ C-B-D-A ⑤ D-A-C-B

14. Choose the most appropriate place to insert the following sentence. [3.7점]

Consequently, they can tolerate considerably higher concentrations of carbon dioxide.

Porpoises and other marine mammals are better equipped than humans physiologically to dive to considerable depths in the ocean. (A) The blood of these animals has approximately 30 percent higher capacity for oxygen transport and storage than has human blood. (B) They also possess increased stores of respiratory pigment in their muscles which may contribute significantly to their oxygen reserve. (C) The respiratory center in the brain, which regulates breathing movements in all mammals, is driven by carbon dioxide in the surrounding blood. In porpoises and other diving mammals, this center is far less sensitive to carbon dioxide in fluids than in other mammals. (D) Moreover, all diving animals, from birds to reptiles to mammals, experience a drastic slowing of the heart rate when diving. (E) In seals, whose normal surface heart rate may be seventy to eighty times a minute, the heart slows to six and ten beats a minute upon diving.

- ① (A) ② (B) ③ (C)
④ (D) ⑤ (E)

15. Choose the most appropriate place to insert the following sentence. [3.7점]

With his discovery, many tribes began to take advantage of the coffee berries.

There are several stories about how the effects of the coffee bush, which was discovered around 1000 A.D., were first observed. (A) Among them, the most prevalent is about an Ethiopian shepherd who noticed his flock was wide-awake after eating the

berries off of a certain bush. (B) When he tried the berries for himself, he found that he also became awake and energetic. (C) For example, members of the Galla tribe in Ethiopia produced an energy boost from mixing a certain berry with animal fat. (D) One path or another led people to the conclusion that the coffee bean would produce certain effects upon not only their livestock, but also themselves. (E) The desire to capture and use the effects of coffee started the quest for cultivation and production of coffee throughout the world.

- ① (A) ② (B) ③ (C)
- ④ (D) ⑤ (E)

16. What is the main idea of the passage? [3.7점]

Suppose there were a molecule that occurred in many or all species, and whose structure slowly changed because of genetic mutations at the same steady rate. Two species derived from a common ancestor would start off with identical forms of the molecule, but as they diverged from each other and from the ancestor, mutations would change it. Thus by comparing the present architecture of the molecule in different species, we could measure how different the creatures were genetically and how much time had elapsed since their divergence. For instance, a molecule might differ by one percent in a pair of species known from fossil evidence to have diverged five million years ago. If the same molecule differed by two percent between two species whose fossil histories were unknown, the molecular clock would indicate that they went their separate evolutionary ways ten million years ago.

- ① The present structure of a molecule shared by two species shows the time elapsed since their divergence.
- ② Molecules have evolved at a steady rate.
- ③ Fossil histories are irrelevant in studying the molecular clock of species.
- ④ Some species evolved from a common ancestor.
- ⑤ Different species began to go separate evolutionary ways about ten million years ago.

[17-18] Read the passage and answer the questions.

Marketers assume that the more choices they offer, the more likely customers will be able to find just the right thing. They assume, for instance, that offering 50 styles of jeans instead of two increases

the chances that shoppers will find a pair they really like. Nevertheless, research now shows that there can be too much choice; when there is, consumers are less likely to buy anything at all, and if they do buy, they are less satisfied with their selection.

It all began with jam. In 2000, psychologists Sheena Iyengar and Mark Lepper published a remarkable study. On one day, shoppers at an upscale food market saw a display table with 24 varieties of gourmet jam. Those who sampled the spreads received a coupon for \$1 off any jam. On another day, shoppers saw a similar table, except that only six varieties of the jam were on display. The large display attracted more interest than the small one. But when the time came to purchase, people who saw the large display were one-tenth as likely to buy as people who saw the small display.

17. Which of the following is the most appropriate title for the passage? [2.3점]

- ① You Can't Please Everyone
- ② All That Glitters Isn't Gold
- ③ The More, The Merrier
- ④ More Is Not Always Better
- ⑤ Beggars Can't Be Choosers

18. What does the underlined word, "Those," refer to? [1점]

- ① marketers ② researchers ③ psychologists
- ④ shoppers ⑤ producers

[19-20] Read the passage and answer the questions.

The first technology of mood our ancestors discovered was language. People have used language in various ways to induce happiness artificially, ways that offer no obvious genetic benefits. I will mention three: consoling, entertaining, and venting. The first two methods benefit the hearer; the last is supposed to benefit the speaker. Our ancestors probably consoled each other with hugs and caresses long before they learned how to talk, but once language was invented they found a new way of providing consolation by offering words of sympathy and advice. In doing so, they discovered that words can be powerful antidepressants. This practice has been around so long that it is now almost instinctual. Faced with friends who are feeling down, we all naturally find ourselves trying to talk them

out of it. We also naturally administer the same _____ to ourselves, whispering silent words of encouragement to ourselves when we are low. Cognitive therapy is based on just this kind of internal monologue. While cognitive therapy may be original in the way it tries to formalize this process, the practice of talking oneself up is probably as old as language itself.

19. Which of the following is the most appropriate title for the passage? [2.3점]

- ① What Cognitive Therapy Can Do for a Better Life
- ② Language Development and Genetic Benefits
- ③ Antidepressants and Artificial Happiness
- ④ Newly Discovered Benefits of Language
- ⑤ Well-Put Words Can Provide Consolation

20. Choose the most appropriate answer to fill in the blank. [5점]

- ① linguistic medicine
- ② unbreakable oath
- ③ simple trial
- ④ technical test
- ⑤ entertaining task

[21-23] Read the passage and answer the questions.

Did you know that there are only a few differences between humans and animals? Whether you watch the family dog, an elephant in the zoo, or a mountain goat in the Andes, you'll see that they do essentially the same thing. They eat, sleep, seek shelter, and breed. Those are all _____. That's what they live by. Their sole purpose is to survive. (A) That's why it's so easy to train them. How are we any different? We have the same body parts and functions. And we have the same basic needs, along with the instinct for survival. (B) Like the animals, we react to what happens around us, and we allow ourselves to become conditioned by our environment. (C) And whether we like to admit it or not, we're also easy to train. (D) The only difference is that for us, it doesn't have to be that way. We have more than _____. We have the ability to choose. That's what separates human beings from the animal world. (E) And if we don't exercise that ability, then we're no better off. If all we're doing is surviving, instead of living, we're simply existing.

21. What is the main idea of the passage? [3.7점]

- ① Survival is the ultimate goal for animals.
- ② Training is essential for behavioral changes.
- ③ Animals are not much different from one another.
- ④ Humans should exercise the ability to choose.
- ⑤ Humans are conditioned by the environment.

22. Which word is the most appropriate for both blanks? [2.3점]

- ① similarities ② behaviors ③ senses
- ④ habits ⑤ instincts

23. Choose the most appropriate place to insert the following sentence. [3.7점]

They react to chance happenings and are conditioned by their environment.

- ① (A) ② (B) ③ (C)
- ④ (D) ⑤ (E)

[24-26] Read the passage and answer the questions.

Nineteenth-century architect Eugene-Emmanuel Viollet-le-Duc contended that Paris's Notre-Dame cathedral, built in the late twelfth century, was supported from the very beginning by a system of flying buttresses – a series of exterior arches (flyers) and their supports (buttresses) – which ① permitted the construction of taller vaulted buildings with slimmer walls and interior supports than had been possible previously. Other commentators insist, however, that Notre-Dame did not have flying buttresses until the thirteenth or fourteenth century, when they were ② eliminated to update the building aesthetically and correct its structural flaws. Although post-twelfth-century modifications and renovations complicate efforts to ③ resolve this controversy – all pre-fifteenth-century flyers have been replaced, and the buttresses have been rebuilt or resurfaced – it is nevertheless possible to tell that both the nave and the choir, the church's two major parts, have always had flying buttresses. It is clear, now that nineteenth-century paint and plaster have been ④ removed, that the nave's lower buttresses date from the twelfth century. Moreover, the choir's lower flyers have chevron (zigzag) decoration. Chevron decoration, which was characteristic of the second half of the twelfth

century and was out of favor by the fourteenth century, is entirely absent from modifications to the building that can be dated with confidence to the thirteenth century.

24. What is the purpose of the passage? [2.3점]

- ① Explaining the artistic value of Notre-Dame
- ② Discussing the role of flying buttresses
- ③ Proposing the renovation of Notre-Dame
- ④ Describing the difference between flyers and buttresses
- ⑤ Supporting one position in a controversial issue about Notre-Dame

25. Which of the underlined words is not appropriate? [2.3점]

- ① A ② B ③ C
- ④ D ⑤ E

26. According to the passage, which of the following is not true? [3.7점]

- ① Notre-Dame was constructed in the 12th century.
- ② All the flyers built before the 15th century have been replaced.
- ③ The nave and the choir are major parts of the cathedral.
- ④ The nave's lower buttresses were built in the 12th century.
- ⑤ Chevron decoration flourished in the 14th century.

[27-28] Read the passage and answer the questions.

The arrival of the long-awaited fourth *Matrix* movie will surely spur another round of thinking about a question that philosophers have been kicking around at least since Plato's time: How do we know that our world is real? Nowadays, of course, we're far more likely to consider that a simulated reality would be rendered in bytes rather than shadows on a cave wall. Furthermore, given both the technical progress being made and the business push behind it, we're far more likely than our predecessors to _____ . The philosophical implications of such worlds – as well as the possibility we might already be existing within one – are the subject of the philosopher David J. Chalmers's new book *Reality+*. In it, Chalmers, who is a professor of philosophy and neural science at New York University, argues that our thinking about our future virtual lives needn't be rooted in visions of dystopia. Chalmers says, "The possibilities for

virtual reality are as broad as the possibilities for physical reality. We know physical reality can be amazing and it can be terrible, and I fully expect the same range for virtual reality."

27. Choose the most appropriate answer to fill in the blank. [5점]

- ① reject physical reality in a virtual environment
- ② embrace the prospect of life in a virtual world
- ③ doubt the possibility of a utopian future
- ④ deny the technical progress of virtual reality
- ⑤ further advance science and technology in the physical world

28. Which of the following is the closest to Chalmers's idea? [2.3점]

- ① Our future virtual lives will be bleak.
- ② The physical world is more vivid and exciting.
- ③ A virtual world does not resemble Plato's concept of the shadow on a cave wall.
- ④ A virtual world will have a similar spectrum to our physical world.
- ⑤ Entrepreneurs should invest more money to advance virtual reality technologies.

29. Choose the most appropriate answer to fill in the blank. [5점]

As the age of rail was beginning, political philosopher Karl Marx used the metaphor of its technology as a worldview. It was no more surprising that a mid-nineteenth-century European would use a railway metaphor than it is to hear someone comparing the mind to a computer today. In what became very influential terms, Marx claimed that human society and consciousness are what he called the superstructure, resting on the economic infrastructure of factories, mines and other forms of production. These were terms taken directly from the railway. Infrastructure meant tracks and associated systems, while the superstructure was the train. In short, for Marx, _____ .

- ① the human mind was a mysterious machine
- ② the human mind was a train running on a set of economic tracks
- ③ the human mind could not be compared to a technological device
- ④ the railway was the most important invention of the nineteenth century
- ⑤ the development of human society was solely dependent on technology

30. Which of the following best fits into ㉠, ㉡ and ㉢? [5점]

Let's say you're on your lunch break, and you're walking past a park where a Beethoven symphony is playing. Will you stop and listen? It depends on the meaning you associate to classical music. Some people would drop anything to be able to listen to the valiant strains of the Eroica Symphony. For them, Beethoven equals pure ㉠_____. For others, however, listening to any kind of classical music is about as ㉡_____ as watching paint dry. Enduring the music would equal a measure of pain, and so they hurry past the park and back to work. But even some people who love classical music would not decide to stop and listen. Maybe the perceived pain of being late for work outweighs the pleasure they would get from hearing the familiar melodies. Or maybe they have a belief that stopping and enjoying music in the middle of the afternoon is wasteful of precious time, and the ㉢_____ of doing something frivolous and inappropriate is greater than the pleasure the music can bring. Each day our lives are filled with these kinds of psychic negotiations. We are constantly weighing our own proposed actions and the impact they will have upon us.

- ① pleasure - confusing - pain
- ② pain - excruciating - pleasure
- ③ pain - tedious - pleasure
- ④ pleasure - mournful - pain
- ⑤ pleasure - exciting - pain

31. Which of the following is not true about the new greenhouse design in the passage? [3.7점]

For hot desert locations with access to seawater, a new greenhouse design generates freshwater and cool air. Oriented to the prevailing wind, the front wall of perforated cardboard, moistened by seawater, cools and moistens hot air blowing in. This cool, humidified air accelerates plant growth; little water evaporates from leaves. Though greenhouses normally capture the heat of sunlight, a double-layered roof, the inner layer coated to reflect infrared light outward, allows visible sunlight in but traps solar heat between the two layers. This heated air, drawn down from the roof, then mixes with the greenhouse air as it reaches a second seawater-moistened cardboard wall at the back of the greenhouse. There the air absorbs more moisture before being cooled off again when it meets a seawater-cooled metal wall, which causes moisture in the air to condense. Thus distilled water for irrigating the plants collects.

- ① Its function is keeping the greenhouse cool.
- ② The double-layered structure of the roof can protect the plants from solar heat.
- ③ The roof allows visible sunlight into the greenhouse.
- ④ The metal wall condenses moisture in the air to irrigate the plants.
- ⑤ The heated air in the roof is instantly pushed out from the greenhouse.

[32-33] Read the passage and answer the questions.

Winston Churchill suffered from recurrent, short-lived depressions. He gave them a name: the black dog, a name that had been used by Samuel Johnson before him, and has been used by many others since. Labeling the depression helped him to cope with it and to accept it, knowing that in due course it would go away. Such labeling helps to domesticate the depression so that it becomes, if not a friend, at least an enemy you know and for which, perhaps, you even feel some affection. When relatively short-lived, recurrent depressions attack you, it may be best to wall them off – to limit or contain them. Then they will take the shortest course. Say to yourself, "Ah, it's my depression again. It will pass away soon as it always does; I've just got to keep going." This is especially helpful for people who tend to get depressed about getting depressed, which is a very common problem and adds insult to injury.

32. Which of the following is the most appropriate title for the passage? [2.3점]

- ① Samuel Johnson's Black Dog
- ② How to Deal with Depression
- ③ Depression Can be Your Friend
- ④ The Various Faces of Depression
- ⑤ Words of Wisdom from Winston Churchill

33. Which word best describes the tone of the underlined sentences? [2.3점]

- ① optimistic ② dejected ③ bitter
- ④ irritated ⑤ sarcastic

[34-35] Read the passage and answer the questions.

To help you get a sense of how vague and complex a term “the metaverse” can be, here’s an exercise to try: Mentally replace the phrase “the metaverse” in a sentence with “cyberspace.” Ninety percent of the time, the meaning won’t substantially change. That’s because the term doesn’t really refer to any one specific type of technology, but rather a broad shift in how we interact with technology. And it’s entirely possible that the term itself will eventually become just as antiquated, even as the specific technology it once described becomes commonplace.

Broadly speaking, the technologies that make up the metaverse can include virtual reality (VR) – characterized by persistent virtual worlds that continue to exist even when you’re not playing – as well as augmented reality (AR) that combines aspects of the digital and physical worlds. However, it doesn’t require that those spaces be exclusively accessed via VR or AR. A virtual world, like aspects of *Fortnite* that can be accessed through PCs, game consoles, and even phones, could be metaversal.

It also translates to a digital economy, where users can create, buy, and sell goods. And, in the more idealistic visions of the metaverse, it’s interoperable, allowing you to take virtual items like clothes or cars from one platform to another. In the real world, you can buy a shirt from the mall and then wear it to a movie theater. Right now, most platforms have virtual identities, avatars, and inventories that are tied to just one platform, but a metaverse might allow you to create a persona that you can take everywhere as easily as you can copy your profile picture from one social network to another.

34. Which is closest in meaning to the underlined word, “antiquated”? [1점]

- ① profound ② obsolete ③ inimitable
- ④ momentous ⑤ ostentatious

35. Which of the following is not true according to the passage? [3.7점]

- ① The term “metaverse” is similar to “cyberspace.”
- ② The metaverse refers to changes in our interactions with technology.
- ③ The metaverse can only be accessed by using virtual reality and augmented reality.
- ④ Users can buy and sell products in the digital economy.
- ⑤ In an idealistic metaversal world, virtual items can be used across different platforms.

[36-38] Read the passage and answer the questions.

In design, production, and trade, England was the frontrunner in the modern clock industry. The English penchant for producing accurate and portable timepieces was perfectly suited for the needs of a growing, mobile population, and the early development of the railroad in Britain provided a catalyst for Britain’s market hegemony in the first half of the nineteenth century. Because the safe and predictable operation of railways was highly dependent upon keeping track of time, clocks were posted at intervals throughout the railway system to allow engineers to ①_____ their chronometers, and telegraph services would periodically wire times to stations throughout the railway system so that clocks could be continually adjusted for accuracy. While this helped prevent accidents and allowed railway companies to keep tighter schedules, it also helped travelers to anticipate arrivals, departures, and connections with greater precision. These developments underpinned a burgeoning awareness of the importance of time throughout society. Thus, train travel ②_____ the demand for timepieces and bolstered the overall clock industry in England.

However, there were drawbacks to the English system that would be exploited by competitors. Namely, the English market was solely devoted to handmade clocks, and avaricious craftsmen who profited from their esoteric skills viewed mechanization as a threat and actively lobbied against the use of machinery to craft “fake clocks.” As a result, British timepieces remained extremely costly to produce. But while the British were ③_____ toward mechanization, this was not the case in Switzerland, where companies began to experiment with the automated manufacture of individual components, such as plates and wheels. By using machines to fashion some parts, timepieces could be fabricated more quickly and cheaply than British timepieces.

36. Which of the following best fits into ①, ② and ③? [5점]

- ① regulate - increased - hopeful
- ② regulate - decreased - sympathetic
- ③ synchronize - increased - sympathetic
- ④ synchronize - increased - antagonistic
- ⑤ normalize - decreased - antagonistic

37. Which is closest in meaning to the underlined word, “avaricious”? [1점]

- ① rapacious ② ingenious ③ hostile
- ④ flagrant ⑤ prominent

38. Which of the following is the most appropriate title for the passage? [2.3점]

- ① The Development of the Railway System in England
- ② The Collapse of Britain’s Market Hegemony
- ③ The History of the British Clock Industry
- ④ The Mechanization of Swiss Timepieces
- ⑤ The Rising Awareness of the Importance of Time

[39–40] Read the passage and answer the questions.

Capitalism is primed for the impact revolution. Our economic system needs to go beyond generating profit alone to generating improvement for people and the planet as well. This transition is being driven by three unstoppable forces. The first force is a massive change in the values of consumers and talent, driving them away from harmful companies and brands. The brightest minds want to work for businesses that create solutions to the big challenges we face. Investors have noticed this powerful trend and understood its implications for profitable investment. More than \$40 trillion of environmental, social and governance (ESG) investment is now flowing, aiming to achieve impact in addition to profit. This amounts to half of the capital in the hands of professional asset managers – it is too big to be a flash in the pan.

Technology is the second force. Huge leaps in technology – through artificial intelligence, machine learning, augmented reality and the genome – enable us to deliver impact globally in ways humanity could never previously contemplate. Technology is also driving momentum behind a third powerful force: transparent measurement of the impacts companies create on people and the environment through their operations, employment and products. Huge computing power and big data enable us to translate impacts into monetary terms that investors, consumers and companies can readily understand and compare. Together, these three powerful forces are acting to improve our world.

39. Which of the following is not true according to the passage? [3.7점]

- ① The economic system should solely be bound to generating profit.
- ② Values are now essential for business.
- ③ Consumers are turning away from harmful brands.
- ④ Investors recognize the importance of the impact revolution.
- ⑤ Technology has become a powerful force in the impact revolution.

40. Which is closest in meaning to the underlined phrase, “a flash in the pan”? [2.3점]

- ① a shocking revelation
- ② something that is inevitable
- ③ an unexpected turn of events
- ④ something that is unlikely to last
- ⑤ an initial step toward the right direction