

**2018-2020 YILLARI  
YÖKDİL  
FEN BİLİMLERİ  
ÇIKMIŞ SORU  
BANKASI**



# İ Ç İ N D E K İ L E R

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**YÖKDİL FEN BİLİMLERİ**  
**İLKBAHAR 2018**









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

1. **People consider soil ---- because it supports plants that supply food, fibre, drugs, and other human needs.**
  - A) various
  - B) simple
  - C) essential
  - D) thick
  - E) missing
2. **The adult brain can grow new brain cells or re-organize itself in response to new experiences, which is a biological ---- called neuroplasticity.**
  - A) refusal
  - B) prediction
  - C) outbreak
  - D) process
  - E) lecture
3. **Botany as a pure science began in the fourth century BC with the Greek philosopher Theophrastus, who ---- influenced the discipline until the seventeenth century.**
  - A) fluently
  - B) heavily
  - C) angrily
  - D) shortly
  - E) loudly
4. **---- water accounts for more than 90 per cent of protoplasm weight, this rate can be as low as 10 per cent in seeds.**
  - A) Although
  - B) Unless
  - C) Similarly
  - D) As if
  - E) Provided
5. **The northern white rhino will soon face total extinction ---- something is done to prevent this tragic outcome.**
  - A) as long as
  - B) as soon as
  - C) unless
  - D) only if
  - E) because
6. **People and animals ---- to find new sources of food when old ones ---- unavailable or they have to move to new areas.**
  - A) used to learn / have become
  - B) would learn / will become
  - C) must learn / were becoming
  - D) might learn / had become
  - E) have to learn / become
7. **Each year, air currents blow two million tons of bacteria into the atmosphere ---- 55 million tons of fungal spores.**
  - A) in case of
  - B) in order to
  - C) in contrast
  - D) as well as
  - E) as though

8. **Today, geophysicists ---- more detailed reports about why earthquakes happen more frequently in some places than others.**
- A) would produce  
B) will be produced  
C) are producing  
D) had produced  
E) are produced
9. **When it comes to the environment, modern societies are not ---- different from primitive societies ---- one might assume.**
- A) too / to  
B) many / than  
C) much / more  
D) as / as  
E) so / that
10. **Researchers ---- are based at the University of Tokyo have discovered that larger earthquakes are more likely to occur when the moon is nearly full or new.**
- A) who  
B) whose  
C) in which  
D) what  
E) where
11. **---- the increasing number of protected areas in recent decades, the rate of extinction in species has not dropped.**
- A) Thanks to  
B) Before  
C) Unless  
D) Now that  
E) Despite
12. **China has seen a decrease in rural child labour ---- the one-child policy and rapid urbanisation.**
- A) however  
B) due to  
C) if  
D) in case  
E) although
13. **Chemistry seeks to explain ---- the structures of atoms ---- how these structures are transformed in chemical reactions.**
- A) rather / than  
B) neither / or  
C) but / also  
D) both / and  
E) such / that
14. **Newton deduced the three laws of motion ---- various experiments performed ---- other scientists, especially Galileo Galilei.**
- A) for / on  
B) by / in  
C) from / by  
D) with / to  
E) into / at
15. **The global human population ---- dramatic growth at least twice throughout history, the first of which ---- around 10,000 years ago.**
- A) experiences / will take place  
B) will experience / was taking place  
C) had experienced / takes place  
D) was experiencing / had taken place  
E) has experienced / took place

**16. Since NASA ---- using the Space Shuttle in 2011, the Soyuz spacecraft ---- the only way for astronauts to reach the International Space Station.**

- A) will stop / was
- B) was stopping / is
- C) stops / will be
- D) stopped / has been
- E) may stop / used to be

**19. Noise pollution from survey ships is a big threat for dolphins ---- they are considered one of the most acoustically sensitive animals on Earth.**

- A) so that
- B) whereas
- C) such
- D) just as
- E) since

**17. Researchers from a number of EU member states have joined forces to ---- the effects of underwater noise generated by shipping.**

- A) investigate
- B) supply
- C) prepare
- D) complain
- E) attend

**20. ---- working on superconductivity, physicist John Bardeen was already well on the way to his first Nobel Prize in physics.**

- A) After
- B) Later
- C) Then
- D) While
- E) Following

**18. Faster recharging lithium batteries were developed when scientists ---- that adding charged metal atoms to tunnel structures improves their performance.**

- A) turned down
- B) found out
- C) led to
- D) took off
- E) gave up

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

'Spam' is the term used to describe unsolicited e-mail messages automatically (21) ---- to millions of recipients. These messages are advertisements about debt consolidation offers, get-rich-quick schemes, and stock market tips. The underlying principle is (22) ---- if you e-mail enough people, some are likely to be interested in or taken in by your offer. It is (23) ---- that over 90 billion spam messages are sent each day. There are various techniques for preventing spam, (24) ---- the most effective is spam filters. These are computer programs that automatically scan incoming e-mail messages and decide which are likely to be spam. The filters can be set up (25) ---- the program deletes the spam messages automatically, sends them to a holding folder for later examination, or takes some other appropriate action.

21.

- A) sent out
- B) sending out
- C) had sent out
- D) having sent out
- E) was sent out

22.

- A) that
- B) when
- C) which
- D) what
- E) where

23.

- A) combined
- B) declined
- C) estimated
- D) terminated
- E) discharged

24.

- A) in contrast
- B) but
- C) moreover
- D) otherwise
- E) therefore

25.

- A) given that
- B) however
- C) as though
- D) so that
- E) on the other hand

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

Did the ancestors of modern birds survive **(26)** ---- they ate seeds? 66 million years ago an asteroid struck Earth and wiped out an estimated 75 per cent of life. It is an event that infamously **(27)** ---- the extinction of the dinosaur. One may wonder: how did the ancestors of modern-day birds survive when all their relatives perished? A study which **(28)** ---- in Current Biology in 2017 hypothesizes that some birdlike dinosaurs survived because they had toothless beaks, and could feed on fire-resistant seeds when the food sources of most other species **(29)** ----. For this study, Derek Larson analyzed more than 3,000 fossilized teeth from birdlike dinosaurs that lived in western North America **(30)** ---- the Cretaceous period.

26.

- A) or else
- B) but
- C) unless
- D) whereas
- E) because

27.

- A) appeared
- B) caused
- C) defeated
- D) shared
- E) called

28.

- A) published
- B) has published
- C) may be published
- D) had published
- E) was published

29.

- A) ignored
- B) served
- C) disappeared
- D) declared
- E) offered

30.

- A) during
- B) on
- C) off
- D) between
- E) among

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

**31. Modern estimates suggest that 85 per cent of the universe's mass is invisible to even the most powerful telescopes ----.**

- A) but evidence about the fate of our galaxy is limited
- B) and is only detectable through the influence of its gravity
- C) so that it simply does not interact with light
- D) where several decades of experiments have proved ineffective
- E) following the deduction that several objects have been used

**32. Although we do not typically think of bacteria as being capable of sight, ----.**

- A) antibiotics can kill the good bacteria in the body along with the bad
- B) humans have been wondering about the answer to these questions for centuries
- C) such detailed studies aim to pay special attention to the species crisis
- D) they started to believe that perhaps the signals were not random
- E) they have light-responsive proteins that are similar to our own visual system

**33. The dominance of fossil fuels will remain unchallenged for at least the next four decades, ----.**

- A) as well as a large number of countries dependent on renewable energy sources
- B) therefore, green policies will play an important role in our immediate energy needs
- C) thus, the amount of European power supplied by renewables is more than that of fossil fuels
- D) even if countries pursue environmental or energy policies enforced by international agreements
- E) now that renewable sources are urgently needed for sustainable development

**34. While flowing water has not been directly observed on Mars, ----.**

- A) there are signs that it has potentially made some brief appearances on the surface
- B) water is not found on the surface or within rocks and soil in any of its forms
- C) the scientists who travelled to this continent concluded that it has large reservoirs of water
- D) continued monitoring shows that such activity may be due to chemical processes
- E) the initial report from Mariner 4 stated that these planets never had Earth-like oceans

**35. ----, mercury levels in the oceans have increased at an alarming rate since the Industrial Revolution.**

- A) As tuna is a kind of long-lived predator in the oceans
- B) In agreement with global efforts to protect the ecosystem
- C) Due to mining and the burning of fossil fuels
- D) Even after heavy fishing in the Pacific Ocean
- E) Despite the amount of mercury in fish and mammals

**37. When the brain cells of humans and all other mammals are starved of oxygen, ----.**

- A) they run out of sufficient energy and begin to die as a result
- B) biology deals with humans, animals as well as plants
- C) such innovations in the field of science have become compulsory
- D) oxygen level in brain cells plays a vital part in humans
- E) such levels depend on age and gender of the species

**36. Scientists have finally established the identity of a missing element within the Earth's core, ----.**

- A) who could help us to better understand how they formed
- B) that strongly argues that the Earth orbits the sun
- C) but the core first separated from the rocky parts of Earth
- D) whose work was needed to confirm the presence of silicon
- E) for which they have been searching for many decades

**38. 'Erosion' is a blanket or general term for a variety of processes ----.**

- A) therefore, much of the surface rock on Earth was caused by erosion
- B) but they played a more important role on Earth than on any other planet
- C) if such substances are used to build new communal structures
- D) that break down or transport rock through the action of ice, liquid, or gas
- E) even though the carving of canyons by rivers is an example of erosion

**39. Producing artificial spider silk has long been a dream of many scientists, ----.**

- A) as long as spiders spin small amounts of silk in labs
- B) but it is still too early for them to expect the dream to come true
- C) whereas it is well tolerated when it is implanted in tissues
- D) though such products require plenty of silk for large scale production
- E) because the researchers have a method that works properly

**41. ----, they have the potential to treat many different kinds of medical conditions.**

- A) Although experiments have shown that it is possible to reprogram an adult skin cell
- B) Even if scientists find ways to recreate the environments in which stem cells grow
- C) Though stem cells can be cultured and induced to develop into different cell types
- D) Because not every stem cell is beneficial in treating diseases in animals
- E) Since embryonic stem cells can transmute into any type of tissue

**40. Even the simplest life form on Earth has countless requirements needed to survive, ----.**

- A) when the Earth was only 700 million years old
- B) it is determined by many environmental factors
- C) such as water, organic materials and energy
- D) as planets may have some sources of energy
- E) resulting in nature and intelligent life



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

**42. Machine translation systems that convert sign language into text help people with hearing difficulties.**

- A) Duyma zorluğu çeken insanlara yardımcı olması için işaret dilini metne dönüştüren makine çeviri sistemleri geliştirildi.
- B) İşaret dilini metne dönüştüren makine çeviri sistemleri, duyma zorluğu yaşayan insanlara yardımcı olmaktadır.
- C) İşaret dilini metne dönüştürerek duyma zorluğu yaşayan insanlara yardımcı olan yazılıma makine çeviri sistemi denir.
- D) Makine çeviri sistemleri işaret dilini metne dönüştürerek duyma zorluğu çeken birçok insana yardım etmektedir.
- E) Duyma zorluğu yaşayan insanlara yardımcı olabilmek için makine çeviri sistemleri metni işaret diline dönüştürür.

**43. The International Space Station is a global project which proves that different states are able to work together in space exploration.**

- A) Farklı devletler bir araya gelerek uzay keşfi alanında çalışabilir, Uluslararası Uzay İstasyonu bunun en iyi kanıtıdır.
- B) Farklı devletlerin birlikte çalışarak Uluslararası Uzay İstasyonu gibi küresel bir proje üretmesi, uzay çalışmaları açısından önemli bir adımdır.
- C) Uluslararası Uzay İstasyonu, farklı devletlerin uzay keşfinde beraber çalışabildiklerini kanıtlayan küresel bir projedir.
- D) Uluslararası Uzay İstasyonu, birçok devletin uzay keşfi konusunda beraber çalışmalarını sağlayan küresel bir projedir.
- E) Uzayın keşfi için farklı devletlerin bir araya gelerek Uluslararası Uzay İstasyonu gibi bir projeye imza atması büyük başarıdır.

**44. Robots are becoming easier to program and more flexible to use, which enables a single factory to manufacture many different products.**

- A) Giderek daha kolay programlanabilir ve daha esnek şekilde kullanılabilir robotların ortaya çıkması sayesinde fabrikalar birçok farklı ürünü imal edebilir.
- B) Fabrikaların birçok ürünü imal edebilmesinin arkasında, giderek daha kolay programlanabilir ve daha esnek şekilde kullanılabilir hale gelen robotlar vardır.
- C) Bir fabrikanın birçok farklı ürünü imal edebilmesi, ancak robotların daha kolay programlanabilir ve daha esnek şekilde kullanılabilir olmasıyla mümkündür.
- D) Robotlar giderek daha kolay programlanabilir ve daha esnek şekilde kullanılabilir bir hâle gelmekte, bu da tek bir fabrikanın birçok farklı ürünü imal etmesine olanak sağlamaktadır.
- E) Giderek daha kolay programlanabilir ve daha esnek şekilde kullanılabilir robotların sayısının artmasıyla birlikte, tek bir fabrika birçok farklı ürünü imal edebilir hale gelecektir.

45. The behavioural changes that take place rapidly during the first twelve years of life match changes in brain structure that occur during that time.

- A) Yaşamın ilk on iki yılında hızlı bir şekilde meydana gelen davranışsal değişimler, bu zaman zarfında beyin yapısında oluşan değişimlerle uyumludur.
- B) Yaşamımızın ilk on iki yılında beynimizde ve davranışlarımızda meydana gelen hızlı değişimler birbirinden ayırt edilemeyecek kadar benzerlik gösterirler.
- C) Yaşamımızın ilk on iki yılında beynimizde ve davranışlarımızda meydana gelen hızlı değişimler birbirleriyle uyumlu şekilde gelişir.
- D) Yaşamın ilk yıllarında meydana gelen davranışsal değişimler ile bu süreç içinde beyin yapısında oluşan bazı değişimler arasında benzerlikler mevcuttur.
- E) Yaşamın ilk on iki yılında hızlı bir şekilde meydana gelen davranışsal değişimler, bu süreçte beyin yapısında oluşan değişimlere büyük ölçüde uyum gösterir.

46. Today, only billionaires can afford a private flight into space, but by 2150 the cost of such a flight will probably be no more than that of a first class airline ticket.

- A) Günümüzde, uzaya özel uçakla gitmeye yalnızca milyarderlerin gücü yetmesine rağmen, böyle bir uçuşun maliyetinin 2150'ye kadar birinci sınıf bir uçak biletinden daha pahalı olmayacağı tahmin ediliyor.
- B) Günümüzde uzaya özel uçuş yapmaya sadece milyarderlerin gücü yetmektedir, ancak böyle bir uçuşun maliyeti 2150'ye kadar muhtemelen birinci sınıf bir uçak biletinden daha fazla olmayacaktır.
- C) Günümüzde, uzaya özel uçuş gerçekleştirmeye sadece milyarderlerin gücü yetiyor, ama böyle bir uçuşun maliyetinin 2150 yılında birinci sınıf bir uçak biletinden ucuz olacağı düşünülmektedir.
- D) Uzaya özel uçakla gitmek sadece milyardere özgü bir ayrıcalıktır, ancak böyle bir uçuşun maliyeti 2150'ye kadar birinci sınıf bir uçak biletiyle aynı olacaktır.
- E) Geçmişte uzaya özel uçakla gitmeye yalnızca milyarderlerin gücü yetiyordu, ancak böyle bir uçuşun maliyeti 2150'ye kadar bir uçak bileti ücretine denk gelecek şekilde ucuzlayacaktır.

**47. Quantum computers might be more powerful than traditional computers, but some applications will require more computing power than one quantum computer can provide on its own.**

- A) Kuantum bilgisayarlar, geleneksel bilgisayarlardan daha güçlü olsalar bile, bazı uygulamaların gerektirdiği işlem gücünü tek başlarına karşılamaları mümkün görünmüyor.
- B) Kuantum bilgisayarlar, geleneksel bilgisayarlardan daha güçlü olacaklardır, ancak bazı uygulamalar için gerekli olan işlem gücünü tek başlarına karşılayamazlar.
- C) Kuantum bilgisayarlar, geleneksel bilgisayarlardan daha güçlü olabilirler, ancak bazı uygulamaların bir kuantum bilgisayarın tek başına sağlayabileceğinden daha fazla işlem gücü gerektireceği unutulmamalıdır.
- D) Modern bilgisayarlar, geleneksel bilgisayarlara nazaran daha güçlü olabilirler, ama yine de bazı uygulamalar için gerekli olan işlem gücünü tek başına üretemeyebilirler.
- E) Kuantum bilgisayarlar, geleneksel bilgisayarlardan daha güçlü olabilirler, ancak bazı uygulamalar bir kuantum bilgisayarın tek başına sağlayabileceğinden daha fazla işlem gücü gerektirecektir.

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

**48. Evrendeki diğer temel güçlerle karşılaştırıldığında oldukça zayıf olmasına rağmen, yerçekimi evrendeki en devasa cisimlerin hareketlerinin arkasındaki itici güçtür.**

- A) Compared to the other fundamental forces in the universe, gravity is weak, yet it is considered to be the driving force behind the motions of many objects in the universe.
- B) When compared to the other vital forces in the universe, gravity is the weakest, but it is still the driving force behind the motions of the most massive objects in the universe.
- C) Although it is quite weak compared to the other fundamental forces in the universe, gravity is the driving force behind the motions of the most massive objects in the universe.
- D) Gravity is the basic driving force behind the motions of many massive objects in the universe despite the fact that it is the weakest force in the universe.
- E) Gravity, admittedly weaker than the other basic forces in the universe, is the driving force behind the motions of several massive objects in the universe.

**49. Gözlem verileri birçok galaksinin merkezinde kara deliklerin bulunabileceğini gösteriyor.**

- A) Data supported by observations show that there are black holes at the centre of most galaxies, if not all.
- B) Observational data indicate that black holes may exist at the centre of many galaxies.
- C) Data based on recent observations suggest that many galaxies are likely to have black holes at their centre.
- D) There are most probably black holes at the centre of many galaxies as proved by recent observational data
- E) According to observational data, it is quite evident that there are black holes at the centre of most galaxies, if not all.

**50. Derhâl müdahale edilmediği takdirde iklim değişikliğinin küresel çapta felaketlere ve binlerce ölüme neden olabileceği tahmin edilmektedir.**

- A) It is estimated that climate change, if not addressed urgently, may cause disasters and thousands of deaths globally.
- B) It is calculated that climate change will cause disasters and thousands of deaths if it is not addressed in the near future.
- C) Climate change is thought to cause major disasters and thousands of deaths even after the recent measures.
- D) Climate change will likely cause some major disasters and thousands of deaths globally if it is not tackled properly.
- E) Climate change, if not handled appropriately, is likely to cause major disasters and thousands of deaths globally.

**51. Dünyanın başka hiçbir yerinde bulunmayan sayısız türün evi olarak bilinen tropik yağmur ormanları, daha önce hiç görülmemiş bir hızda yok ediliyor.**

- A) Tropical rainforests are the home to numerous species found nowhere else in the world, but they are being destroyed rapidly.
- B) Tropical rainforests, which are the home of numerous species existing nowhere else in the world, are being saved at an unprecedented rate.
- C) As tropical rainforests are being destroyed at an alarming rate, numerous species found nowhere else in the world are becoming extinct at an unprecedented rate.
- D) Known to be the home of numerous species found nowhere else in the world, tropical rainforests are destroyed at an unprecedented rate.
- E) Although it is known to be the home of numerous species rarely found in the world, tropical rainforests are destroyed at an alarming rate.

**52. Bilim insanları, yetersiz petrol ve gaz kaynaklarına sahip olan ülkelerin, yenilenebilir enerjiye geçmesini öneriyor.**

- A) Due to limited oil and gas resources in the country, scientists strongly recommend a shift to renewable energy.
- B) Scientists recommend that countries with insufficient oil and gas resources should shift to renewable energy.
- C) The restricted oil and gas resources in the country forced scientists to propose a rapid shift to renewable energy.
- D) Considering how little oil and gas resources countries have, scientists recommend a shift to renewable energy.
- E) Since the country has limited oil and gas resources, scientists propose to use more renewable energy.

**53. Bazı tasarımcılar için üretim sürecinde yapıtları üzerinde belli bir ölçüde denetime sahip olmaları önemlidir.**

- A) Retaining a degree of control over their work in the production stage is considered vital by designers.
- B) According to designers, retaining some degree of control over the production process is really important.
- C) For designers who produce certain works, it is necessary to retain a degree of control over their work.
- D) It is important for some designers to retain a degree of control over their work in the production process.
- E) Some designers believe that retaining control over their work in the production process is vital.

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

54. There are many ways to define 'time' at a particular location. Here, on Earth, our usual system is defined by the motion of the Sun in the sky. This means that the local time depends on where you are on Earth and we get around this complication by having many different time zones. Now, we could also define a similar time system based on the motion of the Sun as seen from the Moon. Such a system exists but it is not much more than an interesting exercise in physics. ----. This is called Universal Time, and it is a modern form of Greenwich Mean Time. It is the same everywhere in the Universe.

- A) What is more useful, however, is a definition of time that does not vary with location
- B) It is difficult to keep track of time at work due to the workload
- C) There have been several unsuccessful attempts to define a brand-new computing system
- D) So, the time on the Moon can never be the same as the time on Earth
- E) Therefore, it will never be possible to calculate exactly what time it is on the Moon

55. High-altitude landscapes are some of the most inhospitable places on Earth. They are cold, dry, and oxygen-poor, which causes sleeplessness, fatigue, coughing, confusion, and a rapid pulse. They were the last places humans settled, yet people did it and survived. ----. From the Himalayas to the Andes to the Ethiopian Plateau, people have evolved in ways that allow them to live at high altitude.

- A) The Himalayas and the Andes attract many climbers looking for adventure
- B) This was all about our failure to cope with such an extreme phenomenon
- C) Living at such heights causes hypoxia, a condition where tissues cannot get enough oxygen
- D) It is easier to find well-protected remains of ancient empires than ever before due to technology
- E) The only logical explanation for this is our ability to adapt, especially to extreme environments

**56. Ceres, an unassuming-looking object made of ice and rock, lies between Mars and Jupiter in the expanse of the Asteroid Belt. It was first spotted by Sicilian astronomer Giuseppe Piazzi on 1 January 1801. This 965-kilometre diameter ball could just have been considered a dead, grey rock in space. ----. It has been discovered that it was – and possibly still is – an active world that may have had cryovolcanoes of the kind that has pretty much disappeared from Earth.**

- A) There are also some other mountains on Ceres such as Liberalia and Yamor
- B) Just one solitary peak made of ice, mud and salts, called Ahuna Mons
- C) But as NASA's Dawn spacecraft has recently uncovered, Ceres has been hiding a strange secret
- D) These planets are not the only bodies discovered in our Solar system
- E) That is, if it erupts icy materials like water ice, or methane instead of lava

**57. As honeybees develop, they undergo metamorphosis. ----. At the right moment, the protective wax caps put in place by worker bees are removed, revealing the pupae just days before they are ready to emerge as fully grown adults. Bees in this stage are pale, as their outer shells are not yet hardened. When they emerge as adults, their shells can still take a few hours to fully harden. This means that very young bees are more or less unable to sting.**

- A) The shell of a newborn bee is not as hard as it is supposed to be
- B) The queen bee is not involved in the process of wax cell production
- C) It is a great idea to mark honeybees if you want to follow them
- D) Their lifecycle consists of four stages: egg, larva, pupa, and adult
- E) Young bees, compared to fully grown adults, are less dangerous to us

58. Late in the twentieth century, evidence of global warming mounted as ice sheets in the Arctic and Antarctic began melting rapidly. Carbon dioxide levels climbed, and the protective ozone layer shrank. Although Earth had experienced cycles of abnormal warmth and cold even before humans appeared, most scientists and some political leaders feared that human activity was seriously disrupting the world's climate. They urged energy conservation and alternatives to carbon-rich oil and coal, such as solar and wind power, hydrogen, and synthetic fuels. ----.

- A) Like many developed countries, the United States, proportionally the world's largest energy user, supports cost-efficient projects
- B) As a result, 140 nations approved an environmental agreement in 2005, known as the Kyoto Protocols, in order to limit destructive emissions
- C) It has been long known that electric utilities using fossil fuels produce greater air pollution than nuclear power plants
- D) When the cold war was over, many nations started scientific space exploration to discover habitable planets
- E) However, one of the major challenges facing developing countries today is to find sufficient oil resources

59. There are objects that are classified neither as stars nor as planets, called 'brown dwarfs'. ----. Brown dwarfs accumulate matter in the same way as stars, but fail to attain enough mass to ignite hydrogen fusion. Stars can fuse hydrogen into helium, which can only occur above a certain temperature and pressure. Thus, objects above this threshold are stars. Brown dwarfs initially produce heat by fusing an isotope of hydrogen called deuterium into helium-3, which occurs at lower temperatures and lower masses.

- A) NASA is looking for more information about the planets' atmosphere
- B) Thus, more precise measurements will no longer be needed
- C) Such information will also explain the processes that shaped the young Milky Way
- D) Researchers originally thought that the system had three planets
- E) This term was first coined by Jill Tarter of the SETI Institute



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

**60. (I)** Such an assumption has not yet been tested rigorously for most animal species. **(II)** Vertebrates are often marked to facilitate the identification of free-ranging individual animals or groups for studies of behaviour, population biology, and physiology. **(III)** Marked animals provide data for home range use, resource selection, social behaviour, and population estimation. **(IV)** Markers can be classified into three general categories: mutilations, tags and bands, and radio transmitters. **(V)** The appropriate marking technique for a study depends on several considerations, including study objectives, target species, marker cost, marker efficacy, and marker effects on the animals.

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

**61. (I)** An environmentalist, on the other hand, is someone who actively works to preserve the environment from destruction or pollution. **(II)** Environment includes everything that affects an organism during its lifetime. **(III)** In turn, all organisms, including people, affect many components in their environment. **(IV)** From a human point of view, environmental issues involve concerns about science, nature, health, employment, profit, law, politics, ethics, fine arts, and economics. **(V)** Therefore, environmental science is by its nature a multidisciplinary field.

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

**62. (I)** An alternative career opportunity for engineers has been offered by Frederick Taylor. **(II)** He has proposed that engineers should take over the role of managers in the governance of companies and that of politicians in the governance of society. **(III)** This proposal would lead to the establishment of a technocracy, that is, government by experts. **(IV)** The role of engineers would, thus, be that of technocrats who, on the basis of technological insight, do what they consider best for a company or for society. **(V)** For instance, being an engineer requires great responsibility for a number of reasons.

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

**63. (I)** Our food and materials come to us via a system that spans the world and whose consequences are mostly concealed from us. **(II)** On average, food is said to travel more than 1,300 miles from where it was grown or produced to where it is eaten. **(III)** In such a system, there is no conceivable way of knowing the human or ecological consequences of eating. **(IV)** The average citizen of the United States now uses some 186,000 calories of energy each day. **(V)** Nor can we know the full cost of virtually food that we purchase or discard.

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

**64. (I)** ENIAC, the first electronic computer, was completed in 1945 at the University of Pennsylvania under a military contract. **(II)** Engineer J. Presper Eckert and physicist John W. Mauchly's enormous device was powered by 18,000 vacuum tubes and performed 5,000 calculations per second. **(III)** While computers allegedly reduce paper documents, new copying and printing technologies only increase the flood. **(IV)** Hungarian refugee John von Neumann soon after developed what became the basic architecture of computer systems. **(V)** The invention of transistors by lab scientists at Bell Laboratories in 1948 eventually eliminated clumsy vacuum tubes and paved the way for microchips.

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

**65. (I)** Dinosaurs were 'born' officially in 1842. **(II)** They were all land-living animals, which poses particular problems. **(III)** They owe their birth to the work of the British anatomist Richard Owen, whose work had concentrated upon the unique nature of some extinct fossil reptiles. **(IV)** At the time of Owen's review, he was working on a surprisingly large collection of fossil bones and teeth that had been discovered up to that time and were scattered around the British Isles. **(V)** Although the birth of dinosaurs was relatively inauspicious, they were soon to become the centre of worldwide attention.

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

**66 - 68. soruları aşağıda verilen parçaya göre cevaplayınız.**

Farmers are under pressure to reduce chemical pesticides and their ability to do so will be aided by the news that the U.S. Department of Agriculture is about to start trialling a device that can kill insects with a laser. Developed by an American company, the 'Photonic Fence' is not really a fence at all, but a small box containing lasers, cameras and an Artificial Intelligence (AI) computer system. The cameras scan the air around the device for 100 metres, and the AI system measures the shape, speed and acceleration frequency of any bugs detected to establish which are potentially harmful. Any insects identified as a threat can then be zapped by the lasers, with a 'kill rate' of up to 20 insects per second. By deploying several such devices, farmers could effectively create a virtual fence around their crops that kills harmful pests but leaves bees and other beneficial or harmless insects untouched. The U.S. trials will begin soon. If the device is proven to work, then the company hopes to bring a commercial product to market, though that will still be some years away.

**66. We understand from the text that the 'Photonic Fence' ----.**

- A) has not been mass produced yet
- B) removes all types of insects on farms
- C) may not be effective since it only kills a few insects
- D) is a box which looks like a real fence
- E) will certainly be a waste of money due to its high cost

**67. It is clear from the text that farmers ----.**

- A) are against the use of the Photonic Fence in farming
- B) are not allowed to use any chemical pesticides in farming
- C) will continue using pesticide as it is cheaper
- D) are expected to decrease the amounts of chemical pesticides they use
- E) will not be able to afford the Photonic Fence at the moment

**68. The text is mainly about ----.**

- A) a new device which aims to destroy harmful insects via laser technology
- B) the reasons why most American farmers have recently stopped using pesticides
- C) how a company devised the 'Photonic Fence' to save harmful pests
- D) the technical challenges of designing the 'Photonic Fence' experienced by scientists

- E) methods of distinguishing harmful pests from beneficial ones in farming

**69 - 71. soruları aşağıda verilen parçaya göre cevaplayınız.**

Wernher von Braun is famous for being the creator of the space program that made it possible to put the first person on the moon on July 20, 1969. He grew up in Germany. From an early age he was fascinated by rocket technology and was involved in developing rockets for the German army in the 1930s. In 1937, he joined Hitler's National Socialist Party, about which he later stated: "My refusal to join the party would have meant that I would have had to abandon the work of my life. Therefore, I decided to join". In 1943, it was claimed that he sabotaged the V2 rocket program, and was arrested by the Nazis. Later, however, he was released. In 1945, he realized that the Germans were going to lose the war, and arranged for his team to be handed over to the Americans. In the U.S., Von Braun originally worked on the development of rockets for military purposes. His dream came true by playing a key role in the space travel program. Von Braun's big dream did therefore ultimately come true.

**69. According to the text, Von Braun joined Hitler's party ----.**

- A) to be able to get enough information about the rocket programs of other nations
- B) in order to continue his career in rocket technology
- C) because his refusal would lead to his family's arrest
- D) since he was the only person with profound knowledge of the moon
- E) to get permission from Hitler to work for both Germany and the U.S.

70. It is understood from the text that Von Braun ----.

- A) had no interest in science when he was a little child
- B) joined Hitler's party to improve his military skills
- C) spent most of his childhood in America
- D) sabotaged the V2 rocket program to help the U.S. in the war
- E) decided to work for the Americans together with his team

71. The text is mainly about ----.

- A) scientists who played an active role in military operations
- B) the role of science and scientists in the Second World War
- C) the determination of Von Braun to fulfil his life-long dream
- D) Von Braun's teenage enthusiasm for rocket design
- E) how the U.S. became victorious in the Second World War

72 - 74. soruları aşağıda verilen parçaya göre cevaplayınız.

'Heritability' is a measure of the relative importance of genes in determining variation in qualitative traits among individuals. However, the calculated heritability value is unique to the population in which it was measured and to the environment of that population. The specificity of heritability means that we should be very cautious when using heritability to measure the general importance of genes to the development of a trait. A famous misapplication of heritability comes from the book *The Bell Curve*, by Charles Herrnstein and Richard Murray, published in 1994. In this book, the authors report that IQ scores differ among subpopulations in the United States. Among white Americans, IQ averages are around 100 while among African-American populations, IQ averages are nearly 15 points lower. Using a conservative estimate of the heritability of intelligence, they argued that the IQ differences between whites and blacks are primarily due to a genetic difference in intelligence between these groups. However, on closer look, we can see that Herrnstein and Murray's conclusion is flawed. These differences could be entirely due to environment. Given the history and current social and economic status of African-Americans in the United States, it is certainly possible that their environment is less enriched than the average environment experienced by a white individual.

72. According to the text, Herrnstein and Murray's research ----.

- A) is flawless in terms of methods applied
- B) is the best work on IQ up to date
- C) is questionable due to a mistake in application of heritability
- D) was published in the first half of the twentieth century
- E) deals with environmental problems

73. It can be clearly understood from the text that ----.

- A) environment is the only variable affecting the intelligence level
- B) there is no simple causal relationship between IQ and race
- C) the heritability value of IQ is constant for all populations and cultures
- D) white Americans scored lower than African-Americans in the IQ test
- E) Herrnstein and Murray have rejected using IQ scores in their research

74. The text is mainly about ----.

- A) the high living standards of African-Americans
- B) the different editions of a book on IQ scores titled The Bell Curve
- C) IQ levels of African-Americans living in the United States
- D) a comparative study of IQ scores between two groups in Africa
- E) a well-known misapplication of heritability in IQ testing

75 - 77. soruları aşağıda verilen parçaya göre cevaplayınız.

In addition to temperature, other factors such as the availability of water, prevalence of high winds, and the duration and intensity of sunlight also limit the geographical areas in which various crops can be grown. However, as far as getting the best crop is concerned, even when fruit trees have bloomed satisfactorily, temperature can be a determinant of whether a good crop will be harvested. Most deciduous fruits need pollination, which is normally done by honeybees. If the temperature is not right, the bees just quit flying, and that can mean a very poor crop indeed. Even if the bees fly and pollen is spread, the pollen must germinate and the pollen tube grow down to the ovule, a process that can be severely restricted by unseasonably low temperatures. And even when pollination has been successful, the growth of individual grape berries (botanically, grapes are berries) can be restricted by both too high and too low temperatures.

75. It is clear from the text that ----.

- A) the success of the pollination process depends solely on the quality of the plant
- B) inadequate sunlight can be disregarded when trees have bloomed satisfactorily
- C) crops may not fully develop unless temperatures are suitable
- D) the development of deciduous fruits is induced by pollination without bees
- E) new drug tests must be conducted on certain plants

76. Which of the following is NOT mentioned in the text as a factor that affects crop growth?

- A) Fluctuations in temperature
- B) The taste of fruits
- C) Existence of sufficient water
- D) Pollination agents like honeybees
- E) Successful pollen germination

78 - 80. soruları aşağıda verilen parçaya göre cevaplayınız.

Fusion energy almost sounds too good to be true because of zero greenhouse gas emissions, no long-lived radioactive waste, and nearly unlimited fuel supply. Yet, fusion power designs are not cheap enough to outperform systems that use fossil fuels such as coal and natural gas. However, University of Washington engineers hope to change that. They have designed a concept for a fusion reactor that, when scaled up to the size of a large electrical power plant, would rival costs for a new coal-fired plant with similar electrical output. The design builds on existing technology and creates a magnetic field within a closed space to hold plasma in place long enough for fusion to occur, allowing the hot plasma to react and burn. The reactor itself would be largely self-sustaining, meaning it would continuously heat the plasma to maintain thermonuclear conditions. Heat generated from the reactor would heat up a coolant that is used to spin a turbine and generate electricity, similar to how a typical power plant works.

77. The text is mainly about ----.

- A) the significant role of temperature in growing good crops
- B) the role of temperature on the post-harvest process
- C) adaptation of pollination in other fields of study
- D) the difficulty in detecting honey bees
- E) factors behind the crop variety in some regions

78. It is clear from the text that ----.

- A) engineers have succeeded in making current energy systems more environmentally friendly
- B) a fusion reactor can produce much more power than present plants
- C) for the time being, the cost of fusion energy design is too high to be used widely
- D) the fusion power plant design is based entirely on new technology
- E) a cheaper way to produce energy from fossil fuels is underway

**79. It is clear from the text that ----.**

- A) electricity production in a fusion reactor is more time-consuming than other power plants
- B) coal-fired plants will produce less energy if fusion plants are operational
- C) the number of coal-fired power plants is declining due to fusion reactors in use
- D) when in use, the fusion power plant will not release any harmful gases
- E) fusion reactors and fossil-fuelled power plants can both be turned into self-sustaining energy sources

**80. The text mainly deals with ----.**

- A) various cost-efficient means of producing energy
- B) existing fusion power plants and their benefits
- C) research on future plants run by fossil fuels
- D) the cost of fusion power plants and coal-fired plants
- E) a prospective fusion reactor design with great potential



**YÖKDİL FEN BİLİMLERİ**  
**YAZ 2018**







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

1. **Though other factors contribute to the decline of species, climate change is a main threat because it occurs ---- rapidly for them ---- successfully adapt.**
- A) as / as  
B) rather / than  
C) too / to  
D) as well / as  
E) so / that
2. **Today, the Internet ---- access to public and private biological databases that ---- the work of thousands of biotech researchers around the world.**
- A) will provide / were supporting  
B) provided / would support  
C) would provide / supported  
D) provides / support  
E) had provided / have supported
3. **The digitalisation of cultural heritage is one of the main ---- facing European museums and other cultural institutions.**
- A) temperatures  
B) challenges  
C) invitations  
D) elections  
E) anniversaries
4. **It is difficult for scientists to measure the mass balance of ice sheets manually; ----, satellite images of the ice sheets can track their growth and recession over the years.**
- A) however  
B) for instance  
C) otherwise  
D) likewise  
E) moreover
5. **In 1990, the discovery that the universe is still expanding was unexpected ---- it was thought that its expansion had come to an end long ago.**
- A) provided  
B) though  
C) so that  
D) besides  
E) since
6. **Toxic substances are chemicals that cause damage ---- living organisms as a result ---- immediate or long-term exposure.**
- A) of / for  
B) to / of  
C) on/ with  
D) in / at  
E) at / in

7. In the past few years, there have been great advances in the field of machine learning, ---- in Artificial Intelligence.
- A) accidentally  
B) carefully  
C) hardly  
D) especially  
E) politely
8. People are concerned about nuclear waste because of its long-term effects, but much ---- waste in the form of plastic also lasts for quite a long time.
- A) communicative  
B) healthy  
C) domestic  
D) temporary  
E) strange
9. ---- science fiction shows and movies like Star Trek and Star Wars make space travel look very easy, the reality is quite different.
- A) Although  
B) Because  
C) When  
D) Unless  
E) Since
10. A new theory claims that the cosmos is full of unseen particle families ---- do not interact with each other.
- A) whose  
B) in which  
C) where  
D) when  
E) that
11. Habitat ---- a broad term that we use to describe the surroundings or conditions where any given organism ----.
- A) has been / lived  
B) is / lives  
C) had been / had lived  
D) was / has lived  
E) will be / would live
12. Thomas Young was born in 1773 and is described as a 'polymath' because he contributed to many scientific fields ---- his extensive research related to colour vision.
- A) in case  
B) otherwise  
C) in addition to  
D) so that  
E) even though
13. Toothpicks, which are generally used after eating, are highly effective for cleaning ---- teeth ---- gums.
- A) neither / or  
B) such / that  
C) more / than  
D) but / also  
E) both / and

**14. Air pollution often travels to areas that do not produce significant amounts of pollution themselves; ----, monitoring air pollution has become a major problem for many authorities.**

- A) just as
- B) for example
- C) however
- D) therefore
- E) in contrast

**15. The La Braña-Arintero site ---- by chance in 2006 by Julio Manuel Vidal Encinas, an archaeologist of the Council of Castilla y León.**

- A) has been discovered
- B) was discovering
- C) has discovered
- D) was discovered
- E) discovered

**16. Ever since the hydrogen bomb ----, attempts ---- to harness the power of nuclear fusion for peaceful purposes.**

- A) is invented / had been made
- B) has been invented / will be made
- C) was invented / have been made
- D) will be invented / were made
- E) had been invented / are made

**17. Different regions and economic sectors in the world are currently ---- the impact of climate change in various ways.**

- A) getting off
- B) calling back
- C) dealing with
- D) sending out
- E) running by

**18. Modern science ---- answers to many of our fundamental questions about the universe and our place within it.**

- A) offers
- B) causes
- C) consumes
- D) happens
- E) disappears

**19. Bees pollinate crops, and ---- we want to transfer pollen from flower to flower by hand, we need to protect them.**

- A) when
- B) unless
- C) if
- D) while
- E) once

**20. Experts from Montana University are studying microorganisms which have been living under the ice of Antarctica ---- the last 500,000 years.**

- A) since
- B) after
- C) before
- D) for
- E) once

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

Teamwork usually occurs in species that live in family groups and (21) ---- each other as a consequence of genetic relatedness. Working together (22) ---- many benefits to an individual, when hunting both small and large prey. (23) ----, lions work together to bring down larger prey. As for marine animals like dolphins, they may coordinate (24) ---- movements to herd many prey into a small area. Animals have developed these strategies in order to make prey easier (25) ---- catch.

21.

- A) had assisted
- B) assist
- C) are assisted
- D) were assisted
- E) assisted

22.

- A) avoids
- B) becomes
- C) ignores
- D) happens
- E) provides

23.

- A) For example
- B) In contrast
- C) Nevertheless
- D) Moreover
- E) However

24.

- A) both
- B) much
- C) its
- D) that
- E) their

25.

- A) for
- B) to
- C) on
- D) at
- E) of



**26 - 30. sorularda, aşağıdaki parçada numaralanmış yerlere uygun düşen sözcük ya da ifadeyi bulunuz.**

Physics is an experimental science. Physicists observe the phenomena of nature and try to find patterns **(26)** ---- relate these phenomena. These patterns are called physical theories or, **(27)** ---- they are very well established and widely used, physical laws or principles. Physicists have to ask appropriate questions, carry out experiments to try to answer the questions, and draw **(28)** ---- conclusions from the results. Physics is not simply a collection of facts; it is also the process by which we arrive at general principles that describe how the physical universe behaves. No theory is regarded as the final truth. It is in the nature of physical theory that we can **(29)** ---- a theory by finding behaviour that is inconsistent with it. **(30)** ----, we can never prove beyond question that a theory is undoubtedly correct.

**26.**

- A) in which
- B) when
- C) where
- D) which
- E) what

**27.**

- A) when
- B) much as
- C) even if
- D) until
- E) unless

**28.**

- A) external
- B) sociable
- C) appropriate
- D) dreadful
- E) informal

**29.**

- A) exploit
- B) require
- C) disprove
- D) remain
- E) involve

**30.**

- A) In other words
- B) Such as
- C) As though
- D) In contrast
- E) Otherwise

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

**31. Biological activity in soil slows down or stops**

----.

- A) when oil spills were experienced in the ocean
- B) because soil is regarded as static and inactive
- C) after vegetation had started to regenerate itself in spring
- D) so the moon's influence on the tide was dramatic
- E) if the soil becomes too cold or too dry

**32. Although the world produces enough food to feed its population, ----.**

- A) nearly one billion people do not have enough to eat
- B) that eating genetically modified food is a concern especially for children
- C) yet industrial agriculture helps increase the global crop
- D) socioeconomic methods should be applied to stop this problem
- E) poor nutrition is no longer the leading health risk worldwide

**33. Because Bennu, the asteroid, regularly passes relatively near to Earth ----.**

- A) it has not been studied thoroughly yet
- B) it is nearly impossible to analyse them
- C) scientists cannot understand how they occur
- D) astronomers can study its orbit closely
- E) they travel more than a million kilometres

**34. While animals such as whales have larger brains by weight,----.**

- A) a baby whale uses up much more energy while growing up
- B) the human brain is the largest relative to the size of its owner's body
- C) such a small body may be a great advantage to move while in danger
- D) its brain consumes a large amount of energy while sending information
- E) a special feature of the human brain is its need for energy

**35. Even though bacteria have a bad reputation for causing disease, ----.**

- A) more bacteria have become resistant to treatment
- B) yet various antitoxins have been used to treat infections
- C) in reality, very few species of bacteria infect humans
- D) bacterial disease can have several serious outcomes
- E) it is not used to kill the harmful bacteria in humans

**36. Scientists have designed a nanocrystal 500 times smaller than a human hair ----.**

- A) because a laser could be used in order to project a holographic image in modern displays
- B) since the old ones could perform much better
- C) if they are used in anti-counterfeit devices in banknotes, and in some medical applications
- D) that turns darkness into visible light and could be used to create night-vision glasses
- E) in case they involve the study of behaviour of light and interaction of objects with light

37. ----, most aerospace companies devote their resources to improving existing products.

- A) Although the development of a new flight vehicle might take a decade or more
- B) Since they design wings or body surfaces to make the craft faster
- C) After engineers subject a new model of the aircraft to tests in a wind tunnel
- D) Because the cost of developing new flight vehicles is so high
- E) Even before computer-aided design enabled engineers to test designs

38. We will not be able to meet the climate warming goals set by the Paris Agreement ----.

- A) as long as emission-reducing technologies spread globally at incredible speeds
- B) unless we speed up the spread of clean technology immediately
- C) since we have long supported scientific advances in these fields
- D) although global emissions of these gases have recently gone up significantly
- E) because the institutions have already improved their experimental techniques

39. ---- as well as an increase in blood pressure, respiration and heart rate.

- A) Neuroscience had already become the fastest growing discipline
- B) The rush of adrenaline causes a sudden release of glucose
- C) One of the basic requirements is certain coded information
- D) A new system for diagnosing increase in blood pressure has been designed
- E) Information is sent effectively around the nervous system

40. ----; for instance, they constructed bridges to make travelling easier.

- A) The cities of the Romans had large populations and impressive public houses
- B) Historians estimate that ninety per cent of the population lived in the country
- C) Ancient Rome was situated on seven hills and its monumental public buildings
- D) The Romans displayed remarkable skill in building and engineering
- E) Ancient Rome ruled a vast empire with a small civil service

41. ---- as they will be able to store energy from wind and solar power.

- A) Future electrodes will not be very useful and efficient
- B) The faster recharging lithium battery has disappeared
- C) New generations of lithium batteries will be very popular
- D) Storing electrical energy quickly has not been achieved
- E) It was recently discovered by a group of students

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

**42. The real reason cats avoid water is that their fur becomes soaked and loses its protecting property.**

- A) Kedilerin sudan kaçınmasının asıl nedeni kürklerinin ıslanması ve koruyucu özelliğini yitirmesidir.
- B) Kürklerinin koruyucu özelliğini tamamen bozduğu için kediler sudan kaçınırlar.
- C) Kediler sudan kaçınırlar; çünkü su, kürklerinin koruyucu özelliğini tamamen bozar.
- D) Kedilerin sudan kaçınmasının nedenlerinden biri de kürklerinin koruyucu özelliğini yitirmesidir.
- E) Kürklerinin ıslanması ve koruyucu özelliğini yitirmesi kedilerin sudan korkmasının sebebi olabilir.

**43. Because they are more elastic than metals like steel, the use of composite materials in train construction is still a debated issue in terms of safety.**

- A) Çelik gibi metallere daha esnek olmadıkları için, kompozit malzemelerin tren yapımında kullanımı, güvenlik açısından tartışmaya açık bir konudur.
- B) Kompozit malzemelerin tren yapımında kullanımının en önemli sebeplerinden biri, çelik gibi metallere daha esnek olmasıdır.
- C) Çelik gibi metaller esnek oldukları için, kompozit malzemelerin tren yapımında kullanımı uzun zamandır tartışılmaktadır.
- D) Kompozit malzemeler, çelik gibi metallere daha esnek olsalar da, tren yapımında kullanımı, güvenlik açısından sakıncalıdır.
- E) Çelik gibi metallere daha esnek oldukları için, kompozit malzemelerin tren yapımında kullanımı, güvenlik açısından hâlâ tartışılan bir konudur.

**44. A growing body of scientific studies indicates that following the Mediterranean diet can help slow memory loss.**

- A) Hafıza kaybını önlemeye yardımcı olduğu için Akdeniz diyetini uygulamanın gerekliliği bilimsel çalışmalarda ortaya konmuştur.
- B) Artan sayıda bilimsel çalışma Akdeniz diyetini uygulamanın hafıza kaybını yavaşlatmaya yardımcı olabildiğini göstermektedir.
- C) Bilim insanları tarafından yapılan çalışmalar Akdeniz diyetini uygulayan bireylerde hafıza kaybının yaşanmadığını göstermektedir.
- D) Çok sayıda çalışma, yaşlılıkta Akdeniz diyetini uygulamanın olası hafıza kaybını yavaşlattığını göstermektedir.
- E) Artan sayıda çalışmada işaret edildiği gibi Akdeniz diyetini uygulamak hafıza kaybını büyük ölçüde yavaşlatmaktadır.

**45. Fossilized 21-million-year-old monkey teeth found on the Panama Canal are the most significant evidence of the presence of mammals in North America.**

- A) Panama Kanalı'nda bulunan 21 milyon yaşındaki fosilleşmiş maymun dişleri, Kuzey Amerika'daki memeli varlığının en önemli kanıtıdır.
- B) Panama Kanalı'nda ilk kez bulunan 21 milyon yaşındaki fosilleşmiş maymun dişleri, Kuzey Amerika'daki memeli varlığının önemli bir kanıtıdır.
- C) 21 milyon yaşındaki fosilleşmiş maymun dişleri, Kuzey Amerika'da yaşamış olan ilkel türler hakkında önemli ipuçları vermektedir.
- D) Panama Kanalı civarında bulunan 21 milyon yaşındaki maymun dişleri, ilk memelilerin Kuzey Amerika'da yaşadıklarının önemli bir işaretidir.
- E) Kuzey Amerika'daki Panama Kanalı'nda şans eseri bulunan 21 milyon yaşındaki maymun dişleri, ilk memeli varlığının en önemli kanıtı kabul edilir.

**46. The United Nations defines biotechnology as any technological application that uses biological systems to make or modify products.**

- A) Biyoteknoloji, çeşitli ürünleri yapmak için biyolojik sistemleri kullanan her türlü teknolojik uygulama olarak karşımıza çıkmaktadır.
- B) Birleşmiş Milletlere göre, biyolojik sistem teknolojisi, birçok ürünü yapmak ve değiştirmek için geliştirilen önemli bir teknolojik uygulamadır.
- C) Birleşmiş Milletler, biyoteknolojiyi, birtakım biyolojik ürünleri yapmak için kullanılan teknolojik bir uygulama olarak tanımlamaktadır.
- D) Biyoteknoloji, ürünleri yapmak ve değiştirmek için Birleşmiş Milletler tarafından da kullanılan teknolojik bir uygulama olarak sınıflandırılabilir.
- E) Birleşmiş Milletler, biyoteknolojiyi, ürünleri yapmak ya da değiştirmek için biyolojik sistemleri kullanan her türlü teknolojik uygulama olarak tanımlamaktadır.

**47. One of the effects of deforestation, which accelerated in the late 20th century, is the disappearance of many plant and animal species.**

- A) 20. yüzyılın sonlarında ortaya çıkan orman kaybının etkilerinin başında bazı bitki ve hayvan türlerinin yok olması gelir.
- B) Birçok bitki ve hayvan türünün ortadan kaybolması, 20. yüzyılda meydana gelen orman kaybının açık sonucudur.
- C) 20. yüzyılın sonlarındaki orman kaybı, bitki ve hayvan türlerinin ortadan kaybolmasının başlıca nedenidir.
- D) 20. yüzyılda hızlanan orman kaybının önemli etkilerinden biri, bitki ve hayvan sayısının önemli ölçüde azalmasıdır.
- E) 20. yüzyılın sonlarında hızlanan orman kaybının etkilerinden biri, birçok bitki ve hayvan türünün yok olmasıdır.

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

**48. Modern bilimin kökleri Avrupa'da 1500-1750 yılları arasında gerçekleşen hızlı bilimsel gelişmelerde yatar.**

- A) Modern science emerged thanks to rapid scientific developments that occurred in Europe between roughly 1500 and 1750.
- B) The principles of modern science can be traced back to a period between 1500 and 1750 which witnessed significant developments.
- C) A period of scientific development that occurred in Europe between 1500 and 1750 is considered to be the origins of modern science.
- D) The origins of modern science lie in rapid scientific developments that occurred in Europe between 1500 and 1750.
- E) Modern science was born out of significant scientific developments that took place in Europe between roughly 1500 and 1750.

**49. Mühendislerden sadece işlerini yetkin bir şekilde yerine getirmeleri değil, aynı zamanda mühendisliğin ahlaki ve toplumsal etkilerinin de farkında olmaları beklenmektedir.**

- A) Engineers should not only perform their work competently, but consider almost all ethical and social aspects of their profession as well.
- B) Engineers are expected to perform their work competently so that social issues of engineering can be handled appropriately.
- C) Engineers' primary duty is that they should be competent and aware of the ethical and social effects of engineering.
- D) Engineers are supposed to perform their work competently and to know the ethical and social effects of their decisions.
- E) Engineers are expected not only to perform their work competently but also to be aware of the ethical and social effects of engineering.

**50. Kızıl sincaplar, sonbaharda hatırlaması kolay yerlere gömdükleri yiyecek depolarına güvindikleri için kış uykusuna yatmazlar.**

- A) As they rely on the caches of food they buried in easy-to-remember sites in autumn, red squirrels do not hibernate.
- B) Relying on the food they buried in specific sites in autumn may cause red squirrels not to hibernate.
- C) Because red squirrels do not hibernate, they usually bury the caches of food in easy-to-remember sites.
- D) Red squirrels bury the caches of food in an easy-to-remember site in autumn in order not to hibernate.
- E) Red squirrels cannot hibernate; as a result, they have to bury their food in easy-to-remember sites in autumn.

**51. Gerekli türbinlerin kurulum maliyeti, rüzgâr gücünün yaygın kullanımının önünde her zaman bir engel olmuştur.**

- A) Despite the installation cost of necessary turbines being inexpensive, wind power has never become widespread.
- B) The installation cost of necessary turbines has always been an obstacle to the widespread use of wind power.
- C) Wind power has always been considered too expensive due to the installation cost of necessary turbines.
- D) The high installation cost of necessary turbines for wind power has hardly stopped us from using it widely.
- E) The widespread use of wind power has slowed down because of the high installation cost of necessary turbines.

**52. Evlerde kömür kullanımı da azaltılmadıkça, Çin'in enerji santrallerinden karbon salınımını azaltma planları çok etkili olmayabilir.**

- A) China's plans to reduce emissions from power plants will not be effective as long as the household use of coal is encouraged.
- B) China's plans to reduce emissions from power plants may not be effective if the use of health-damaging coal is also reduced.
- C) If household use of coal is also reduced, China's plans to reduce emissions from power plants will have significant effects.
- D) China's plans to reduce harmful emissions from power plants will not be very effective if people keep using coal for heating.
- E) As long as the household use of coal is not also reduced, China's plans to reduce carbon emission from power plants may not be very effective.

**53. 2017 yılında yayımlanan bir rapora göre, Avrupa'daki kirlenmiş toprak miktarının 2025 yılına kadar %50 artması beklenmektedir.**

- A) A report of 2017 suggested that the total amount of polluted soil in Europe is estimated to increase by nearly 50% in 2025.
- B) According to a number of reports issued in 2017, the amount of polluted soil is considered to increase nearly by 50% in 2025.
- C) According to a report issued in 2017, the amount of polluted soil in Europe is expected to increase by 50% by 2025.
- D) In 2017, certain reports stated that the surface area of polluted soil in Europe will have increased by up to 50% by 2025.
- E) A report issued in 2017 stated that the surface area of polluted soil in Europe will probably increase by 50% by 2025.

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

54. Soyuz is the oldest spacecraft still in operation. ----. Since then, this spacecraft has carried more people to orbit and back than any other spacecraft. While not immune to its own set of disasters and setbacks, Soyuz is nevertheless the safest and most cost-effective spacecraft ever built. As of 2018, it is the only way to get warm bodies up to the International Space Station and back and is used by both the Russians and the Americans.

- A) A parachute failure caused the module to crash
- B) It might be used as an emergency ferry at all times
- C) Some astronauts complain that it has become old-fashioned
- D) It was built by the Korolyov Design Bureau in the 1960s
- E) Americans plan to land on Mars before 2020

55. Concorde, the fastest passenger aircraft of its time, cruised at speeds of over 2,180 kilometres per hour – twice the speed of sound. At half that speed, it would break the sound barrier, generating an enormous double sonic boom that could be heard for miles. This incredibly loud noise led to a worldwide ban on continental supersonic flights. ----. To achieve this, it has announced plans to develop a ‘low boom’ aircraft, which generates a soft thump as it breaks the sound barrier, rather than a disruptive boom.

- A) Scientists used to work on a project to stop shockwaves generated by supersonic aircrafts
- B) Shockwaves move away from the aircraft in all directions and travel at the speed of sound
- C) In 2016, a group of engineers wanted to start a new spacecraft project, but they could not afford it
- D) Now, NASA hopes to bring back supersonic passenger air travel by making flights greener, safer and quieter
- E) These factors contributed to the aircraft’s unexpected worldwide failure at the beginning of 2000



**56. The oyster has a hard outer wall known as a mantle, which covers and protects certain organs. When an intruder such as a grain of sand enters an oyster's shell, it irritates the oyster. Therefore, the oyster promptly covers the foreign object with a mineral substance called nacre. The oyster coats it with more and more nacre until it forms a pearl. ----. Pearl 'farmers' can harvest pearls by triggering this response by inserting a grain of sand into the shell.**

- A) But oysters can produce pearls in a very short period of time
- B) For example, producing pearls in this way helps them to expand their life spans
- C) Recently, biologists have found that oysters produce nacre from their shells
- D) So, the ecosystem where species like oysters live is still in danger of being polluted
- E) The shiny spheres are thus actually the product of an immune response

**57. The field of electric power is concerned with the design and operation of systems for generating, transmitting, and distributing electric power. ----. One of these is the ability to transmit power at extremely high voltages in both the direct current and alternating current modes, reducing power losses. Another is the real-time digital control of power generation, transmission, and distribution, thereby optimizing the efficiency of the system while it is in operation.**

- A) Electronics and electric power have chosen different paths as they have developed
- B) Throughout history, man-made objects have played an important part in civilizations
- C) Engineers working in this field have made several developments since the 1970s
- D) The principle of electromagnetic induction was discovered by Michael Faraday in 1831

E) Information is now generated, transmitted, received, and stored electronically

**58. Sound is stored in one of two basic ways, called formats. The first format stores sound in a form that resembles the original sound wave and is known as analogue recording. ----. The second format is digital recording which represents a sound wave as a series of numbers. Computer drives use the position of magnetic particles to define these numbers. A number of digital formats exist, and they determine the quality of the recorded sound and the number of channels of sound playback.**

- A) The term 'format' is also used to describe the number of channels, or streams of sound
- B) This format is called analogue because the form of the sound wave in the recording is analogous to the original waveform
- C) Two of the most common formats are monaural, or mono, and stereophonic, or stereo
- D) When they are played, the sounds from these two separate channels combine in the air
- E) They were really popular in the 1970s, mainly because they were easy to access then

**59. ----. Scientists have discovered ways in which these signals can be picked up by sensors and sent wirelessly to other electrical devices, making it possible for a person to move or alter objects by thought alone. Most research in this field is directed toward developing devices to help people with nervous-system injuries regain the use of paralyzed limbs. The technology has also been picked up by some computer-game manufacturers, who have produced games that can be played using thought power.**

- A) As biotechnology advances, it generates ethical and social issues as well
- B) To many scientists, it seems hard to develop systems that are as flexible as the human brain
- C) Software can now compete on even terms with the best chess players
- D) When a person is thinking, the brain produces electrical signals

E) However, computer game manufacturers use these advances

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

**60.** (I) The literal meaning of carnivorous is 'meat eating'. (II) When this definition is applied to plants, it evokes visions of snarling green jaws snapping at nearby animal life. (III) Although the vision is vivid, it is not in keeping with reality. (IV) Most plants are cunning in their means of entrapping animal prey and have evolved sophisticated means of digesting it. (V) Common names used for plants can be confusing because the same plant may be called by different names in different geographic areas.

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

**61.** (I) One of the most important types of acceleration is the acceleration caused by gravity. (II) The history of the universe is essentially a story about the interplay between matter and energy. (III) Interactions between these two began in the Big Bang. (IV) They still exist today in everything from the microscopic moving of atoms to huge collisions of galaxies. (V) Understanding the universe, therefore, depends on becoming familiar with how matter responds to the flow of energy.

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

**62. (I)** Ancient people used various methods to preserve food for a long time. **(II)** Making cucumber pickles is a long process with two stages. **(III)** First, the salt in the vinegar mix takes the water out of the cucumbers. **(IV)** Second, good lactobacilli bacteria already living on the cucumbers convert sugars into lactic acid, which preserves the produce and adds spiciness. **(V)** A clean cloth or cheesecloth secured with a rubber band vents gases from fermentation and forms a barrier to mold and harmful bacteria, and after a couple weeks in the jar, the fermented pickles are ready.

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

**64. (I)** The most basic motions of Earth are its daily rotation and its yearly orbit around the Sun. **(II)** Our entire solar system is actually on a very long journey within the Milky Way Galaxy. **(III)** It rotates once each day around its axis, which is the imaginary line connecting the North Pole to the South Pole. **(IV)** As viewed from above the North Pole, the movement is counterclockwise. **(V)** Although we do not feel any obvious effects from Earth's rotation, the speed of it is substantial.

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

**63. (I)** Most graphics systems provide a keyboard and at least one other input device. **(II)** The most common input devices are the mouse, the joystick, and the data tablet. **(III)** Each provides positional information to the system, and each usually is equipped with one or more buttons to provide signals to the processor. **(IV)** They are often called pointing devices and they allow a user to indicate a particular location on the display. **(V)** They need to create new games for game fans regularly.

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

65. (I) Most meditation is done sitting down in special postures, such as the full or half lotus in which both feet, or just one foot, rests on the opposite thigh. (II) However, many people meditate in simpler positions, using firm cushions, or sitting on a low bench with their feet tucked underneath. (III) In meditation there are always two dangers; either becoming drowsy and falling asleep, or becoming agitated by distracting thoughts or discomfort. (IV) There is nothing magical about these positions. (V) They all have the same aim; to provide a posture that is both relaxed and alert.

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

66 - 68. soruları aşağıda verilen parçaya göre cevaplayınız.

Since its construction, at least 1300 people have killed themselves by jumping off the Golden Gate Bridge in San Francisco. In 1940, the Board of Directors discussed an "anti-suicide screen" but decided against it. In 2008, they voted 14 to 1 to install a stainless steel net but this time serious public disagreement led to a cancellation in construction. While the proponents of the project tended to disregard aesthetic considerations, those against the barrier believed the bridge had always been praised for its transparency and any barrier design would destroy the view. In addition, opponents claimed a suicide barrier would not be effective, since people who wanted to kill themselves would simply go somewhere else. However, those favouring the project claimed most suicidal people act on an impulse and, when prevented from actually killing themselves, often seek help instead of ending their lives. When it came to financial concerns, the barrier did not seem worth the costs to the opponents, whereas the proponents reacted by saying the value of human life cannot be expressed in monetary terms.

66. It is clear from the text that ----.

- A) state authorities agreed to install anti-suicide netting but they could not afford it
- B) there has been no agreement on the best way to address suicide attempts at the Golden Gate Bridge
- C) the bridge is under construction now despite some opponents
- D) a great number of people had been prevented from committing suicide by 2008
- E) the authorities inspected some other bridges with similar designs before reaching a verdict

**67. According to the text, some people were against the installation of a barrier since ----.**

- A) the project required structural change in the bridge and brought additional cost
- B) suicide from the bridge was neither possible nor probable as the bridge was difficult to climb
- C) it would prevent the public from noticing people who were about to commit suicide
- D) people who were stopped when they were about to end their lives would usually seek psychological help
- E) they believed people had free will and one should not interfere with people's decisions to end their own lives

**68. The text is mainly about ----.**

- A) contradictory viewpoints regarding the Golden Gate Bridge suicide barrier
- B) an inquiry into the pros and cons of the construction of the Golden Gate Bridge
- C) cost-benefit and risk analysis prior to the construction of a bridge in San Francisco
- D) the cost of redesigning bridges for public use in the city of San Francisco
- E) social and ethical issues that arose during construction of the Golden Gate Bridge

**69 - 71. soruları aşağıda verilen parçaya göre cevaplayınız.**

An increase in temperature of a few degrees might not sound so bad, but small changes in average temperature can lead to much more dramatic changes in climate patterns. These changes will cause some regions to warm much more than the average, while other regions may cool. Polar regions will warm the most, causing polar ice to melt. This is clearly threatening to the species of these regions, but it also warms the oceans everywhere and changes their salt content as melting ice pours fresh water into the sea. The fact that the waters of the Gulf of Mexico are at their warmest level in at least a century may be contributing to the greater strength of hurricanes that have recently blown out of the Caribbean. More generally, overall warming of the atmosphere will increase evaporation from the oceans, leading to numerous and intense storms; ironically, this means that global warming could mean more severe winter blizzards.

**69. It is clear from the text that ----.**

- A) because of the change in temperature, most areas will become desert-like
- B) low temperature is a sign of disasters such as hurricanes
- C) some areas are warmer because of the increase in the salt level in seas
- D) even the slightest changes in temperature can affect climate patterns
- E) a few degrees' increase in temperature is better than a decrease

**70. It is stated in the text that the reason for the change in the salt content of seas is that ----.**

- A) more freshwater will flow into the seas due to melting polar ice
- B) the water in seas will evaporate, causing storms and hurricanes
- C) some regions like the Caribbean are likely to get much more rain
- D) endangered species in polar regions will become extinct
- E) climate patterns across the world may cause certain regions to get cooler

**71. The text is mainly about ----.**

- A) to what extent increases in temperature are affecting marine life
- B) how the Gulf of Mexico is affected by an increase in temperature
- C) climate change and its influence on animals in polar regions
- D) how we can help protect the environment
- E) the consequences of changes in temperatures across the world

**72 - 74. soruları aşağıda verilen parçaya göre cevaplayınız.**

Driving is a much more complex activity than most people think. It involves a wide range of skills and actions. Some of them are easier to automate than others. Maintaining speed on an open road is simple, which is why standard cruise control systems have been doing it automatically for a long time. Besides lane-keeping systems, adaptive cruise control systems that keep proper speed and spacing behind other vehicles are also widely available. However, it will be an enormous jump from such systems to fully automated driving, which is still something we can only have in science-fiction films. The automotive industry and the media have made a mess of the terminology used to talk about automated driverless systems. The terms 'autonomous', 'driverless' and 'self-driving' confuse more than they enlighten. To clear things up, scientists have defined different levels of automation. They arranged them on a ladder of decreasing dependence on the driver.

**72. According to the text, the technical terms used by automotive manufacturers and the press ----.**

- A) set an important safety target for automated driving systems
- B) cause confusion among the public about automated driverless systems
- C) sound futuristic, like having your own personal electronic chauffeur
- D) will bring automated valet-parking systems in the near future
- E) are only related to autopilot in specific scenarios, such as freeway traffic jams

**73. We understand from the text that ----.**

- A) the terminology used for self-driving cars is widely agreed upon
- B) few people think driving is an easy task to execute
- C) there is still a long way to go before we can switch to fully automated cars
- D) the production of smart cars will have to end before long
- E) the safety of modern car systems is still under debate

**74. It is clear from the text that ----.**

- A) cruise control systems have been used for many years
- B) steering control will depend more on drivers soon
- C) steering control must be affordable for the general public
- D) lane-keeping systems will disappear in the future
- E) governments encourage fully automated driving projects

**75 - 77. soruları aşağıda verilen parçaya göre cevaplayınız.**

The ozone layer protects life on Earth, and without ozone, the world as we know it would not exist. Ozone is a key element of the atmosphere, the blanket of gases surrounding our planet that is made up of discernable layers, which differ in temperature, density, and gas composition. The lowest level, the troposphere, extends about 11 km up from Earth's surface. This level is familiar to us: it is the air we breathe and where our weather occurs. The next level in the atmospheric blanket, the stratosphere, rises to 50 km above Earth's surface. The stratosphere is much less dense than the troposphere but contains a 'layer' of ozone – abbreviated as O<sub>3</sub> because it contains three oxygen atoms – a region where most of the atmosphere's ozone is found.

**75. It is clear from the text that ----.**

- A) the stratosphere has the least ozone compared to the other layers
- B) the stratosphere is much closer to the Earth than the troposphere
- C) the gases surrounding the Earth vary in density and content
- D) the layers that make up the ozone layer have not been fully observed
- E) all the layers in the atmosphere have almost the same features

**76. According to the text, one of the reasons we know the troposphere well is that it ----.**

- A) contains the most vital ozone type
- B) protects life on Earth better than the other layers
- C) extends about 50 km up from Earth's surface
- D) is much thicker than the other layers
- E) contains the air we inhale and exhale

**77. We can infer from the text that ----.**

- A) the ozone layer is a single body with no discernible layers
- B) the ozone layer makes the world habitable for every living species
- C) weather phenomena occur in the highest level of the atmosphere
- D) the density of the ozone layer changes seasonally
- E) there are two atmospheric layers between the Earth and the troposphere



**78 - 80. soruları aşağıda verilen parçaya göre cevaplayınız.**

Dreams have long been regarded as prophetic communications which enable us to foretell the future. There is absolutely no scientific evidence for this theory and considerable scientific evidence against it. It is certainly true that individuals who are concerned about a traumatic event, such as the threat of the loss of a loved one who is sick, will dream about that loved one more often. We know from our experiments that it is possible to influence dream content simply by having a subject in mind while going to sleep. Therefore, dreaming about a loved one at a time when that loved one's life is threatened is not surprising. If the dreamer then calls and finds that the individual has died, it is understandable for him or her to assume that the dream was an early warning of that death. But this is a mistake. It is simply a coincidental correspondence between a situation about which one has legitimate and intense concern and the occurrence of the event that one fears.

**78. The text is mainly about ----.**

- A) the significance of dreams in ancient cultures
- B) why people frequently dream of their loved ones
- C) the association between dreams and reality
- D) how we can control our dreams to know about the future
- E) a proven theory about dreaming and its effects

**79. According to the text, ----.**

- A) the form and content of our dreams are inseparable
- B) science can help prove the prophetic quality of dreaming
- C) our daily routine has no significant effect on the content of dreams
- D) concerns about traumatic events may determine the content of our dreams
- E) modern science has never been interested in the content of dreams

**80. From the text, we can clearly understand that ----.**

- A) most of our dreams tell us that we will lose one of our loved ones soon
- B) people who have never had sleep problems can have lucid dreams
- C) some incidents may make people think dreams are indicators of a future event
- D) most people can remember their dreams quite easily
- E) there is a certain relation between mental health and dreaming



**YÖKDİL FEN BİLİMLERİ**  
**MART 2019**







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

1. ---- the benefits of genetic engineering in food production, many individuals express concerns regarding the ethics of the new technology and its effect on food safety.
- A) In spite of  
B) Similar to  
C) As far as  
D) As a result of  
E) Owing to
2. Some bacteria ---- nitrogen and carbon from decaying organic matter and then release these gases into the atmosphere to be reused by other living things.
- A) defend  
B) fail  
C) recycle  
D) delete  
E) confuse
3. In Brazil, the Renca reserve covers 46,000 square kilometres and has untouched forests ---- several valuable minerals, including gold.
- A) like  
B) as well as  
C) because of  
D) such as  
E) even if
4. According to recent studies, your biological clock can be confused ---- you are affected by bright computer light right before bedtime.
- A) but  
B) besides  
C) though  
D) if  
E) otherwise
5. Vietnam, which borders the South China Sea, has a moist, tropical climate, and its highlands are ---- forested.
- A) excitedly  
B) publicly  
C) easily  
D) regularly  
E) densely
6. The Earth has a unique set of characteristics to support life; for instance, it is ---- too hot, like Mercury, the closest planet to the Sun, ---- too cold, like distant Mars.
- A) neither / nor  
B) more / than  
C) so / as  
D) as / well  
E) both / and

7. The study of ecosystems ---- increasingly sophisticated in the 20th century, and today it ---- us investigate and control the environmental effects of industrialization.

- A) has become / has helped
- B) became / helps
- C) becomes / is helping
- D) was becoming / helped
- E) had become / was helping

8. Every precaution should be taken to protect groundwater purity because once contaminated, groundwater is difficult, expensive, and sometimes impossible to ----.

- A) cool down
- B) stay out
- C) pass away
- D) clean up
- E) heat up

9. Amphibians, reptiles, and most fish are known as poikilothermic, which means that their body temperature is always ---- that of their environment.

- A) too much
- B) much more
- C) as many as
- D) too many
- E) the same as

10. Hydrogen ---- so easy to make (one just adds a metal to an acid) that it ---- as early as the late 15th century.

- A) was / is being known
- B) has been / will be known
- C) is / was known
- D) will be / is known
- E) had been / has been known

11. Plastics are synthetic materials that can be turned ---- various shapes, and they have many applications ---- engineering.

- A) on / to
- B) for / off
- C) at / from
- D) into / in
- E) over / on

12. Much of the arctic tundra is permanently ---- ground, and only its active layer melts during the growing season.

- A) close
- B) early
- C) frozen
- D) thin
- E) outdoor



13. The ozone hole is potentially dangerous ---- the ozone in the atmosphere prevents much of the Sun's dangerous ultraviolet light from reaching Earth.

- A) because
- B) until
- C) for instance
- D) consequently
- E) nevertheless

14. Although cholesterol was isolated as early as the 1700s, productive research into its structure did not begin ---- the 20th century.

- A) for
- B) until
- C) last
- D) while
- E) since

15. Recently, biologists ---- mini-kidneys that can produce urine, which ---- a big step toward repairing damaged organs.

- A) can grow / had been
- B) had grown / will be
- C) used to grow / has been
- D) are growing / was
- E) have grown / is

16. In a natural disaster, seconds of warning are really vital; ----, scientists use the latest advances to try to predict when it will happen.

- A) therefore
- B) so that
- C) however
- D) likewise
- E) in contrast

17. Pure water does not exist in nature as it always has some minerals or other ---- dissolved in it.

- A) expeditions
- B) comments
- C) imitations
- D) substances
- E) advantages

18. In animals, many metabolites are obtained by the digestion of food, ---- in plants, only the basic starting materials, such as water and minerals, are externally derived.

- A) even after
- B) in other words
- C) whereas
- D) just as
- E) moreover

19. The largest known prime number, with more than 23 million digits, ---- in December 2017 by an electrical engineer called Jonathan Pace.

- A) is discovered
- B) was discovered
- C) was discovering
- D) had discovered
- E) discovered

20. Fat cells contain enzymes that can break down fat into glycerol and fatty acids, ---- can be transported in the blood to the liver.

- A) whether
- B) how
- C) which
- D) what
- E) where

**21 - 25. sorularda, aşağıdaki parçada numaralanmış yerlere uygun düşen sözcük ya da ifadeyi bulunuz.**

Overpopulation, climate change, (21) ---- of biodiversity, lack of freshwater supply, and pollution are key environmental issues that Earth is facing today. What happens when all these resources eventually (22) ---- completely? Well, the good news is that scientists have recently discovered a new habitable exoplanet that is similar to Earth – Proxima-B. (23) ---- the search for life and other possible habitable planets has always captivated scientists and researchers, it was only in recent years that advanced telescope technology has been made available to detect planets outside of our solar system. An optical reflecting telescope, (24) ----, helped scientists observe Proxima-B and its orbiting star this year. However, even (25) ---- the latest technological advancements, it would still take 70,000 years for us to get there.

21.

- A) loss
- B) objection
- C) extent
- D) path
- E) relief

22.

- A) bump into
- B) put off
- C) make up
- D) run out
- E) turn down

23.

- A) But
- B) When
- C) If
- D) As long as
- E) Though

24.

- A) on the contrary
- B) in contrast
- C) for example
- D) on the other hand
- E) as though

25.

- A) on
- B) with
- C) in
- D) about
- E) down

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

Scientists in Japan have built an early prototype of a device that (26) ---- your skin into a computer display. The device is (27) ---- polymer light-emitting diodes (LED) that are just three micrometres thick. It is also equipped (28) ---- organic photodetectors. In the concept test, the University of Tokyo researchers put the LEDs on a flexible rubber sublayer and connected them to a sensor (29) ---- measures blood oxygen levels. Then, they attached them to a human hand using some thin plastic. If you (30) ---- the thin plastic, the effect is somewhat similar to having an LED tattoo. It is hoped that the technology will be used to make wearable devices much less bulky and annoying.

26.

- A) could change
- B) had changed
- C) used to change
- D) changed
- E) had to change

27.

- A) pointed out
- B) put up with
- C) taken off
- D) turned back
- E) made up of

28.

- A) into
- B) with
- C) after
- D) under
- E) off

29.

- A) how
- B) why
- C) when
- D) that
- E) where

30.

- A) ignore
- B) had ignored
- C) ignored
- D) will ignore
- E) would ignore

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

**31. The innermost part of Earth is far too deep to investigate directly, ----.**

- A) because these experiments can provide a window into what Earth's interior was like soon after it first formed
- B) while a research team subjected alloys of iron and nickel mixed with silicon to high pressures and temperatures
- C) so, instead, scientists study how seismic waves pass through this region to learn something of its makeup
- D) for example, the Earth's core is mainly composed of iron and nickel
- E) this discovery could help us to better understand how our world formed

**32. Whereas large-leaved plants like bananas usually grow in the tropics, ----.**

- A) day and night temperatures affect their sizes
- B) they take in more of the sun's heat
- C) plants with large leaves survive tropical climates
- D) plants with small leaves tend to be found closer to the poles
- E) large-leaved trees can cool down a lot faster

**33. As people live longer, their ability to fight infectious agents is impaired; ----.**

- A) similarly, diseases that were widespread have already been wiped out across many regions
- B) instead, as lifestyles of people change, new opportunities arise for deadly agents to infect them
- C) for instance, the bacteria causing Lyme disease have only been isolated in the past few decades
- D) however, they develop a tendency to identify the causative agents of infectious diseases
- E) as a result, the organisms that are usually unable to cause disease become potentially deadly agents

**34. Technical advances of the 19th century broadened the field of engineering; ----.**

- A) in contrast, mechanical engineering was recognized as a separate branch
- B) this was done by introducing a large number of engineering specialities
- C) however, they apply scientific and engineering skills to technical problems
- D) thus, the term "engineer" also defines a person who has received training
- E) as a result, large-scale construction work started before the 18th century

**35. The embryo has three primary layers that undergo many interactions ----.**

- A) in order to evolve into organ, bone, muscle, skin, or neural tissue
- B) because the nervous system of an adult contains a vast array of cell types
- C) while there is an enormous gap between humans and insects
- D) although the brain is a cellular machine that acts as an organizer
- E) due to the movement and processing of information in an adult brain

**36. ----, they need their habitats to remain stable over a long time.**

- A) As long as there is enough food to feed their offspring
- B) If parasites modified the behaviour of their hosts
- C) Since many organisms in deep seas grow very slowly
- D) Although certain animals are still being kept in zoos
- E) When it recognizes that it is under serious threat

**37. The concerns about the ozone hole began to rise in the mid-1980s, ----.**

- A) when British scientists noticed it was widening
- B) before the ozone hole was first discovered in the 1950s
- C) so the outcomes of the scientific studies are satisfying
- D) if every nation in the world signed the Montreal Protocol
- E) as the hole in the ozone over the Antarctic is closing

**38. Although much is now understood about ants and their social structures, ----.**

- A) it is a type of insect that follows its genetic codes to look for food
- B) they work together to build remarkably complex structures
- C) an ant colony can consist of hundreds to millions of individual ants
- D) scientists can still fully explain neither their individual nor group behaviour
- E) ant colonies provide some significant examples of complex systems

**39. Water occurs as rain clouds, consisting of water droplets; ----.**

- A) as a result, minerals in solution must be sanitized on a regular basis
- B) however, hydrology is the science concerned with the distribution of water
- C) therefore, blood in animals and people, as well as sap in plants, consist of water
- D) for example, it has the capacity to freeze and melt at any given time
- E) in addition, it also appears in the form of swamps, lakes, rivers, and oceans

**40. ----, but they can continue to do this only to the degree that humans' environmental impact will allow.**

- A) A customer may prefer environmentally-friendly products nowadays
- B) Ecosystems provide us with valuable and sometimes irreplaceable resources
- C) The recent rise in the price of the oil is expected to cause more unemployment
- D) The number of animal species is declining too fast to prevent it all around the world
- E) This neighbourhood used to be a good place to raise your children

**41. The immune system, like the brain, differs in sophistication in different animals, ----.**

- A) the most important component of which is the white blood cell
- B) which consists of many different types of cells distributed over the entire body
- C) but the overall principles are the same across many species
- D) so it only attacks foreign pathogens with the goal of preventing harm to the body
- E) whereas many types of cells participate in the orchestration of the immune response

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

**42. Hydrogen is the most abundant element found in the universe, and, therefore, it is considered by many people to be the clean fuel of the future.**

- A) Hidrojen, evrende bol bulunan bir element olduğu için çoğu kişi hidrojenin geleceğin temiz yakıtı olacağını düşünüyor.
- B) İnsanlar tarafından geleceğin temiz yakıtı olarak görülen hidrojen, evrende bol miktarda bulunan elementtir.
- C) Evrende en kolay şekilde ulaşılan element hidrojendir ve bu yüzden bu element geleceğin temiz yakıtı olarak düşünülmektedir.
- D) Hidrojen, evrende bol olan elementtir ve çoğu insan, hidrojeni geleceğin en temiz yakıtı olarak adlandırır.
- E) Hidrojen, evrende en bol miktarda bulunan elementtir ve bu yüzden çoğu kişi tarafından geleceğin temiz yakıtı olarak düşünülür.

**43. A logical system for scientific methods was first put forward by the English philosopher Francis Bacon in the early 17th century.**

- A) Mantıksal bir sistemi olan bilimsel yöntemler, ilk kez 17. yüzyılın başında İngiliz filozof Francis Bacon tarafından çalışılmıştır.
- B) İngiliz filozof Francis Bacon, mantığın ancak bilimsel yöntemlerle açıklanabileceğini 17. yüzyılın başlarında öne sürmüştür.
- C) Bilimsel yöntemler için mantıksal bir sistem, ilk kez 17. yüzyılın başında İngiliz filozof Francis Bacon tarafından öne sürülmüştür.
- D) Bilimsel yöntemler için mantıksal bir sistemin, 17. yüzyılın başında İngiliz filozof Francis Bacon tarafından öne sürüldüğü kabul edilir.
- E) Bilimsel yöntemleri tanımlamak için bir mantık sistemi kuran İngiliz Francis Bacon, 17. yüzyıl başında yaşamış İngiliz filozoftur.

**44. It is difficult for scientists to detect and understand dark matter as it does not interact with magnetic force.**

- A) Manyetik güçle etkileşime geçmediği için, karanlık maddenin tespit edilmesi ve anlaşılması oldukça zordur.
- B) Manyetik güçle etkileşime geçmeyen karanlık madde, bilim insanları tarafından zorlukla keşfedilmiş ve anlaşılmıştır.
- C) Bilim insanları zor da olsa manyetik güçle etkileşime geçmeyen karanlık maddeyi keşfetmiş ve onu anlamışlardır.
- D) Manyetik güçle etkileşime geçmediği için, karanlık maddeyi tespit etmek ve anlamak bilim insanları için zordur.
- E) Karanlık maddenin bilim insanları tarafından tespiti zordur, çünkü manyetik güçle hiç etkileşime geçmemiştir.

**45. The brain consumes more oxygen than other organs in the body, which makes it extremely susceptible to damage related to oxygen deficiency.**

- A) Oksijen yetmezliği ile ilgili hasarlara karşı aşırı hassas olan beyin, vücuttaki tüm organlardan daha fazla oksijene ihtiyaç duyar.
- B) Beyin, vücuttaki diğer bütün organların toplamından daha fazla oksijen tüketir, bu nedenle oksijen yetmezliği beyin için çok büyük bir problem olabilir.
- C) Beyin, diğer organlardan çok daha fazla oksijen tüketir, bu durum onu oksijen yetmezliğinden kaynaklanan hasarlara karşı zayıf hâle getirebilir.
- D) Vücutta en fazla oksijen tüketen organlardan biri olan beyin, oksijen yetmezliği ile ilgili hasarlara karşı oldukça savunmasızdır.
- E) Beyin, vücuttaki diğer organlardan daha fazla oksijen tüketir, bu da onu oksijen yetmezliği ile ilgili hasarlara karşı aşırı hassas hâle getirir.

**46. Using electronic devices, such as a mobile phone, before bedtime inhibits the release of melatonin hormone and increases the level of stress.**

- A) Cep telefonlarının yatmadan önce kullanılmasının, melatonin hormonunun salgılanmasını durdurduğu ve stres seviyesini artırdığı ortaya konmuştur.
- B) Yatmadan önce cep telefonu ve diğer elektronik cihazların kullanımı, melatonin hormonunun salgılanmasını durdurarak stres seviyesini artırabilir.
- C) Yatmadan önce cep telefonu gibi elektronik cihazları kullanırsak, melatonin hormonunun salgılayamayız ve stres seviyemiz artar.
- D) Yatmadan önce cep telefonu gibi elektronik cihazların kullanılması, melatonin hormonunun salgılanmasını engeller ve stres seviyesini artırır.
- E) Melatonin hormonunun salgılanmasını engelleyen şeylerden biri de yatmadan önce cep telefonu gibi elektronik cihazların kullanımınıdır.

**47. When a developing fetus or young child is constantly exposed to arsenic, some health issues may develop quickly, but other problems may not show up until later periods in life.**

- A) Gelişmekte olan bir fetüs ya da küçük bir çocuk sürekli arseniğe maruz kaldığında, bazı sağlık sorunları hızla gelişebilir, fakat diğer problemler hayatın sonraki dönemlerine kadar ortaya çıkmayabilir.
- B) Arseniğe maruz kaldığında bir fetüsün ya da küçük bir çocuğun bazı sağlık sorunları ile karşılaşma ihtimali çok yüksek olabilir, ancak bazıları da bu sorunlarla hayatları boyunca karşılaşmayabilir.
- C) Sürekli olarak arseniğe maruz kalan bir fetüs ya da küçük bir çocukta sağlık sorunları gelişebilir, fakat diğerleri hayatın sonraki dönemlerine kadar ortaya çıkmayabilir.
- D) Gelişmeye devam eden bir fetüs ya da küçük bir çocuk arseniğe maruz kaldığında, bazı sağlık sorunları ile karşılaşabilir, fakat diğerleri hayatının sonuna kadar ortaya çıkmayabilir.
- E) Gelişmekte olan bir fetüsün ya da küçük bir çocuğun bazı sağlık sorunları yaşayabilmesinin sebeplerinden biri sürekli olarak arseniğe maruz bırakılması olabilir, ancak bu sorun yaşayacağı anlamına gelmez.

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

**48. Yarı iletken plastikten yapılan düşük maliyetli alıcılar, nörolojik hastalıklar gibi çeşitli sağlık problemlerini teşhis etmek veya gözlemlemek için kullanılabilir.**

- A) Low-cost sensors that are made from semiconducting plastic will likely be used to diagnose or monitor health problems, like neurological diseases.
- B) Low-cost sensors made from semiconducting plastic could be used to diagnose or monitor various health problems, like neurological diseases.
- C) Neurological diseases may be diagnosed with low-cost sensors made from semiconducting plastic, but monitoring them requires more advanced devices.
- D) Low-cost sensors made from semiconducting plastic help diagnose or monitor various health problems, like neurological diseases.
- E) Low-cost sensors are made from semiconducting plastic that could cause a wide range of health problems, such as neurological diseases.

**49. Fırtınaların sıklığında ve şiddetindeki olası değişikliklerin deniz yaşamı üzerinde son derece zararlı etkileri olabilir.**

- A) Marine life is affected negatively by potential changes in the frequency and intensity of harmful storms.
- B) The frequency and intensity of storms around the world could change the potential cycle of marine life.
- C) Marine life has never been affected by the potential changes in the frequency and intensity of storms.
- D) Potential changes in the frequency and intensity of storms may dramatically affect the diversity of marine life.
- E) Potential changes in the frequency and intensity of storms may have extremely harmful effects on marine life.

**50. Yeryüzündeki sıcaklık deniz seviyesinde ortalama 15°C derecedir; ancak bu enleme, yüksekliğe, mevsime ve günün saatine göre değişiklik gösterir.**

- A) Latitude, elevation, season, and time of day determine the temperature on Earth, but it usually averages 15°C at sea level.
- B) The temperature on Earth is measured 15°C on average at sea level; however, it may vary as a result of seasonal and timely changes.
- C) The temperature on Earth averages 15°C at sea level; however, it varies according to latitude, elevation, season, and time of day.
- D) The temperature at sea level averages 15°C; however, it may vary according to latitude, elevation, season, and time of day.
- E) The temperature on Earth varies according to latitude, elevation, and season; but it is usually about 15°C at sea level during the day.



**51. İnsanlar günlük yaşamlarında bir evin duvarları için ne kadar boyanın gerekli olduğunu hesaplamak gibi işler için geometri formüllerine ihtiyaç duyarlar.**

- A) People need geometric formulas in everyday life for tasks, such as calculating how much paint is necessary for the walls of a house.
- B) In order to carry out certain tasks in everyday life, like calculating how much paint will be needed for the walls of a house, people need certain geometric formulas.
- C) Geometric formulas are required for tasks in everyday life, such as calculating how much paint is necessary for all the walls of a house.
- D) People need to know geometric formulas in order to carry out tasks, such as calculating how much paint they will need to cover the walls of a house.
- E) It is necessary for people to know geometric formulas when they perform tasks, such as calculating how much paint is necessary for the walls of a house.

**52. 1920'lere kadar, radyasyonla ilgili çoğu çalışma, radyoaktif mineraller ya da x ışınları gibi insan yapımı elektromanyetik radyasyon ile ilgiliydi.**

- A) Until the 1920s, most studies of radiation were concerned with radioactive minerals other than electromagnetic radiation, such as x-rays.
- B) Until the 1920s, many scientists preferred to conduct research into radioactive minerals or electromagnetic radiation, such as x-rays.
- C) Radioactive minerals or man-made electromagnetic radiation, such as x-rays, were the main fields of study until the 1920s.
- D) Until the 1920s, most studies of radiation were related to radioactive minerals or man-made electromagnetic radiation, such as x-rays.
- E) Until the 1920s, studies of radiation were generally related to radioactive minerals and man-made electromagnetic radiation like x-rays.

**53. Bir inşaat mühendisi, genellikle diğer mühendislik alanlarının temel bilgisine ihtiyaç duyar, çünkü çoğu mühendislik konuları birbiriyle bağlantılıdır.**

- A) Most engineering issues are generally interrelated; therefore, civil engineers need knowledge of other basic engineering fields.
- B) A civil engineer usually needs basic knowledge of other engineering fields, because most engineering issues are interrelated.
- C) A civil engineer usually needs certain basic knowledge of other engineering fields because it is essential to deal with related issues.
- D) A basic knowledge of various engineering fields is essential for a civil engineer as many engineering issues seem interrelated.
- E) The basic aim of civil engineers is to have basic knowledge of other engineering fields, as they apply it on an interrelated issue.

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

54. Many bacteria are anaerobic; that is, they do not consume oxygen and, indeed, are opposed to it. ----. The atmosphere at that time was probably a mixture of nitrogen with gases such as carbon monoxide and water vapour, or perhaps methane. These primitive bacteria needed some source of energy to drive their biochemical processes, and some researchers believe they may have at first found this source in the heat and chemical energy of undersea volcanoes.
- A) All living organisms need oxygen to sustain life in their surroundings
- B) When life began, over 3.8 billion years ago, the first cells were also anaerobic
- C) At an early stage in biological life, sunlight was the only source of energy
- D) There is no known geological process that can maintain a high level of oxygen
- E) A planet with an oxygen blanket could support life but does not necessarily do so

55. The brain receives a constant stream of information as electrical impulses from neurons in the sense organs. ----. If it is irrelevant, it is allowed to fade away, and we are not conscious of it. However, if it is novel or important, the brain amplifies the signals, causing them to be represented in various regions. If this activity is sustained for long enough, it will result in a conscious experience. In some cases, thoughts are taken one step further, and the brain instructs the body to act on them, by sending signals to the muscles to make them contract.
- A) No one knows exactly how electrical activity in the brain turns into experience
- B) Unconscious brain processing, however, guides and sometimes initiates actions
- C) The first thing it does is to determine whether the information requires attention
- D) They respond to stimuli in much the same way: they generate electrical signals
- E) The primary task of the brain is to maintain the whole body in an optimal state

**56. Buildings that can change shape in a split second or fold into a bag. It sounds futuristic, but the technology is within reach since scientists from Harvard University have managed to develop a material that can change size, shape, and volume on command. The very strong material can also change its hardness to become either bendable or completely inflexible. ----. The new material is, however, not made of paper, but rather of the artificial material polyethylene, which is folded into a cube with two missing sides and combined with other, completely identical cubes.**

- A) The scientists were inspired by the traditional Japanese art form of origami or the art of paper folding
- B) The material will also react to electric impulses, so it can more easily change shape in the field
- C) The paper house invented by the scientists can be folded along all edges, and it changes volume
- D) It can be used for a number of different purposes, such as building refugee camps or even spacecraft
- E) It changes shape by means of pressurized air, which forces the building blocks to change shape

**57. Cyberattacks will become more common in the years ahead. That is not just a problem for big companies and governments: every person who uses modern technology is a target. At risk is not abstract data or “secrets”. Cybersecurity is now about protecting things, infrastructures, and processes that support modern life. Governments and technology companies cannot secure cyberspace alone. It will take a collective immune system to do the job. Individuals also have a role to play. ----.**

- A) In the coming years, cyberattacks will almost certainly increase, and that will be a serious problem for all of us
- B) Recently, criminals accessed the data of more than 80 million customers of the health insurance company called Anthem
- C) Now that everyone is connected in some way to cyberspace—through phones, laptops, corporate networks—we are all defenseless
- D) Every network-connected person needs to support the immune system by practicing the cyber equivalent of personal hygiene
- E) For instance, cybercriminals stole the credit-card information and personal data of millions of people from companies

**58. One colony of bees can carry pollen between 300 million flowers in a single day, and hives are transported between fields across the world to fertilize 70% of our most widely consumed crops. They also help plants to produce better crops, increase yields, and trigger fruits, nuts, and seeds to grow larger. It is not just fruits and vegetables that would go missing from our kitchens if the bees died, either. ----.**

- A) However, the disappearance of bees would not be the end of food altogether
- B) Moreover, a single bee makes one twelfth of a teaspoon of honey during its lifetime
- C) Therefore, we need these little creatures to keep our supermarkets stocked
- D) Flies, birds, moths, and butterflies are all important pollinators, too
- E) Our livestock also feed on crops like alfalfa and clover, which bees pollinate

**59. For decades, genetics taught us a simple truth: Each cell in our body, at some point in its development, contains the blueprint that tells us how to grow. ----. A group of researchers from Harvard University now says that tiny bioelectric signals surging through and among our cells act as an instruction to kick-start gene expression. These signals point cells in the right direction as they start to grow into a heart or a hair follicle, and influence the shape and function of the body.**

- A) Moreover, it is quite similar to a human body
- B) A cell consists of cytoplasm and a nucleus
- C) These scientists could not find these signals
- D) Therefore, the shape of our body matters
- E) However, that might not be the whole story

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

**60. (I)** One of the most important distinctions made by embryologists was the difference between analogy and homology. **(II)** Both terms refer to structures that appear to be similar. **(III)** Homologous structures are those organs whose underlying similarity is the result of their being from a common ancestral structure. **(IV)** Embryology is a subdivision of anatomy that deals with developmental changes that occur before birth. **(V)** On the other hand, analogous structures are those whose similarity comes from their performing a similar function, rather than their arising from a common ancestor.

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

**61. (I)** Technological enthusiasm pertains to the ideal of wanting to develop new technological possibilities and take up technological challenges. **(II)** The inherent danger of technological advances lies in the possible negative effects of technology and the relevant social constraints. **(III)** This is an ideal that motivates many engineers. **(IV)** It is fitting that Samuel Florman refers to this as “the existential pleasures of engineering”. **(V)** One good example of technological enthusiasm is the development of Google Earth, a program with which, via the Internet, it is possible to zoom in on the Earth’s surface.

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

**62. (I)** Planets that orbit other stars are called exoplanets. **(II)** The surface of Ganymede, the largest moon in the solar system, appears to have a dual personality. **(III)** Some regions are dark and densely cratered, suggesting that they look much the same today as they did billions of years ago. **(IV)** Other regions are light-coloured with very few craters, suggesting that liquid water has recently erupted and refrozen. **(V)** Moreover, magnetic field data indicate that Ganymede, like Europa, could have a subsurface ocean of liquid water.

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

**63. (I)** When prospectors discovered the first underground helium reserve in 1903, they deemed the gas useless because it was not flammable and could not be sold as fuel. **(II)** Earth might generate helium gas naturally by underground radioactivity. **(III)** Over a century later, liquid helium has become an invaluable coolant for MRI scanners, and the gas also has applications in nuclear power. **(IV)** Yet supplies on Earth are finite and unreliable because reserves have only been found accidentally during petroleum exploration. **(V)** Now, experts have discovered one of the world’s largest helium fields, this time in the Tanzanian Rift Valley, on purpose.

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

**64. (I)** The North Pole is one of the most remote places on the planet. **(II)** Despite the harsh environment, there is contention over its ownership as there could be rich natural resources beneath the ice. **(III)** To ensure its presence in the Arctic, the Canadian government has started working on drones capable of surviving the harsh climatic conditions. **(IV)** This is because explorers have died in the sub-zero temperatures of the most northerly point on the planet, and drones would be likely to take their place. **(V)** Additionally, as the Arctic is impacted by climate change, the natural gas and oil will be easier to extract.

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

**65. (I)** The fast-increasing industrialization was based on import of cheap raw materials and export of finished products. **(II)** This was only possible if the transport systems kept up with demand and could offer reasonable prices. **(III)** With these innovations, Britain produced the best iron in the highest quantities by the late 18th century. **(IV)** The canal system was relatively cheap but time-consuming. **(V)** Soon two new transport modes were invented to cope with the demands of the Industrial Revolution: Steamship and Railways.

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

**66 - 68. soruları aşağıda verilen parçaya göre cevaplayınız.**

The call for all students to learn computer programming is growing louder. Some believe that computer science instruction in public schools can close achievement gaps among socioeconomic groups and help students compete with those in other countries. Supporters of this idea include business leaders who will employ the next generation of engineers and programmers, as well as government officials who are worried about the country's competitiveness in computer programming. However, others argue that coding for all students will create logistical challenges, including a shortage of teachers, the absence of an agreed-on curriculum, and inequalities in students' access to computers. Some critics also argue that coding represents a narrow technical focus and that business leaders who will benefit from this are pushing it on schools. A potential middle ground involves teaching "computational thinking". I

n other words, there is a need to develop habits of mind that include breaking down a problem, designing systems, and running small experiments to see which approaches fail and which succeed.

**66. The text is mainly about ----.**

- A) controversial ideas about teaching computer programming in public schools
- B) why every child should learn computer programming at an early age
- C) new job opportunities created by the introduction of computer programming
- D) the negative effects of coding and programming on school curricula
- E) the reasons for supporting computer programming courses at schools

**67. It is clear from the text that ----.**

- A) some political leaders are worried because they think competitiveness in computer programming may cause problems between countries
- B) it is necessary to have an adequate number of qualified teachers and a good curriculum to start teaching computer programming in schools
- C) some people may lose their jobs in the future if computer programming becomes available to every individual
- D) governments need to step in to overcome inequalities in students' access to computers
- E) business leaders have some serious doubts about the benefits of teaching computer programming in schools

**68. From the text, we can infer that ----.**

- A) young people need to be encouraged to share their ideas about computer programming and their future careers
- B) business leaders and government officials will soon come to an agreement about computer programming education
- C) the disadvantages of computational thinking outweigh its advantages
- D) the future of certain businesses depends solely on computer programming
- E) computational thinking may be an answer to the ongoing debate about computer programming education

**69 - 71. soruları aşağıda verilen parçaya göre cevaplayınız.**

Last year, an international team of astronomers published a shocking new report on the extent of light pollution on Earth. The bottom line for those who care about the night sky is significant: Some 80% of the globe is adversely affected by night-time light pollution, and the problem in North America is growing worse by 6% each year. More than 99% of Europeans do not see a dark night sky. By percentage of population, Singapore is the most light-polluted country on Earth, followed by Kuwait, Qatar, and the United Arab Emirates. Africa is home to the top 10 least light-polluted countries. Such pollution creates a significant problem; disturbingly, almost one-third of the world's population cannot fully see the Milky Way. Light pollution is also amateur astronomers' worst enemy as this is not a hobby you do in your basement. That is why an institute is offering a place for amateur astronomers to go, called Dark Sky New Mexico. The site offers world-class dark skies within a four-hour drive of major southwestern cities. The institute provides remote observing and imaging from this pristine site.

**69. We understand from the text that ----.**

- A) Dark Sky New Mexico is an unspoiled place not affected by night-time light pollution
- B) the group is offering Dark Sky New Mexico because it is the nearest observing site
- C) amateur astronomers need somewhere closer to the sky to observe the planets
- D) places like Dark Sky New Mexico are popular sites among amateur astronomers
- E) African countries are also severely affected by the threat of night-time light pollution

**70. It is stated in the text that ----.**

- A) the extent of light pollution is growing dramatically each year only in densely populated countries
- B) the report issued last year also offers some solutions for the problem of night-time pollution
- C) night-time light pollution has some severe health effects on people in big cities
- D) the rate of night-time light pollution in Europe is far higher than the world average rate
- E) African countries do not care about the night sky as they have very few amateur astronomers

**71. It is clear from the text that ----.**

- A) sites offering world-class dark skies are fewer in number if you travel from Europe to America
- B) government have started to make large investments to end light pollution
- C) it is impossible for about 30% of the world population to see the Milky Way
- D) major southwestern cities are not affected by light pollution as they are close to New Mexico
- E) the number of amateur astronomers is increasing despite the threat of light pollution



**72 - 74. soruları aşağıda verilen parçaya göre cevaplayınız.**

Careful study of the galaxy's rotation reveals one of the greatest mysteries in science. Stars at different distances from the galactic centre orbit at different speeds, and we can learn how mass is distributed in the galaxy by measuring these speeds. Such studies indicate that the stars in the disk of the galaxy represent only the "tip of the iceberg" compared to the mass of the entire galaxy. Most of the mass of the galaxy seems to be located outside the visible disk, in what we call the halo. We do not know the nature of this mass, but we call it dark matter because we have not detected any light coming from it. Studies of other galaxies suggest that they are also made mostly of dark matter, which means this mysterious matter must significantly outweigh the ordinary matter that makes up planets and stars. An even more mysterious dark energy seems to make up much of the total energy content of the universe.

**72. According to the text, measuring the speed of stars is necessary to ----.**

- A) measure the distances from the galactic centre
- B) understand the distribution of mass in the galaxy
- C) calculate and compare the mass of the whole galaxy
- D) prove why the previous physics theories were wrong
- E) show that interstellar travel is possible

**73. It can be understood from the text that ----.**

- A) the study of the ordinary matter may help scientists make predictions about the entire galaxy
- B) we still do not know whether dark matter can be found in every galaxy or not
- C) much of the total energy content of the universe comes from the ordinary matter
- D) most of the mass lies unseen in the disk of the galaxy that surrounds it entirely
- E) the stars in the disk of the galaxy constitute only a small proportion of the mass of the entire galaxy

**74. The text is mainly about ----.**

- A) the results of scientific studies concerning the distribution of mass in the galaxy
- B) the scientific discoveries of the energy sources of the universe
- C) how the Sun and other stars orbit the centre of the galaxy
- D) why billions of galaxies in the universe move relative to one another
- E) the consequences of not knowing the nature of dark matter

**75 - 77. soruları aşağıda verilen parçaya göre cevaplayınız.**

Towards the end of the 1960s, the Ford Motor Company, one of the world's largest car manufacturers, was gradually losing market share. In 1968, President Lee Iacocca decided that a small cheap car had to be designed quickly. This was to become the Ford Pinto. The decision was to put it onto the market for less than \$2,000 in 1970. This was a very competitive price, but the production schedule for the car's development was rushed. At the time, car development normally required around 43 months. Only 24 months were reserved for the Ford Pinto. Because the Pinto had to cost a maximum of \$2,000, a radical design was selected in which styling took precedence over engineering design. The safety aspect of the design did not receive sufficient priority. There was no experience with small cars within the company at all. Later it was found that the gear construction in the rear axles was situated in a way that would puncture the gas tank in the event of a collision.

**75. We understand from the text that ----.**

- A) the engineers made careful calculations long before they started to work on the new model
- B) the price of the Ford Pinto would be no less than \$2,000 on the market
- C) the Ford Motor Company refused to be rushed into designing the Ford Pinto
- D) the Ford Motor Company produced a small car in order to compete with its rivals
- E) since the Ford Pinto was a small car, the duration of its production took less time than expected

**76. It is clear from the text that ----.**

- A) the new model was supposed to be designed within 43 months
- B) the appearance and engineering of Ford Pinto were equally valued
- C) the design of the new model car was uncommon at that time
- D) the primary aim in designing the new car model was its safety
- E) the production of the new model car took more than two years

**77. According to the text, ----.**

- A) the gear mechanism operated efficiently
- B) it took longer than average to design the new model
- C) the company produced several models like the Pinto before
- D) safety issues were overlooked to an extent in the new design
- E) the new model became an immediate success on the market

**78 - 80. soruları aşağıda verilen parçaya göre cevaplayınız.**

Toward the end of the 19th century, it became clear that atoms are not indivisible. The existence of characteristic atomic spectra of elements suggested that atoms have an internal structure, and J. J. Thomson's discovery of the negatively charged electron in 1897 showed that atoms could be broken down into charged particles. Rutherford's experiments in 1910-1911 revealed that an atom's positive charge resides in a small, dense nucleus. In 1919, Rutherford made an additional discovery: When alpha particles are fired into nitrogen, one of the products is hydrogen gas. He reasoned that the hydrogen nucleus is a constituent of the nuclei of heavier atoms, such as nitrogen, and that a collision with a fast-moving alpha particle can dislodge one of those hydrogen nuclei. Thus, the hydrogen nucleus is an elementary particle, to which Rutherford gave the name proton. The following decade saw the blossoming of quantum mechanics, including the Schrödinger equation. It is owing to all these physicists that today we are on our way to understanding the principles that underlie atomic structure.

**78. It can be understood from the text that ----.**

- A) Thomson was able to fill the gap in physics by building on the theory of Rutherford
- B) it was not until Thomson's finding that atoms were thought to be divided into particles
- C) Rutherford's findings regarding the atomic structure refuted Thomson's theories
- D) Rutherford succeeded in locating the nucleus near the positively-charged particle
- E) Thomson is usually credited with the discovery of a subatomic particle called the proton

**79. It can be understood from the text that ----.**

- A) Thomson and Rutherford studied atoms independently and had contradictory results
- B) neither Thomson's nor Rutherford's experiments provided guidance to later researchers
- C) developments in the field of physics cannot be attributed to the works of a single scientist
- D) Rutherford had to modify his experiment to validate his results regarding the effects of nitrogen
- E) when physicists raised general interest in quantum mechanics, the structure of the atom was completely understood

**80. The text is mainly about ----.**

- A) the conflicting ideas of major physicists
- B) common misconceptions of atomic structure
- C) an analysis of the studies of Thomson and Rutherford
- D) the description of how an atom splits into particles
- E) the origins of the modern understanding of the atomic structure



**YÖKDİL FEN BİLİMLERİ**  
**KASIM 2019**









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

1. In regions with a relatively dry climate, intensive cultivation by farmers can have terrible ----, draining water sources, and causing soil erosion.
- A) consequences                      B) assumptions  
C) functions                              D) distinctions  
E) observation
2. The spectacular discoveries and ---- in molecular biology in the last fifty years have created a gene-based medical revolution.
- A) delays                                  B) celebrations  
C) difficulties                              D) achievements  
E) imitations
3. In recent years ---- efforts have been made in introducing improved forest harvesting practices to tropical forests to support sustainable forest management.
- A) considerable                          B) deniable  
C) vulnerable                              D) habitable  
E) changeable
4. Asian sea bass, a fish species farmed in several Asian countries, feed ---- on small crustaceans (crab, shrimp, etc.) and later switch to fish as they grow up.
- A) openly                                      B) firmly  
C) initially                                  D) mutually  
E) virtually
5. Infectious microbes from animals can be ---- directly to humans through an animal bite, or indirectly through the bite of insects that feed on both animals and humans.
- A) sentenced                                B) designated  
C) restricted                                 D) transmitted  
E) adjusted
6. Known for their devoted parental care, treehopper mothers ---- their offspring until the young hoppers are old enough to fly away.
- A) bring about                                B) watch over  
C) put on                                      D) give up  
E) keep off

7. **Although smartphones ---- arguably the most popular gaming platform for the past couple of years, they do not have the ability ---- with desktop computers.**
- A) have been / to compete  
B) were / to be competing  
C) could be / competing  
D) are / to have competed  
E) must have been / compete
8. **E-mail advertising ---- a good reputation these days, as people realise that it ---- affordable and effective.**
- A) gets / has to be  
B) was getting / could be  
C) has been getting / used to be  
D) will get / should be  
E) is getting / can be
9. **Temperament is an emotional trait that is relatively stable ---- the life span, and is at least ---- some degree, influenced by biology.**
- A) over / to  
B) into / at  
C) through / on  
D) with / of  
E) about / from
10. **---- the 20th century, the discovery of extra-solar planets made a great contribution to the existing efforts in the search ---- extraterrestrial intelligence.**
- A) Over / at  
B) Within / about  
C) Throughout / under  
D) During / for  
E) With / above
11. **The arrival of the printing press had a profound effect ---- Renaissance Europe and introduced an era of mass communication ---- many different languages.**
- A) upon / at  
B) among / from  
C) on / in  
D) by / with  
E) to / through
12. **---- all greenhouse gas emissions were stopped tomorrow, the average global temperature would still keep rising for the next 30 years.**
- A) In case  
B) Even if  
C) Because  
D) Although  
E) Once
13. **Life expectancy at birth is the number of years a newborn infant would live ---- already existing patterns of mortality at the time of its birth were to stay the same throughout its life.**
- A) if  
B) since  
C) in case  
D) so that  
E) although
14. **Not much progress could be made in chemistry ---- chemists gained a better understanding of the materials they worked with.**
- A) as  
B) until  
C) only when  
D) as long as  
E) if

15. Dogs, which are highly responsive to sensory information, look and listen to interpret their surroundings, ---- humans do.

- A) although                      B) just as  
 C) only when                    D) unless  
 E) as long as

18. ---- the advancements in Internet service and delivery, slow-loading web pages are still commonplace.

- A) By means of                    B) Instead of  
 C) Despite                        D) With the help of  
 E) As well as

16. ---- the field of seismology can be divided into studies of the Earth's structure and of seismic sources (earthquakes, explosion, etc.), they are not fully separable.

- A) As long as                    B) Because  
 C) Even though                 D) Unless  
 E) Once

19. To test pet's sensitivity to specific allergens, a veterinarian routinely exposes it to these allergens via ---- a daily serum under the tongue ---- a shot every one to two weeks.

- A) such / that                    B) so / that  
 C) the more / the more        D) either / or  
 E) as / as

17. Today, people with rare conditions could be diagnosed quicker ---- the advances in technology including 3D facial analysis.

- A) except for                    B) despite  
 C) as well as                    D) thanks to  
 E) unlike

20. Making up the inner fifth of the Sun, the core is ---- nuclear fusion creates 99 per cent of the Sun's energy.

- A) where                         B) that  
 C) who                            D) when  
 E) whose

**21 - 25. sorularda, aşağıdaki parçada numaralanmış yerlere uygun düşen sözcük ya da ifadeyi bulunuz.**

Overuse of insecticides in urban areas is risky for several reasons. It can be avoided if several other non-chemical controls **(21)** ----. People, pets, wildlife, beneficial organisms, and other non-target organisms may be exposed to insecticides that have not been **(22)** ---- applied. Such exposure could cause acute or chronic health problems. Insecticides could leak **(23)** ---- the soil or enter groundwater and result in pollution. Frequent insecticide use against particular pests may result in resistant pest populations that are even harder to control. And, **(24)** ---- the harmful impact of insecticides on beneficial organisms, their use may also increase the risk of pest outbreaks. **(25)** ----, responsible insecticide use, in combination with other environmentally friendly pest management tactics, result in positive environmental consequences.

**21.**

- A) would implement      B) are implemented  
C) have implemented      D) implemented  
E) had been implemented

**22.**

- A) randomly      B) commonly  
C) actually      D) properly  
E) fortunately

**23.**

- A) by      B) with  
C) at      D) for  
E) into

**24.**

- A) in addition to      B) in spite of  
C) in place of      D) unlike  
E) regardless of

**25.**

- A) Moreover      B) Otherwise  
C) However      D) Likewise  
E) For example

**26 - 30. sorularda, aşağıdaki parçada numaralanmış yerlere uygun düşen sözcük ya da ifadeyi bulunuz.**

When scientists first started to study nature, they concentrated on individual living things. They travelled the world, and samples of those living things to museums **(26)** ---- they were catalogued and identified there. Today, this work still **(27)** ----, but scientists also study the way living things interact with each other. This research is particularly important because it helps us to understand how the changes that humans bring, **(28)** ---- pollution and deforestation, can affect the living world. Ecology is the study of these connections. It involves living things themselves, and the raw materials and nutrients **(29)** ---- by them. **(30)** ---- ecology, energy is important because it is the driving force that keeps living things alive.

**26.**

- |            |             |
|------------|-------------|
| A) just as | B) so that  |
| C) instead | D) although |
| E) but     |             |

**27.**

- |                |               |
|----------------|---------------|
| A) sets out    | B) doubles up |
| C) falls down  | D) goes on    |
| E) breaks down |               |

**28.**

- |                 |               |
|-----------------|---------------|
| A) on behalf of | B) such as    |
| C) according to | D) instead of |
| E) despite      |               |

**29.**

- |                      |                |
|----------------------|----------------|
| A) used              | B) having used |
| C) to have used      | D) using       |
| E) to have been used |                |

**30.**

- |           |            |
|-----------|------------|
| A) Behind | B) On      |
| C) At     | D) Through |
| E) In     |            |

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

31. As the human brain thinks, learns and remembers, ----

- A) people might be suffering from a limited perspective
- B) it creates consciousness consisting of thoughts and feelings
- C) some experts think it is possible to understand the brain simply through scanning
- D) how identical cells produce an immense complexity is becoming clear to many scientists
- E) information flow in the brains of some animals is also easy to determine

32. Since weather plays such an important role in our daily lives, ----

- A) weather conditions are a result of the atmosphere's attempt to gain a balance
- B) everyone is interested in the weather forecast to take precautions according to the seasonal conditions
- C) temperature and pressure are the most important parameters in meteorology
- D) people pay less attention to weather forecast on TV than on mobile apps
- E) changes in temperature have minimal impact on some people's moods

33. Although people had long tried to visualize certain oceanic features, ----.

- A) by 1996, an updated map of the ocean floor based on data from orbiting satellites was created
- B) at first, scientists on ships tried to measure ocean depths and create ocean floor maps
- C) only 29% of the land surfaces on Earth is not submerged under the oceans
- D) it was not until technology improved that the first accurate maps of oceans could be drawn in the 20th century
- E) scientist have started to compile all the available data about the Atlantic Ocean

34. ----, but its increasing concentration is suspected of causing global warming.

- A) Carbon dioxide is a natural constituent of the atmosphere
- B) The burning of fossil fuels causes an increase in carbon dioxide levels and toxic chemicals
- C) High levels of carbon dioxide force governments to take precautions regarding the environment
- D) Like methane, carbon dioxide leads to an undesired change as a greenhouse gas
- E) Coal burning, which produces carbon dioxide, is a serious source of pollution

**35. There have been many attempts to define the term 'planet' over the centuries, ----.**

- A) because a planet refers to an object that is not a star and moves in an orbit
- B) as long as all planets must satisfy three criteria to be defined as a planet
- C) even though it is claimed that Pluto is not a planet
- D) but to date, there is still no universally agreed-upon scientific definition of the term
- E) unless a planet is by far the largest object in its orbital neighbourhood

**37. Fossil fuels have traditionally been regarded as convenient sources of energy, ----.**

- A) yet the burning of fossil fuels poses many serious environmental threats
- B) although fossil fuels such as petroleum, natural gas and coal are relatively plentiful in Earth's crust
- C) if they originate from ancient plants and animals which are non-renewable energy sources
- D) as they raise Earth's average temperature, worsening the effects of climate change
- E) therefore capturing a small fraction of sunlight could meet our energy needs several times

**36. Even though the term 'biodiversity' is relatively new, ----.**

- A) for thousands of years philosophers and scientists have studied aspects of biodiversity
- B) biologists describe the diversity of organisms by comparing their anatomy and physiology
- C) biologists will need sophisticated techniques for their studies
- D) many of the people who have heard of the term still do not understand what it means
- E) scientists are not able to examine chromosomes and genes with more precision

**38. Digital libraries differ from traditional libraries ----.**

- A) whereas the concept of digital libraries can be traced back to the 19th century
- B) in that they exist in the 'cyber world' of computers and the Internet rather than in physical buildings
- C) even if information on the Internet is chaotic and expanding quickly and remarkably
- D) although digital libraries have developed in parallel with the rapid growth of the Internet
- E) so that the digitisation of resources enables easy and rapid access to digital library content

**39. Mountains rarely occur as isolated individuals; ----.**

- A) still, they generally have steep slopes and a relatively small summit area
- B) instead, they are usually found in circular groups
- C) yet, some mountains have been constructed upon the surface by eruptions of volcanic ash
- D) even so, their most perceived effects are related to the blocking of airflow
- E) conversely, their systems occur both on continent and in ocean basins

**41. Recent findings show that storm and hurricane intensity has grown around the world since 1970 due to rising ocean temperatures ----.**

- A) though hurricanes are occurring in the northern hemisphere because of warmer ocean temperatures
- B) but global warming models predict that storms and hurricanes are about to become less intense soon
- C) as long as the number of tropical storms and hurricanes stays same over the next 40 years
- D) unless the bigger storms and hurricanes bring higher water levels, taller waves and more storm damage
- E) in case some storm-protection barriers might not be strong enough to protect against the hurricanes and storms

**40. Ever since scientists discovered a large number of dinosaur fossils in the late 18th century, ----.**

- A) we have wondered how a world of giant reptiles came to an end
- B) dinosaurs might not have become extinct due to a meteor crash
- C) lots of new research studies will have been conducted by the end of the 21st century
- D) many theories regarding the extinction of dinosaurs were confirmed in the 16th century
- E) it had been a big question mark whether we could discover some new species



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

42. Although they have been searching for years, astronomers have yet to find anywhere in the universe that remotely resembles the Earth.

- A) Gökbilimcilerin yıllarca süren arayışına rağmen, evrende Dünya'ya az da olsa benzeyen bir yer henüz bulunamamıştır.
- B) Yıllarca araştırma yapan gökbilimciler, evrende Dünya'ya az da olsa benzeyen bir yer henüz bulamamışlardır.
- C) Yıllardır aramalarına rağmen gökbilimciler evrende Dünya'ya az da olsa benzeyen bir yer henüz bulamamışlardır.
- D) Yıllardır evrende Dünya'ya uzaktan da olsa benzeyen bir yer aramalarına rağmen, gökbilimciler henüz böyle bir yer bulamamışlardır.
- E) Yıllardır aranmasına rağmen, gökbilimciler tarafından evrende Dünya'ya uzaktan da olsa benzeyen herhangi bir yer henüz bulunamamıştır.

43. Not only the physical dangers, but also the fact that radiation puts astronauts at a higher risk of getting cancer makes space exploration a risky business.

- A) Sadece fiziksel tehlikeler değil, radyasyonun astronotların kansere yakalanma riskini artırdığı gerçeği de uzay araştırmalarını riskli bir iş hâline getirmektedir.
- B) Fiziksel tehlikelerle birlikte radyasyonun astronotları kansere yakalanma riskiyle daha fazla karşı karşıya getirmesi de uzay araştırmalarını riskli bir iş yapmaktadır.
- C) Uzay araştırmaları, yalnızca fiziksel tehlikelerle değil, radyasyonun astronotların kansere daha fazla yakalanmalarına neden olmasıyla da riskli hâle gelmektedir.
- D) Fiziksel tehlikelerin yanı sıra radyasyonun astronotları kansere daha fazla yatkın hale getirme riski de uzay araştırmalarını tehlikeli bir çalışma yapmaktadır.
- E) Uzay araştırmaları, fiziksel tehlikelerinin yanı sıra radyasyonun astronotların kansere yakalanma riskini artırması sebebiyle de riskli bir iş hâline gelmektedir.

**44. Ecological restoration is practiced in all regions of the world, but what counts as restoration varies according to cultural perspective.**

- A) Ekolojik restorasyon olarak neyin kabul edileceğinin kültürel bakış açısına göre değişkenlik göstermesinin sebebi, dünyanın tüm bölgelerinde restorasyonun uygulanmakta olmasıdır.
- B) Her ne kadar kültürel bakış açısına göre neyin restorasyon olarak kabul edildiği konusunda farklılıklar olsa da ekolojik restorasyon dünyanın tüm bölgelerinde uygulanmaktadır.
- C) Ekolojik restorasyon dünyanın tüm bölgelerinde yapılmaktadır, ancak kültürel bakış açısı neyin restorasyon olarak kabul edileceğini etkilemektedir.
- D) Dünya üzerinde tüm bölgelerde uygulanmakta olan ekolojik restorasyon, restorasyona ilişkin farklı kültürel bakış açılarından etkilenmektedir.
- E) Ekolojik restorasyon dünyanın tüm bölgelerinde yapılmaktadır, ancak neyin restorasyon olarak kabul edildiği kültürel bakış açısına göre değişmektedir.

**45. Mechanical clocks, in the West, were made at first for monasteries where prayers had to be said at set hours of the day and night.**

- A) Manastırlarda duaların gündüz ve gece belirli saatlerde okunması gerektiğinden, Batı'daki ilk mekanik saatler onlar için yapılmıştır.
- B) Manastırlar, duaların gündüz ve gecenin belirli saatlerde okunma zorunluluğundan dolayı Batı'da yapılan ilk mekanik saatleri kullanmışlardır.
- C) Batı'da mekanik saatler, ilk önce duaların gündüz ve gecenin belirli saatlerinde okunmasının zorunlu olduğu manastırlar için yapılmıştır.
- D) Batı'da mekanik saatlerin ilk yapımı, duaların gündüz ve gecenin belirli saatlerinde okunma zorunluluğu nedeniyle manastırlar için gerçekleştirilmiştir.
- E) Batı'da kullanılan mekanik saatler, ilk olarak duaların gündüz ve gece belirli saatlerde okunduğu manastırlarda yapılmıştır.

**46. Dopamine is one of the intriguing chemicals found in the brains of a broad spectrum of biological organisms, from insects to all the way to humans.**

- A) Dopamin, böceklerden insanlara kadar geniş bir yelpazedeki biyolojik organizmaların beyinlerinde bulunan merak uyandırıcı kimyasallardan biridir.
- B) Dopamin, böceklerden insanlara kadar geniş bir yelpazedeki biyolojik organizmaların beyinlerinde bulunan kimyasallardan biri olduğu için ilgi çekicidir.
- C) Dopamin, merak uyandırıcı kimyasallardan biridir ve böceklerden insanlara kadar geniş bir yelpazedeki biyolojik organizmaların beyinlerinde bulunur.
- D) İlgi çekici kimyasallardan biri olan dopamin, böcekleri ve insanları içeren geniş bir yelpazedeki biyolojik organizmaların beyinlerinde bulunur.
- E) Böceklerden insanlara kadar geniş bir yelpazedeki biyolojik organizmaların beyinlerinde bulunan dopamin, ilgi çekici bir kimyasaldır.

**47. Bearing an incredibly rich diversity, coral reefs are the rain forests of the oceans and provide shelter for numerous species.**

- A) İnanılmaz bir çeşitlilik barındıran mercan kayalıkları, okyanusların yağmur ormanlarıdır ve sayısız canlı türüne koruma sağlar.
- B) İnanılmaz bir çeşitlilik barındıran mercan kayalıkları, sayısız canlı türüne koruma sağladığından okyanusların yağmur ormanlarıdır.
- C) İnanılmaz bir çeşitlilik barındıran mercan kayalıkları, okyanusların yağmur ormanları oldukları için sayısız canlı türüne koruma sağlar.
- D) Mercan kayalıkları, sahip oldukları inanılmaz çeşitlilikle birlikte pek çok canlı türüne koruma sağlayarak okyanusların yağmur ormanları olmuştur.
- E) Mercan kayalıkları inanılmaz bir çeşitlilik barındırmakla kalmayıp birçok canlı türüne koruma sağladığı için okyanusların yağmur ormanlarıdır.

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

48. Dünya'nın ve Venüs'ün atmosferlerindeki farklılıkların birçoğu, Venüs'ün yüzeyinde yok denecek kadar az su olmasına dayandırılabilir.

- A) Many of the differences between the atmospheres of Earth and Venus can be traced to near-total lack of water on the surface of Venus.
- B) The near-total lack of water on the surface of Venus is attributed mostly to the differences in the atmospheres of Earth and Venus
- C) The atmospheres of Earth and Venus have a number of differences, which could be traced to the fact that there is almost no water on the surface of Venus.
- D) The fact that Venus has almost no water at all on its surface can be considered the main reason why there are many differences between the atmospheres of Earth and Venus.
- E) There are a number of differences between the atmospheres of Earth and Venus, and they can be attributed to the fact that there is virtually no water on the surface of Venus.

49. Kuramsal hesaplamalara göre, Everest Dağı'nın kütlesine sahip bir kara deliğin Hawking radyasyonu nedeniyle bütün enerjisini kaybetmesi yaklaşık milyar yıl alabilir.

- A) Theoretical calculations show that a black hole which has the mass of Mount Everest can take about 20 billion years to lose all its energy because of Hawking radiation.
- B) According to theoretical calculations, it might take a black hole having the mass of Mount Everest about 20 billion years to lose all its energy due to Hawking radiation.
- C) A black hole which has almost the same amount of mass as Mount Everest may take approximately 20 billion years to consume all its energy due to Hawking radiation, as suggested by theoretical calculations.
- D) According to theoretical calculations, if a black hole has the mass of Mount Everest, it may lose all its energy due to Hawking radiation in almost 20 billion years.
- E) Whether a black hole has the mass of Mount Everest or not, it can lose all its energy in 20 billion years due to Hawking radiation, as shown by theoretical calculations.

50. Evcil kedi; erkeklerin yalnız, dişilerin ise nispeten daha sosyal olduğu tek türdür.

- A) The domestic cat is a species in which males are alone and females are generally more sociable.
- B) The domestic cat is one of the species in which males are solitary and females are relatively more sociable.
- C) The domestic cat is the only species in which males are solitary and females are relatively more sociable.
- D) Only in the domestic cat species are males solitary and females generally more sociable.
- E) In the domestic cat species, males are solitary while females are relatively more sociable.

**51. Herhangi bir bilgisayar sisteminin başarısı, onu kullanması beklenen kişilerin iş akışına dahil edilmesine bağlıdır.**

- A) A computer system owes its success to being integrated into the workflow of people who will use it.
- B) A computer system's integration into the workflow of people who are to use it determines its success.
- C) In order for any computer system to be successful, it is to be integrated into the workflow of people who will use it.
- D) In order to be successful, a computer system needs to be integrated into the workflow of people who will use it.
- E) The success of any computer system depends on its being integrated into the workflow of people who are to use it.

**52. Küresel biyo çeşitliliğin en basit ölçüm aracı, şu anda canlı olan türlerin sayısı anlamına gelen 'tür zenginliğidir'.**

- A) Referring to the number of species alive now, 'species richness' is one of the simplest measures of global biodiversity.
- B) The simplest measure of global biodiversity is 'species richness', which means the numbers of species alive now.
- C) 'Species richness' is the simplest tool in measuring global biodiversity, and it refers to the number of species alive now.
- D) The simplest definition of 'species richness' is the number of species alive now and it is used to measure global biodiversity.
- E) Used to measure global biodiversity in a simple way, 'species richness' accounts for the number of species alive now.

**53. Charles Babbage çeşitli alanlara önemli katkılarda bulunmuştur, ancak en çok bilgisayarın temel öğelerini kavramlaştırması ile tanınır.**

- A) Although Charles Babbage contributed significantly to various fields, he is mostly known for having conceptualized the basic elements of the computer.
- B) Charles Babbage contributed enormously to different fields, but his most widely-known contribution is the conceptualisation of the key elements of the computer.
- C) Charles Babbage made major contributions to a variety of fields, but he is best known for having conceptualised the key elements of the computer.
- D) A variety of fields have benefitted from Charles Babbage's major contributions while the conceptualisation of the key elements of the computer is his best acknowledged contribution.
- E) Among his significant contributions to various fields, Charles Babbage is best acknowledged for conceptualising the key elements of the computer.

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

54. Europa, one of the moons of Jupiter, appears to be no more than an airless world with an icy surface. ----. The Galileo spacecraft imaging also showed features in the ice consistent with a sub-surface ocean. In addition to that, the magnetometer indicated the presence of a global layer of slightly salty liquid water.

- A) For instance, there are many ecosystems on Earth that thrive and grown in water that is continuously covered by ice.
- B) However, theoretical calculations suggest that under the ice surface of Europa, there might be a layer of liquid water.
- C) It is possible that sunlight passes through the cracks in the ice of Europa.
- D) Europa has been the most extensively studied moon of the planet Jupiter.
- E) In polar oceans and some ice-covered lakes, photosynthesis is performed under the ice-cover.

55. ----. Planetary exploration has revealed that essentially every atmosphere starts at the bottom with a troposphere, where temperature decreases with height at a nearly constant rate. Each atmosphere has a stratosphere, where temperature usually increases with height or, in the case of Venus and Mars, decreases much less quickly than in the troposphere.

- A) Earth's unique atmosphere is what makes life on the planet possible.
- B) The global atmosphere rotates faster than the solid planet.
- C) Atmospheres are found on the Sun as well as 8 planets, and each has its own brand of weather and its unique chemistry.
- D) Earth may differ in many ways from the other planets, but not in the basic structure of its atmosphere.
- E) Earth has many planetary attributes that are important to the study of its atmosphere and oceans.

56. In some ways, diesel and petrol engines are constructed the same. Both are designed to convert the chemical energy of fuel into mechanical energy to power the car. ---- The biggest difference between the two engines is the way in which the explosions take place. In a petrol engine, fuel is mixed with air, compressed, and ignited by a sparking plug, while a diesel engine has no sparking plug.

- A) The conversation takes place via a series of small explosions.
- B) The pressure is lower in petrol engines, unlike diesel engines.
- C) The diesel engine has changed very little since its invention in 1897.
- D) The introduction of petrol engines changed the world in various ways.
- E) The diesel engine was designed to make as much use of the fuel as possible.

**57. Millions of years ago, the remains of plants and animals decayed and built up in thick layers. This decayed matter from plants and animals is called organic material; it was once alive. ----. Pressure and heat changed some of this organic material into coal, some into oil, and some into natural gas.**

- A) Seismic surveys use echoes from a vibration source at the earth's surface.
- B) Oil was formed from the remains of animals and plants that lived millions of years ago.
- C) The search for natural gas begins with geologists locating the types of rock.
- D) Over time, the mud and soil changed to rock, covered the organic material and trapped it beneath the rock.
- E) Scientists and engineers explore a chosen area by studying rock samples from the earth.

**58. The products of systematic study are used in biology in a few ways. ----. For example, do the specimens studied represent one species or several species? If several, what are their identities? And then, the same biologist might want to know the relationships among these entities in order to fully understand the comparative data he/she has collected. For example, are the similarities in the ecology of two species the result of convergence in a similar environment or common history?**

- A) Systematists who publish species descriptions are expected to observe good taxonomic scholarship.
- B) First, a biologist may need some knowledge of species and their populations in order to conduct research.
- C) Systematics is the study of the diversity of organisms and the relationships among these organisms.
- D) Biology is one of the oldest scientific disciplines, with roots in antiquity and a formal scientific literature.
- E) Comparative sciences such as systematics use the similarities and differences among the subjects studied.

**59. Seen through a microscope, protozoans often look like tiny animals living at great speed. But protozoans are not animals, and they do not have eyes, mouths or even brains. Instead, they are microorganisms with just a single cell. ----. Many are active predators, hunting for food, while others stay in one place and feed on anything edible that drifts nearby. And there are some others that form partnerships with much larger living things to survive.**

- A) These protozoans can be incredibly abundant, for example, an elephant can have billions of them living in its gigantic gut.
- B) Most protozoans live in water, but some are found inside other living things, and this offers them certain advantages.
- C) One of the fastest protozoans of all is *Paramecium*, a slipper-shaped organisms covered with fur.
- D) Unlike many other microorganisms, protozoans need to eat, and they get their food in different ways.
- E) Some microorganisms that live in the intestines of plant-eating animals may cause dangerous diseases.

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

**60. (I)** A very effective antibiotic has just been produced thanks to the recent developments in biotechnology. **(II)** The term 'biotechnology' was coined in 1919 by Hungarian scientist Karl Ereky to mean 'any product produced from raw materials with the aid of living organisms'. **(III)** But in its broadest sense, the practice of biotechnology dates back to ancient times. **(IV)** In approximately 6000 BC, the Sumerians and Babylonians discovered the use of yeast. **(V)** And in about 4000 BC, the Egyptians employed yeast to make bread and the Chinese bacteria to make yoghurt.

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

**61. (I)** We know dirty air is bad for our bodies, causing the equivalent of millions of deaths worldwide every year, making it a bigger killer than smoking. **(II)** Air pollution leads to a number of problems for many species. **(III)** But could air pollution be bad for our minds too? **(IV)** A study has found that psychotic experiences, which can involve hearing or seeing something that others do not, are more common among teenagers in the UK's most polluted areas. **(V)** However, the association does not mean that breathing in air pollution leads to psychosis in teenagers since there could be other explanations.

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

**62. (I)** Ants are the 'super weight lifters' of the animal kingdom. **(II)** They are often confused with termites despite many obvious physical differences between them. **(III)** They are strong in relation to their size and can carry objects 10 to 20 times their own weight – some species can carry objects up to 50 times their own weight. **(IV)** Ants are able to carry these objects great distances and even climb trees while carrying them. **(V)** This is comparable to a 50-kilogram person picking up a small car, carrying it 3 or 4 kilometres on his back and then climbing the tallest mountain while still carrying the car.

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

**63. (I)** The mixture of gases that surrounds the solid earth is called the atmosphere. **(II)** Although it represents a very small fraction of the weight of the earth, it is very important because it contains gases essential to life. **(III)** Carbon dioxide plays an important role by trapping heat, causing the greenhouse effect, which keeps the earth warm and liveable, for the most part. **(IV)** Among these gases, nitrogen, oxygen and argon dominate the atmosphere. **(V)** But carbon dioxide, which is vital to life on Earth, makes up only 0.32 per cent of the atmosphere.

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



- 64. (I)** All human activities generate some form of waste, and some of them are called 'hazardous waste'. **(II)** In its most general sense, the term 'hazardous waste' comprises toxic chemicals, radioactive materials, and biological or infectious waste. **(III)** Hazardous waste poses a threat to workers through occupational exposure and to the public through exposure in homes, communities and the general environment. **(IV)** Technical and regulatory efforts have been made to reduce gas from motor vehicles. **(V)** The exposure may occur near the site of generation, along transportation corridors, and near the ultimate disposal sites.
- A) I      B) II      C) III      D) IV      E) V

- 65. (I)** Every year, 8 million tonnes of plastic end up in the oceans. **(II)** Ocean currents trap a major portion of this plastic in an area of the North Pasific three times the size of France. **(III)** The German Parliament has recently introduced a law to reduce the effects of air pollution caused by plastic materials. **(IV)** A Dutch project called Ocean Cleanup has placed a 600-m-long floating, U-shaped barrier there, which is carried forward by currents, waves, and wind, collecting the waste, so it can be pumped up by ships. **(V)** A total of 60 barriers will be launched with the hope of collecting half of this ocean plastic by 2025.
- A) I      B) II      C) III      D) IV      E) V

**66 - 68. soruları aşağıda verilen parçaya göre cevaplayınız.**

Just like in the well-known fable *Little Red Riding Hood*, wolves are traditionally described as villains and portrayed as evil and horrible. Now, thanks to the latest research, this picture of wolves is changing. New studies and evidence give an intriguing insight into a sophisticated social structure centred around wolf family life. At the root of this is a complex level of communication built partly on facial expressions that reflect a wolf's feelings. In effect, wolves 'talk' by making faces at each other. Researchers believe wolves may have used these communication skills to build bridges with hunter-gatherer people in a journey that finally led to the domestic dogs we know today. "Most people think of wolves an unpleasant creature but this is nonsense," says Elana Hobkirk of Durham University. "They are in fact animals which are capable of joy and friendliness as well as anger."

**66. According to the passage, wolves ----.**

- A) are undeniably the villains of the social structure around them
- B) are being given a new image thanks to the recent studies about them
- C) are usually illustrated as friendly and adorable in literary works
- D) are often the main characters of fables and fairy tales
- E) are described in *Little Red Riding Hood* in terms of their family life

**67. According to the passage, how do wolves reveal their feelings?**

- A) They interact with their own relatives by making loud noises.
- B) They communicate through some techniques that humans find unpleasant.
- C) They have to make more efforts than the dogs we know today.
- D) They use their faces as a medium of communication.
- E) They utilise a technique which can only be understood by hunter-gatherers.

**68. What is the main purpose of the author?**

- A) To criticise traditional story-telling about wolves
- B) To inform readers about the family structure of wolves
- C) To compare today's dogs and wolves in terms of their behaviour
- D) To give information about new studies related to the nature of wolves
- E) To explain how wolves communicate with humans

**69 - 71. soruları aşağıda verilen parçaya göre cevaplayınız.**

Compared with other bodily fluids, tears are vastly understudied. Collecting that salty drops is tedious—weepy donors are rare, men hardly ever sign up and tears must be ‘fresh’ for their make-up to be properly analysed. As a result, researchers lack a consensus about the purpose of basic human behaviour. Is crying a primal way to communicate that many species share, as some chemists hypothesise? Or is it, as psychologists have put forward, a uniquely human key to social bonding? Neurobiologist Noam Sobel has a plan to advance the field: He has perfected a way to flash-freeze tears and is now working to create a ‘tear bank’ for researchers around the world. Sobel hopes interested researchers will eventually be able to select tears by age and gender from tear bank. This customized access could be of great help to experiments dealing with many unanswered questions about the chemistry of crying: Do tears of men and women differ? Do the tears affect mood or appetite? How do emotional and non-emotional tears – from, say, cutting onions – compare? For Sobel, the more people who cry their eyes out, the better for the tear bank.

**69. According to the passage, research about tears is rarely carried out due to the ----.**

- A) lack of consensus about its purpose
- B) questions that remain unanswered
- C) scarcity of the samples needed
- D) complicated nature of the topic
- E) unique chemistry of the fluid

**70. What is the passage mainly about?**

- A) Questions that are commonly asked about the way women and men cry
- B) Different studies seeking to determine how tears relate to social bonding
- C) Emotions that are conveyed during many different stages of crying
- D) Gender differences when expressing feelings through crying
- E) The challenges involved in studying why humans cry and a possible solution to them

**71. Sobel thinks that the more people cry, the more ----.**

- A) tear samples there will be
- B) relief they will receive
- C) emotional they will get
- D) questions there will be
- E) unhealthy eyes they will have

**72 - 74. soruları aşağıda verilen parçaya göre cevaplayınız.**

The effects of air pollution have been divided into several categories so that better analyses of pollutants can be conducted. Effects include aesthetic losses, economic losses, safety hazards, personal discomfort, and health effects. Aesthetic effects include any changes caused by air pollution that result in the loss of visually pleasing scenery. Economic losses include the loss of vegetation and livestock due to massive exposure to the gaseous air pollution. These particles can kill or sicken commercial crops and livestock. Other losses may occur as people's possessions are damaged as a result of the pollution, which can cause the build-up of dirt or dust particles. An additional effect of air pollution is personal discomfort and health hazards. Eye irritation, asthma, bronchitis, and sinusitis are a few of the health risks caused by air pollution. However, these are some minor risks of air pollution that are usually curable.

**72. According to the passage, why are the effects of air pollution categorised?**

- A) To cope with its economic consequences
- B) To increase awareness about its harmful effects
- C) To carry out analyses of the pollutants more effectively
- D) To prevent the risks of air pollution
- E) To list the changes among the categories

**73. It can be inferred from the passage that the aesthetic effects of air pollution ----.**

- A) are the most common type
- B) make an area seem unattractive
- C) can increase the risk of asthma
- D) are within the minor risk group
- E) can result in an economic loss

**74. Which of the following is true according to the passage?**

- A) Most people pay more attention to the aesthetic effects of air pollution than its health effects.
- B) Eye irritation and asthma resulting from air pollution can often be cured.
- C) Loss of vegetation can occur because of large groups of livestock.
- D) Governments are taking precautions to avoid gaseous air pollution.
- E) Economic and aesthetic effects of air pollution are closely related.

**75 - 77. soruları aşağıda verilen parçaya göre cevaplayınız.**

All forms of life on Earth require water to function. Life has been found in all kinds of extreme environments, operating at the limits of heat and cold and even without air. But every type of life we have discovered contains biological cells that require water in their operating environment. Cells simply could not function without it. It is not just a matter of keeping them inflated and moving chemicals around – living, cells are full of tiny complex mechanisms. Many of these mechanisms rely on different sections of molecules either working well with water or not mixing with it. Proteins, for example, are the key worker molecules in living organisms. Proteins have to fold into particular shapes to carry out their roles, and it is the interaction between water and various parts of a protein molecule that tells it how to fold. Water is not just a solvent, a substance that dissolves other substances, but it also plays an important role in the functioning of our cells.

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

- A) life can be found even in environments where there is no air
- B) it is difficult to find life in extreme environments
- C) certain types of life do not need water to operate
- D) biological cells cannot operate at high temperatures
- E) air keeps cells inflated and moves chemicals around

**76. The author gives the protein example in order to ----.**

- A) show that protein is the main element in a living
- B) explain how important water is for protein molecules to function
- C) emphasise the fact that protein can survive in extreme environments
- D) compare the functions of tiny complex molecules
- E) indicate that there are some molecules which do not need air to function

**77. It is clear from the passage that ----.**

- A) both water and heat are essential elements for a cell
- B) water plays a fundamental role in the functioning of living cells
- C) how a protein folds depends on the amount of water available
- D) every cell has complex mechanisms that can survive without water
- E) biological cells contain a high percentage of water in order to survive

**78 - 80. soruları aşağıda verilen parçaya göre cevaplayınız.**

The red handfish, found off the southeast coast of Tasmania, Australia, uses its 'hands', which are modified fins, to crawl across the bottom of the seafloor. It does not travel very far or fast, which restricts populations to small areas. Classed as critically endangered, it faces threats from habitat degradation and low reproductive rates. Often called the world's rarest fish, scientists only knew of the one population, numbering between 20 and 40 fish, until divers discovered a second population in earlier 2018. "Finding this second population is a big relief as it essentially doubles the number of individuals we thought were left on Earth, but the danger is still on," says diver Antonia Cooper. "It provides hope that other small populations may still exist and allows scientists to start discussing conservation options such as habitat protection and viability of a captive breeding programme."

**78. Why is the red handfish called 'the world's rarest fish'?**

- A) This type of fish has the unique colour of red which can hardly be found in the ocean.
- B) The 'hands' of the red handfish might disappear as the habitat degrades.
- C) The modified fins of the red handfish travel slowly in small areas.
- D) This type of fish only exists around the the bottom of the seafloor.
- E) Only a handful of red handfish were known until recently.

**79. It is clearly stated in the passage that ----.**

- A) unfavourable environmental factors and a low number of offspring are threats for the red handfish
- B) with the new discovery of the second population, the red handfish is not endangered now
- C) the divers will start a habitat programme for the newly discovered population of the red handfish
- D) there were more than two populations of the red handfish in the past
- E) the red handfish may travel to the north coast of Australia during the year

**80. What is the passage mainly about?**

- A) How the red handfish uses its 'hands'
- B) The reasons why the red handfish population has decreased
- C) An exciting new discovery about the red handfish
- D) Why the red handfish lives off the southeast coast of Tasmania
- E) How to protect endangered marine species

**YÖKDİL FEN BİLİMLERİ**  
**MART 2020**









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

1. **Scientific discoveries may be made simultaneously by scientists working independently, but almost every ---- depends on previous work and theories.**
  - A) expense
  - B) precaution
  - C) threat
  - D) advance
  - E) decline
2. **Artificial selection is the conscious attempt by human beings to change the environments or - --- of other organisms so as to alter the evolution of these organisms.**
  - A) instructions
  - B) traits
  - C) profits
  - D) intentions
  - E) causes
3. **Taxonomy is the area of biological science comprising three ---- but highly interrelated disciplines: classification, naming and identification of organisms.**
  - A) respectable
  - B) regular
  - C) distinct
  - D) virtual
  - E) consistent
4. **A volcanic catastrophe is often thousands of years in the making—many volcanoes gain strength for millennia before an ---- powerful explosion occurs.**
  - A) immensely
  - B) insufficiently
  - C) adversely
  - D) inconveniently
  - E) elaborately
5. **Swifts, one of the fastest small birds, can be --- from the superficially-similar African swallows by their characteristic style of flight.**
  - A) derived
  - B) prevented
  - C) extracted
  - D) distinguished
  - E) obtained
6. **Bioinformatics is a new field that ---- the development and application of computational methods to organise, integrate, and analyse gene-related data.**
  - A) centers on
  - B) falls behind
  - C) leaves out
  - D) brings down
  - E) puts off
7. **At the end of the 17th century, Isaac Newton -- -- his laws of motion and gravity, making science more precise and mathematical than it ---- before.**
  - A) had set down / would have been
  - B) was setting down / has been
  - C) set down / had been
  - D) would set down / was
  - E) had been setting down / would be

8. **Over the past 100 years, the relativity theories and quantum mechanics ---- major triumphs at the cost of us, ---- our classic conception of time.**
- A) have celebrated / losing  
B) celebrated / to have lost  
C) have been celebrated / having been lost  
D) had celebrated / being lost  
E) were celebrated / to be lost
9. **The Enlightenment period saw astronomical observatories grow ---- size and number, ---- a growing emphasis on the housing of larger telescopes.**
- A) by / over  
B) for / through  
C) beyond / to  
D) from / at  
E) in / with
10. **The boiling point of a liquid substance is the temperature ---- which the vapour pressure of the liquid equals the external pressure ---- the liquid.**
- A) of/ by  
B) among /off  
C) at / on  
D) for / with  
E) in / under
11. **After 13 years in Saturn's orbit, the Cassini spacecraft ended its mission in September 2017 ---- making a planned dive ---- the planet's atmosphere.**
- A) after / with  
B) about / over  
C) in / at  
D) by / into  
E) from / through
12. **---- the Earth's long history, scientists divide its 4.5-billion-year existence using the geologic time scale, which makes this history manageable.**
- A) Unlike  
B) Except for  
C) On behalf of  
D) Because of  
E) Similar to
13. **It takes up to five years ---- a cocoa tree bears fruit, and it then produces around 1000 beans a year, but that is only enough for one kilogramme of chocolate.**
- A) because  
B) unless  
C) before  
D) as if  
E) as soon as
14. **---- continental islands are part of their nearby continental landmass, oceanic islands are the result of undersea volcanoes or tectonic plate activity pushing up the seafloor.**
- A) Unless  
B) After  
C) While  
D) Because  
E) As long as
15. **Like people, animals can also have reactions to pollen and other environmental allergens, ---- they have different symptoms than we do and should be treated differently as well.**
- A) as if  
B) once  
C) but  
D) so  
E) since

16. The solid core inside the Moon is similar to that of Earth; ----, the Moon's core is gradually cooling, which creates cracks on the surface, in contrast to the Earth's warming core.

- A) however
- B) eventually
- C) furthermore
- D) for instance
- E) in brief

17. Atmosphere observation includes such well-known instruments as the thermometer and barometer ---- less familiar devices such as the radiosonde.

- A) according to
- B) in terms of
- C) with the purpose of
- D) owing to
- E) as well as

18. According to a study, a common species of wasp appears to be becoming smaller in number ---- the ongoing global rise in temperatures.

- A) except for
- B) rather than
- C) as a consequence of
- D) contrary to
- E) in pursuit of

19. Studies have shown that flying animals manage well ---- due to the fact that they can escape predators by taking flight, ---- because flight has supplied them with a number of advantageous qualities.

- A) such / that
- B) the more / the more
- C) neither / nor
- D) not only / but also
- E) as / as

20. Inside the Sun, density and temperature rise steadily toward the core, ---- the pressure is more than 100 billion times greater than the atmospheric pressure on the Earth's surface.

- A) where
- B) how
- C) which
- D) whom
- E) what

**21 - 25. sorularda, aşağıdaki parçada numaralanmış yerlere uygun düşen sözcük ya da ifadeyi bulunuz.**

For thousands of years, humans had relied on animals and manpower to move heavy loads and drive machinery. This all changed in the late 18th century with the arrival of a new invention: the steam engine. Steam engines operate by burning fuel to heat water **(21)** ---- it boils. The resulting hot steam **(22)** ---- the boiling water is trapped to create pressure, which is used to drive machinery. This simple principle opened the way to powerful new engines. Steam engines were more **(23)** ---- than windmills or waterwheels which had to be built in specific places. They were more powerful than humans and animals, and they **(24)** ---- equipment used on farms and in factories. **(25)** ---- all these advantages, larger models were used to pump vast amounts of water to drain mines and supply canal systems.

**21.**

- A) as if
- B) unless
- C) until
- D) although
- E) just as

**22.**

- A) into
- B) from
- C) without
- D) at
- E) for

**23.**

- A) urgent
- B) tedious
- C) threatening
- D) redundant
- E) flexible

**24.**

- A) may drive
- B) have to drive
- C) should have driven
- D) could drive
- E) would have driven

**25.**

- A) Such as
- B) Regardless of
- C) Contrary to
- D) Instead of
- E) In addition to

**26 - 30. sorularda, aşağıdaki parçada numaralanmış yerlere uygun düşen sözcük ya da ifadeyi bulunuz.**

Before the invention of the microscope, it was impossible to see cells. Some biological theories were therefore based on speculations **(26)** ---- Scientific observation. For example, people believed in 'spontaneous generation' **(27)** ---- it was hard to believe that cells would regenerate. The development of the microscope, including that of an electronic version in the 20th century, made **(28)** ---- observation of the internal structure of the cell possible. Robert Hooke was the first **(29)** ---- dead cells in 1665. In 1838, Matthias Schleiden observed living cells, and in 1839, in collaboration **(30)** ---- Theodor Schwann, he developed the first theory of cells; that all living organisms consist of cells.

**26.**

- A) despite
- B) owing to
- C) rather than
- D) similar to
- E) as a result of

**27.**

- A) in case
- B) as long as
- C) because
- D) although
- E) so that

**28.**

- A) weak
- B) scarce
- C) accidental
- D) vague
- E) detailed

**29.**

- A) to see
- B) seeing
- C) to have been seen
- D) having seen
- E) to be seen

**30.**

- A) with
- B) between
- C) to
- D) from
- E) for

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

**31. Despite their benefits in farms where pests are abundant, ----.**

- A) pesticides are widely used by farmers to increase agricultural productivity
- B) pesticides are responsible for about one million poisoning cases globally every year
- C) humans cause much more severe environmental damage than pesticides do
- D) pesticides can also be classified according to the similarities of their chemical structures
- E) contagious diseases in crops can be prevented by using pesticides

**32. Once it has decided on its target, ----.**

- A) the dragonfly attacks the prey in mid-air using its legs
- B) the dragonfly's menu also features mosquitoes, flies and butterflies
- C) the dragonfly is often seen over water in the wild
- D) the dragonfly has hardly changed, proving itself to be the champion of adaptation
- E) the dragonfly is an insect with a long thin body

**33. Although several geological phenomena account for the formation of numerous lakes on Earth, ----.**

- A) most lakes were formed as a result of glacier activity
- B) they are inland bodies of water scattered over the earth's surface
- C) salt lakes have high levels of chalky deposits at the bottom
- D) young lakes have less organic matter as opposed to old ones
- E) lake basins formed at the edge of glaciers were generally too deep

**34. As the technology for piping gas from the source began to improve, ----.**

- A) it was the product of the decaying of living matter over millions of years
- B) Alaska and Texas were the largest sources of gas in the US
- C) it became possible to transport gas over thousands of miles
- D) it was initially inconvenient to store in large amounts
- E) it was believed to have been first discovered and used by the Chinese

**35. Although traditional recruitment sources such as newspaper advertisements are still used to recruit job applicants, ----.**



- A) people also argue that the Internet may pose potential threats to personal privacy
- B) use of the Internet is less likely to reduce the time associated with traditional recruitment methods
- C) most people seeking jobs are still looking at newspaper advertisements instead of using the Internet
- D) the Internet has changed the way in which many organisations announce job opportunities
- E) the Internet recruiting poses challenges for organisations that use online recruiting programmes

**36. Although lead was widely known at a very early date, ----.**

- A) the first metal to be practically utilised was copper
- B) that period is known as the Chalcolithic Age
- C) metallurgical developments originated in mountainous regions
- D) the emergence of rock-melting process started the Copper Age
- E) most of the larger metal artefacts were produced in the Middle East

**37. Fossils may be the body parts or direct traces of activities left behind by animals, plants, fungi, and microorganisms; ----.**

- A) thus, they might include a mammalian tooth, a clamshell, a leaf or the entire skeleton of a dinosaur
- B) on the other hand, fossils are real and truly the remains of long-dead organisms
- C) by comparison, they are usually formed as dead organisms become buried by layers of sediment
- D) however, some people have historically studied fossils as an interest
- E) for example, ancient people used fossils to make necklaces and to exchange in trade

**38. The life cycle of different insect species varies greatly, ----.**

- A) while the field of insect ecology investigates Mortality factors that help regulate insect populations
- B) as it is essential to understand populations and their reproductive capacity
- C) thus some feed on living plants, others on decaying plants, and still others on animals
- D) given that some species that coexist in an area and interact with each other form an ecological community
- E) but all insects undergo the basic stages of development from an egg to a reproductive adult

**39. Insect-pollinated flowers are usually brightly coloured and sugary-smelling ----.**

- A) although birds or bats use these colourful flowers as landing pads
- B) while hummingbirds are the only pollinating birds that fly as they feed
- C) because insects are attracted by vivid colours and sweet scents
- D) only when some plants try to shed their shiny pollen into the air
- E) as some flower heads have much larger flowers, spaced much further apart

**41. Chestnut wood can be worked easily to manufacture fine furniture and musical instruments; ----.**

- A) on the other hand, chestnuts are species of trees in the genus Castanea
- B) moreover, it is also used for its durability in roof materials and construction timber
- C) for example, true chestnut seeds could be confused with horse chestnuts
- D) thus, in 1999, the global crop of sweet chestnut was harvested from about 630,000 acres
- E) similarly, they are species of temperate hardwood forests found in the northern hemisphere

**40. Humans have drastically altered wetlands for a variety of reasons; ----.**

- A) for example, an estimated 26 per cent of the world's wetlands have been converted for agricultural purposes alone
- B) however, more than half of the original wetlands in the United States have been destroyed in the past 200 years
- C) as a result, people thought that they were nothing more than breeding places for diseases
- D) on the contrary, wetland birds migrate to cold places during summer months
- E) in other words, the wetlands are home to a large variety of wildlife

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

**42. By opening the way to the use of high-rise buildings, the elevator played a decisive role in the creation of the characteristic urban geography of many modern cities.**

- A) Pek çok modern şehrin karakteristik kentsel coğrafyasını oluşturmada belirleyici bir rolü olan asansör, çok katlı binaların kullanılmasının yolunu açmıştır
- B) Asansör, çok katlı binaların kullanımının yolunu açarak pek çok modern şehrin karakteristik kentsel coğrafyasının oluşmasında belirleyici bir rol oynamıştır.
- C) Çok katlı binaların kullanımının yolunu açan asansör, pek çok modern şehrin karakteristik kentsel coğrafyasının oluşmasında belirleyici bir rol oynamıştır.
- D) Asansör çok katlı binaların kullanımının yolunu açtığı için pek çok modern şehrin karakteristik kentsel coğrafyasının oluşumunda belirleyici bir rol oynamıştır.
- E) Çok katlı binaların kullanımının yolunu açan asansör, pek çok modern şehrin karakteristik kentsel coğrafyasının oluşmasında belirleyici bir role sahip olmuştur.

**43. At the beginning of the Industrial Revolution, engineers devoted their efforts almost entirely to making devices that functioned profitably, but with no attention to their safety**

- A) Sanayi Devrimi'nin başlangıcında mühendisler neredeyse bütün çabalarını kârlı bir şekilde işleyen, ancak güvenliğine önem vermedikleri aygıtlar yapmaya adanmışlar.
- B) Sanayi Devrimi'nin başlangıcında hemen hemen bütün çabalarını kârlı bir şekilde çalışan aygıtlar üretmeye adanmış mühendisler, güvenliğe hiç önem vermediler.
- C) Güvenli aygıtlar yapmak, Sanayi Devrimi'nin başlangıcında mühendislerin kârlı bir şekilde çalışan aygıtlar yapmak kadar önem verdikleri bir konu değildi.
- D) Kârlı bir şekilde işleyen aygıtlar üretme çabaları, Sanayi Devrimi'nin başlangıcında, mühendislerin güvenli aygıtların üretilmesine pek önem vermemelerine neden oldu.
- E) Sanayi Devrimi'nin başlangıcında mühendisler kendilerini tamamen kârlı bir şekilde çalışan aygıtlar yapmaya adanmışlar, fakat güvenliğine hiç önem vermediler.

**44. In 725, Chinese engineer Liang Ling-Zan and Buddhist monk Yi-Xing invented a water clock which displayed various astronomical events rather than the time.**

- A) Zamanı ve çeşitli astronomik olayları gösteren su saati, Çinli mühendis Liang Ling-Zan ve Budist rahip Yi-Xing tarafından 725 yılında icat edilmiştir.
- B) 725 yılında, Çinli mühendis Liang Ling-Zan ve Budist rahip Yi-Xing, zamanı ve çeşitli astronomik olayları gösteren su saatini icat ettiler.
- C) 725 yılında, Çinli mühendis Liang Ling-Zan ve Budist rahip Yi-Xing tarafından icat edilen su saati, zamanı göstermek yerine çeşitli astronomik olayları gösteriyordu.
- D) 725 yılında, Çinli mühendis Liang Ling-Zan ve Budist rahip Yi-Xing, zamandan ziyade çeşitli astronomik olayları gösteren bir su saati icat ettiler.
- E) Zamandan çok çeşitli astronomik olayları gösteren su saati, Çinli mühendis Liang Ling-Zan'ın yardımıyla Budist rahip Yi-Xing tarafından 725 yılında icat edilmiştir.

**45. Early farmers quickly learned that a supply of water was essential to farming thus, the primary fields of grain were processed alongside the great rivers of the Middle East.**

- A) İlk çiftçiler su tedarikinin çiftçilik için önemli olduğunu çabucak öğrendiler, bu yüzden başlıca tahıl arazileri Orta Doğu'nun büyük nehirleri boyunca işlendi.
- B) İlk çiftçiler su tedarikinin çiftçilik açısından önemli olduğunu çabucak öğrenmelerinden dolayı başlıca tahıl arazilerini Orta Doğu'nun büyük nehirleri boyunca işlediler.
- C) Su tedarikinin çiftçilik için önemli olduğunu çabuk öğrenen ilk çiftçiler başlıca tahıl arazilerini Orta Doğu'daki büyük nehirler boyunca işlediler.
- D) Başlıca tahıl arazilerinin Orta Doğu'daki büyük nehirler boyunca işlenmesinin sebebi, ilk çiftçilerin su tedarikinin çiftçilik açısından önemli olduğunu çabucak kavramalarıdır.
- E) İlk çiftçiler su tedarikinin önemli bir çiftçilik meselesi olduğunu çabuk öğrendiler ve başlıca tahıl arazilerini Orta Doğu'nun büyük nehirleri boyunca işlediler.

**46. Severe frost is a great threat to organisms, as the cold causes enzymes and cell membranes to function poorly.**

- A) Şiddetli don organizmalar için büyük bir tehdittir, çünkü soğuk, enzimlerin ve hücre zarlarının zayıf bir şekilde çalışmasına neden olur.
- B) Şiddetli donun, organizmalar için büyük bir tehdit oluşturmasının sebebi, enzimlerin ve hücre zarlarının soğukta zayıf bir şekilde çalışmasıdır.
- C) Organizmalar için büyük bir tehdit yaratan şiddetli don ve soğuk, enzimlerin ve hücre zarlarının zayıf bir şekilde çalışmasına neden olur.
- D) Enzimler ve hücre zarları soğukta zayıf bir şekilde çalışır ve şiddetli don organizmalar için büyük bir tehdit oluşturur.
- E) Soğuk, enzimlerin ve hücre zarlarının zayıf bir şekilde çalışmasına neden olur, bu yüzden şiddetli don organizmalar için büyük bir tehdittir.

**47. The availability of information about products on the Internet, as long as it is well-organised and easy to access, is an important reason why some consumers prefer shopping online.**

- A) İnternette ürünlerle ilgili bilgi mevcuttur ve bu bilgi iyi bir şekilde düzenlenmişse ve erişimi kolaysa, bazı tüketiciler İnternette alışveriş yapmayı tercih ederler.
- B) Bazı tüketicilerin İnternette alışveriş yapmayı tercih etmelerinin önemli bir sebebi, İnternette ürünlerle ilgili bilginin mevcut olması ve bu bilginin iyi düzenlenmiş ve erişiminin kolay olmasıdır.
- C) İyi düzenlenmiş ve erişimi kolay olduğu sürece İnternette ürünlerle ilgili bilginin mevcut olması, bazı tüketicilerin İnternette alışveriş yapmayı tercih etmesinin önemli bir sebebidir.
- D) İnternette ürünlerle ilgili mevcut olan bilgi iyi düzenlenmiş ve erişimi kolay olduğunda, bu durum tüketicilerin İnternette alışveriş yapmayı tercih etmesi için önemli bir neden olarak görülür.
- E) Ürünlerle ilgili bilginin İnternette yer alması, bazı tüketicilerin İnternette alışveriş yapmayı tercih etmelerinin önemli bir nedenidir, ancak bu bilgi iyi düzenlenmiş ve erişimi kolay olmalıdır.

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

**48. Karnabahar ve brokoli gibi sebzeler, vücudun kafeini daha hızlı parçalamasına yardımcı olur, bu nedenle aşırı kafein alımı hâlinde bunları tüketmek makul olacaktır.**

- A) As vegetables like cauliflower and broccoli help the body break down caffeine faster, it will be wise to consume them when caffeine is taken excessively
- B) In case of excessive caffeine intake, it will be wise to consume vegetables like cauliflower and broccoli because they help the body by breaking down caffeine faster.
- C) Vegetables like cauliflower and broccoli help the body break down caffeine faster, so it will be wise to consume them in case of excessive caffeine intake.
- D) In the case of excessive caffeine intake, consuming vegetables like cauliflower and broccoli will be quite wise as they help the body break down caffeine faster.
- E) The body breaks down caffeine faster when vegetables like cauliflower and broccoli are consumed, so it will be wise to consume them if caffeine is taken excessively.

**49. 1862 yılında, Louis Pasteur, süt 70 dereceye kadar ısıtılırsa içindeki bakterilerin öleceğini ve bu nedenle sütün daha uzun süre muhafaza edilebileceğini kanıtladı.**

- A) 1862 was the year when Louis Pasteur proved that if milk was heated up to 70°C, the bacteria in it would be killed, and therefore it could be kept longer.
- B) What Louis Pasteur proved in 1862 was that if milk was heated up to 70°C, this would kill the bacteria it contained, and thus the milk could be kept longer.
- C) In 1862, Louis Pasteur proved that if milk was heated up to 70°C, the bacteria in it would die, and therefore the milk could be kept longer.
- D) Demonstrating that the bacteria milk contained would die if it was heated up to 70°C, Louis Pasteur, in 1862, proved that the milk could be kept longer.
- E) In 1862, Louis Pasteur proved that milk would be kept longer provided that it was heated up to 70°C to kill the bacteria it contained.

**50. Nörologlar tarafından yeni geliştirilen bir çip, beynin anatomik yapılarını kopyalamaya çalışmak yerine, insan zihninin bilişsel becerilerini taklit etmeyi amaçlamaktadır.**

- A) The aim of the chip recently developed by neurologists is to mimic the cognitive abilities of the human mind rather than replicating the anatomical structures of the brain
- B) A chip recently developed by neurologists aims to mimic the cognitive abilities of the human mind instead of trying to replicate the anatomical structures of the brain.
- C) A chip recently developed by neurologists not only tries to replicate the anatomical structures of the brain, but also aims to mimic the cognitive abilities of the human mind.
- D) Trying to replicate the anatomical structures of the brain, a chip recently developed by neurologists aims to mimic the cognitive abilities of the human mind.
- E) A chip that aims to mimic the cognitive abilities of the human mind instead of trying to replicate the anatomical structures of the brain has been recently developed by neurologists.

**51. Çöller çorak olabilir, ancak hem uzun kuraklıklar boyunca hem de nadir bir yağış sonrasında pek çok bitki ve hayvanın yuvasıdır.**

- A) Deserts may be barren during the long droughts, but after a rare rainfall, they are home to a wide range of plants and animals.
- B) Even barren deserts may be home to many plants and animals, both during the long droughts and after a rare rainfall.
- C) Although deserts may be barren, they are home to a number of plants and animals during the long droughts and after a rare rainfall.
- D) Deserts, even if barren, are home to both plants and animals during the long droughts and after a rare rainfall.
- E) Deserts may be barren, but they are home to many plants and animals, both during the long droughts and after a rare rainfall.

**52. Büyük Patlama kuramını destekleyen sağlam bilimsel kanıtlar vardır, ancak henüz kanıtlanmamış pek çok detay ve cevaplanmamış pek çok soru da bulunmaktadır.**

- A) Although there are many details yet unproven and many questions still unanswered, there is solid scientific evidence to support the Big Bang theory.
- B) While there is solid scientific evidence to support the Big Bang theory, there are also many details yet unproven and many questions still unanswered.
- C) Despite the presence of solid scientific evidence to support it, the Big Bang theory still has many details unproven and many questions unanswered.
- D) There is solid scientific evidence supporting the Big Bang theory, however, there are also many details yet unproven and many questions still unanswered.
- E) The Big Bang theory has many details yet unproven and many questions still unanswered, but there is solid scientific evidence to support it.

**53. Hücre klonlamanın amacı, belirli hücre türlerinin bilimsel araştırmalar için kullanılacak pek çok kopyasını üretmektir.**

- A) Producing many copies of certain types of cells that can be used for scientific research is one of the purposes of cell cloning.
- B) The purpose of cell cloning is to produce many copies of certain types of cells, as they are used for scientific research
- C) The aim of cell cloning is to produce many copies of certain types of cells, and these copies can be used for scientific research.
- D) The purpose of cell cloning is to produce many copies of certain types of cells that can be used for scientific research.
- E) Cell cloning aims to produce many copies of certain types of cells so that they can be used in scientific research.

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

54. Suspension bridges have many advantages over other kinds of bridges because of their design. For one thing, they can span great distances. The longest suspension bridge in the world is the Akashi-Kaikyo Bridge in Japan, covering an impressive 12,831 feet. ---- For example, if the deck of the bridge is too thin, it can lose its stability in heavy winds and shake itself to pieces, which is what happened to the Tacoma Narrows Bridge in the United States in 1940.

- A) The first suspension bridge is considered to have been constructed in the 7th century BC by Mayans.
- B) This \$3.3 billion bridge, which took 12 years to build, is seen as a great engineering masterpiece.
- C) Furthermore, the wonderful design of these structures can make you wonder how they stay up.
- D) However, suspension bridges require careful design and planning to avoid any undesirable consequences
- E) A suspension bridge hangs from steel cables that are supported by towers at each end.

55. The sun's heat energy passes easily through glass and warms the room beyond, which means windows make ideal solar collectors. For maximum capture of solar energy, a house needs large south-facing windows. ---- Even if it cannot be oriented precisely north-south, it is still possible to harness a good percentage of the sun's energy. Also, to adapt to an existing house, there are several options. For instance, bigger windows on the south-facing walls could be installed.

- A) The type of glass in your windows determines how efficiently solar energy is captured.
- B) In new construction, this is easy to achieve by siting the house accordingly.
- C) The idea is to store heat and to radiate it back after the sun has gone down.
- D) The most efficient way to do this is with a heat recovery ventilation system.
- E) The sun is a fantastic source of costless heat that can be harnessed very simply.

56. Dissolved oxygen is the amount of oxygen present in freshwater, such as a stream, or freshwater lake. A certain amount of dissolved oxygen is required to sustain fish, animals, and other aquatic life. ---- These include fish being killed and loss of aquatic ecosystems.

- A) The oxygen is refilled through several mechanisms, one being the simple diffusion of the oxygen from the atmosphere into the water.
- B) Since most aquatic organisms need oxygen to live, it is important to maintain dissolved oxygen in water.
- C) Any decrease in dissolved oxygen can cause changes, usually negative, in an aquatic system.
- D) Determining the amount of dissolved oxygen in an aquatic system aids in the measurement of biochemical oxidation.
- E) Dissolved minerals such as magnesium and calcium contribute to the hardness of water.



57. Species have evolved throughout the course of natural history, and the fossil record is filled with evidence of extinctions, some of which have been sudden and catastrophic.

Ecologists believe that we are in such an era of rapid species extinctions today. ---- For example, the spotted owl is endangered by overharvesting of old-growth forests in the United Kingdom, and the bald eagle has been nearly rendered extinct in the United States outside of Alaska due to poisoning with pesticides.

- A) Species biodiversity has a number of health benefits for humans
- B) Enacted in 1973, the Endangered Species Act emerged to protect wildlife in the United States.
- C) Using fossil records to determine which species became extinct is a well-established method.
- D) The most prominent current cause is human activity, which brings about loss of habitat for species and also causes pollution.
- E) The protection of endangered species is a very complex and challenging task.

58. Cold storage through refrigeration or freezing makes it possible to extend both the seasons of harvest and the geographic area in which a product is available. ---- But now, modern cold storage technology makes virtually any product available year-round on a global basis. Other technologies have been combined with refrigeration to further improve this availability, such as a sealed room where the air is modified to increase its nitrogen content to keep food fresh.

- A) Time and temperature are the key factors that determine how well foods can retain their properties.
- B) The next step in the cold storage food chain is transport by railroad cars, trucks, airplanes, or boats.
- C) Refrigerated warehouses maintain the temperatures required to assure maintenance of quality.
- D) Food that is placed in cold storage is protected from the degradation that is caused by microorganisms.
- E) Food products were previously grown locally and had to be marketed within a short period of time.

**59. Flash floods are floods that occur extremely quickly, usually within several minutes or hours. They cause streams and rivers to rise rapidly and wash over the land, destroying almost everything in their path. Their destructiveness is based on several factors, including rainfall intensity, duration, surface conditions, and slope of the area. --- Mountain regions are also prone to flash flooding, and even deserts and arid regions are vulnerable to flash floods, since many dry regions are known for intense thunderstorms which can produce a lot of rainwater in a short time.**

- A) Flash floods are very unpredictable and can occur at any time of the year.
- B) Floodwaters can carry a great deal of sediment and debris, coating the inside and outside of a building.
- C) Flash flooding is considered to be the main reason for deaths associated with thunderstorms, especially when they occur at night.
- D) The destructive potential of flood currents is tremendous as they can cause massive amounts of erosion
- E) Urban areas are the most susceptible to flash floods, since a high percentage of the surface area cannot absorb water.

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

- 60. (I)** The name 'reptiles' refers collectively to a confused mixture of different animals, such as turtles, crocodiles, lizards, and snakes, that are not birds or mammals. **(II)** The antique scientific concept reptilia promotes misperception and misunderstanding of history and the diversity of some vertebrates. **(III)** The term 'reptile' is now a deeply established popular name rather than a scientific one. **(IV)** For much of the later 19th and most of the 20th century, reptilia was taken to mean a group composed of the ancestors of living reptiles. **(V)** Similarly, the ancestors of all mammals and birds were taken under the term reptilia.
- A) I    B) II    C) III    D) IV    E) V
- 61. (I)** One can usually see rainbows after summer rains, early in the morning or late in the afternoon, when the sun is low. **(II)** Diamond-shaped glass objects, mirrors or other transparent items can also be used to form a rainbow. **(III)** Raindrops act as tiny prisms and disperse the white sunlight into the form of a large beautiful arch composed of visible colours. **(IV)** To see these colours, one must be located between the sun and raindrops forming an arc in the sky. **(V)** When sunlight enters the raindrops at the proper angle, it is refracted by the raindrops, then reflected back at an angle that creates a rainbow.
- A) I    B) II    C) III    D) IV    E) V
- 62. (I)** Dominique-François-Jean Arago was the leading French astronomer for the first half of the 19th century. **(II)** Among Arago's achievements in astronomy is his discovery of the Sun's chromosphere. **(III)** The chromosphere is the thin and usually transparent layer of the Sun's atmosphere. **(IV)** He also offered a pioneering explanation for the twinkling of stars. **(V)** In addition, Arago conducted research that helped lead one of his assistants, Urbain Jean Joseph Leverrier, to discover the planet Neptune.
- A) I    B) II    C) III    D) IV    E) V
- 63. (I)** It is estimated that sales of genetically modified (GM) seed in 2015 amounted to \$15.3bn. **(II)** This was grown in over 20 countries on an area greater than 440 million acres - more than a 100-fold increase since 1996. **(III)** In 2015, the top five countries in order of area of GM crops cultivated were the USA, Brazil, Argentina, India and Canada. **(IV)** In contrast, only about 290,000 acres were grown in the EU, all were an insect-resistant variety of maize. **(V)** Miami was the first to announce that specific genes could be introduced into plant cells, and then whole plants could be generated with only a single altered characteristic.
- A) I    B) II    C) III    D) IV    E) V
- 64. (I)** Earth's major terrestrial, marine, and freshwater ecosystems are known as biomes. **(II)** Significant changes in the global environment and climate are causing major shifts in some biomes. **(III)** They are classified according to similarities in species composition of plants and animals and by environmental attributes. **(IV)** These include temperature, precipitation, and soil type in terrestrial biomes and temperature, depth, and salinity in aquatic biomes. **(V)** However, there are no hard boundaries between biomes and there is much intermixing of species between them.
- A) I    B) II    C) III    D) IV    E) V
- 65. (I)** After 1890, the development, manufacture, and use of glass increased so rapidly as to be almost revolutionary. **(II)** The science and engineering of glass as a material are now so much better understood that glass can be tailored to meet an exact need. **(III)** Machinery has been developed for precise, continuous manufacture of sheet glass, tubing, containers, bulbs, and a host of other products. **(IV)** In the early 1800s, the greatest demand was for window glass. **(V)** New methods of cutting, welding, sealing, and tempering have also led to the use of glass in completely new fields.
- A) I    B) II    C) III    D) IV    E) V

**66 - 68. soruları aşağıda verilen parçaya göre cevaplayınız.**

One of the most famous volcanoes may be misunderstood. Carmelo Fertilo, a geologist from Italy, believes the material feeding Mount Etna's cone is mostly water, so it is effectively a giant hot spring. However, most geologists are unconvinced. Mount Etna is almost always active. It may have spewed 70 million tonnes of lava in 2011 alone. What really puzzles the Italian geologist is that Etna also discharges more than 7 million tonnes of steam, carbon dioxide and sulphur dioxide every year. The normal explanation is that gas bubbles out of magma as it moves up the volcano's vent. However, Fertilo claims that Etna would need to erupt ten times more lava than it does to account for all the gas. He also argues that Etna is not just fed by magma. He states that its deep plumbing system could hold lots of water, carbon dioxide and sulphur dioxide. making up about 70 per cent of the material feeding the volcano. According to Fertilo, such a system is closer to a spring rather than a volcano. However, according to Kayla Lacovino, there are simpler alternatives. She has argued that the excess gas could come from deep molten rock that does not enter Etna.

**66. It can be understood from the passage that most geologists ----.**

- A) doubt Fertilo's arguments about Mount Etna
- B) have misunderstood Fertilo's claims about Mount Etna
- C) agree with lacovino as well as Fertilo
- D) claim that Mount Etna is a hot spring
- E) try to provide new findings to support their own claims

**67. According to the passage, Fertilo believes that Mount Etna ----.**

- A) had its largest and most devastating eruption in 2011
- B) erupts ten times more lava than gas
- C) includes some of the characteristics of a hot spring
- D) is the most unpredictable volcano on Earth
- E) can remain inactive for long periods of time

**68. Which could be the best title for this passage?**

- A) The Eruptions of Mount Etna Throughout History
- B) Excess Gas in Mount Etna
- C) What Really Feeds Mount Etna?
- D) Why is Mount Etna Always Active?
- E) The Most Famous Volcanoes on Earth

**69 - 71. soruları aşağıda verilen parçaya göre cevaplayınız.**

The science behind growing meat without animals is fairly simple. Growing the cells that form cultured meat is not hugely different from other 'cell culture' methods that biologists have used to study cells since the early 1900s. The process starts with a few "satellite" cells, which can be obtained from a small sample of muscle taken from a live animal. These are stem cells that can turn into the different cells found in muscle. Just one cell could, in theory, be used to grow an infinite amount of meat. When fed a nutrient rich serum, the cells turn into muscle cells and proliferate, doubling in number roughly every few days. After the cells have multiplied, they are encouraged to form strips, much like how muscle cells form fibres in living tissue. These fibres are attached to a sponge-like scaffold that floods the fibres with nutrients and mechanically stretches them, 'exercising' the muscle cells to increase their size and protein content. The resulting tissue can then be harvested, seasoned, cooked and consumed as boneless processed meat.

**69. It is clearly stated in the passage that ----.**

- A) it is not a must to have a sample cell from a living animal to produce meat
- B) studying cells is a relatively new concept in the current decade
- C) producing meat from a muscle cell in a lab is quite a complicated process
- D) the first step in creating meat is to double the number of muscle cells
- E) growing meat without animals is a process similar to other cell culture methods

**70. According to the passage, stem cells ----.**

- A) are cells that do not have the ability to multiply
- B) are composed of various cells that have different functions
- C) have the ability to transform into different cells in a muscle
- D) need to be attached to other cells to form living tissues
- E) decrease in number at the end of the production process

**71. The passage is mainly about ----.**

- A) the advances in human cell production under scientific intervention
- B) the reasons why cell production may not be practical for common use
- C) different types of cell culture methods used by biologists since the early 1900s
- D) an alternative way of growing meat through unconventional means
- E) some steps followed by scientists to cure animal diseases by producing cells

72 - 74. soruları aşağıda verilen parçaya göre cevaplayınız.

River systems are completely changed when dams are built. The main reason is obvious: dams block the channels, altering the water's direction by decreasing or increasing the amount of water that flows through the channel - the defined pathway the water follows. In turn, this modifies or completely changes the river's erosional and depositional characteristics, thus changing the channel's landscape and affecting the local environment. Although there are good reasons for dams (mainly to stop flooding in populated areas), there are often just as many potential problems. One in particular is the erosion that occurs just below the main structure holding back the water. Because the sediment is no longer transported within the water (the load is dropped in the reservoir), the water from the spillway often erodes the channel immediately below. Another problem can also arise from the fact that because there is less sediment load, there is also less of a delta being formed at the mouth of a river. For example, the Aswan High Dam along the Nile River in Egypt was finished in 1966, primarily to provide electricity and irrigation. But the water is dammed up in a lake about 280 kilometres long, and this is starving the Nile delta of sediments. Because of this, the currents in the Mediterranean Sea are carrying away more sediment than the river can replenish and causing the delta to slowly erode away.

72. According to the passage, dams ----.

- A) do not affect erosional characteristics of a river as much as depositional ones
- B) provide more beneficial than harmful effects to the local environment
- C) may adversely affect river systems and the local environment
- D) can stop flooding but have no other real benefits
- E) generally increase the amount of water that flows through channels

73. The problem with the Aswan High Dam is that ----.

- A) it cannot provide enough electricity
- B) it has a negative impact on the currents in the Mediterranean Sea
- C) it is reducing the size of the Nile delta
- D) the people in the Nile region are still facing problems with irrigation
- E) sediment is flooding in from the Mediterranean Sea

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

- A) reduce
- B) ruin
- C) renew
- D) resist
- E) restrict

**75 - 77. soruları aşağıda verilen parçaya göre cevaplayınız.**

An 11-year-old boy taps furiously on a laptop, hiding from enemies as he runs through a city. They catch him before he reaches safety - game over. Frustrated, he opens the game's programming window, adjusts the settings, and this time gets past the bullies. Victory! This could be the future of American education. The Quest to Learn' school opened last September in Manhattan, welcoming the first class of sixth-graders who will learn almost entirely through video game-inspired activities, an educational strategy developed to keep kids engaged and prepare them for high-tech careers. For many years, videogames have outperformed teachers in one key way: They are exceptionally good at engaging kids, which is, in fact, a serious problem for teachers. Videogames drop kids into complex problems where they fail and fail, but they try again and again. When kids face tough problems in school, however, they sometimes just give up, which is why only a third of eighth-graders earn proficient math scores on national assessment tests. The educators behind 'The Quest to Learn' school hope that video game-based lessons will help to overcome that problem.

**75. According to the passage, the introduction of video game-based lessons into the American education system ----.**

- A) will dramatically help students to find the easiest way to overcome their problems
- B) will encourage many students to have high-tech careers
- C) is necessary to help students adjust to technology
- D) will assist children in dealing with bullies
- E) may negatively affect students' self-confidence since they can fail several times

**76. It is stated in the passage that it is a challenge for many teachers to ----.**

- A) prepare students for high-tech careers
- B) adapt themselves to technological changes
- C) use video games effectively in class
- D) attract and keep students' attention and interest
- E) help students gain new learning strategies

**77. The reason why many eighth-graders cannot get proficient math scores is that they ----.**

- A) spend too much time playing videogames
- B) tend to give up when they face a challenge
- C) are given very complex math problems to solve
- D) mostly take video game-based lessons that are not aimed at improving their math skills
- E) are not adequately prepared by their teachers

**78 - 80. soruları aşağıda verilen parçaya göre cevaplayınız.**

With its flat landscape, Copenhagen is an unlikely ski destination. But an innovative project called Copenhill aims to pair recreation with renewable energy. Copenhill is a massive facility in the city's industrial area that converts trash to electricity, providing power for 30,000 homes in Copenhagen and heat for more than twice that number. The new structure will eventually include an urban ski park, a climbing wall, and a cafe on its roof with an attractive city view. Copenhill is 25 per cent more efficient than the other waste-burning facility in Copenhagen and will be able to control its own carbon dioxide emissions, in line with Denmark's ambitious goal to become carbon-neutral by 2050. The idea of burning garbage has its critics, who say waste-to-energy facilities merely reinforce excessive consumerism. But in 2018, Copenhill processed almost 500,000 tons of garbage. That is better than filling up landfills, which are potent sources of methane - a greenhouse gas that can ruin the prospect of anyone's enjoyment.

**78. According to the passage, Copenhill ----.**

- A) will be able to power thousands of homes in many cities across Denmark once construction is complete
- B) will provide several recreational opportunities in the future, such as skiing, climbing and enjoying the city view
- C) will probably not include a cafe at its roof due to high amounts of carbon dioxide in Copenhagen
- D) was built in its current location as it is important to construct recycling facilities in flat areas
- E) will stop functioning as a recycling facility when an urban ski park is built

**79. According to the critics of Copenhill, ----.**

- A) waiting until 2050 to start seeing the possible benefits promised by the new facility is far too long
- B) the other waste-burning facility is more efficient even though it cannot control its carbon dioxide emissions
- C) it may not be possible to convert trash to electricity if an urban ski park is integrated into the facility
- D) the facility is going to result in methane increases in landfills, which will ruin the environment
- E) recycling waste in order to produce power is not reasonable because it promotes high consumption

**80. What is the author's attitude towards Copenhill?**

- A) Supportive
- B) Critical
- C) Doubtful
- D) Neutral
- E) Ignorant



**YÖKDİL FEN BİLİMLERİ  
CEVAP ANAHTARLARI**



**YÖKDİL FEN 2018 İLKBAHAR  
CEVAP ANAHTARI**

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

**YÖKDİL FEN 2018 YAZ  
CEVAP ANAHTARI**

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

## YÖKDİL FEN 2019 MART

## CEVAP ANAHTARI

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

## YÖKDİL FEN 2019 KASIM

## CEVAP ANAHTARI

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

## YÖKDİL FEN 2020 MART

## CEVAP ANAHTARI

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