

1.- 20. sorularda, cümlede boş bırakılan yerlere uygun düşen sözcük veya ifadeyi bulunuz.

1. **Most of the rare gases have been detected in small amounts in earth minerals in meteorites, but are found in greater ---- in the Earth's atmosphere.**
- A) intervention B) abundance
C) deprivation D) weakness
E) replacement
2. **Epidemiologists have increasingly focused on environmental and lifestyle factors, of which diet and ---- to carcinogenic chemicals are generally seen as the central risk factors for various cancer types.**
- A) priority B) conversion
C) exposure D) objection
E) appeal
3. **In a desert, groundwater is a ---- source of life to plants, which can produce roots that are dozens of meters long, to reach down from the dry surface to the water below.**
- A) vital B) threatening
C) deliberate D) bizarre
E) trivial
4. **Technological advances are ---- accompanied by risks which raise important ethical issues that need to be dealt with by the societies producing these technologies.**
- A) incompetently B) inaccurately
C) unconsciously D) inevitably
E) irresponsibly
5. **Greenhouse gases become a problem when the atmosphere ---- too much of them, which is happening today as our vehicles and industries are pumping out an array of gases.**
- A) distracts B) narrows
C) pollutes D) destroys
E) contains
6. **Albert Einstein consulted his friends and colleagues to ---- the best way to proceed in his research requiring a high level of mathematical expertise.**
- A) put off B) throw away
C) turn down D) give up
E) figure out
7. **In recent times, a number of prominent scientists ---- the question of whether habitable planets ---- or not.**
- A) had been taking up / will exist
B) have taken up / exist
C) had taken up / could exist
D) took up / have existed
E) will be taking up / had existed
8. **All living things ---- the Earth ---- highly complex relationships between themselves and with their environments.**
- A) to have inhabited / always formed
B) to be inhabiting / would always form
C) to inhabit / had always formed
D) inhabiting / have always formed
E) having inhabited / will always form
9. **A few years ago, people in England were surprised to find their cars covered ---- dust that had blown ---- the Sahara Desert.**
- A) beyond / away B) to / by
C) on / at D) in / from
E) for / along
10. **Quantum mechanics has radically changed our views ---- reality and has come to play a critical role ---- today's most important technologies..**
- A) to / above B) between / under
C) on / in D) from / through
E) at / with

11. The body has the ability to fight off many pathogenic organisms that may gain entrance ---- an opening in the skin or ---- other means.
- A) through / by B) with / below
C) to / off D) under / for
E) on / from
12. A bite from a funnel-web spider delivers neurotoxins that can kill an adult human in hours; ----, they might be our friends in the fight against the small hive beetle, a new threat to bees.
- A) therefore B) in other words
C) for example D) however
E) accordingly
13. ---- emissions of greenhouse gases were to halt immediately, temperatures would be expected to rise by about 0.6°C over in this century.
- A) Only when B) Even if
C) While D) Because
E) Just as
14. Extreme heat due to global warming poses one of the biggest threats to drivers across the US ---- high temperatures cause asphalt to split more quickly.
- A) unless B) because
C) although D) in order that
E) until
15. Descartes was the first to publish a detailed account of how to use coordinates for locating points in space ---- Fermat had developed the concept slightly earlier.
- A) although B) by the time
C) provided that D) since
E) so that
16. The normal function of antibodies is to detect foreign substances and flag them for destruction, — helping to fight infection.
- A) instead B) thus
C) otherwise D) yet
E) still
17. ---- repeated attempts, nobody has ever reached the bottom of Lake Baikal in Siberia, which is the world's deepest and largest freshwater lake.
- A) Because of B) Despite
C) In terms of D) By means of
E) Unlike
18. ---- numerous missions to the Red Planet, we now know that in its early infancy, Mars had a strong magnetic field, created by convection currents of molten metals in the planet's core.
- A) In comparison to B) Thanks to
C) In spite of D) Rather than
E) In the absence of
19. In a double-blind study, ---- the subjects of the experiment ---- the persons administering the experiment know the critical aspects of the experiment so as to avoid experimenter bias as well as placebo effects.
- A) other / than B) such / that
C) so / that D) neither / nor
E) the more / the more
20. A recent scientific paper proposed that orcas may be the only mammals, other than ourselves, ---- genes have actually been changed by culture.
- A) when B) what
C) which D) whose
E) why

21.- 25. sorularda, aşağıdaki parçada numaralanmış yerlere uygun düşen sözcük veya ifadeyi bulunuz.

The field of forensic science is the study and practice of the application of natural sciences for the purpose of the law. One of the disciplines in forensic science is forensic serology, which involves the identification and characterisation of blood and blood fluids, either **(21)** ---- a liquid or dried state, in association with a criminal or civil investigation. The components of blood have the potential of being a highly **(22)** - --- feature for personal identification. Blood and dried bloodstains are two of the most frequently encountered types of evidence in criminal investigation of crimes **(23)** ---- homicides and assaults. Forensic serologists **(24)** ---- to identify blood and bloodstains found at crime scenes since the 1900s. **(25)** ---- forensic serologists can individualise human blood by identifying all of its known factors, the result could be evidence of the strongest kind for linking a suspect to the crime scene or finding a lost victim.

21.

- A) in
- B) against
- C) upon
- D) for
- E) at

22.

- A) reversible
- B) distinctive
- C) frightening
- D) redundant
- E) adverse

23.

- A) regardless of
- B) for the sake of
- C) contrary to
- D) instead of
- E) such as

24.

- A) have attempted
- B) had attempted
- C) attempted
- D) were attempting
- E) will attempt

25.

- A) Whereas
- B) Given that
- C) Even if
- D) Unless
- E) In order that

26. - 30. sorularda, aşağıdaki parçada numaralanmış yerlere uygun düşen sözcük veya ifadeyi bulunuz.

The muscles dragonflies use to fly are directly attached to their wings, which are further strengthened by a number of veins. This means the largest dragonflies can reach heights of almost 2,000 metres, **(26)** ---- them to fly above the strongest winds. Their flexible heads serve as a navigation device. They are able to capture up to 175 images per second **(27)** ---- their compound eyes, which are actually made up of 30,000 individual eyes. They can also see a far wider spectrum of colours than humans. The dragonfly also has three so-called simple eyes, which have one lens to measure brightness and act as optical stabilisers. **(28)** ---- their prey, only one hope remains: a sudden summer downpour. As soon as the first drops begin to fall, the insect's clear vision is **(29)** ----. The dragonfly can no longer determine its flightpath because the water confuses the compound eyes, making the landscape appear blurred. **(30)** ----, the dragonfly is forced to make an emergency landing.

26.

- A) to allow
- B) to be allowed
- C) allowing
- D) being allowed
- E) to have allowed

27.

- A) with the help of
- B) instead of
- C) in pursuit of
- D) as opposed to
- E) except for

28.

- A) By
- B) From
- C) Above
- D) For
- E) Behind

29.

- A) restored
- B) impaired
- C) sharpened
- D) received
- E) released

30.

- A) By comparison
- B) As a result
- C) Otherwise
- D) Similarly
- E) For instance

31. - 41. sorularda, verilen cümleyi uygun şekilde tamamlayan ifadeyi bulunuz.

31. Because of the changing attitudes towards the usefulness of dams and their possible harm to the environment, ----.

- A) the most famous dam failure in the US was that of the South Fork Dam in May 1889
- B) dams were also used to avoid flooding and to facilitate transportation
- C) dams were already being built to provide water storage and irrigation even before the advent of written history
- D) advances in dam engineering in the first half of the 20th century led to the golden age of dam construction
- E) more than 500 dam removal projects were carried out in the US during the last decades of the 20th century

32. ----, but there have been several periods during which climate has drastically shifted, either locally or globally.

- A) Global warming has been an important subject of the political debate
- B) There has never been anything directly comparable to the current cycle of human-induced global warming
- C) The world's reef systems have been facing overwhelming stress due to global warming
- D) Global warming requires joint efforts of governments and international organisations
- E) Scientific projections with respect to global warming depend on the study of the past

33. Despite the possibility of ending abruptly with the return of adequate rainfall, ----.

- A) a severe drought, in 1988, hit the sites in Minnesota where the researchers had been measuring species richness
- B) the effects of a drought on the landscape and its inhabitants may last for years
- C) tropical savanna is a type of grassland that is characterised by seasonal droughts
- D) the intensity of a drought is measured largely by the ability of the living things to tolerate it
- E) droughts might have also had an enormous impact on people in other dry regions of the world

34. Although the commonly known honeybee species are native to Europe and Africa only, ----.

- A) the honey is made from nectar, a sweet sap or sugar syrup produced by special glands in flowers
- B) honey is, today, still valued as a sweetener and is used to some extent in medicine
- C) the natural home for a honeybee colony is mainly a hollow tree, log, or cave
- D) honey was a precious commodity in early Roman, Greek, and Egyptian civilisations
- E) humans have transported them to other continents and places where they have flourished

35. Many of the tastiest mushroom species can be eaten without any risk; ----.

- A) accordingly, mushroom cultivation appears to have begun in England in the late 18th century
- B) however, some species of edible ones are rather similar to those that are deadly poisonous
- C) for example, mycophobia, the fear of fungus, is common to some people and cultures
- D) on the contrary, a number of fungi are used for medical purposes
- E) thus, mushrooms make their living by absorbing nutrients from dead and living plants and animals

36. Because the populations of ducks have been badly depleted by overhunting, ----.

- A) the best aquatic habitat for ducks are those with relatively shallow water
- B) lead shot is an important type of toxic pollution that kills large numbers of ducks
- C) the loss of natural cavities has been an important cause of the decline of the wood duck
- D) conservation has become a high priority for several governments and private agencies
- E) the most important breeding habitats for ducks in North America occur in the fringing marshes

37. Viruses do not feed or grow, and they cannot reproduce on their own; ----.

- A) instead, they hijack living cells and force them to make copies of themselves
- B) for example, antibiotics are not effective against viruses
- C) however, the taxonomy of viruses is done by a number of internationally recognised authorities
- D) that is, they can only be seen with an electron microscope since they are very small
- E) nevertheless, no one knows exactly the source where viruses came from

38. Biologists have identified more than 500,000 species of plants in the kingdom Plantae ----.

- A) as roots require oxygen for respiration, which is why most plants cannot live in soil that lacks air spaces
- B) since photosynthesis takes place in organelles called chloroplasts in plants
- C) although there are still plenty of undiscovered species found in the tropics
- D) because the seed plants are the dominant and most studied group of plants
- E) if they undergo developmental changes, known as morphogenesis, while growing

39. Solar eclipses are not actually rarer than lunar eclipses, ----.

- A) in fact, they occur in equal numbers, usually about two of each per year
- B) as a result, a total solar eclipse only casts a shadow about 480 km wide across the Earth
- C) that is, a lunar eclipse occurs when the Earth passes between the Moon and the Sun
- D) although many people miscalculate when exactly a lunar eclipse will be visible to the eye
- E) therefore, these events had a religious purpose for some old civilisations

40. Artificial vision implants are often able to improve one's ability to recognise shapes and movements ----.

- A) whereas a number of varying designs are being used in clinical trials
- B) because they may sometimes not be compatible with the patient
- C) although the implants have made life easier for those with poor vision
- D) since the resolution of the artificial systems is an important consideration in their design
- E) even though none of the currently available technologies restores full vision

41. Monitor lizards, like all lizards, are most energetic after heated by the morning sun ----.

- A) since their muscles work much more efficiently when they are warm
- B) although cell division contributes to the regeneration of a lizard's tail
- C) while the world's largest lizard is the extremely impressive Komodo dragon
- D) as they grow replacement teeth in the gaps between their mature teeth
- E) given that these lizards may see water as a safe place when threatened

42.- 47. sorularda, verilen İngilizce cümleye anlamca en yakın Türkçe cümleyi bulunuz.

42. Although the word 'electric' was first used in the 16th century, it was only after the Scientific Revolution in the 18th century that serious investigation of electricity began.

- A) Elektriğin ciddi bir şekilde araştırılması ancak 18. yüzyıldaki Bilimsel Devrim'den sonra başlasa da 'elektrik' kelimesi ilk olarak 16. yüzyılda kullanılmıştır.
- B) 'Elektrik' kelimesi ilk olarak 16. yüzyılda kullanılmış olsa da elektriğin ciddi bir şekilde araştırılması ancak 18. yüzyıldaki Bilimsel Devrim'den sonra başlamıştır.
- C) Elektriğin ciddi bir şekilde araştırılması ancak 18. yüzyıldaki Bilimsel Devrim'den sonra mümkün olmuştur, fakat 'elektrik' kelimesi ilk olarak 16. yüzyılda kullanılmıştır.
- D) Elektriğin ciddi bir şekilde araştırılması ancak 18. yüzyıldaki Bilimsel Devrim'den sonra gerçekleşse de 'elektrik' kelimesi ilk olarak 16. yüzyılda kullanılmıştır.
- E) 'Elektrik' kelimesi ilk olarak 16. yüzyılda kullanılmıştır, ancak elektriğin ciddi bir şekilde araştırılması 18. yüzyıldaki Bilimsel Devrim sonrasında başlamıştır.

43. Heat generated by nuclear reactions below the ground creates hugely powerful currents that make rocks move by triggering earthquakes and volcanic eruptions.

- A) Yerin altındaki nükleer reaksiyonların tetiklediği depremler ve volkanik patlamalar, kayaları ısıyla hareket ettirerek çok güçlü akıntılar oluşturur.
- B) Nükleer reaksiyonların ürettiği ısı, yerin altında oldukça güçlü akıntılar oluşturur ve deprem ve volkanik patlamaları tetikleyerek kayaları hareket ettirir.
- C) Yerin altında oluşan nükleer reaksiyonların ısısı kayaları hareket ettiren çok güçlü akıntılar oluştururken depremleri ve volkanik patlamaları da tetikler.
- D) Yerin altındaki nükleer reaksiyonların ürettiği ısı, depremleri ve volkanik patlamaları tetiklediğinde kayaların hareket etmesini sağlayan çok güçlü akıntılar oluşturur.
- E) Yerin altında nükleer reaksiyonlar tarafından üretilen ısı, depremleri ve volkanik patlamaları tetikleyerek kayaları hareket ettiren oldukça güçlü akıntılar oluşturur.

44. Proteins are large and complex molecules that do most of the work in cells, and they are necessary for the structure, function and regulation of the body's tissues and organs.

- A) Vücuttaki doku ve organların yapısı, işlevi ve yönetimi için gerekli olan proteinler, büyük ve karmaşık moleküllerden oluşurlar ve hücrelerdeki çoğu işi gerçekleştirirler.
- B) Hücrelerdeki çoğu işi gerçekleştiren proteinler, vücudun doku ve organlarının yapısı, işlevi ve yönetimi için gerekli olan büyük ve karmaşık moleküllerdir.
- C) Büyük ve karmaşık moleküllerden oluşan proteinler, hücrelerdeki çoğu işi gerçekleştirirler ve vücuttaki doku ve organların yapısı, işlevi ve yönetimi için gereklidirler.
- D) Proteinler, hücrelerdeki çoğu işi gerçekleştiren büyük ve karmaşık moleküllerdir ve vücudun doku ve organlarının yapısı, işlevi ve yönetimi için gereklidirler.
- E) Proteinler, büyük ve karmaşık moleküller oldukları için hücrelerdeki çoğu işi gerçekleştirirler ve vücudun doku ve organlarını yapısı, işlevi ve yönetimi için gereklidirler.

45. A deviation in the gene huntingtin, which plays an important role in the development of the nervous system before birth, causes a disease known as Huntington's.

- A) Doğumdan önce sinir sisteminin gelişmesinde önemli bir rol oynayan *huntingtin* genindeki bir sapma, Huntington olarak bilinen bir hastalığa yol açmaktadır.
- B) Doğumdan önce sinir sisteminin gelişmesinde önemli bir rol oynayan *huntingtin* geninde bir sapma meydana geldiğinde Huntington olarak bilinen bir hastalık ortaya çıkmaktadır.
- C) *Huntingtin* geni, doğumdan önce sinir sisteminin gelişmesinde önemli bir rol oynamaktadır ve bu gendeki bir sapma, Huntington olarak bilinen bir hastalığa yol açmaktadır.
- D) Huntington hastalığının sebebinin, doğumdan önce sinir sisteminin gelişmesinde önemli bir rol oynayan *huntingtin* genindeki bir sapma olduğu bilinmektedir.
- E) *Huntingtin* geni, doğumdan önce sinir sisteminin gelişmesinde önemli bir rol oynadığı için bu gendeki bir sapma, Huntington olarak bilinen bir hastalığa yol açmaktadır.

46. Instead of applying pesticides to an entire field, farmers could save time thanks to drones with artificial intelligence, which can spot plants in need.

- A) Çiftçiler bütün tarlaya haşere ilacı uygulamak yerine yapay zekâya sahip uzaktan kumandalı hava araçları sayesinde ihtiyacı olan bitkileri belirleyerek zamandan tasarruf edebilirler.
- B) Bütün tarlaya haşere ilacı uygulamak yerine ihtiyacı olan bitkileri seçebilen yapay zekâya sahip uzaktan kumandalı hava araçları kullanmak, çiftçilerin zamandan tasarruf etmelerini sağlayabilir.
- C) Çiftçiler bütün tarlaya haşere ilacı uygulamaktansa, ihtiyacı olan bitkileri saptayabilen yapay zekâya sahip uzaktan kumandalı hava araçları sayesinde zamandan tasarruf edebilirler.
- D) Çiftçiler haşere ilacına ihtiyaç duyan bitkileri saptayabilen yapay zekâya sahip uzaktan kumandalı hava araçları sayesinde bütün tarlaya haşere ilacı uygulamak zorunda kalmadan zamandan tasarruf edebilirler.
- E) Çiftçiler bütün tarlaya haşere ilacı uygulamaktansa, ihtiyacı olan bitkileri belirleyebilen yapay zekâya sahip uzaktan kumandalı hava araçlarından faydalandıklarında zamandan tasarruf edebilirler.

47. Increasing destruction of the Amazon rainforest, which is a vital store of carbon, makes it difficult for us to reduce global carbon emissions.

- A) Amazon yağmur ormanları önemli bir karbon deposudur, ancak artan tahribatına bağlı olarak küresel karbon salınımlarını azaltmamız zorlaşmıştır.
- B) Önemli bir karbon deposu olan Amazon yağmur ormanlarının artan tahribatı, küresel karbon salınımlarını azaltmamızı zorlaştırıyor.
- C) Önemli bir karbon deposu olan Amazon yağmur ormanlarının tahribatındaki artış yüzünden küresel karbon salınımlarını azaltmamız zorlaşmıştır.
- D) Önemli bir karbon deposu olan Amazon yağmur ormanlarının tahribatındaki artış, küresel karbon salınımlarını azaltmamızı zor bir hâle getirmiştir.
- E) Küresel karbon salınımlarını azaltmamızı zorlaştıran sebep, önemli bir karbon deposu olan Amazon yağmur ormanlarının artan tahribatıdır.

48. - 53. sorularda, verilen Türkçe cümleye anlamca en yakın İngilizce cümleyi bulunuz.

48. Aşırı gübre kullanımı yer altı sularındaki nitrat seviyelerini artırabilir, ki bu da suyu insan tüketimi için elverişsiz hâle getirebilir.

- A) When nitrate levels increase in groundwater due to excessive use of fertilisers, the water could become unfit for human consumption.
- B) Excessive use of fertilisers can increase the levels of nitrate in groundwater, which could render the water unfit for human consumption.
- C) Nitrate levels may increase in groundwater as a result of excessive use of fertilisers, and this can make the water unfit for human consumption.
- D) If fertilisers are excessively used, this can increase the levels of nitrate in groundwater, which could be unfit for human consumption.
- E) Using fertilisers excessively results in increased levels of nitrate in groundwater, which could render the water unfit for human consumption.

49. Her ne kadar bazı türlerinin kuduz taşıyabildikleri doğru olsa da yarasalar çoğu insanın gözden kaçırdığı pek çok önemli ekolojik fayda sağlarlar.

- A) Although it is true that some of their species can carry rabies, bats provide many crucial ecological benefits that most people overlook.
- B) While it is a fact that some species of bats carry rabies, they are overlooked by many people when it comes to the crucial ecological benefits they provide.
- C) Despite the fact that some of their species may carry rabies, it is true that bats provide many crucial ecological benefits which are overlooked by many people.
- D) Though they provide many crucial ecological benefits that many people overlook, it is a fact that some species of bats are known to carry rabies.
- E) Even if rabies can be transmitted by some species of bats, they do provide many crucial ecological benefits that are overlooked by most people.

50. Esasında 12,7 milyar yıl önce Güneş benzeri bir yıldız etrafında şekillenen Methuselah gezegeni, evrendeki pek çok olaya tanıklık etmiş bilge bir yaşlı ruh gibi görünür.

- A) The planet Methuselah, which seems like a wise old soul who has witnessed many occurrences in the universe, originally formed around a Sun-like star 12.7 billion years ago.
- B) The planet Methuselah, which originally formed around a Sun-like star 12.7 billion years ago, seems like a wise old soul who has witnessed many occurrences in the universe.
- C) The planet Methuselah originally formed around a Sun-like star 12.7 billion years ago, which makes it seem like a wise old soul who has witnessed many occurrences in the universe.
- D) Seeming like a wise old soul who has witnessed many occurrences in the universe, the planet Methuselah originally formed around a Sun-like star 12.7 billion years ago.
- E) The planet Methuselah originally formed around a Sun-like star 12.7 billion years ago, and it seems like a wise old soul witnessing many occurrences in the universe.

51. Thomas Edison'un buluşlarıyla ilgili duyuruları basın aracılığıyla yapma konusundaki istekliliği, pazarlama çabalarına destek sağlamış olsa da bilimsel şöhreti sorunlar yaratmıştır.

- A) While Thomas Edison's willingness to make announcements about his inventions through the press aided his marketing efforts, it created problems for his scientific reputation.
- B) Thomas Edison's scientific reputation was damaged by his willingness to make announcements about his inventions using the press although it contributed to his marketing efforts.
- C) Thomas Edison's marketing efforts were supported by his willingness to make announcements about his inventions through the press, but his scientific reputation was ruined by it.
- D) What caused problems for Thomas Edison's scientific reputation was his willingness to make announcements about his inventions using the press, despite being beneficial for his marketing efforts.
- E) Thomas Edison's willingness to make announcements about his inventions using the press contributed to his marketing efforts, yet it created problems for his scientific reputation.

52. Bir uçakta ne tür bir güç sistemi kullanırsa kullanılsın, havacılık mühendisleri sürekli olarak uçağın aerodinamik özelliklerini geliştirecek yeni tasarımlar araştırırlar.

- A) No matter what kind of power system is used in an aircraft, aeronautical engineers constantly search for new designs that will improve the aerodynamic properties of the aircraft.
- B) Other than the power system that is used in an aircraft, aeronautical engineers constantly look for new designs to improve the aerodynamic properties of the aircraft.
- C) Aeronautical engineers always search for new designs that will improve the aerodynamic properties of an aircraft in addition to the power system used in the aircraft.
- D) Although aeronautical engineers know what kind of power system is used in an aircraft, they always search for new designs that will improve its aerodynamic properties.
- E) Rather than the power system used in an aircraft, new designs that will improve the aircraft's aerodynamic properties are constantly searched by aeronautical engineers.

53. Mühürlerin ıslak kil tabletlere basıldığı bir teknolojinin ilk kez Babilliler tarafından kullanılmış olduğu bilinse de matbaayı muhtemelen Çinliler icat etmiştir.

- A) It is claimed that the Chinese invented the printing, but it was the Babylonians who first used a technology in which seals were pressed into damp clay tablets.
- B) The Babylonians are known to have first developed a technology in which seals were pressed into damp clay tablets, but the Chinese probably invented the printing.
- C) It is known that the Babylonians first used a technology in which seals were pressed into damp clay tablets, but the printing was probably invented by the Chinese.
- D) Although a technology in which seals were pressed into damp clay tablets is known to have been first used by the Babylonians, the Chinese probably invented the printing.
- E) While a technology in which seals were pressed into damp clay tablets is thought to have been first developed by the Babylonians, the printing was probably invented by the Chinese.

54. - 59. sorularda, boş bırakılan yere, parçada anlam bütünlüğünü sağlamak için getirilebilecek cümleyi bulunuz.

54. **Written numbers, in the form of tallies at first, preceded any known form of written words. A major development of the period after the Agricultural Revolution was the invention of ways more complex than tallies to record numbers, leading eventually to numeration systems. ---- It is not clear how writing arose in other parts of the world, but numerals probably preceded words in eastern Asia and in the Americas as well.**
- A) In Mesopotamia, the early ways of recording numbers seem to have led directly to writing.
- B) Later, something closer to true geometry also arose in both Egypt and Mesopotamia, with improvements in the ability to measure.
- C) In Mesopotamia, the base-60 system of numeration led to a mathematics capable of solving quadratic equations.
- D) Toward the end of the period, symbols used for zero as a placeholder were introduced.
- E) Systems of measurement, like numeration systems, appear to have arisen from trade needs.
55. ---- **The first farmers of northern China primarily grew millet, starting as early as 11,500 years ago. Millet is a drought-tolerant, small-seeded grain in the grass family that today is mostly grown in East Asia. According to historical records and early recipes, by the Tang dynasty, wheat had replaced millet. As a result, it actually became the region's major crop. Unfortunately, little is known about exactly how or why this shift occurred.**
- A) Apart from being versatile in cooking, wheat grows faster and has a consistently higher yield than millet once found in the staple diet.
- B) The Tang dynasty is known to have reigned between 618 and 907 CE.
- C) Although China is the world's biggest consumer of wheat which is mainly used to produce a host of pastries, it was not always the case.
- D) Many early writers commented that wheat gruel, but not millet, was food solely consumed in times of desperation.
- E) The most likely reason that people across China started to grow wheat was its alternating optimal sowing season with millet.

56. **Tackling climate change requires cooperation on a global scale, bringing together governments, businesses and individuals. We need to gradually end our reliance on fossil fuels and use renewable energy sources and sustainable transport options. ---- Nonetheless, they are not sufficient alone and proposed methods to remove carbon dioxide from the atmosphere have not yet been tested on a large scale. Although our efforts are beginning to pay off and carbon dioxide emissions are slowing in some parts of the world, experts agree that the transition to green energy is not happening fast enough.**
- A) Environmentally friendly technologies may not be initially welcomed in some countries.
- B) If left uncontrolled, climate change will have devastating consequences for our planet and its inhabitants.
- C) The increased amount of heat caused by ongoing warming will lead to more tropical storms and cyclones.
- D) New technologies, be it super-efficient solar panels or electric cars, will play a vital role in reducing carbon dioxide emissions.
- E) We have been releasing a considerable amount of carbon dioxide into the atmosphere to heat our homes and power our cars.
57. ---- **They include eyes, olfactory pits, chemotactile and mechanotactile sensillae on the arms, and statocysts capable of detecting direction and angle of acceleration as well as static posture. The eyes have a cornea and iris diaphragm, amovable lens, and a retina, capable of light and dark adaptation. Under totally controlled experimental conditions, octopuses can be trained to distinguish visually between pairs of geometric figures, and tactilely between textures and tastes of different surfaces.**
- A) Octopuses are remarkably tough experimental animals and rapidly recover from brain lesions.
- B) The brain in an adult octopus may contain over 300 million cells.
- C) Rapid and patterned colour changes are possible in octopuses.
- D) Octopuses can swim by jet propulsion but rarely do so, except as an escape mechanism.
- E) The sense organs of octopuses are complex and efficient in discrimination.

58. Fruit rots are the most economically important diseases of cranberries. ---- Higher temperatures during the growing season increase fungal activity and the level of disease. High moisture levels also increase disease, because spore release, spore germination, and penetration of the host plant are all dependent on the presence of adequate moisture. Bruising during harvest, sorting, or packing significantly increases the amount of postharvest fruit rot.

- A) The production rates of cranberries are increasing in European countries thanks to sustainable agricultural policies.
- B) Several factors influence the amount of fruit rot that occurs.
- C) Almost 4 years of growth and care are required before the first commercial crop is produced.
- D) Care includes the protection of cranberries from frost in spring and fall.
- E) Practices that reduce fruit rots include rapid drying of the fruit.

59. Cave exploration is, by its nature, a potentially hazardous activity although the relative risk of an accident, and its severity, clearly vary from cave to cave. In all but the simplest of cases, rescue of an injured person from a cave poses problems that are different from those encountered on the surface. A cave is a relatively hostile environment in which to perform a rescue. ---- Hence, there is a need for specialist rescue teams who are aware of the latest rescue techniques.

- A) Many tourists are enthusiastic about visiting caves despite their potential risks.
- B) It is completely dark beyond the entrance zone and there may be other potential hazards, including water, low temperatures, and constricted passages.
- C) Throughout the world there has been a dramatic increase in the number of rescue teams with sophisticated equipment.
- D) When a person is injured, a factor critical to successful rescue is the time taken to alert the rescue organisation.
- E) The difficulty of the cave and the depth of the accident site mean that there may be long hours between an injury and the arrival of the rescue team.

60.-65. sorularda, cümleler sırasıyla okunduğunda parçanın anlam bütünlüğünü bozan cümleyi bulunuz.

60. (I) There is no way to predict big earthquakes hours or days in advance, and some think it may never be possible. (II) However, some regions have early warning systems that issue alerts as soon as the first tremors are detected. (III) This gives people a few seconds or more of warning before the most dangerous shaking starts. (IV) Modern buildings are usually designed to withstand sizeable earthquakes, though many could still be left unusable. (V) For that reason, the US Geological Survey is currently developing a system called 'ShakeAlert' for all the quake-sensitive regions.

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

61. (I) The problem of self-control has puzzled psychologists and behavioural scientists for decades. (II) A great deal of research has identified situations in which self-control failures are likely to happen and tools to help people exercise better control. (III) For instance, research has found that people persist for longer on tasks that require self-control when they know they will be paid for their efforts, or when they are told that their work will benefit others. (IV) These motivating incentives can increase people's self-control, at least up to a point. (V) Likewise, many of the most worrying problems in people's lives, from overeating to not working out enough, are caused by a lack of self-control in common.

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

62. (I) Primitive people long believed that volcanoes were inhabited by deities or demons that were highly temperamental, dangerous, and unpredictable. (II) James Hutton was in 1788 the first to attempt to explode the myth associated with natural disasters. (III) To please those kind inconsistent characters, humans have for centuries made the ultimate sacrifice. (IV) There were also those who were skeptical of such rites, pointing out that earlier sacrifices had failed to prevent or stop an eruption. (V) However, the believers have countered with the argument that things would have been much worse without the sacrifice.

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

63. (I) Oceans appear blue from space for the same reason the sky appears blue: ocean waters absorb the other colours of the light spectrum while reflecting light in the blue part of the spectrum. (II) When ocean waters carry little organic matter, the colour is a deep blue. (III) Scientists benefit from a NASA satellite to gather data on global ocean bio-optical properties. (IV) If there are marine plants present, more blue light will be absorbed and more green light reflected, thus changing the ocean's colour. (V) For example, during hurricanes in the Atlantic Ocean, the blue waters mix with the stirred yellow plant pigments to form a green colour.

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

64. (I) DNA, the master molecule, is a natural polymer which encodes the genetic information required for the growth, development, and reproduction of an organism. (II) Defects in the DNA of just one gene can cause a genetic disorder which results in disease because the protein encoded by the defective gene is abnormal. (III) Found in all cells, it consists of chains of units called nucleotides. (IV) Each nucleotide unit contains three components: the sugar deoxyribose, a phosphate group, and a nitrogen-containing amine or base with a ring-type structure. (V) The base component can be any of four types: adenine, cytosine, guanine or thymine.

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

65. (I) The Moon has played a pivotal role in the development of life as well as human development. (II) In addition to the 24-hour rotation period of the Earth, which may be a direct consequence of lunar formation, ancient people could find their way at night thanks to the moonlight. (III) The Moon is a unique satellite in the Solar System, the largest relative to its planet. (IV) Moreover, lunar tidal effects may have been crucial in providing an environment for life to develop. (V) It is also possible that the Moon has stabilised the Earth, preventing large-scale excursions that might have had catastrophic effects on evolution.

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

66. - 68. soruları aşağıdaki parçaya göre cevaplayınız.

Whiteout is the condition in which the ground, air, and sky are all a uniform white and no landscape features are visible. Persons exposed to a whiteout lose their perception of depth and quickly become disoriented, so a whiteout is extremely dangerous. There are two ways in which a whiteout can occur. In calm weather, a uniformly white snow surface may lie beneath low cloud. The cloud diffuses light passing through it, so light falls on objects evenly from all sides and there are no shadows.

Consequently, everything appears white. If dark objects are visible, they appear to float, and it is impossible to determine their distance. Whiteout can also occur in a blizzard. Again, the light is diffused by clouds, but in this case there are also snowflakes between the cloud base and the ground. The snowflakes are falling quickly and turning in all directions, reflecting light in all directions as they do so. A flashlight is useless in the second type of whiteout, because the light is scattered by the falling snowflakes.

66. It is clearly stated in the passage that in a whiteout, ----.

- A) the snowy surface meets harsh cold weather
- B) the ground, air, and sky are alike in terms of colour
- C) light falls on objects from a certain side
- D) dark objects become more visible since their distance can be estimated more easily
- E) the weather is relatively warm with clear skies

67. According to the passage, there are two ways in which a whiteout occurs, and in both cases, ----.

- A) nothing with dark colours could be seen
- B) there should be snowflakes falling quickly from the sky
- C) the shadows of some objects get darker
- D) using a flashlight is not helpful to identify objects
- E) the light is diffused by clouds

68. What is the passage mainly about?

- A) The description of a natural event together with its effects
- B) Reasons why a whiteout gives permanent damage to a person's perception
- C) Factors influencing the occurrence of a whiteout in a blizzard
- D) The use of a flashlight in the occurrences of whiteout
- E) A natural phenomenon that has not been clearly understood by scientists yet

69. - 71. soruları aşağıdaki parçaya göre cevaplayınız.

The Florida manatee is a large marine mammal with a rounded, heavy grey body and a horizontally flattened tail. Native Americans hunted manatees for centuries, using their flesh for food, their bones for medicine, and their skin for leather. When Spanish explorers began colonising the Caribbean islands in the 16th century, manatee hunting increased. Biologists believe this hunting is responsible for the manatee's initial decline. Natural events, such as sudden changes in water temperature, also can be deadly to manatees. In the 1980s, three abnormally cold winters in Florida lowered water temperatures throughout the state. In water below 15°C, manatees become lazy, stop eating, and eventually die. Many manatees perished during those cold Florida winters. The greatest continued threat to manatees, however, comes from humans. To fix this problem, in 1978, the Florida legislature passed the Florida Manatee Sanctuary Act, which designated the entire state a shelter and a protection area for the animal. In areas declared manatee shelters, no boats, swimmers, or divers are allowed.

69. Which could be understood from the passage?

- A) Manatees are still being hunted in large amounts despite measures taken to increase their numbers.
- B) The impact of Native Americans on the manatee's decline was much bigger than that of Spanish explorers.
- C) Due to cold Florida winters, manatees have adapted themselves to living in extremely low water temperatures.
- D) After Spanish explorers colonised the Caribbean islands, they did not hunt manatees for a long time as their numbers were decreasing.
- E) For native Americans, manatees were not only a source of food but also a material used for different purposes.

70. Which of the following is true about the Florida manatee?

- A) They stop eating when their habitat is destroyed by humans.
- B) They cannot live comfortably in temperatures below 15°C.
- C) Humans are not as dangerous as natural events for them.
- D) Their horizontally flattened tail causes them to act in a lazy way in water.
- E) The measures introduced by the Florida legislature to protect them are criticised by swimmers and divers.

71. What is the primary purpose of the author?

- A) To emphasise the importance of the Florida Manatee Sanctuary Act for the protection of the manatee
- B) To explain why natural events lead to deadly consequences for the Florida manatee
- C) To inform the reader about the reasons for the decline in numbers of the Florida manatee
- D) To highlight that human activities pose serious threats to the effective protection of manatees
- E) To encourage the states other than Florida to declare protection areas for manatees

72. - 74. soruları aşağıdaki parçaya göre cevaplayınız.

Planting trees is widely accepted as a way to counter global warming, but in the future, this strategy could become less effective. In a warmer world with rising levels of carbon dioxide in the air, researchers think trees will grow faster, but this is not necessarily a good thing. Faster growth may mean a shorter tree life, reducing the amount of time they lock carbon up. A study adds to the evidence that this is the case. Ulf Büntgen at the University of Cambridge and his colleagues looked at tree ring records going back 2,000 years, and found that the longest-lived trees were those with the slowest growth rates. The team studied 1,800 trees, all mountain pines from the Spanish Pyrenees or the Russian Altai region, which can live up to about 800 years. Yet, in a warmer world with more carbon dioxide, these trees might live just 150 years after growing rapidly. Büntgen says "We should keep planting trees to tackle climate change, but we should realise that, on a timescale of centuries, the carbon these trees seize may not stay there long. However, it does not mean that the carbon sink of forests will go away".

72. According to the passage, it is a common belief that ----.

- A) planting trees helps us to fight against global warming
- B) the effects of global warming have become more apparent because of shortened lifespan of trees
- C) the positive effects of planting trees are lessened by global warming
- D) trees grow more slowly in warm regions, such as the Spanish Pyrenees
- E) a large number of trees can live up to about 300 years

73. One can understand from the passage that faster growth of a tree ----.

- A) has been shown by Büntgen to be an important advantage for the tree
- B) can cause the tree to have a shorter lifespan
- C) could mean a quick recovery of the forests lost recently
- D) dramatically increases the amount of carbon dioxide it can absorb from the air
- E) means that it will provide more help to alleviate the negative effects of global warming

74. The underlined word 'seize' in the passage is closest in meaning to ----.

- A) jeopardise
- B) revive
- C) store
- D) violate
- E) improve

75. - 77. soruları aşağıdaki parçaya göre cevaplayınız.

Tephra is the name given to all the material that erupts from a volcano, excluding lava. Tephra comes in all shapes and sizes, and is also referred to as pyroclastic material or fire particles. Geologists classify tephra according to size and believe that ash, block, and bombs are the most common types. Ash is a material smaller than two millimetres that is emitted from an erupting volcano; it can also contain little stones. In a large eruption, ash can accumulate to a great thickness and spread out for thousands of kilometres, usually in the direction of the prevailing winds. Blocks, on the other hand, are solid rock emitted from an erupting volcano. They can be anywhere from the size of a baseball to the size of a boulder as large as a house. Finally, bombs are volcanic rocks that are still molten inside; they are shaped by their passage through the air. Typically ranging from baseball to basketball size, they can be bigger than a small plane.

75. According to the passage, tephra ----.

- A) varies depending on whether it includes lava
- B) is generally shaped by lava
- C) has the same shape in all categories
- D) consists of various materials in different sizes
- E) is categorised based on the intensity of a volcanic eruption

76. It is clear from the passage that ----.

- A) bombs are heavier than blocks as they are composed of a hot liquid
- B) volcanic eruptions are accompanied by a change in weather conditions
- C) bombs gain a different form when they come in contact with air
- D) ash is transported a short distance by wind if it carries stones
- E) blocks may spread out for thousands of kilometres thanks to winds

77. What is the passage mainly about?

- A) Major characteristics of volcanic eruptions that emit lava and tephra
- B) Explanation of why tephra occurs and how it contributes to volcanic eruptions
- C) The impacts of air and wind on the formation of tephra
- D) The definition of tephra together with its widely-known categories
- E) The spread of ash to different places after a volcanic eruption

78. - 80. soruları aşağıdaki parçaya göre cevaplayınız.

New studies show that we are easily emotionally influenced by humanoid robots. Scientists from a leading university made 43 subjects play a quiz game with a humanoid robot. They were told that the aim was to test a new robotic software, so they did not know they were being observed. After the game, the test subjects were told to deactivate the robot, but before their fingers touched the button, the robot cried, "No, no, I am afraid of the dark. Do not turn me off". This made almost all test subjects hesitate, and 14 of them refused to press the button. Subsequently, eight test subjects explained they felt sorry for the robot, whereas six said they did not wish to do something that the robot did not want them to. The scientists also made another team take the test without the robot crying. In this case, the test subjects had no problems shutting the robot down. According to the scientists, it is deeply rooted in us that we would rather treat a machine as a human being than risk that something human is treated inhumanely. It seems that our reactions to machines are not very different from those we show to humans, and we should not treat anything in a bad manner, be it a human or a machine.

78. It is understood from the passage that before the test, the subjects ----.

- A) were not informed that their reactions were going to be observed
- B) were instructed to think and feel like a humanoid robot
- C) were asked to treat the robot as if it were a human
- D) were not willing to play a quiz game with the humanoid robot
- E) were told that the purpose of the study was to test the level of interaction of humanoid robots

79. Which of the following is true about the study?

- A) Some subjects in the first group did not want to deactivate the robot because of emotional concerns.
- B) All subjects in the first group refused to deactivate the robot when it cried.
- C) The subjects in the second group did not want to shut the robot down although it did not cry.
- D) Deactivation of the robot meant that the test subjects failed to play a quiz game with the robot.
- E) The subjects in the second group were asked to deactivate the robot without paying attention to its cry

80. The author's attitude towards the emotional reactions of the subjects to the robot in the test is ----.

- A) sarcastic
- B) pessimistic
- C) overcritical
- D) favouring
- E) disapproving

28 MART 2021

YÖKDİL FEN BİLİMLERİ CEVAPLARI

1. B	21. A	41. A	61. E
2. C	22. B	42. B	62. B
3. A	23. E	43. E	63. C
4. D	24. A	44. D	64. B
5. E	25. B	45. A	65. C
6. E	26. C	46. C	66. B
7. B	27. A	47. B	67. E
8. D	28. D	48. B	68. A
9. D	29. B	49. A	69. E
10. C	30. B	50. B	70. B
11. A	31. E	51. A	71. C
12. D	32. B	52. A	72. A
13. B	33. B	53. D	73. B
14. B	34. E	54. A	74. C
15. A	35. B	55. C	75. D
16. B	36. D	56. D	76. C
17. B	37. A	57. E	77. D
18. B	38. C	58. B	78. A
19. D	39. A	59. B	79. A
20. D	40. E	60. D	80. D