

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

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

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

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 olacaktır.
- 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 milyarderlere 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 felakete 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

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 - 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.

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 metallerden 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 metallerden daha esnek olmasıdır.
- C) Çelik gibi metaller esnek oldukları için, kompozit malzemelerin tren yapımında kullanımı uzun zamandır tartışılmaktadır.
- D) Kompozit malzemeler, çelik gibi metallerden daha esnek olsalar da, tren yapımında kullanımı, güvenlik açısından sakıncalıdır.
- E) Çelik gibi metallerden 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 güvendikleri 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 shynospheres 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

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

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

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 O₃ 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 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