

1. **An international team of scientists have been trying to calculate a value called the Hubble Constant, which ---- how rapidly the universe is expanding outward.**
- A) constitutes
B) represents
C) elucidates
D) reinforces
E) depletes
2. **Those who are deprived of a sense of belonging in the workplace ---- a variety of maladies that extend beyond mere discomfort, including greater stress and strain, poorer health, and lower emotional and psychological wellbeing.**
- A) obtain
B) realize
C) challenge
D) exhibit
E) occupy
3. **German Zeppelins were very functional and achieved huge success during World War I because they could ---- higher altitudes than other airplanes of the era.**
- A) receive
B) attain
C) undermine
D) soar
E) employ
4. **Alan Turing, the man commonly ---- as the father of modern computer science, has been honoured by ---- to appear on a United Kingdom banknote.**
- A) recognising / selected
B) recognise / to have selected
C) recognised / being selected
D) to recognise / to select
E) to be recognised / selecting
5. **---- several developed countries have effectively implemented control policies, the number of smokers is increasing in a number of countries where such efforts are lacking.**
- A) Just as
B) As though
C) Unless
D) Now that
E) While
6. **The obstacles ---- colonizing Mars are not only limited to the journey to the Red Planet – once we get there, we will also need to find a way to deal with the detrimental health consequences ---- too much radiation and not enough gravity.**
- A) of / on
B) to / of
C) by / upon
D) on / to
E) at / into
7. **Thanks largely to the use of state-of-art technology, each farmer ---- almost 200 people today, compared to the early days of farming when one farmer ---- food for only 20 people.**
- A) can feed / would have provided
B) should feed / could have provided
C) is able to feed / could provide
D) has to feed / used to provide
E) must feed / would provide
8. **Wireless systems provide people with countless conveniences; however, it is also important to consider their ---- such as lack of security and privacy.**
- A) drawbacks
B) directives
C) insights
D) conflicts
E) obligations

9. Rainforests ---- on an unprecedented scale, which, in the eyes of many experts, is the best solution available so far ---- unfavourable effects of climate change.
- A) have been restored / to be reversed
B) are restored / reversing
C) were restored / reversed
D) are being restored / to reverse
E) will be restored / to have reversed
10. Many pregnant or recently pregnant workers suspect that they are the first ones to be targeted for redundancy, ---- this can be hard to prove.
- A) now that
B) unless
C) so that
D) because
E) although
11. When the lack of progression happens over a long time in a workplace – as opportunities for promotion are repeatedly ---- or delayed – its negative impacts will be more severe.
- A) disrupted
B) maintained
C) covered
D) prohibited
E) denied
12. If workers suspect that the lack of progression or promotion might be linked to who they are, ---- how they are doing, then failure to advance can be a cycle of disappointment and disillusionment.
- A) by virtue of
B) rather than
C) in contrast to
D) instead of
E) along with
13. Smoking is known to kill one ---- two smokers, but quitting ---- any point in life leads to big improvements in health and reduces healthcare costs.
- A) of / by
B) up / to
C) in / at
D) from / on
E) by / of
14. Contagious diseases have so far affected the whole world, but hit some regions more, ---- where a military conflict or civil war hinders the treatment and prevention efforts.
- A) eventually
B) accurately
C) promptly
D) considerably
E) notably
5. Supercomputers can perform ---- demanding tasks in a very short time ---- it would take at least 10.000 regular PCs to carry out the same tasks.
- A) both / and B) as / as
C) such / that D) either / or
E) so / that
16. With the outbreak of measles continuing to spread across Europe, some EU members have passed a new law making vaccinations ---- for kids so that that no child will be affected by the disease.
- A) insubordinate B) considerable
C) entitled D) obligatory
E) successive

17-21: For these questions, choose the best word or expression to fill the spaces in the passage.

Burnout is a state of emotional, physical, and mental exhaustion caused by excessive and prolonged stress. It occurs **(17)** ---- you feel overwhelmed, emotionally drained, and unable to meet constant demands. As the stress continues, you begin to lose the interest and motivation that led you to take on a certain role **(18)** ---- the first place. Burnout significantly reduces your productivity and energy, **(19)** ---- you increasingly helpless, hopeless, cynical, and resentful. Eventually, you may feel like you have nothing more to give. The negative effects of burnout **(20)** ---- into every area of life, including your home, work, and social life. Burnout can also cause long-term changes to your body that make you susceptible to illnesses like colds and flu. It has so many negative consequences, **(21)** ---- it is important to deal with burnout right away.

17.

- A) while
- B) whereas
- C) when
- D) unless
- E) in case

18.

- A) through
- B) in
- C) below
- D) off
- E) over

19.

- A) to leave
- B) leaving
- C) to be left
- D) left
- E) leave

20.

- A) spill over
- B) break out
- C) allow for
- D) put off
- E) look up

21.

- A) conversely
- B) meanwhile
- C) however
- D) otherwise
- E) hence

22-26: For these questions, choose the best word or expression to fill the spaces in the passage.

Throughout history, people have bred domesticated animals to (22) ---- certain traits and chosen some for their ability to breed in captivity and for their calm temperament. Their ability to resist disease and survive in difficult climates is (23) ---- valuable. The traits these domestic animals have developed (24) ---- time make them different from their wild ancestors. Take dogs, for instance. These animals have regarded as the best companions of people for centuries, and given their common traits, they (25) ---- from grey wolves long ago, though today, they are clearly a distinct species from grey wolves. Domesticated animals can bear physical features very different from their counterparts in the wild. To illustrate, wild chickens only hatch a small number of eggs once a year, (26) ---- domestic chickens commonly lay 200 or more eggs each year.

22.

- A) develop
- B) evade
- C) prevent
- D) promote
- E) erupt

23.

- A) though
- B) unlike
- C) also
- D) in contrast to
- E) thus

24.

- A) on
- B) at
- C) over
- D) for
- E) from

25.

- A) should have been domesticated
- B) would have been domesticated
- C) had to be domesticated
- D) must have been domesticated
- E) used to be domesticated

26.

- A) while
- B) as long as
- C) just as
- D) in case
- E) when

27. **The first telegraph cable to span the Atlantic revolutionized communication, ----.**

- A) while it also transformed business, politics, and even language
- B) because installing telegraph wires across the oceans proved nearly impossible
- C) so it would be a valuable triumph to cut the entire travel time for transatlantic messages
- D) yet the notion of directly cabling messages with lightning speed to Europe sparked interest
- E) and the lack of telegraph operators was another setback

28. **Although the moderate consumption of fried foods, especially French fries or fried potatoes, is claimed to have a positive health impact, ----.**

- A) there is still no evidence that finds a link between eating fried foods and death
- B) researchers also need to investigate the association between eating canned food and obesity
- C) fatty and spicy food will increase your chances of developing certain diseases in such cases
- D) up to a third of North American adults are now cutting down on these healthy meals
- E) it has been found that eating them is associated with such diseases as diabetes and obesity

29. **----, preventive maintenance can restore performance and extend pavement life with lower costs.**

- A) Whereas pavement preservation leads to significant environmental benefits
- B) If failures or holes in pavements are detected in their early stages
- C) Although pavement restoration is not a new industry
- D) Even if keeping pavements in good shape saves money and energy and reduces emissions
- E) As soon as a machine compacts asphalt over existing pavement at a construction site

30. **----, manufacturers should take them into account when designing autonomous vehicles.**

- A) Given that animals cannot make informed decisions or react as humans would
- B) Although prototypes of autonomous machines startle animals
- C) As animal-friendly moral machines are being developed
- D) Unless absolute moral rules are enforced consistently
- E) Though advocates for animal rights follow developments in robotics

31. **----, instead, researchers argue that he met his demise due to a neurological disorder.**

- A) The death of Alexander the Great may have happened 2,300 years ago
- B) Theories on the death of Alexander the Great have not been satisfactory so far
- C) No theory has provided an all-encompassing answer explaining the death of Alexander the Great
- D) Alexander the Great did not die from infection, alcoholism or murder, as others have claimed
- E) Alexander the Great's body showed no signs of decomposition for six days after his death

32. **In a fencing tournament, which is an old combat sport equipped with ne technology, competitors wear an electronic device ----.**

- A) although the use of swords dates to prehistoric times and swordplay to ancient civilizations
- B) because it is an organized sport involving the use of swords for attack and defence
- C) so that the judges know when someone has made a hit on his opponent
- D) just as swordsmanship was also practiced widely by the ancient Persians, Babylonians and Greeks
- E) once one of the fencers has scored an on-target hit detected by the sensors

33. With artificial intelligence becoming incorporated into more aspects of our daily lives, from writing to driving, ----.

- A) artists write algorithms not to follow a set of rules, but to learn a specific aesthetic
- B) it is only natural that artists will also start to experiment with it
- C) generating new images in adherence to the aesthetics via artificial intelligence is nowhere in sight
- D) no one can produce images that surprise even the artist presiding over the process by using it alone
- E) many artists must seek to make their works appealing by using it

34. Women have been responsible for some of the most important scientific breakthroughs that shaped the modern world, ----.

- A) so that young girls dreaming of a career in science should be inspired by those in the field
- B) while a great number of countries achieve what is classed as gender parity
- C) even if women make up the majority of researchers in some countries such as Armenia and Kuwait
- D) and they have contributed to social and political movements such as anti-slavery campaigns
- E) yet others lead the world in gender equality thanks to ambitious welfare and social policies

35. Although most people consider deserts as barren wastelands, ----.

- A) they are biologically rich habitats with a vast array of animals and plants
- B) they cover more than one-fifth of the Earth's land area
- C) a place that receives less than 25 centimetres of rain per year is regarded a desert
- D) there are also some other deserts that are extremely cold
- E) surprisingly, only about 20 percent of deserts are covered by sand

36. ----, though overall control is maintained by the brain.

- A) Most species of octopus, squids, and cuttlefish can instantly their change colour
- B) Two-thirds of an octopus's neurons are in its arms, allowing them to act independently
- C) Some species of octopods can even alter the texture of their skin to mimic coral or pebbles
- D) Their intelligence and amazing camouflage abilities make octopus a unique species
- E) The distributed neurons enable octopus's most striking adaptation

37-42: For these questions, choose the most accurate Turkish translation of the sentences in English, and the most accurate English translation of the sentences in Turkish.

37. **New discoveries in genetics may someday enable doctors to detect many inherited diseases even before people develop them.**

- A) Genetik bilimindeki yeni keşifler sayesinde bir gün doktorlar pek çok kalıtsal hastalığı insanlar bunlara yakalanmadan çok önce tespit edebilir.
- B) Genetik bilimindeki yeni keşifler bir gün doktorların pek çok kalıtsal hastalığı insanlar daha bunlara yakalanmadan tespit etmesine olanak sağlayabilir.
- C) Genetik biliminde yeni keşifler yapan doktorlar bir gün pek çok kalıtsal hastalığı insanlar daha bunlara yakalanmadan tespit edebilirler.
- D) Genetik biliminde yeni keşifler yapan doktorların pek çok kalıtsal hastalığı insanlar bunlara yakalanmadan önce tespit etmesi bir gün mümkün olabilir.
- E) Genetik bilimindeki yeni keşifler bir gün doktorların pek çok insanın kalıtsal hastalıklara yakalanmasını önlemesine olanak sağlayabilir.

38. **All countries with nuclear power must find a formula which will allow all sides to reduce their nuclear arsenals without any side gaining an edge over the other.**

- A) Nükleer gücü olan ülkeler, herhangi bir tarafın avantaj kazanmasını istemiyorsa tüm tarafların nükleer cephaneliklerini azaltmalarını sağlayacak ortak bir formül bulmalıdır.
- B) Nükleer gücü olan ülkeler bir taraf üzerinde avantaj kazanmadan nükleer cephaneliklerini azaltmak istiyorlarsa, bir formül üzerinde birlikte çalışmalıdır.
- C) Nükleer gücü olan ülkeler, herhangi bir tarafın avantaj kazanmasının önüne geçmek için, tüm tarafların nükleer cephaneliklerini birlikte azaltmaya çalışmalıdır.
- D) Nükleer gücü olan tüm ülkelerin, bir tarafın diğerleri üzerinde avantaj kazanmadan tüm tarafların nükleer cephaneliklerini azaltmalarını sağlayacak bir formül bulması gereklidir.
- E) Nükleer gücü olan tüm ülkelerin herhangi bir taraf avantaj kazanmadan tüm tarafların nükleer cephaneliklerini azaltmalarını sağlayacak bir formül bulmaları herkesin çıkarıdır.

39. **Giving children responsibility and trusting them with that responsibility foster a sense of self-confidence that will help them throughout their entire lives.**

- A) Çocuklara sorumluluk verilmesi ve bu sorumluluk konusunda güvenilmesi tüm yaşamları boyunca onlara yardımcı olacak bir özgüven duygusunu geliştirir.
- B) Çocuklara sorumluluk verildiğinde ve bu konuda onlara güvenildiğinde, tüm yaşamları boyunca onlara yardımcı olacak bir özgüven duygusu geliştirirler.
- C) Çocuklara sorumluluk vermek ve bu sorumluluk konusunda onlara güvenmek tüm yaşamları boyunca onlara yardımcı olacak bir özgüven duygusunu güçlendirir.
- D) Çocuklara sorumluluk vermenin ve bu sorumluluk konusunda onlara güvenin tüm yaşamları boyunca onlara yardımcı olacak bir özgüven duygusunu güçlendirdiğine inanılır.
- E) Çocuklara sorumluluk verilir ve bu sorumluluk konusunda onlara güvenilirse, bu tüm yaşamları boyunca onlara yardımcı olacak bir özgüven duygusunun güçlenmesine yardımcı olur.

40. Katil balinalar fok balıklarını çoğu zaman suyun içine düşsünler diye üzerinde uzandıkları buzdu yukarı iterek yakalar.

- A) Killer whales often catch seals by tipping up the ice they are lying on so that they fall into the water.
- B) Tipping up the ice they are lying on so that they fall into the water is a method utilized by killer whales to catch seals.
- C) When killer whales tip up the ice, seals fall off the ice into the water, allowing killer whales to catch them.
- D) Killer whales are often known to catch seals by tipping up the ice they are lying on so that they fall into the water.
- E) Killer whales have often been spotted tipping up the ice where seals are lying so that they fall into the water.

41. Kendisine ait bir kokusu olmadığından, insanların sızıntıları tespit edebilmesi ve bunları durduracak önlemler alması için doğal gazı yapay bir koku eklenir.

- A) If natural gas had its own smell, artificial odour wouldn't have to be added to allow people to be able to identify leaks, and take measures to stop them.
- B) Having no smell of its own makes it impossible to identify leaks and thus take measures to stop them, so artificial odour is added to natural gas to allow people to be able to do so.
- C) Artificial odour is added to natural gas, which has no smell of its own, to allow people to be able to identify leaks, and take precautions to stop them.
- D) Natural gas lacks smell, thus artificial odour is added to natural gas to allow people to be able to identify leaks, and take measures to stop them.
- E) Since it has no smell of its own, artificial odour is added to natural gas to allow people to be able to identify leaks, and take measures to stop them.

42. İnsanlar genellikle daha çekici hale getirmek için yöresel olmayan bitkileri bahçelerine koyarlar, ancak sorun bu bitkilerin çok istilacı olabilmesi ve mevcut bitkileri öldürebilmesidir.

- A) People often put non-native plants in their gardens to make them more attractive, but the problem is that these plants can be very invasive, and may kill existing plants.
- B) People who often put non-native plants in their gardens to make them more attractive seem to forget that these plants can be very invasive, and may actually kill existing plants.
- C) People plant non-native plants in their gardens to make them more attractive without considering the fact that these plants can be very invasive, and may kill existing.
- D) People often put non-native plants in their gardens to make them more interesting, but the problem is that these plants can be very invasive, causing the existing plants to die.
- E) People interested in planting non-native plants in their gardens to make them more interesting should be careful in that these plants can be very invasive, and may actually kill existing plants.

43-46: Answer these questions according to the passage below.

Substance-related and addictive disorders result in significant consequences for people. The biological processes causing addiction involve the reward pathways in the brain that provide feel-good chemicals to "reward" substance use. The areas of the brain responsible for self-control also undergo changes during an addictive disorder, contributing to difficulties in avoiding the addictive substance. Substances produce a joyful feeling by triggering large amounts of dopamine in certain regions of the brain responsible for the feeling of reward. Addiction occurs when using a substance takes over these regions and increases the urge to consume more of the substance to achieve the same rewarding effect. Eventually, substance use no longer causes the same rewarding feelings that it once triggered. However, if people avoid using the substance, they begin to feel withdrawal symptoms, in which they experience unpleasant mental effects caused by not taking it. Some people may turn to using drugs and alcohol to alleviate these effects, but this can also harm the functioning of a brain region that manages decision-making. This region should alert a person to the harmful consequences of such behavior, but addiction impairs its ability to carry out this function.

43. Which of the following is true about substance-related and addictive disorders?

- A) Feelings of stress can worsen the adverse effects of using addictive substances.
- B) Substance use is a way of escaping from real life for some people.
- C) Addiction may not result from taking addictive substances.
- D) Withdrawal symptoms can occur even before people stop taking addictive substances.
- E) The changes to the brain make it difficult for people to avoid addictive substances.

44. Which of the following can be concluded from the passage?

- A) The brain changes in so many ways that it can take people a long time to regain their health.
- B) People who consume alcohol are more prone to substance-related addictive disorders.
- C) Long term effects of substance use are far more devastating compared to its short term effects.
- D) People trying to stop taking addictive substances may end up using drugs and alcohol.
- E) The type of substance that a person takes worsens the course of addictive disorders.

45. It can be understood from the passage that withdrawal symptoms ----.

- A) disappear if the sufferer avoids the addictive substance as much as possible
- B) bring about constant fatigue as well as negative impacts on the brain
- C) stem from avoiding the substance that causes the addiction
- D) lead individuals to take even larger amounts of addictive substances
- E) occur when a substance causes a great deal of damage to certain regions in the brain

46. The passage is mainly about the ----.

- A) withdrawal symptoms that are triggered by restricting the use of addictive substances
- B) reasons why addiction takes place and its subsequent effects
- C) precautions that people should take to avoid taking drugs and alcohol
- D) steps to follow to stop taking addictive substances
- E) dire consequences of turning to drugs and alcohol

47-50: Answer these questions according to the passage below.

Antarctica might look like an inhospitable wasteland of ice, but there are some areas full of life. A subglacial lake, deep below the ice sheet, harbors colonies of bacteria – a fact that could have huge significance for the search for extra-terrestrial life on Mars in particular. Only last year, astronomers discovered a giant lake with subterranean water on Mars, which may host microbial beings. The discovery of these bacteria in the continent is thanks to a project aiming to determine the diversity of life there and initial results suggest the continent is far from barren. It is too early to say for sure but they may even reveal the potential for higher lifeforms to exist. But this is not the only lake beneath the ice sheet with bacterial lifeforms. In 2013, scientists drilled 800 meters into another lake another lake in Mars, where they found bacteria feeding on methane. This suggests life, even if only on a microbial level, can survive in such hostile environments, raising the possibility of life on Saturn and Jupiter's icy moons. It may even help us find a way to manage greenhouse gas emissions on Earth. The findings have also led scientists to believe the entire continent is one giant ecosystem, consisting of many lakes connected to one another via a network of rivers.

47. Which of the following can be concluded from the passage?

- A) The climatic conditions in Antarctica are totally distinct from those on Mars.
- B) Some bacteria species in Antarctica may provide a solution to an environmental issue.
- C) There are very few unidentified species inhabiting Antarctica.
- D) The main aim of the researchers was to discover new species in bodies of water in Antarctica.
- E) Antarctica is still regarded as an infertile continent despite the new research findings.

48. Which of the following is true according to the passage?

- A) The research has been carried out in collaboration with astronomers studying Mars.
- B) The new bacteria species in Antarctica holds clues regarding the history of the continent.
- C) The findings show that complex lifeforms exist in a lake on Mars.
- D) Subglacial lakes in Antarctica are the only home to a wide range of bacteria species.
- E) The species of bacteria discovered in Antarctica may give an insight into life on other planets.

49. The researchers maintain that ----.

- A) biodiversity in Antarctica is much more extensive than other continents on Earth
- B) it is difficult to classify the new microbial beings and bacteria species discovered in Antarctica
- C) there are far more subglacial lakes in Antarctica than previously thought
- D) lakes deep below Antarctica might be linked to each other through rivers
- E) the bacteria in Antarctica have remained dormant for thousands of years

50. Which of the following would be the best title of the passage?

- A) Myths Debunked about Life in Antarctica
- B) Amazing Subglacial Lakes of Antarctica
- C) The Importance of Research into the Mysteries of the Universe
- D) Secrets of Antarctica Clue for Life on Other Planets
- E) Life in Antarctica: What Does the Future Hold?

51-54: Answer these questions according to the passage below.

Have humans permanently changed the planet? That seemingly simple question has sparked a controversy among scientists over what to call the time period we live in. According to some, we are officially in the *Holocene*, which began after the last major ice age. But others claim that this label is **obsolete**. They think we live in *Anthropocene*, the age of man, as humans have caused mass extinctions of plant and animal species, polluted the oceans and altered the atmosphere, among other lasting impacts. Some geologists, however, say that clear-cut evidence for a new epoch simply doesn't exist because when you start naming geologic-time terms, you need to define where exactly it appears in the rock strata. The atomic era, for instance, has left traces of radiation in soils around the globe, while agriculture's signature in Europe can be detected in rock strata as far back as A.D. 900. Yet, *Anthropocene* proponents recommend starting the epoch with the advent of the industrial revolution in the early 1800s or the atomic age in the 1950s. Either way, this is a strong reminder to us that we are now having so many undeniable impacts on the environment that a new geological epoch has begun.

51. Which of the following is true according to the passage?

- A) The term *Anthropocene* was instantly adopted by scientists to describe the era we are living in.
- B) It may take a long time to label an era as many different criteria must be taken into consideration.
- C) The effects of human activities make us think that we are living in a new epoch.
- D) There is a consensus among scientists on changing the name of our current epoch to *Anthropocene*.
- E) This is the first time a new term for human-oriented era has been suggested.

52. The word **obsolete** is closest in meaning to ----.

- A) invaluable
- B) prominent
- C) outmoded
- D) extensive
- E) contemporary

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53. According to the author, ----.

- A) we need to define an era on the basis of the extinction and emergence of new species
- B) the debate among scientists is useless as we need more time to precisely name the era we live in
- C) scientists waste their time inventing names for epochs instead of focusing on research
- D) an increasing number of scientists believe humans are the primary geological force on the planet
- E) the noticeable human-caused changes on our planet show that we are already living in a new era

54. The passage is mainly about ----.

- A) the main differences between two terms that aim to define the time period we live in
- B) a scientific debate triggered by the efforts to label the epoch we live in
- C) the findings of research that show that we are living in the *Anthropocene*
- D) the irreversible changes that humans have caused to the environment
- E) the difficulties experienced in naming the geological time period we live in

55-58: Answer these questions according to the passage below.

"John Doe", the name given to an anonymous or unidentified person, dates to 13th century England, when it was first used in legal documents to protect the identity of witnesses. The concept of a code name in legal documents is actually quite old; the Romans, for example, had their own version of "John Doe" in legal proceedings. Almost every nation has its own variation of "John Doe," ranging from Mou Mou in Chinese to Fulan al-Fulani in Arabic. There are some other reasons to use these names. In some cases, "John Doe" is used for someone who cannot be identified, such as a murder victim or a witness to a crime who has not come forward. Jury members are also sometimes referred to as "John Doe" so that they cannot be identified and pressured. Newspapers use it to avoid exposing some people such as rape victims as well. It is also used to refer to someone who does not actually exist. For example, a lawyer might mention a hypothetical situation involving a "John Doe" to reinforce his argument in the eyes of a jury. John Doe's female counterpart is Jane, and its infant version is Baby Doe.

55. Which of the following can be concluded about the name "John Doe" from the passage?

- A) The general public uses it sarcastically in their daily lives.
- B) It is sometimes used to avoid revealing information in sensitive situations.
- C) It is no longer used in legal proceedings in England.
- D) Members of the jury often use it to refer to suspects until they reach their decision.
- E) It is usually used for people who commit serious crimes.

56. It can be understood from the passage that ----.

- A) some people opposed to the use of John Doe as it was inappropriate for legal cases
- B) the name John Doe was chosen as it was the most common name in England at the time
- C) the names Jane Doe and Baby Doe emerged much later than John Doe
- D) there are different versions of the name John Doe across many countries
- E) the name John Doe became a common practice immediately after its first use

57. Which of the following is true about the term "John Doe" according to the passage?

- A) It is used in courts all over the world.
- B) It is sometimes used for fictitious people.
- C) It can be used for people suffering from amnesia.
- D) It is used for innocent people alone.
- E) It was first used by a lawyer in the 13th century.

58. The passage is mainly about ----.

- A) a brief history of the term John Doe and the reasons why it has been used
- B) various reasons why the name John Doe should be used in legal cases
- C) the myths about the term John Doe in many countries around the world
- D) the differences and similarities of the use of John Doe across many countries
- E) the importance of using the term John Doe to protect innocent people

59-62: Answer these questions according to the passage below.

Artists often resort to other fields and use new pigments and oils to produce vibrant and luminous colors and Rembrandt was no different. He made use of technique, creativity and meticulous labor as well as chemistry while creating his masterpieces in the early 1600s. A new analysis of his works shows he used an unusual compound in his paints, which helped him succeed his secret signature technique. Researchers already knew that he used readily available compounds like lead white pigment and oils to make paints. But, when they subjected paint samples from some of his best-known works to X-ray analysis, they detected another compound they weren't expecting, a mineral called *plumbonacrite*. This finding was surprising since this mineral is generally found in 20th-century works onward, apart from some paintings by Vincent van Gogh. Having studied historical texts and determined what would have been available to a 17th-century artist, researchers found that its presence is not arbitrary, but that it is the result of an intended synthesis enabling him to give his paintings a three-dimensional appearance. This isn't the only artistic secret revealed by X-rays in recent years. For instance, in 2016, a previously unseen painting beneath Degas' "Portrait of a Lady" was unveiled through this method.

59. Which of the following is true about Rembrandt?

- A) He made use of a combination of some rare compounds while doing his masterpieces.
- B) The techniques he used while creating his works influenced the 20th-century artists.
- C) He was more renowned for his chemistry knowledge than the works he created.
- D) He was the first artist to sign his masterpieces using a 3D technique.
- E) He was way ahead of his time due mainly to a specific substance he used in his paintings.

60. It is clearly stated in the passage that ----.

- A) researchers analyzed Rembrandt's paintings to compare his style with Van Gogh's
- B) the rare substance Rembrandt used enabled him to give a distinct perspective to his works
- C) Rembrandt utilized totally different substances in his works from his contemporaries
- D) researchers analyzed the surviving works of artists to understand their chemical structures
- E) some artists used unusual substances in their paintings so that their works would be durable

61. It can be understood from the passage that ----.

- A) Rembrandt and Vincent van Gogh were the most prominent artists in the 17th century
- B) Vincent van Gogh was inspired by the technique Rembrandt used while creating his masterpieces
- C) Rembrandt and Vincent van Gogh were the first artists to use distinctive signature technique in their works
- D) Rembrandt made use of another discipline to do his paintings like other artists at the time
- E) Rembrandt's exceptional expertise in chemistry made him stand out among other artists

62. Which of the following can be concluded from the passage?

- A) Being a master artist requires both a unique skill and considerable expertise in many different fields.
- B) The importance of chemistry in creating works of art was overlooked until recent times.
- C) Science can help us reveal the clever tricks famous artists used when creating their masterpieces.
- D) Some of the techniques famous artists used in their works are still unknown to science.
- E) Science and skill have always gone hand in hand in the creation of masterpieces.

63-67. For these questions, choose the best option to complete the dialogue.

63.

John:

- I am seriously considering stopping eating seafood altogether.

Mike:

- Why would you do that? They are full of all sorts of nutrients.

John:

- ----

Mike:

- Well, they may have a point, but don't you think you are a bit overreacting?
- A) I need to stick to a more balanced diet according to my dietician.
- B) We should pay more attention to our eating habits to help conserve the environment.
- C) It has to do with all those micro plastics. I keep hearing about them in every article I read.
- D) Marine scientists should do something to deal with this problem.
- E) I believe nature will take care of it at the expense of human beings.

Susan:

- I've read in an article that people often assume procrastination is a choice and that the personality trait, which sees people delay necessary tasks, is a sign of laziness.

Gerard:

- As the article suggests people assume it to be true, however, new research shows that genes may play a role.

Susan:

- ----

Gerrard:

- Well, they examined identical twins from different cultures over a year and concluded that 46% of the tendency to procrastinate might be down to genes.
- A) Right, I know that some twins show differences in their levels of procrastination.
- B) But, some scientists disapproved of the results of those studies, claiming that more research is needed.
- C) Well, it is already known that this gene helps regulate the production of dopamine that plays a role in brain processes such as attention and motivation.
- D) That sounds really interesting, but I am curious about how the researchers have reached that conclusion.
- E) I still believe that it is a matter of choice rather than the genes. You can always change your behaviour even if procrastination is something inherited.

64.

65.

Interviewer:

- **What is the impact of social media on marketing?**

Social Media Expert:

- **Well, it is one of the areas where huge investments are happening today. Since social media is highly customisable for desired media ads, it has become quite important for businesses.**

Interviewer:

- ----

Social Media Expert:

- **Exactly. This classification helps releasing targeted ads, which is not effective if implemented through television, radio or print medium.**
- A) Still, some experts believe that ads on a TV channel, in newspapers or on the radio is still the most effective way of developing their business. What do you think?
- B) What about the fake advertisements that often appear on social networking sites? Don't you think there should be some restrictions for them?
- C) Users should be careful about the video on the relevant social media platform, one may also consider sending it who will find the content relevant to their business.
- D) Recent survey results show that social media marketing is a popular career choice among people today. What are your views on this?
- E) Some people claim that ads target users by putting them into categories like background, purchase history, and history of social media behaviour. Is that true?

66.

Mark:

- **Did you know that a deadly spider can actually be a life saver?**

Norma:

- **No, personally I can't think of a situation in which a deadly spider can save my life. How can it be?**

Mark:

- ----

Norma:

- **Well, I know that toxins in snake venom can be used to develop new drugs to treat some illnesses. I should have guessed what you meant.**

Mark:

- **Yes, it's the same thing, indeed.**

- A) Unfortunately, the risk of spider or snake bite is a public health hazard that many people in the rural tropics face on a daily basis.
- B) It is thanks to a medical breakthrough in which researchers have discovered that spider venom can be used to help people who suffer from heart attacks.
- C) Well, you may have arachnophobia, which is the unreasonable fear of spiders and arachnids such as scorpions.
- D) That's why the governments across the world should pass a law that restricts people who illegally hunts these creatures to gain financial profits.
- E) In fact, world's most venomous one is Funnel-web spider, which is deadly to humans, though no deaths have been recorded since the development of anti-venom.

67.

Mary:

- **It turns out there's a good reason why some people have low salaries compared to others, based on recent research findings.**

Clark:

- **I think, there must be various reasons for that.**

Mary:

- ----

Clark:

- **Then, it seems parents must monitor their children's behaviours from a very early age if they want them to have reasonable salaries in the future.**

- A) You may have a point, but workers who receive incentive pay have an additional chance to earn higher wages than workers who have fewer incentive options.
- B) I think luck seems to matter more when it comes to getting a key position in a company where one can make huge sums of money.
- C) Right, one of them is that, according to a study, distracted pre-school kids earn less than their more attentive classmates do when they are in their 30s.
- D) I think it all depends on how you treat your boss at the workplace as some people always have a good relationship with their bosses.
- E) It is also true that women are paid less in most occupations compared to men and this should be unacceptable in our modern world.

68-71: For these questions, choose the best rephrased form of the given sentence.

68. Without the oceans absorbing all the heat created by greenhouse gases, global warming would occur even faster than it does now.

- A) It is proven that oceans increase the amount of heat caused by greenhouse gases and thus contribute to the pace of global warming.
- B) If the oceans were able to absorb the heat caused by greenhouse gases, then the pace of global warming would slow down.
- C) The adverse effects of global warming would be devastating even if oceans absorbed the heat generated by greenhouse gases.
- D) The rate of global warming would be faster if the oceans didn't have the capacity to absorb heat produced by greenhouse gases.
- E) The pace of global warming slowed down so that oceans could absorb the heat created by greenhouse gases.

69. Scientific experiments intended to recreate the conditions at the beginning of the universe could bring about the end of life on Earth.

- A) Some scientific experiments aiming to reveal the mysteries as to the very first days of the universe might cause life on Earth to end.
- B) Life on Earth may end due to the experiments scientists conduct to simulate the conditions that were present at the time the universe came to exist.
- C) It is feared that scientists will destroy our planet while carrying out experiments to form the environment that was present before the universe came into being.
- D) Once scientific experiments are done to recreate the conditions that caused life to start on Earth, the end result means the end of life on Earth.
- E) Life on Earth can be destroyed via experiments carried out by scientists while they are trying to discover the mysteries as to the very first days of the universe.

70. Fueled by rising incomes rather than urbanization, meat consumption in China has grown dramatically, which can undermine its efforts to fight climate change.

- A) Not only increasing incomes but also urbanization have contributed to the increase in meat consumption in China, undermining the efforts to curb climate change.
- B) The fight against climate change could be negatively influenced by the rapid urbanization and dramatic increase in meat consumption in China.
- C) Urbanization has contributed more to the increase in meat production in China and this may have a negative impact on global warming.
- D) The cities in China has grown steadily and this played a role in the dramatic increase in meat consumption, causing changes to the policies concerning climate change.
- E) The motive behind the sharp rise in meat consumption in China is not urbanization but increasing incomes, and this may disrupt its attempts to curb climate change.

71. By examining fossils and geological changes, researchers found that a profound cognitive leap in humans occurred at the same time as dramatic transformations in climate and geography.

- A) After looking into fossils and geological changes, researchers realized that changes in climate have played almost no role in the development of human cognition.
- B) When researchers examined fossils and geological changes, they suggested that changes to the climate and landscape were the main factors worsening human capabilities to deal with changes.
- C) Through studying fossils and geological changes, researchers suggested that the dramatic increase in the cognitive abilities of mankind coincided with the significant changes in climate and landscape.
- D) In order to understand what the changes to climate and landscape mean for human cognition, the researchers decided to examine the fossils rather than the geological changes.
- E) Having done a thorough study into the causes of the rise in cognitive abilities of humans, researchers realized that there was no significant correlation between climate and human cognition.

72-75: For these questions, choose the best option to complete the missing part of the passage.

72. It is common knowledge that a sedentary lifestyle increases the risk of heart disease, type 2 diabetes, cancer and obesity, and can result in premature death. Many people think they can compensate for sitting around by walking, playing sports or going to the gym. ---- They suggest the effect on our longevity from sitting for long periods of time cannot be reversed through exercise. Even 60 minutes of daily exercise may not be enough.

- A) Also, sedentary groups have a higher chance of dying than active ones.
- B) Therefore, this remains the case even though those sitting a lot also do regular exercise.
- C) Yet, reducing your sit-down time may be better than expensive, crowded, smelly gyms.
- D) However, this assumption has been challenged by scientists.
- E) So, standing up at your desk, taking frequent breaks, or watching TV on your feet are some.

73. In the popular imagination, robotic surgery is a piece of cake. Take the science fiction film *Prometheus*, where a character simply climbs into a pod for an emergency caesarean section. ---- However, modern machines are still hampered by poor vision. In the messy, crowded environment of a soft-tissue surgery, robots struggle to keep track of where the features of the organs are relative to each other, let alone change those features.
- A) At best, robots have been used by surgeons as a non-autonomous "third hand".
- B) Even when working under human supervision, it is not able to make linear cuts and incisions.
- C) Its performance on living tissue from pigs is more impressive.
- D) This new system brings self-driving robotic surgery a step closer.
- E) A robot, in fact, can make precise cuts with a blade, insert threading needles, and even tie knots.
74. Couples experiencing infertility often suffer feelings of shame, failure and isolation. ---- The rates of these disorders associated with infertility are comparable to those associated with cancer or heart attack. These people need support, but this support has been largely confined to online groups and whispers among friends. The society needs to start having open and honest conversations about the struggles of starting a family if we want to see real changes and make infertility less of a burden.
- A) Thus, infertility is professionally and legally regarded as a disease especially in developing countries.
- B) Yet, approximately one in six couples in the US are affected by infertility no matter how old they are.
- C) Hence, infertility and the challenges it poses, disproportionately affects women more than men.
- D) In addition, apart from struggling with infertility, they experience anxiety and depression triggered by the problem.
- E) But, having to cope with infertility can have severe impacts on women's careers and so they end up quitting work.
75. ---- For instance, thanks to extreme ocean temperatures, Great Barrier Reef suffered mass bleaching in 2016 that turned parades of colourful coral into dull, white masses. But palaeontologists have now discovered a haven to which one region's reefs might relocate, via oceanic currents, to escape overheating. By studying fossils, researchers found that during periods of warming in the distant past, coral reefs migrated away from equatorial warm waters to the bay's more hospitable subtropical latitudes.
- A) The idea of refuges for endangered reefs on the move is not new.
- B) It is vital to understand the dynamics of ecological communities and their responses.
- C) As the oceans continue to heat up, coral habitats are becoming less and less habitable.
- D) Not all corals are equally fit to travel across the ocean to a new home.
- E) Many unexplored bays could one day provide a haven for corals.

76-80: For these questions, choose the irrelevant sentence in the passage.

76. (I) While automated vehicles promise a better future, they are also the subject of many concerns. **(II)** They may be spotted on our roads as soon as 2025 and could contribute to urban tourism. **(III)** More time spent in cars on longer journeys could facilitate greater urban sprawl and increase car dependency. **(IV)** They may reduce demand for train travel, coach tours, public transport and driven taxis, all of which will result in future job losses. **(V)** The potential for terrorism facilitated by such vehicles also raises genuine security fears.

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

77. (I) Long-necked dinosaurs were among the most strong and successful herbivores of the age of the dinosaurs. **(II)** Their characteristics were a barrel-shaped body on columnar legs, an extremely long neck, and a relatively small head. **(III)** They existed for 150 million years and were thus able to assert themselves on earth. **(IV)** However, it is still unclear how exactly these giants moved. **(V)** Also their gigantism, with which they far surpassed other dinosaurs, points at their success in dominating the Earth.

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

78. (I) Despite its potential benefits, many experts argue that education systems rely too heavily on standardized testing for assessment. **(II)** Reliance upon this can lead teachers to "teach to the test" and provide unfair advantages to communities that can afford better test preparation. **(III)** Standardized testing can be defined as a consistent measure for academic success. **(IV)** Standardized tests may also force students into superficial thinking — that is, simply copying answers compared with active, critical engagement of knowledge. **(V)** Besides these, nonstop testing can overwhelm students with undue stress.

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

79. (I) Findings suggest that linguistic education takes on a critical role in advocating the development of human civilization and culture. **(II)** The conventional wisdom held in linguistics is the vocal apparatus of human beings has remained fixed for the last 200,000 years. **(III)** As a consequence, all humans, ancient and modern, possess the same basic capacity to produce speech sounds. **(IV)** But recent evidence from palaeoanthropology has upended these assumptions by suggesting the way we eat can actually alter jaw anatomy. **(V)** And according to research, its consequences for the way we speak have been profound.

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

80. (I) African farmers are accustomed to fighting off pests from their hard-earned yields. (II) But they were at a loss when a new invasive insect, the fall armyworm, infested their crops over the past two years. (III) Due to growing interest from the pesticide industry and new government regulations, pesticides are widely available to rural farmers across much of Africa. (IV) But farmers often use the toxic sprays without proper pesticide education or protective equipment, so this availability also presents hazards. (V) The lack of pesticides poses a grave threat to all the cultivation processes in Africa.

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



END OF THE TEST
CHECK YOUR ANSWERS