0번째 지문:

In the classic model of the Sumerian economy, the temple functioned as an administrative authority governing commodity production. collection, and redistribution. The discovery of administrative tablets from the temple complexes at Uruk suggests that token use and consequently writing evolved as a tool of centralized economic governance. Given the lack of archaeological evidence from Uruk-period domestic sites, it is not clear whether individuals also used the system for personal agreements. For that matter, it is not clear how widespread literacy was at its beginnings. The use of identifiable symbols and pictograms on the early tablets is consistent with administrators needing a lexicon that was mutually intelligible by literate and nonliterate parties. As cuneiform script became more abstract, literacy must have become increasingly important to ensure one understood what he or she had agreed to.

15

1번째 지문:

Choosing similar friends can have a rationale. Assessing the survivability of an environment can be risky (if an environment turns out to be deadly, for instance. it might be too late by the time you found out), so humans have evolved the desire to associate with similar individuals as a way to perform this function efficiently. This is especially useful to a species that lives in so many different sorts of environments. However, the carrying capacity of a given environment places a limit on this strategy. If resources are very limited, the individuals who live in a particular place cannot all do the exact same thing (for example, if there are few trees, people cannot all live in tree houses or if mangoes are in short supply, people cannot all live solely on a diet of mangoes). A rational strategy would therefore sometimes be to avoid similar members of one’s species.

9

2번째 지문:

Thanks to newly developed neuroimaging technology, we now have access to the specific brain changes that occur during learning. Even though all of our brains contain the same basic structures, our neural networks are as unique as our fingerprints. The latest developmental neuroscience research has shown that the brain is much more malleable throughout life than previously assumed: it develops in response to its own processes, to its immediate and distant “environments.” and to its past and current situations. The brain seeks to create meaning through establishing or refining existing neural networks. When we learn a new fact or skill, our neurons communicate to form networks of connected information. Using this knowledge or skill results in structural changes to allow similar future impulses to travel more quickly and efficiently than others. High-activity synaptic connections are stabilized and strengthened, while connections with relatively low use are weakened and eventually pruned. In this way. our brains are sculpted by our own history of experiences.

10

3번째 지문:

Successful integration of an educational technology is marked by that technology being regarded by users as an unobtrusive facilitator of learning, instruction, or performance. When the focus shifts from the technology being used to the educational purpose that technology serves, then that technology is becoming a comfortable and trusted element, and can be regarded as being successfully integrated. Few people give a second thought to the use of a ball-point pen although the mechanisms involved vary — some use a twist mechanism and some use a push button on top, and there are other variations as well. Personal computers have reached a similar level of familiarity for a great many users, but certainly not for all. New and emerging technologies often introduce both fascination and frustration with users. As long as the user’s focus is on the technology itself rather than its use in promoting learning, instruction, or performance, then one ought not to conclude that the technology has been successfully integrated - at least for that users.

10

4번째 지문:

Through recent decades academic archaeologists have been urged to conduct their research and excavations according to hypothesis-testing procedures. It has been argued that we should construct our general theories, deduce testable propositions and prove or disprove them against the sampled data. In fact, the application of this ‘scientific method’ often ran into difficulties. The data have a tendency to lead to unexpected questions, problems and issues. Thus, archaeologists claiming to follow hypothesis-testing procedures found themselves having to create a fiction. In practice. their work and theoretical conclusions partly developed from the data which they had discovered. In other words, they already knew the data when they decided upon an interpretation. But in presenting their work they rewrote the script, placing the theory first and claiming to have tested it against data which they discovered, as in an experiment under laboratory conditions.

10

5번째 지문:

Genetic engineering followed by cloning to distribute many identical animals or plants is sometimes seen as a threat to the diversity of nature. However, humans have been replacing diverse natural habitats with artificial monoculture for millennia. Most natural habitats in the advanced nations have already been replaced with some form of artificial environment based on mass production or repetition. The real threat to biodiversity is surely the need to convert ever more of our planet into production zones to feed the ever-increasing human population. The cloning and transgenic alteration of domestic animals makes little difference to the overall situation. Conversely, the renewed interest in genetics has led to a growing awareness that there are many wild plants and animals with interesting or useful genetic properties that could be used for a variety of as-yet-unknown purposes. This has led in turn to a realization that we should avoid destroying natural ecosystems. because they may harbor tomorrow's drugs against cancer, malaria, or obesity.

10

6번째 지문:

Since human beings are at once both similar and different, they should be treated equally because of both. Such a view, which grounds equality not in human uniformity but in the interplay of uniformity and difference, builds difference into the very concept of equality, breaks the traditional equation of equality with similarity, and is immune to monist distortion. Once the basis of equality changes so does its content. Equality involves equal freedom or opportunity to be different, and treating human beings equally requires us to take into account both their similarities and differences. When the latter are not relevant, equality entails uniform or identical treatment; when they are, it requires differential treatment. Equal rights do not mean identical rights, for individuals with different cultural backgrounds and needs might require different rights to enjoy equality in respect of whatever happens to be the content of their rights. Equality involves not just rejection of irrelevant differences as is commonly argued, but also full recognition of legitimate and relevant ones.

10

7번째 지문:

Protopia is a state of becoming, rather than a destination. It is a process. In the protopian mode, things are better today than they were yesterday, although only a little better. It is incremental improvement or mild progress. The “pro” in protopian stems from the notions of process and progress. This subtle progress is not dramatic, not exciting. It is easy to miss because a protopia generates almost as many new problems as new benefits. The problems of today were caused by yesterday’s technological successes, and the technological solutions to today’s problems will cause the problems of tomorrow. This circular expansion of both problems and solutions hides a steady accumulation of small net benefits over time Ever since the Enlightenment and the invention of science, we've managed to create a tiny bit more than we've destroyed each year. But that few percent positive difference is compounded over decades into what we might call civilization. Its benefits never star in movies.

10

8번째 지문:

Research with human runners challenged conventional wisdom and found that the ground-reaction forces at the foot and the shock transmitted up the leg and through the body after impact with the ground varied little as runners moved from extremely compliant to extremely hard running surfaces. As a result, researchers gradually began to believe that runners are subconsciously able to adjust leg stiffness prior to foot strike based on their perceptions of the hardness or stiffness of the surface on which they are running. This view suggests that runners create soft legs that soak up impact forces when they are running on very hard surfaces and stiff legs when they are moving along on yielding terrain. As a result, impact forces passing through the legs are strikingly similar over a wide range of running surface types. Contrary to popular belief, running on concrete is not more damaging to the legs than running on soft sand.

10

9번째 지문:

One of the great risks of writing is that even the simplest of choices regarding wording or punctuation can sometimes prejudice your audience against you in ways that may seem unfair. For example, look again at the old grammar rule forbidding the splitting of infinitives. After decades of telling students to never split an infinitive (something just done in this sentence), most composition experts now acknowledge that a split infinitive is not a grammar crime. Suppose you have written a position paper trying to convince your city council of the need to hire security personnel for the library, and half of the council members –the people you wish to convince- remember their eighth-grade grammar teacher’s warning about splitting infinitives. How will they respond when you tell them, in your introduction, that librarians are compelled “to always accompany” visitors to the rare book room because of the threat of damage? How much of their attention have you suddenly lost because of their automatic recollection of what is now a nonruled? It is possible, in other words, to write correctly and still offend your readers’ notions of your language competence.

10번째 지문:

Even when we do something as apparently simple as picking up a screwdriver, our brain automatically adjusts what it considers body to include the tool. We can literally feel things with the end of the screwdriver. When we extend a hand, holding the screwdriver, we automatically take the length of the latter into account. We can probe difficult-to-reach places with its extended end, and comprehend what we are exploring. Furthermore, we instantly regard the screwdriver we are holding as “our” screwdriver, and get possessive about it. We do the same with the much more complex tools we use, in much more complex situations. The cars we pilot instantaneously and automatically become ourselves. Because of this, when someone bangs his fist on our car’s hood after we have irritated him at a crosswalk, we take it personally. This is not always reasonable. Nonetheless, without the extension of self into machine, it would be impossible to drive.

11번째 지문:

A large part of what we see is what we expect to see. This explains why we “see” faces and figures in a flickering campfire, or in moving clouds. This is why Leonardo da Vinci advised artists to discover their motifs by staring at patches on a black wall. A fire provides a constant flickering change in visual information that never integrates into anything solid and thereby allows the brain to engage in a play of hypotheses. On the other hand, the wall does not present us with very much in the way of visual clues, and so the brain begins to make more and more hypotheses and desperately searches for confirmation. A crack in the wall looks a little like the profile of a nose and suddenly a whole face appears, or a leaping horse, or a dancing figure. In cases like these the brain’s visual strategies are projecting images from within the mind out onto the world.

12번째 지문:

The role of science can sometimes be overstated, with its advocates slipping into scientism. Scientism is the view that the scientific description of reality is the only truth there is. With the advance of science, there has been a tendency to slip into scientism. and assume that any factual claim can be authenticated if and only if the term ‘scientific’ can correctly be ascribed to it. The consequence is that non-scientific approaches to reality—and that can include all the arts, religion, and personal, emotional and value-laden ways of encountering the world—may become labelled as merely subjective, and therefore of little account in terms of describing the way the world is. The philosophy of science seeks to avoid crude scientism and get a balanced view on what the scientific method can and cannot achieve.

13번째 지문:

The Swiss psychologist Jean Piaget frequently analyzed children’s conception of time via their ability to compare or estimate the time taken by pairs of events. In a typical experiment, two toy cars were shown running synchronously on parallel tracks one running faster and stopping further down the track. The children were then asked to judge whether the cars had run for the same time and to justify their judgment. Preschoolers and young school-age children confuse temporal and spatial dimensions: Starting times are judged by starting points, stopping times by stopping points and durations by distance, though each of these errors does not necessitate the others. Hence. a child may claim that the cars started and stopped running together (correct) and that the car which stopped further ahead, ran for more time (incorrect).

14번째 지문:

The future of our high-tech goods may lie not in the limitations of our minds, but in our ability to secure the ingredients to produce them. In previous eras, such as the Iron Age and the Bronze Age, the discovery of new elements brought forth seemingly unending numbers of new inventions. Now the combinations may truly be unending. We are now witnessing a fundamental shift in our resource demands. At no point in human history have we used more elements, in more combinations, and in increasingly refined amounts. Our ingenuity will soon outpace our material supplies. This situation comes at a defining moment when the world is struggling to reduce its reliance on fossil fuels. Fortunately, rare metals are key ingredients in green technologies such as electric cars, wind turbines, and solar panels. They help to convert free natural resources like the sun and wind into the power that fuels our lives. But without increasing today’s limited supplies, we have no chance of developing the alternative green technologies we need to slow climate change.

15번째 지문:

There have been many attempts to define what music is in terms of the specific attributes of musical sounds. The famous nineteenth-century critic Eduard Hanslick regarded ‘the measurable tone’ as ‘the primary and essential condition of all music’. Musical sounds. he was saying. can be distinguished from those of nature by the fact that they involve the use of fixed pitches. whereas virtually all natural sounds consist of constantly fluctuating frequencies. And a number of twentieth-century writers have assumed, like Hanslick. that fixed pitches are among the defining features of music. Now it is true that in most of the world’s musical cultures, pitches are not only fixed, but organized into a series of discrete steps. However, this is a generalization about music and not a definition of it, for it is easy to put forward counter-examples. Japanese shakuhachi music and the sanjo music of Korea, for instance, fluctuate constantly around the notional pitches in terms of which the music is organaized.

16번째 지문:

When you begin to tell a story again that you have retold many times, what you retrieve from memory is the index to the story itself. That index can be embellished in a variety of ways. Over time, even the embellishments become standardized. An old man’s story that he has told hundreds of times shows little variation, and any variation that does exist becomes part of the story itself, regardless of its origin. People add details to their stories that may or may not have occurred. They are recalling indexes and reconstructing details. If at some point they add a nice detail, not really certain of its validity, telling the story with that same detail a few more times will ensure its permanent place in the story index. In other words, the stories we tell time and again are identical to the memory we have of the events that the story relates.

17번째 지문:

With population growth slowing, the strongest force increasing demand for more agricultural production will be rising incomes, which are desired by practically all governments and individuals. Although richer people spend smaller proportions of their income on food, in total they consume more food —and richer food, which contributes to various kinds of disease and debilitation. The changes in diet that usually accompany higher incomes will require relatively greater increases in the production of feed grains, rather than food grains, as foods of animal origin partly displace plant-based foods in people’s diets. It takes two to six times more grain to produce food value through animals than to get the equivalent value directly from plants. It is thus quite credible to estimate that in order to meet economic and social needs within the next three to five decades, the world should be producing more than twice as much grain and agricultural products as at present, but in ways that these are accessible to the food-insecure.

18번째 지문:

If one looks at the Oxford definition, one gets the sense that post-truth is not so much a claim that truth does not exist as that facts are subordinate to our political point of view. The Oxford definition focuses on “what” post-truth is: the idea that feelings sometimes matter more than facts. But just as important is the next question, which is why this ever occurs. Someone does not argue against an obvious or easily confirmable fact for no reason; he or she does so when it is to his or her advantage. When a person’s beliefs are threatened by an “inconvenient fact,” sometimes it is preferable to challenge the fact. This can happen at either a conscious or unconscious level (since sometimes the person we are seeking to convince is ourselves), but the point is that this sort of post-truth relationship to facts occurs only when we are seeking to assert something that is more important to us than the truth itself.

19번째 지문:

The debates between social and cultural anthropologists concern not the differences between the concepts but the analytical priority: which should come first, the social chicken or the cultural egg? British anthropology emphasizes the social. It assumes that social institutions determine culture and that universal domains of society (such as kinship, economy, politics, and religion) are represented by specific institutions (such as the family, subsistence farming, the British Parliament, and the Church of England) which can be compared cross-culturally. American anthropology emphasizes the cultural. It assumes that culture shapes social institutions by providing the shared beliefs, the core values, the communicative tools, and so on that make social life possible. It does not assume that there are universal social domains, preferring instead to discover domains empirically as aspects of each society’s own classificatory schemes — in other words, its culture. And it rejects the notion that any social institution can be understood in isolation from its own context.

20번째 지문:

Some people have defined wildlife damage management as the science and management of overabundant species, but this definition is too narrow. All wildlife species act in ways that harm human interests. Thus, all species cause wildlife damage, not just overabundant ones. One interesting example of this involves endangered peregrine falcons in California, which prey on another endangered species, the California least tern. Certainly, we would not consider peregrine falcons as being overabundant, but we wish that they would not feed on an endangered species. In this case, one of the negative values associated with a peregrine falcon population is that its predation reduces the population of another endangered species. The goal of wildlife damage management in this case would be to stop the falcons from eating the terns without harming the falcons.