

Amish people do not believe it is necessary for their young people to attend high school or pursue an education at the college level. They do not value education for its own sake or feel that education makes one a better person. The standard curriculum includes reading, basic arithmetic, spelling and grammar, and some history and geography. Topics in science, independent thinking, or critical analysis are not considered appropriate or necessary. As for life skills, Amish boys learn farming from watching and helping their fathers, while Amish girls learn to be good homemakers by imitating their mothers. Teachers in Amish schools are not required to have attended college. ---- Within the school, older children will serve as tutors to the younger children.

- A. Indeed, in some rural communities, Amish children generally complete school only up to the eighth grade.
- B. Subsequently, Amish children continue their schooling one-half day each week so that they can perfect their skills as needed.
- C. Actually, most Amish children are expected to become full-time workers on the family farms or businesses.
- D. That is, most Amish communities have their own schools, where children of all ages learn together in one- or two-room schoolhouses.
- E. Instead, young Amish people, usually women, who have distinguished themselves as students simply remain in the school, assuming the role of teacher.

Self-esteem begins at birth and ends at death. It is considered a trait that evolves continuously over time. Children generally have high levels of self-esteem as a consequence of highly positive, and often unrealistic, views of themselves. ---- Yet, the transition from adolescence to young adulthood and then to middle adulthood marks a slow rise in self-esteem as individuals experience successful life milestones, such as graduation, employment, and marriage. Self-esteem peaks in late midlife as individuals become more established in their work and personal lives.

- A. Scholarly studies have documented that race and ethnicity might be a factor that causes variations in the level of self-esteem among people.
- B. Self-esteem has been a hot topic in psychology as it is often associated with such concepts as well-being and motivation.
- C. As they move into adolescence, self-esteem drops as teens experience anxiety about how they will be perceived by those around them.
- D. Psychologists need to find answers why lack of self-esteem scourges some children even if they become highly successful in life.
- E. According to a recent theory, self-esteem is closely related with how people interact with others in social settings.

Whether or not art can always be associated with aesthetic appreciation is a question philosophers have asked for centuries. ---- Art can be educational, as with an illustration that details the bones in the human skeleton. It can be representative, as with a play that tells the life of two characters in history. It can motivate, as with a speech that inspires listeners to action. Art can also enrich people's lives in the way that a sculpture adorns a room or music inspires a mood.

- A. While some people share reactions to certain objects of art, the aesthetic properties are subject to individual interpretation.
- B. Aesthetic properties often have the power to inspire emotional response, and such a response is not likely to be consistent.
- C. Works of art are identified as aesthetically pleasing because they affect sentiments.
- D. However, the beauty and aesthetic properties found in art serve many purposes.
- E. Aesthetic appreciation, then, is the admiration of beauty, such as valuing the fine arts of music and literature.

The Romans were the greatest bridge builders of the ancient world, just as they were the greatest road builders. In the city of Rome, at least 12 bridges crossed the Tiber River. ---- Some of these were temporary wooden bridges. Others were pontoon bridges, or floating bridges, of boats placed side by side. On secondary roads, the Romans built wooden bridges, but for their major roads, they constructed sturdy stone bridges. None of the Roman wooden bridges survives today, but some of the stone bridges are still intact. One of the best-preserved stone bridges in Italy is the Ponte di Augusto, completed in AD 20 at Rimini.

- A. Bridges consisting of stone piers were able to withstand the forces of nature longer than the ones with wooden piers.
- B. To span the largest rivers like the Danube, Roman bridge builders used a combination of stone and wood.
- C. Elsewhere, engineers travelled with the Roman armies to build all kinds of bridges for soldiers to cross the rivers they encountered.
- D. In western Spain near Merida, a bridge built by the Romans in AD 106 still carries traffic over the Tagus River.
- E. Stone bridges were laid on rivers with arches of large, overlapping stones through which the water could flow

The dynastic age of ancient Egypt lasted for an astonishingly long period of just over 3,000 years. The height of ancient Egypt's power was during the lengthy reign of Rameses II. There are abundant archaeological and textual evidence to gain a rich understanding of life spread along the Nile at this time. ---- That is partly because many communities of those lands were non-literate nomads who travelled great distances with their herds (especially sheep and goat) looking for grass. They left few archaeological traces behind.

- A. Under Rameses II's son Merenptah, large numbers of different Libyan groups managed to invade the Nile delta, but they were defeated by the Egyptian army.
- B. Along the Mediterranean coast, there were permanent settlements in areas including eastern Libya, where seasonal rainfall allowed limited agriculture and the raising of cattle.
- C. During the reign of Rameses II, Egypt faced several attempted invasions by coastal-based populations from the west, especially the peoples they referred to as 'Libu'.
- D. However, there are far less evidence for life in North Africa to the west of Egypt, which covered modern Libya, Tunisia, Algeria, and Morocco.
- E. In the second Battle of Kadesh, Rameses II was almost captured but was rescued by the sudden arrival of troops from Amurru, the land of the Amorites, former Hittite subjects who had defected to Egypt.

To an outsider it may seem that the term 'Aboriginal' serves as a name for a single population, a disparate but ultimately homogeneous people. ---- While the majority of Indigenous Australians lived in coastal areas, others occupied islands off the mainland, including the Tiwi Islands to the north and Tasmania in the south. Others remained closer to New Guinea, settling on the Torres Strait Islands above the northern tip of Queensland. Although they are classified as Aboriginals, the Torres Strait Islanders are of Melanesian descent and share many traits and customs with the people of what is today Papua New Guinea.

- A. In fact, people are confused by the term, many taking it to mean something along the lines of 'not the original ones', which is rather misleading.
- B. However, historians and anthropologists are yet to agree exactly when these peoples originated.
- C. Yet, in truth there are hundreds of different clans each equipped with their own tongues and belief systems and scattered across the continent.
- D. Furthermore, one people of the Australian continent would have shared cultural similarities with that of another.
- E. Hence, the Native Americans of the United States and the Aboriginals of Australia suffered a similar fate.

(I) Emotional intelligence, which refers to the ability to perceive and constructively act on both one's own emotions and the feelings of others, has found a number of different applications outside of psychological research. (II) Professional, educational, and community institutions have integrated different aspects of the emotional intelligence philosophy into their organisations. (III) The popularity of the concept of emotional intelligence in business is easily explained – when employees, managers, and clients have mutually rewarding personal relationships, productivity increases and profits follow. (IV) In addition to emotional intelligence, factors such as self-confidence and self-discovery can greatly contribute to employees' competence. (V) On the other hand, emphasis on emotional intelligence at schools focuses on conflict resolution and communication skills, and is frequently implemented in violence-prevention programs.

A) I B) II C) III D) IV E) V

(I) The term 'oldest old' refers to persons at the upper segment of the age pyramid. (II) By a conventional demographic definition those aged 80 years and older are included in the oldest-old population, although alternative definitions are also in use. (III) Since the end of World War II, in most countries the oldest old has been the fastest growing component of the population at large. (IV) Increases in life expectancy are welcomed as a sign of progress and improvement in living conditions. (V) This trend will almost certainly continue in the decades to come, with improving survival rates at very high ages.

- A) I B) II C) III D) IV E) V

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(I) The Ancient Greeks believed that writing played an important part in the development of civilization. (II) The Greeks used an alphabet, a set of symbols or letters representing various sounds, in their system of writing. (III) They associated the use of written language with order and democracy. (IV) Sometime around 600 BCE, for example, the Athenian politician Solon had his new laws written on a large wooden tablet and placed on display so all could see them. (V) This permanent posting of the laws made it clear that they were fixed and that they applied to everyone.

A) I B) II C) III D) IV E) V

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(I) The Yeşilırmak, a river in Türkiye, has a course of approximately 418 kilometres. (II) The area of its basin is around 20,000 square kilometres. (III) It was once part of Pontus, a kingdom bordering the Black Sea, which flourished from the 4th century BCE until it became part of the Roman Empire. (IV) The river rises in the mountains of northeast Türkiye, flows northwest through narrow fertile valleys, and ends in the Black Sea, near the city of Samsun. (V) The river's highest flow is from March to July, as snow melts in the mountains of Türkiye, and its lowest flow is in November and December.

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(I) The term 'imaginary audience' was introduced by the psychologist David Elkind. (II) The concept refers to the tendency of adolescents to falsely assume that their appearance or behaviour is the focus of other people's attention. (III) Having an imaginary audience is believed to result in the self-consciousness that is characteristic of adolescence and is often linked conceptually with personal fable, which involves having a strong belief in one's own uniqueness. (IV) Researchers can assess imaginary audience by asking adolescents questions about what they would do in social situations that are potentially embarrassing. (V) Some researchers have rated children with imaginary playmates as less competent in cognitive, physical, and social skills than their peers.

A) I B) II C) III D) IV E) V

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(I) People automatically react to the facial expressions of others by mirroring them – such as when the person next to you yawns – but it is also true for much more discreet motions. (II) Even when a person's face does not seem to react to seeing another individual's facial expression, scientists can measure that their facial muscles still mirror the expression they are looking at. (III) If a person's face is paralysed or he/she has had Botox injections, partly paralysing face muscles, it might be difficult for him/her to decode the emotions of other people. (IV) According to some scientists, this mirroring helps people understand other people's emotions. (V) This is because when people mirror an expression, it triggers the emotion that the expression represents, and so they experience empathy.

A) I B) II C) III D) IV E) V

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Altering the teeth for aesthetic reasons is a practice that has been found in cultures around the world, with teeth filing being one of the more common practices. Some Australian Aborigines file their teeth in such a way as to be aesthetically pleasing. ---- In Bali, for example, teeth are filed not for decorative reasons but because teeth symbolize negative emotions like anger, jealousy, and greed, which can be controlled through filing the teeth. Upper-class Mayans also filed their teeth, and sometimes etched designs onto the surface of the teeth as well, a tradition that has also been found in Africa and Central America.

- A. Other cultures file their teeth into sharp points, such as the Mentawai of Sumatra or the Dinka of Sudan, but not all are for appearance alone.
- B. Some cultures also stained their teeth to make them more beautiful, such as in Vietnam where black teeth were once preferred to white.
- C. Gums can also be operated on in order to change the shape and appearance of the gums and teeth.
- D. Today in the contemporary body modification community, teeth sharpening is a relatively rare practice.
- E. Tooth filing is done at a dentist's office, although some people have filed their own teeth at considerable risk.

The risk for numerous cancers rises with obesity. The reasons for this are difficult to separate out. ---- Yet, these factors are generally lacking in obesity. Further, the increase in adipose tissue evident in obesity appears to be a contributing factor to hormone-driven cancers such as prostate cancer and breast cancer, the risks for which are higher in people who have obesity than in people who are of healthy weight.

- A. Some studies have established a connection between the length of time food remains in the gastrointestinal tract with the risk for cancer.
- B. It has been identified that there are more than a thousand chemicals and other substances that have the ability to cause cancer.
- C. Regular physical activity and nutritious eating habits support the health of cells throughout the body as well as foster efficient immune function.
- D. According to recent data, a diet high in red meat increases the risk for cancer overall and specifically hormone-driven cancers.
- E. The most significant lifestyle factors related to cancer are smoking, diet, obesity, and exposure to environmental carcinogens.

Dentists recommend brushing and flossing the teeth at least twice a day and having routine dental check-ups twice a year. These measures help to prevent dental cavities and gum disease, and permit early detection and treatment of oral cancers. Dental health problems become more common with increasing age, for numerous and varied reasons. ---- There are strong correlations between the health of the mouth and health in general, even to the extent that the earliest signs of some diseases are first apparent in the mouth.

- A. They may include the cumulative effect of lifestyle habits, diminished saliva in the mouth, and diseases such as diabetes.
- B. Numerous bacteria naturally inhabit the mouth and can enter the bloodstream if there is any bleeding in the mouth.
- C. Chewing tobacco and cigarette smoking contribute to oral hygiene challenges such as tobacco stains on the teeth.
- D. Dentists strongly encourage the use of mouth guards in activities during which there could be injury to the mouth.
- E. In some cases, dentists prescribe preventive antibiotic medications prior to cleaning or major dental procedures.

Putting objects into their noses and ears is a common occurrence with young children. In such cases, the object is typically visible, though drainage or odour may signal an undetected obstruction that is causing an infection. Individual attempts to retrieve or clear the object can result in pushing it instead farther into the auditory canal or nasal passages; there is a risk with foreign objects in the nose of inhaling them into the airways or lungs. ---- It is especially important as particles of food and objects such as paper wads attract moisture and can swell, lodging more firmly in the ear or nose.

- A. Nevertheless, it is required to learn cardiopulmonary resuscitation (CPR) and other methods to relieve airway obstruction, such as the Heimlich manoeuvre.
- B. In addition, sometimes the tissue becomes raw and bleeds; and nasal vestibulitis typically develops with extended sneezing and nose blowing.
- C. Removal of the foreign object, as a result, is nearly always a complete remedy, unless there is a secondary infection that requires further treatment.
- D. Likewise, using an eyedropper to gently fill the auditory canal with warm olive oil can make the foreign object float to the top of the canal easily.
- E. Hence, a healthcare provider should assess and remove any foreign object that does not come out of the ear or nose with minimal effort.

"Twin studies are one of the most important pieces of evidence for genes being involved in autism," says Abha Gupta, a pediatrician who also researches the genetics and neurobiology of autism spectrum disorder (ASD) at Yale School of Medicine. Identical twins share nearly 100 percent of their genes, while fraternal twins share about 50 percent. ---- Since the 1970s, a number of studies have revealed that both identical twins are more likely to have autism than both fraternal twins.

- A. So, if identical twins have the same disorder, it is strong evidence for a genetic cause.
- B. Hundreds of genes are linked to ASD, which makes it difficult to research.
- C. Although ASD is heritable, children with no family history of the disorder can still develop it through genetic mutations.
- D. So far, the only generally accepted risk factors for identical twins are related to maternal health during pregnancy.
- E. The autism spectrum describes people with a wide range of developmental disorders.

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Of the diseases spread by mosquitoes, malaria has proved particularly deadly. In 2016, 216 million people were sickened by malaria worldwide, 445,000 of whom died. Certain species of *Anopheles* mosquitoes are carriers for the malaria-causing *Plasmodium* parasite. - --- About a week later, when the mosquito feeds again, the parasite hitches a ride in the bug's spit to a new human host, ultimately infiltrating that person's liver and bloodstream and causing sickness or death.

- A. When female mosquitoes bite humans, seeking the nutrients they need for their eggs, they unwittingly pick up these parasites.
- B. *Plasmodium* then reproduces in the mosquito's gut before they travel to its salivary glands.
- C. The disease's wide reach and alarming death toll have netted it the biggest and best-funded mosquito-control efforts.
- D. To fight those bugs, scientists have been developing insecticide-laced sugar baits that attract both male and female mosquitoes.
- E. Mosquitoes find humans in many ways, including following a person's carbon dioxide output through the eaves in their house.

(I) Anaesthesia refers to the loss of sensation with or without loss of consciousness. (II) There are several ways of producing anaesthesia, with the choice dependent on the type of surgery and the medical condition and preference of the patient. (III) Regional anaesthesia, analgesia, without loss of consciousness, results from injecting a solution of local anaesthetic drug either into the cerebrospinal fluid surrounding the spinal cord or into the epidural space surrounding the cerebrospinal fluid, usually in the lower back area. (IV) Each person responds differently to a given anaesthetic, and anaesthetic techniques and drugs often have marked effects on bodily functions, especially those of the cardiovascular and respiratory systems. (V) Therefore, these systems are monitored closely during anaesthetic administration, with measurements such as heart sounds, blood pressure, temperature, and oxygenation taken using a variety of sophisticated devices.

A) I B) II C) III D) IV E) V

(I) We may not have the luxuriant fur of some mammal species, but our skin is still covered with millions of hairs. (II) Most of those on the body are short, fine vellus hairs that, when tweaked by visiting insects, warn us that we might be bitten or stung. (III) Thicker, longer terminal hairs are found on the head, eyebrows, and eyelashes. (IV) Head hair is protective and also forms an important part of our appearance. (V) The shaft is the section of a hair that is visible above the skin's surface.

A) I B) II C) III D) IV E) V

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(I) People who suffer from the rare disorder narcolepsy fall asleep a few times each day for several minutes or longer at times likely to induce sleep, but also other occasions. (II) This may occur randomly, such as after a meal or during a conversation, or because of a triggering event, like when the person is carrying out a monotonous activity. (III) Along with avoiding activities that may bring on an attack, a person with narcolepsy may take certain prescribed drugs in special situations when a narcoleptic attack would be particularly inappropriate or embarrassing. (IV) Narcolepsy is present for life and the cause is unknown, although there is a tendency for the disorder to run in families. (V) However, in most cases it is necessary for those with narcolepsy to entirely avoid risky activities, such as driving or hazardous sports.

A) I B) II C) III D) IV E) V

(I) The potential medical applications of ultrasound were first recognized in the 1940s as an outgrowth of the sonar technology developed to detect submarines during World War II. (II) The first useful medical images were produced in the early 1950s, and by 1965, ultrasound quality had improved to the point that it came into general medical use. (III) The many types and uses of ultrasound technology make it difficult to generalize about the time and costs involved. (IV) Today, improvements in the technology, application, and interpretation of ultrasound still continue. (V) However, its low cost, safety, and speed make it one of the best medical imaging techniques.

A) I B) II C) III D) IV E) V

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(I) Although much has been learned about human embryology in the last couple of decades, a great deal remains unknown. (II) Studying prenatal human development is difficult because the embryo and fetus develop in a closed environment – the mother's womb. (III) However, the relatively recent development of a number of prenatal tests has opened a window on the process. (IV) The fetus receives all nutrients and oxygen from blood that circulates through the placenta. (V) Add to that more accurate and complete evaluations of newborns, especially those with problems, and a clearer picture of what can go wrong before birth is possible.

A) I B) II C) III D) IV E) V

(I) Amnesia is simply the standard term for a loss of memory, whether partial or complete. (II) Research on patients with amnesia has led scientists to discover some interesting things about memory. (III) The condition is usually temporary, and it generally affects only a small part of a person's experience, such as memory of the immediate past. (IV) Amnesia can be produced by a range of causes, including both psychological trauma and brain damage that may be caused by a blow to the head. (V) It can also be due to such varied causes as stroke and brain tumor.

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Whatever its institutional affiliation, the goal of a botanical garden was the collection of plants for purposes of utility and scientific interest. Great gardeners were admired for the skill with which they could acclimate plants coming from vastly different climates and environments. Definitions of utility shifted during the 18th century. At its beginning, the dominant use envisioned for botanical garden plants was medical. ---- This tradition retained its vitality and even expanded into new areas – the veterinary school in Lyons, France, the first ever, acquired a botanical garden in 1763.

- A. Individuals could still found botanical gardens, such as the one founded by the physician John Fothergill in the British town of Upton in 1762.
- B. The expansion of scientific functions and the vast numbers of new plants found in the 18th century put pressure on the space allocated to gardens.
- C. Europe's unquestionable leader among botanical gardens was the Royal Botanical Garden of France, and Britain's Kew Gardens was emerging by late in the century.
- D. University botanical gardens were associated with medical programs, and they were usually administered by medical professors.
- E. The major gardens also published catalogues to acquaint people who could not visit botanical gardens with their collections and achievements.

Genetic engineering refers to the process of manipulating genes in humans, animals, or plants, in order to create an organism with new genetic characteristics, such as a crop that is resistant to pests or an animal that resists cancer. ---- Changing the genetic makeup of an animal by manipulating and transferring selected genes from one animal to the next allows scientists to produce specific traits in animals to be used for food such as tenderness of flesh, disease resistance, and level of fat. One company, for example, has discovered a gene marker which will allow scientists to breed animals with leaner meat, while another has recently developed a way to test for genes for lean meat production (double muscling) in cattle.

- A. Genetic engineering is currently being used to genetically modify plants and animals for human benefit.
- B. Cloning breeder livestock is the wave of the future, since Dolly the sheep was successfully cloned in 1996.
- C. In genetic engineering, the health of the clones is currently in question as such animals may not live a long life.
- D. The focus has been to clone only prized breeder animals as it is not yet legal to produce food animals themselves.
- E. However, the primary focus in genetic engineering for the past few years has been to produce an allergen-free animal.

A human being breathes 16 times a minute on average when active but not under physical exertion such as running. By breathing, an adult gets about 500 liters or 0.7 kg of pure oxygen a day. ---- When the air is inhaled, it includes 20-21% oxygen, whereas the oxygen content is about 15% when the air is exhaled again. Once inside the body, the oxygen is not equally distributed. Your brain accounts for 2% of your body weight, but it claims 20% of your oxygen supply to meet its considerable energy requirement.

- A. Interestingly, people can neither see, nor smell nor taste oxygen but are dependent on it to survive.
- B. But if you are subjected to high oxygen concentrations for more than 24 hours, it could harm your lung cells.
- C. Yet, contrary to common belief, we do not use all the available oxygen that we breathe into our lungs.
- D. 50 kg of oxygen exists in a person of 75 kg, since the human body consists primarily of water.
- E. Oxygen is an extremely efficient tool in our metabolism, and it functions as fuel in energy production.

Within the Mariana Trench in the Pacific Ocean lies the deepest point on Earth's surface: Challenger Deep. It is a place that only the most fearless ocean explorers have visited. As submersible design has improved, the journey has become more accessible, but still, more people have been to space than to Mariana Trench. --- Research published in 2019 found that 100% of the amphipods from the trench had traces of microplastics in their stomachs. In the same year, undersea explorer Victor Vescovo discovered a plastic bag and sweet wrappers at almost 11,000m deep.

- A. And, just like space, this remote underwater frontier offers mysteries that humans cannot resist, like if life can exist there.
- B. Yet, despite being one of the most remote locations on Earth, the Mariana Trench has not escaped the impact of humanity.
- C. In recent years, scientists investigating the Mariana Trench have revealed a strange and fascinating alien world right here on Earth.
- D. With near-freezing temperatures and crushing pressure, the Mariana Trench makes for an environment that is as inhospitable as space.
- E. The Mariana Trench was formed when one tectonic plate was pushed beneath another and today, the deepest parts of Earth's oceans sit within it.

Gerontechnology, a new area in the study of human aging, has focused on developing technology to promote independence and reduce disabilities associated with old age. ---- For this reason, it is important that effective training programs be developed to teach older adults how to use new technology. The discipline known as human factors provides an effective means of accomplishing this goal. Human factor is a science focused on optimizing interactions between humans and the machines they use, thereby resulting in improved safety and quality of life. When developing methods to teach older adults to use new technologies, a systems-approach is effective because the characteristics of the person, the environment, and the technology itself are considered through a series of steps.

Which sentence best completes the passage?

1. New technologies may cause some occupations to lose their importance as the service they provide is no longer needed such as home care for the elderly.
2. To evaluate a program, measures of successful learning such as retention of information and ease of device usage should be examined.
3. Training techniques such as the provision of well-organized written instructions may assist in reconciling the differences between task requirements and personal limitations.
4. Non-users of new technologies such as the Internet share common goals with older adults and express positive attitudes about learning to use new technology.
5. Although the promise of new technologies is great for making life easier, this potential is highly dependent on the ability of older adults to learn to use such technologies.

30.

Some adipose tissue is brown because of its high concentration of mitochondria, which have iron-containing pigments. When energy-rich molecules in brown fat are catabolized (broken down to release energy), the stored energy is released not as chemical energy but as heat. Human infants are born with a lot of brown fat in their back and shoulder regions – it comprises about 5% of their body weight. Because infants have a high surface area-to-volume ratio, they tend to lose a lot of heat. One way that they keep warm is to produce heat in their brown fat tissues. ---- Adults have mostly white fat, which generates less heat when the fat is catabolized.

Which sentence best completes the passage?

1. As a child grows up, the brown fat content of the body is reduced.
2. In summer time, temperature can reach suffocating levels for infants and adults alike.
3. Recent studies are comparing white fat cells with brown fat cells in infants and adults.
4. Brown fat may be somehow associated with a tendency to remain lean.

5. Children tend to be active all day long and thus use ample energy.

31.

- (I) In many places around the world, vehicles and industry emit harmful gases and particles of pollution in the air that can lead to health risks when inhaled.
- (II) Some eco-friendly buildings in cities are designed to act as urban air purifiers.
- (III) The towers of Bosco Verticale in Milan, Italy, have many plants on their outsides.
- (IV) Scientists are working to develop machines that can suck carbon dioxide directly from the air.
- (V) These catch polluting particles and absorb carbon dioxide gas to use in a process called photosynthesis.

Which sentence does not belong to the passage?

1. I
2. II
3. III
4. IV
5. V

32.

- (I) The discovery of a lake of liquid water underneath the south polar ice cap on Mars is very exciting for astrobiology and the search for life beyond Earth.
- (II) Liquid water is one of the major prerequisites for life, and similar environments on Earth, such as Lake Vostok, sealed deep beneath the Antarctic ice sheet, provide analogues for what sort of microbial life we might hope to find on Mars.
- (III) But this subsurface lake water on Mars would be an extremely challenging environment for life to survive in.
- (IV) Scientists have known for a long time that there was water on the Martian surface in the distant past, due to the erosion patterns in the rock and the existence of hydrated materials.
- (V) The water, although liquid, is still punishingly frigid at around -70°C, and is probably also very salty to keep it liquid at such low temperatures.

Which sentence does not belong to the passage?

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2. II
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4. IV
5. V

33.

- (I) The assignment of meanings to certain numbers may date back to the origin of counting.
- (II) In the mantic tradition, which is probably at least as old as the invention of writing, words and names reveal hidden meanings and associations when interpreted as numbers.
- (III) Pythagoras and his followers adopted traditional meanings for the numbers in the decad (the numbers from 1 to 10).

(IV) Yet, they also expanded upon traditional meanings in numbers by attending to arithmetical properties.
(V) For instance, the number 10 evoked a special reverence because it represented at once the decad and the sum of the first four numbers of the decad.

Which sentence does not belong to the passage?

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34.

(I) The 17th-century English scientist Robert Boyle is generally considered to be the founder of modern chemistry.
(II) Before Boyle's time, chemistry was the province of the alchemists and of such craftsmen as dye makers and metallurgists.
(III) By the time Boyle died, chemistry had become a science.
(IV) Although it was Boyle's influence that caused the 'al' to be dropped from alchemy, he was also an alchemist who spent years passionately seeking the Philosopher's Stone.
(V) Boyle amassed enormous wealth, but in some respects, he had a checkered career.

Which sentence does not belong to the passage?

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5. V

35.

(I) Game theory is a branch of mathematics concerned with the analysis of conflict situations.
(II) It involves determining a strategy for a given situation and the costs or benefits realised by using the strategy.
(III) First developed in the early 20th century, it was originally applied to parlour games such as chess.
(IV) Now, game theory is applied to a wide range of subjects such as economics, behavioural sciences, sociology, military science, and political science.
(V) The theory received little attention until 1944 when John von Neumann and economist Oskar Morgenstern wrote the classic treatise *Theory of Games and Economic Behavior*.

Which sentence does not belong to the passage?

1. I
2. II
3. III
4. IV
5. V

36.

(I) Frostbite is the freezing of tissues which occurs when body parts, most commonly the fingers, toes, and the tips of ears and the nose, are exposed for long periods to the cold.
(II) It is a direct result of limited blood circulation.
(III) Recognising and treating the first signs of frostnip, the least serious form of frostbite, may prevent the development of the more serious forms of frostbite.
(IV) Prolonged exposure to the cold can constrict blood vessels, causing blood circulation within tissues to slow down.
(V) When tissues are deprived of the warmth of circulating blood, ice crystals can then form, leading to tissue death and loss of the affected body parts.

Which sentence does not belong to the passage?

1. I
2. II
3. III
4. IV
5. V