

A

İNGİLİZCE

FEN BİLİMLERİ

1. – 18. sorularda, cümlede boş bırakılan yerlere uygun düşen sözcük ya da ifadeyi bulunuz.

1. **Marine biodiversity ensures that ecosystems recover relatively quickly after an accidental or natural ----.**

- A) disturbance B) hesitation
C) encouragement D) dedication
E) spectacle

2. **According to kinetic theory, the absolute temperature of a gas is directly ---- to the average kinetic energy of the molecules.**

- A) experimental B) fundamental
C) negligible D) proportional
E) exceptional

3. **At times during the last Ice Age the North Atlantic thermohaline circulation was ---- weaker than it is today.**

- A) pleasantly B) rarely
C) considerably D) directly
E) fully

4. **In the 1940s, computer pioneer Konrad Zuse began to ---- that the universe might be nothing but a giant computer continually executing formal rules to compute its own evolution.**

- A) denounce B) pressurize
C) empower D) evade
E) speculate

5. **In recent years, carbon dioxide (CO₂), a naturally occurring greenhouse gas, has been ---- as a result of activities such as the burning of fossil fuels and deforestation.**

- A) setting out B) building up
C) going out D) coming in
E) reaching up

6. **The movement of electrons within electromagnetic waves ---- some of the wave's energy, affecting the properties of the wave and how it travels.**

- A) tells off B) puts in
C) finds out D) uses up
E) goes around

7. **Some evolutionary biologists argue that if the clock of evolution ---- to the beginning and allowed to run again to the present day, the resulting animals on Earth ---- very different from the ones we know now.**

- A) has been rewound / would have been
B) is rewound / will be
C) might be rewound / will have been
D) had been rewound / had been
E) could be rewound / might be

Diğer sayfaya geçiniz.

8. Scientists who ---- alert the world to the existence of a hole in the stratospheric ozone layer recently reported that this feature of the atmosphere ---- widening soon.
- A) help / would stop
B) have helped / might have stopped
C) helped / may stop
D) will help / might stop
E) had helped / has stopped
9. Meteorites ---- the best available record of the chemical and physical processes that ---- during the first million years of our solar system's history.
- A) provide / occurred
B) are providing / have occurred
C) had provided / occurred
D) could provide / would occur
E) provided / might occur
10. Today one third of the carbon dioxide (CO₂) given off by burning fossil fuels ---- the oceans, thus ---- their naturally alkaline pH.
- A) is entering / reduces
B) enters / reducing
C) had entered / will reduce
D) will enter / reduced
E) would enter / having reduced
11. Until recently, some scientists ---- that many individuals of the same species ---- specific tasks better than the same number of individuals from different species.
- A) will think / are performing
B) were thinking / will perform
C) think / ought to perform
D) had thought / would be performing
E) thought / could perform
12. Archaeological records show evidence ---- local plants being used as medicine ---- ancient Egyptian and Stone Age times.
- A) about / at
B) of / in
C) with / by
D) from / for
E) on / to
13. The Weddell seal can swim under the ice ---- a depth of 500 metres ---- more than an hour without coming up for air.
- A) to / between
B) in / during
C) at / for
D) on / through
E) with / about

14. ---- providing energy, proteins provide the raw materials for building the body's tissues and regulating its many activities.

- A) According to B) As regards
C) Despite D) In addition to
E) Contrary to

15. The theory posits that Earth's climate changes ---- cyclic variations in the way it orbits the sun.

- A) in place of B) in case of
C) so as to D) in view of
E) as a result of

16. Life on Earth would be impossible without water, ---- all life forms, from bacteria to plants and animals, contain it.

- A) since B) even so
C) unless D) that
E) when

17. Obtaining nutrients is of ---- vital importance ---- both individual organisms and ecosystems are structured around the central theme of nutrition, the process of taking in and using food.

- A) more / than B) such / that
C) so / as D) much / like
E) either / or

18. Butterflies have some characteristics that are ---- for professional scientists to understand ---- amateur enthusiasts.

- A) easier / than B) the easiest / as
C) as easy / so D) so easy / that
E) easiest / like

19. – 23. sorularda, aşağıdaki parçada numaralanmış yerlere uygun düşen sözcük ya da ifadeyi bulunuz.

Among the earliest events in fruit fly development are those that determine which end of the egg cell will become the head and which end will become the tail. These events (19) ---- in the ovaries of the mother fly and involve communication between an unfertilized egg cell and the cells next to it. One of the first genes activated in the egg cell produces a protein that leaves the egg cell and signals neighbouring follicle cells. Then these follicle cells (20) ---- to turn on genes for other proteins, which signal back to the egg cell. One of the egg cell's responses is to localize a specific type of mRNA at one end of the cell. This mRNA marks the end of the egg (21) ---- the fly's head will develop, and thus defines the fly's head-to-tail axis. (22) ----, other egg cell genes direct the positioning (23) ---- the top-to-bottom and side-to-side axes.

19.

- A) instruct B) dispel C) embrace
D) identify E) occur

20.

- A) will be stimulated B) stimulate
C) are stimulated D) have been stimulated
E) are stimulating

21.

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

22.

- A) On the contrary B) Similarly
C) Nevertheless D) Despite this
E) As a result

23.

- A) behind B) to
C) about D) of
E) at

24. – 35. sorularda, verilen cümleyi uygun şekilde tamamlayan ifadeyi bulunuz.

24. Long before Linnaeus established his system for naming plants in the 18th century, ----.

- A) around the world, orchids have long been symbols of fertility and potency as in the Greek legend of Orchis
- B) the common names of flowers should be highly evocative or imaginative
- C) early attempts at growing orchids had consisted of placing plants in pots filled with a thick mixture of rotting wood and leaves
- D) many Amazonian orchids are referred to locally as “monkey love-potions”
- E) people throughout the world called plants by their own inventive names

25. While air quality may improve with increased biofuel use, ----.

- A) water quality can suffer due to over-use of fertilizers and overdrawn water supplies
- B) worldwide ethanol demand has pushed up the cost of corn by 25% and sugar by 100%
- C) meanwhile, fuel crops had increased in value
- D) the energy balance of today’s ethanol is positive
- E) 75 million gallons of biodiesel and 4 billion gallons of ethanol were made last year

26. When sunlight hits a raindrop, ----.

- A) a ray of sunlight actually consists of a mixture of differently-coloured light
- B) a typical raindrop is spherical in shape
- C) the rainbow is actually a circle which is centered on the point that is directly opposite the sun from the observer
- D) there is a reduction in its speed and this causes the light to bend
- E) refraction is the bending of light as it passes from one medium to another

27. Having taken in more carbohydrates than it needs, ----.

- A) sugar can contribute to nutrient deficiencies only by displacing nutrients
- B) the body uses glucose to meet its energy requirements, fills its glycogen stores to capacity, and may still have some left over
- C) researchers agree that unusually high doses of refined sugar can alter blood lipids to favour heart disease
- D) high-fibre foods not only add bulk to the diet, but are economical and nutritious
- E) a high-fat diet raises the risks of heart disease, some types of cancer, hypertension, diabetes and obesity

28. ----, yet the “software programmes”, or genes, inside our bodies have not changed much in thousands of years.

- A) Computer software has come down in price by half annually
- B) There is a gene that tells fat cells to hold on to every calorie in order to protect the body during periods of starvation
- C) Scientists are researching new methods to overcome the difficulties of gene therapy
- D) A human gene is composed of two sets of 23 chromosomes
- E) Our computers and other electronic devices typically have their software updated every few months

29. ---- because at these speeds they can propel the car without using engine power.

- A) The two-mode hybrid systems contain two electric motors surrounding two planetary gear sets
- B) At higher velocities, engine power is required
- C) The systems can deliver continuous power in the required amounts
- D) Single-mode hybrid automobile systems are more fuel-efficient at lower speeds
- E) Two-mode systems switch between modes without the driver realizing it

30. Biological psychology is interdisciplinary by nature ----.

- A) now that about half the people who have advanced degrees in psychology will work in colleges and universities
- B) if our treatment of consciousness reflected both the biological and cognitive perspectives
- C) since it seeks to establish relationships between psychological processes and biological ones
- D) just as biological researchers have often attempted to explain psychological principles in terms of biological ones
- E) and so cognitive science and cultural psychology are further examples of this phenomenon

31. Most viruses cannot survive very long outside a living host cell, ----.

- A) although temperate bacteriophages do not always destroy their hosts
- B) but the type of attachment proteins on the surface of a virus determines what type of cell it can infect
- C) since viruses have several ways to penetrate animal cells
- D) so their survival depends to a great extent on their being transmitted from animal to animal
- E) yet under a microscope, most bacteria appear similar in size and form

32. ----, it is now actually quite a simple matter to make electrons oppose the "push" of applied electric and magnetic fields.

- A) Although this process might have seemed impossible in the past
- B) Rather than the wave reacting to an individual molecule
- C) Whether there is a collective response of millions of molecules
- D) Because one wants to understand how negative refraction can arise
- E) Since much remains to be done to turn such visions into reality

33. Physical activity limits the rise in blood glucose that would normally occur after a meal ----.

- A) but aerobic exercise is typically recommended for people who want to lose weight
- B) since research is ongoing in this area
- C) whereas it takes weeks to months of aerobic training to improve physical fitness
- D) that it will be required only under certain specific conditions
- E) by making insulin work better in moving glucose into muscle

34. ----, astronomers want to take pictures of galaxies of various ages from infancy to maturity.

- A) Because *Hubble* has taken long exposures of small patches of sky
- B) In order to get an idea of what the Milky Way might have looked like in the past
- C) Even though old galaxies were smaller in size and more irregular in shape than modern ones
- D) As one would expect, if today's galaxies formed from the union of several smaller ones
- E) If the rate of star formation reached its peak around seven billion years ago

35. RNA interference, ----, can turn specific genes off.

- A) that a new technology could be developed
- B) whose ability to understand the brain was accelerating
- C) just as hypertension in animals is common
- D) in that nanoparticles can latch onto cancer cells
- E) which scientists have only recently begun to understand

36. – 38. sorularda, verilen İngilizce cümleye anlamca en yakın Türkçe cümleyi bulunuz.

36. **Most scientists are of the opinion that hurricane Katrina, which caused colossal damage to the coastal areas of Louisiana in America, was clearly linked with global warming.**

- A) Pek çok bilim adamı, Amerika'da Louisiana sahil bölgelerinde büyük tahribata yol açan Katrina kasırgasının, küresel ısınmanın bir sonucu olduğu görüşünü benimsemektedir.
- B) Çoğu bilim adamı, Amerika'da Louisiana'nın sahil bölgelerinde çok büyük hasara neden olan Katrina kasırgasının, küresel ısınmayla açıkça bağlantılı olduğu görüşündedir.
- C) Pek çok bilim adamına göre küresel ısınmayla açıkça bağlantılı olan Katrina kasırgası, Amerika'da Louisiana kıyılarında çok büyük tahribata yol açmıştır.
- D) Çoğu bilim adamına göre küresel ısınmayla kesin ilişkisi olan Katrina kasırgası, en korkunç etkisini Amerika'nın Louisiana sahillerinde göstermiştir.
- E) Birçok bilim adamı, küresel ısınmadan kaynaklanan kasırgaların Amerika'da Louisiana'nın sahil bölgelerini vuran Katrina gibi, büyük hasarlara neden olacağını düşünmektedir.

37. **The fact that the majority of the scientific world subscribes to a particular view does not make it absolutely right.**

- A) Belirli bir görüş mutlak doğru olmasa da bilim dünyasında çoğunluk tarafından benimsenmiş olabilir.
- B) Bilim dünyasında çoğunluğun aynı görüşe sahip olması, bu görüşün mutlaka doğru olduğu anlamına gelmez.
- C) Bilim dünyasının çoğunluğu belirli bir görüşü mutlak doğru kabul etmiş olsa da gerçek bunun tam tersi olabilir.
- D) Bilim dünyasının çoğunluğunun belirli bir görüşü kabul etmesi, bu görüşü mutlak doğru kılmaz.
- E) Belirli bir görüş bilim dünyasında çoğunlukla benimsenmiş olsa bile, mutlaka doğru olmayabilir.

38. **Even if all fossil-fuel power stations worldwide were switched off tomorrow, global temperatures would continue to rise for another fifty years.**

- A) Fosil yakıtı dayanan enerji santralleri tüm dünyada durdurulsa bile küresel sıcaklıkların hızla artması sorunu en az bir elli yıl daha çözülemeyecektir.
- B) Tüm dünyadaki fosil yakıtla çalışan enerji santralleri yarın kapatılsa bile, bu durum küresel sıcaklığın artmasını elli yıl daha durduramaz.
- C) Eğer fosil yakıtlı enerji santralleri tüm dünyada hemen kapatılabilirse, küresel sıcaklık ancak elli yıl daha yükselmeye devam eder.
- D) Fosil yakıt kullanan enerji santralleri yarın tüm dünyada kapatılsaydı, küresel sıcaklığın artması sadece elli yıl sürerdi.
- E) Dünyadaki tüm fosil yakıtlı enerji santralleri yarın devreden çıkarılsa bile, küresel sıcaklıklar bir elli yıl daha yükselmeye devam edecektir.

39. – 41. sorularda, verilen Türkçe cümleye anlamca en yakın İngilizce cümleyi bulunuz.

39. **Darwin'in ileri sürmüş olduğu başlıca düşünceler, bilimdeki pek çok kavram gibi, eski Yunanlılara kadar izlenebilir.**

- A) The main ideas Darwin advanced, like many concepts in science, can be traced back to the ancient Greeks.
- B) Similar to many concepts in science, the majority of ideas put forward by Darwin are often attributed to the ancient Greeks.
- C) Like a number of scientific concepts, most of the ideas suggested by Darwin may have been derived from the ancient Greeks.
- D) Many ideas advanced by Darwin can, like the majority of concepts in science, be related to the ancient Greeks.
- E) Like a lot of ideas in science, a great majority of concepts developed by Darwin are referred to in the works of the ancient Greeks.

40. Tür olarak varlığımızı sürdürmemiz toprağa bağlıdır; ancak erozyon ve kimyasal kirlilik, bu yamsal kaynağı tüm dünyada tehdit etmektedir.

- A) Erosion and chemical pollution throughout the world threaten our survival as a species, which depends on soil as a vital resource.
- B) Soil is indispensable for our survival, and yet this resource of vital importance is threatened by erosion and chemical pollution worldwide.
- C) For our survival as a species, we especially depend on soil, and yet this important resource is threatened worldwide by erosion and chemical pollution.
- D) Our survival as a species depends on soil, and yet erosion and chemical pollution threaten this vital resource throughout the world.
- E) Throughout the world, erosion and chemical pollution threaten soil, which, as a vital resource, is indispensable for our survival.

41. İki galaksinin çarpışması, evrenin kütlesine hükmettiği sanılan görünmez kara maddenin bugüne kadar elde edilen en iyi kanıtını sağlar.

- A) Following the collision of two galaxies, there appears the best evidence so far known of the invisible dark matter which is believed to pervade the mass of the universe.
- B) The collision of two galaxies provides the best evidence yet obtained of the invisible dark matter assumed to dominate the mass of the universe.
- C) The only evidence so far of the invisible dark matter thought to penetrate the mass of the universe is provided by the collision of two galaxies.
- D) It is from the collision of two galaxies that the best evidence yet of the invisible dark matter which is assumed to hold together the mass of the universe has been obtained.
- E) The invisible dark matter which is thought to dominate the mass of the universe is best understood through the evidence provided by the collision of two galaxies.

42. – 46. sorularda, boş bırakılan yere, parçada anlam bütünlüğünü sağlamak için getirilebilecek cümleyi bulunuz.

42. Hippopotamuses can be irritable and aggressive when it comes to defending their territory and their young. ----. They have trampled or gored people who came too near, dragged them into lakes, tipped over their boats, and bitten off their heads.

- A) Hippos are led by dominant males, which can weigh 6,000 pounds or more
- B) Agricultural irrigation systems and other developments have depleted the hippos' wetland, river and lake habitats
- C) Although hippos occasionally fight with crocodiles, a growing number of their attacks are on humans
- D) A decade ago there were about 160,000 hippos in Africa, but the population has dwindled to between 125,000 and 148,000 today
- E) In countries beset by civil unrest, where people are hungry and desperate, hippos are hunted for their meat

43. The historian G. Sarton said that the development of mathematics is unknown to the general public. ----. Cayley's seminal investigations of matrix algebra were crucial for the development of linear algebra. The terms *matrix*, *determinant* and *Jacobian*, familiar to most science students, were invented by Sylvester.

- A) Cayley was a Trinity College fellow at Cambridge for a few years until he married
- B) It isn't clear when they met, but by 1847 they were corresponding to share thoughts about mathematics
- C) Each had triumphed on the University of Cambridge's fearsome Tripos examinations
- D) Certainly very few have ever heard of A. Cayley or J.J. Sylvester, two of the most prolific mathematicians of the Victorian era
- E) J.J. Sylvester was not only a mathematician but also an enthusiastic poet who called himself the "mathematical Adam"

44. ----? The answer to that question can range from days to months to decades on the one extreme and from centuries to millenia, and possibly even longer depending on such diverse and interrelated factors as design, construction and maintenance.

- A) How old is the world-famous Brooklyn Bridge
- B) Can a bridge possibly be designed to last a century
- C) How long did London's Millennium Bridge stay open
- D) The Tacoma Narrows Bridge lasted only four months before it fell to the wind, didn't it
- E) How long can a bridge last

45. Detecting a virus on any nanosize particle usually means fixing it to a substrate or attaching a fluorescent probe to it, neither of which is practical for detecting particles in real time. ----. The system splits a laser beam in two, sending one half to a sample. When the light hits a small particle, it is reflected back and recombined with the reserved half of the laser beam, producing a detectable interference pattern only when a moving particle is present.

- A) The method works because it relies on the light's amplitude rather than its intensity
- B) The investigators have so far detected single particles as small as seven nanometres across
- C) Now physicists have assembled a simple system for doing just that
- D) A substrate is a substance that reacts when it comes into contact with a particular enzyme
- E) Amplitude is the square root of intensity

46. Why do young chameleons prefer to stay close to the ground? In a recent study published in *Behavioral Ecology and Sociobiology*, biologists argue that cannibalism in the common chameleon has resulted in a habitat shift. ----. Juvenile chameleons tend to stay in low grasses, whereas adults make better use of their anatomical gifts by living primarily in trees.

- A) That is, as individuals develop, their choice of habitat changes
- B) With its prehensile tail and strong, opposing toes, the common chameleon is a natural climber
- C) Young chameleons showed little change in behaviour when with other juveniles
- D) The biologists placed a one-way mirror between an adult and a juvenile, so that the adult could see the juvenile but not the other way round
- E) Whether an attack was likely when there was close contact between the generations was also tested

47. – 51. sorularda, karşılıklı konuşmanın boş bırakılan kısmını tamamlayabilecek ifadeyi bulunuz.

47. Maeve :
- I learned today that there are actually two types of synapses in an animal's nervous system.

Charles :
- ----

Maeve :
- Which type transmits signals faster?

Charles :
- The second, because it sends signals directly, without using a neurotransmitter.

- A) Oh, really? I only know of one type.
- B) Most people have only heard of chemical synapses.
- C) Electrical synapses were first found in crayfish in 1957.
- D) Yes, chemical and electrical synapses.
- E) Synapses send information from the nervous system to the brain, and vice versa.

48. Tim :

- Did you know that NASA is going to send another manned mission to upgrade and repair the *Hubble* space telescope?

Max :

- Oh? I thought that, after the 2003 *Columbia* shuttle disaster, they were going to send manned spacecraft only to the International Space Station.

Tim :

- ----

Max :

- I hope NASA's taking the proper precautions this time.

- A) The space telescope is deteriorating because of dust and radiation.
- B) Well, NASA changed its mind because a robotic mission has turned out to be impossible.
- C) *Hubble* was first launched into space in 1990. Did you know that?
- D) I learned from this article that Edwin Hubble was the first astronomer to describe the expansion of the universe.
- E) The *Hubble* telescope has sent back thousands of valuable images. I think it's worth the mission, don't you?

49. Mary :

- I watched a news report this evening about a man who had started many forest fires. Investigators were able to find him by examining the areas where the fires had started.

Paul :

- ----

Mary :

- No; they looked very carefully, sometimes with a magnifying glass or metal detector, to find the match or other agent that had been used to set the fire, and then they traced it back to the person. It almost always works.

- A) Have you ever been near a forest fire when it was burning?
- B) A fire last August nearly burnt up my aunt's home in California. I hope they catch whoever set that fire, too.
- C) How could they possibly have done that? Weren't all the clues burnt up in the fire?
- D) How could they find the place where the fire had started?
- E) I think people should be very careful with matches or cigarettes when they are in the forest.

50. Carol :
- **Do you know what makes birds' vision better than ours?**
- Mike :
- ----
- Carol :
- **Why do they have that ability when humans don't?**
- Mike :
- **I think it's because early mammals were active at night, when there's no ultraviolet light from the sun, and so they lost the ability, but birds didn't.**
- A) It's partly because they can see ultraviolet light wavelengths, while humans can't.
- B) They need to see better in order to determine the health of a potential mate.
- C) It's impossible for humans to know what birds' perception of colours is actually like.
- D) I think their vision is always strengthened by ultraviolet light.
- E) Insects can also see ultraviolet wavelengths.

51. Brenda :
- **Have you heard of the new Internet technology that allows people to conduct a search for information by entering a photo taken with a mobile telephone into the search engine?**
- Ryan :
- ----
- Brenda :
- **Well, for example, sending a photo of a nearby landmark building might give you a street map of the area.**
- Ryan :
- **That would be useful if you were lost in a foreign city.**
- A) I can barely use my mobile to call someone, let alone to send a picture over the Internet!
- B) Who told you that?
- C) What good would that be?
- D) Oh, another new technology.
- E) Don't believe everything you read or see on the television.

52. – 56. sorularda, cümleler sırasıyla okunduğunda parçanın anlam bütünlüğünü bozan cümleyi bulunuz.

52. (I) Are humans the only primates that cry? (II) The answer depends on how you define "crying". (III) If it is defined as tears coming from the eyes, then the answer is yes. (IV) Others take a conservative stance and say that it is too difficult to tell whether or not non-human primates have feelings. (V) However, if crying is vocalization that occurs under the conditions of distress, then you can find crying in almost all primates.
- A) I B) II C) III D) IV E) V
53. (I) Vertebrate skeletons must be both rigid and strong. (II) However, there are disadvantages to having grossly under- or overbuilt bones. (III) Animals have to balance the needs for strength and stability against the cost of producing, maintaining and manufacturing a heavier skeleton. (IV) Consequently, skeletal size tends to match mechanical requirements closely. (V) Indeed, limb-bone fractures are relatively rare.
- A) I B) II C) III D) IV E) V
54. (I) The world's coral reefs are in trouble. (II) According to an international consortium of scientists and volunteers, only 30 per cent of reefs are healthy now. (III) Modern coral reefs as we know them have been accumulating since the Holocene Epoch 10,000 years ago. (IV) US government agencies, conservation organizations and other scientists echo the point. (V) A few go so far as to say that coral reefs in some areas may be doomed.
- A) I B) II C) III D) IV E) V
55. (I) Plant biologists estimate that 25-50% of all plant species are polyploids, that is, having three or more sets of chromosomes. (II) Hybridization between two species accounts for most of this polyploidy, perhaps because the unusually diverse assortment of genes a hybrid inherits from parents of different species can be advantageous. (III) Many of the plants we grow for food are polyploids, including oats, potatoes, bananas, plums, apples and wheat. (IV) Cotton, also a polyploid, is the source of one of the world's most popular clothing fibres. (V) Cotton thread is made from the long white plumes that extend from the seeds of the plant.
- A) I B) II C) III D) IV E) V
56. (I) Migration is a very precise evolutionary adaptation to seasonal changes, but the benefits of migration are not without cost. (II) Many weeks may be spent each year on energy-demanding journeys. (III) Some animals may become lost or die along the way. (IV) Green turtles migrate more than 2,000 kilometres across open ocean between their feeding area off the coast of Brazil and their nesting place on Ascension Island. (V) And migrating individuals are often at greater risk from predators in unfamiliar areas.
- A) I B) II C) III D) IV E) V

57. – 60. soruları aşağıdaki parçaya göre cevaplayınız.

During our visit in the summer of 1994 to the Chernobyl Exclusion Zone, a region within a 30 km radius of the Chernobyl Nuclear Power Plant, we were amazed by the diversity of mammals living in the shadow of the ruined reactor only eight years after the meltdown. During our excursion through the woods, we trapped some of the local mice for examination in a makeshift laboratory. We were surprised to find that, although each mouse registered unprecedented levels of radiation in its bones and muscles, all the animals seemed physically normal, and many of the females were carrying normal-looking embryos. We found that the mice did not have any obvious chromosomal damage. We wondered whether the absence of injury could be explained by some sort of adaptive change, perhaps a more efficient DNA-repair mechanism, after many prior generations had been exposed to radiation. But when we transplanted wild mice from uncontaminated regions into cages in the Exclusion Zone and then examined their chromosomes, they were likewise unaffected by the radiation. In at least this respect, the mice seemed to have a natural "immunity" to harm from radiation.

57. We see from the passage that the scientists who visited the Chernobyl Exclusion Zone in 1994 concluded that ----.

- A) all mice appear to have inborn protection against the harmful effects of radiation
- B) only the mice born in the Exclusion Zone were immune to the chromosomal damage caused by high levels of radiation
- C) mice certainly have better-developed DNA-repair mechanisms than other animals
- D) the meltdown of the nuclear reactor at Chernobyl caused greater than usual diversity among the mammals living nearby
- E) their makeshift laboratory did not produce valid results for their experiments with the mice

58. It is clear from the passage that the mice native to the Chernobyl Exclusion Zone ----.

- A) had suffered extensive chromosomal damage
- B) were found to have very high radiation levels in their bodies
- C) were not affected by the radiation as much as the mice which had been brought in from outside the Exclusion Zone
- D) were not put in cages by the scientists studying them
- E) showed less genetic diversity than mice from other areas

59. According to the passage, the lack of subsequent chromosomal damage in mice brought into the Chernobyl Exclusion Zone from radiation-free areas proves that ----.

- A) mammals can suffer the effects of radiation and still carry a normal embryo
- B) the radiation found in the mice native to the Exclusion Zone had compounded with each new generation
- C) the mice native to the Exclusion Zone had, actually, not developed their immunity to radiation after the explosion occurred
- D) unprecedented levels of radiation in an animal's tissues always signal extensive chromosomal damage
- E) trapping animals is a difficult task, best left to hunters native to the area

60. We understand from the passage that, on their visit to the Chernobyl Exclusion Zone, the scientists ----.

- A) did not expect to find animals that were physically normal
- B) themselves began to suffer from exposure to high levels of radiation
- C) mainly wanted to observe the effects of the reactor's meltdown on the surrounding plant life
- D) transported mice from the Exclusion Zone to an uncontaminated area to see if their radiation levels would decrease
- E) were surprised to find that animals in the Exclusion Zone did not look the same as animals from outside the Exclusion Zone

Diğer sayfaya geçiniz.

61. – 64. soruları aşağıdaki parçaya göre cevaplayınız.

In an attempt to settle the question of whether ice exists on the moon, NASA plans to launch the Lunar Reconnaissance Orbiter (LRO) in 2008. Travelling in a polar orbit only 50 kilometres above the moon's surface, the probe will focus a high-resolution neutron sensor on the suspected ice deposits to determine their precise locations. But because the ice is probably buried and mixed with lunar dirt, NASA will also need to land a probe to dig up and analyze soil samples. This mission, scheduled for 2011, is a challenging one because instruments operating in shadowed areas cannot use solar power. The craft could land at a sunlit site and send a battery-powered vehicle into a dark crater, but the batteries would quickly die. A radioisotope thermal generator could provide electricity using heat from plutonium decay, but NASA is leaning against this option because it is expensive and controversial. Another idea under consideration is sending a probe that could hop from place to place on the lunar surface by restarting its landing rockets, lifting the craft to 100 metres above its original landing site and moving it to another spot in the crater basin to hunt for ice. Investigating more than one site is crucial because the ice may be unevenly distributed. Yet another alternative would be to fire ground-penetrating instruments at several places in the shadowed basin, either from a lander at the crater's rim or from an orbiting craft.

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

- A) firing ground-penetrating instruments at the moon could upset the balance of its surface
- B) there are several options for producing a probe that could work in the shadowed areas of the moon
- C) NASA will use plutonium decay to provide power for its newest landing probe
- D) the spacecraft that NASA wants to send to the moon will probably never actually be manufactured
- E) NASA plans only to send a probe to orbit the moon, not to land on it

62. We understand from the passage that, as part of an effort to prove the existence of ice on the moon, NASA ----.

- A) will make no use of high-resolution radio telescopes
- B) is currently observing the moon from Earth
- C) is planning to send one spacecraft to orbit the moon and another to land there
- D) is going to send a landing craft that will rely solely on solar power
- E) has already sent a spacecraft there to take pictures

63. It is pointed out in the passage that, since there may be more ice on one part of the moon's surface than on another, ----.

- A) a battery-powered vehicle is an essential part of the probe
- B) facilities which will examine the ice must be built near larger ice patches
- C) the search there for ice is expensive and controversial
- D) it is essential to test for ice in several different areas
- E) it will not be possible to use the ice for future space exploration

64. We see from the passage that the main problem of landing a probe on the moon to test for ice in shadowed areas is ----.

- A) that the public is not interested in the project
- B) the hard, rocky surface of the moon
- C) lack of government funding for the project
- D) the extremely cold temperatures the probe would have to work in
- E) that it would not be able to use solar power

65. – 68. soruları aşağıdaki parçaya göre cevaplayınız.

Stem cells, unlike all other cells in the body, can copy themselves indefinitely. So-called adult stem cells are found in many parts of the body, constantly rejuvenating the brain, remodelling arteries so blood can bypass clogs, and growing new skin to heal wounds. However, adult stem cells have more limited power than embryonic stem cells, which can turn into any type of cell in the body. Indeed, scientists are hoping that embryonic stem cells could be turned into neurons to fix damaged brains, cardiac cells to repair damaged hearts, or pancreatic cells to create insulin for people with diabetes. Maybe they could even be used to regenerate whole organs. To date, scientists worldwide have made more than 100 different human embryonic cell lines. Still, the existing lines have serious limitations. Most have been grown on a lattice of mouse embryonic skin cells for support. Consequently, the human embryonic cells are contaminated by mouse cells, and though they're still useful for research, they cannot at present be used to develop therapies for humans.

65. According to the passage, the main problem with the currently existing embryonic stem cell lines is ----.

- A) the fact that they could be turned into neurons
- B) the lack of diversity between the different lines
- C) that there are not enough of them to develop therapies useful for treating human diseases
- D) that they are contaminated by the mouse cells upon which they have been grown
- E) that they do not produce reliable research results

66. As regards the therapeutic possibilities, the passage emphasizes the advantages of ----.

- A) developing human embryonic stem cells based on mouse cells
- B) embryonic stem cells over adult stem cells
- C) human embryonic stem cells over mouse embryonic skin cells
- D) man-made embryonic stem cell lines
- E) adult stem cells when used to rejuvenate the blood

67. We see from the passage that embryonic stem cells ----.

- A) are far less versatile than adult stem cells
- B) hold no possibility of being used to cure disease
- C) in the past were able to treat illnesses, but cannot be used for this purpose today
- D) might, in the future, be used to treat humans with damaged brains or hearts
- E) cannot reproduce themselves, unlike adult stem cells

68. It is understood from the passage that adult stem cells ----.

- A) have been manipulated by scientists in order to produce new organs
- B) are not as well-understood as other types of cells in our bodies
- C) are always actively engaged in our bodies
- D) will someday be used to regenerate whole organs
- E) can turn into any other cell type

69. – 72. soruları aşağıdaki parçaya göre cevaplayınız.

The concentrations of methane (CH₄) and carbon dioxide (CO₂) gases in the atmosphere have both risen dramatically since the start of the Industrial Revolution. However, unlike its more familiar greenhouse-gas cousin, atmospheric methane has recently stopped increasing in abundance. This development wasn't entirely unanticipated, given that the rate of increase has been slowing for at least a quarter-century. The recent stabilization of methane levels is something that some scientists are trying very hard to explain. Methane has many sources. Some are natural, such as wetlands and plants, and some are the consequences of modern society, such as landfills and wastewater treatment. Methane is destroyed principally by its reaction with the hydroxyl radical (OH) in the lower atmosphere. One theory about the stabilization of methane levels is that deforestation has reduced the number of plants contributing to atmospheric methane. Another idea is that an increase in the prevalence of tropical thunderstorms may have raised the amounts of the various nitrogen oxides high in the atmosphere. There, these gases have the side effect of boosting the production of OH, which in turn acts to destroy methane.

69. It is pointed out in the passage that methane in the atmosphere is destroyed primarily by ----.

- A) the interventions of scientists
- B) the presence of carbon dioxide gas
- C) wetlands and plants
- D) contact with OH, the hydroxyl radical
- E) the Industrial Revolution

70. According to the passage, although atmospheric carbon dioxide levels continue to rise, ----.

- A) atmospheric methane levels are no longer rising
- B) an increase in tropical thunderstorms may reduce these carbon dioxide levels
- C) this rise is expected to level out some time in the next quarter-century
- D) scientists are trying very hard to explain this increase
- E) they are not evenly distributed

71. We understand from the passage that landfills and wastewater treatment facilities are examples of ----.

- A) natural sources of carbon dioxide
- B) ways to boost the production of OH in the atmosphere
- C) man-made sources of methane
- D) high levels of atmospheric methane
- E) the recent stabilization of methane levels

72. It can be inferred from the passage that ----.

- A) atmospheric methane is produced only by human activity
- B) the greenhouse effect of methane is not as widely-known as that of carbon dioxide
- C) scientists expect atmospheric methane levels to continue rising
- D) deforestation contributes to increasing atmospheric methane levels
- E) carbon dioxide is not as important as methane in terms of causing global warming

73. – 76. soruları aşağıdaki parçaya göre cevaplayınız.

In 1980, the physicist Luís Alvarez and his son Walter advanced a startling theory about the demise of the dinosaurs: that it was caused by forces that came from beyond this world. They hypothesized that perhaps a meteor impact had ended the age of the dinosaurs. The primary evidence was that in soil core samples taken in locations around the globe, iridium, a substance very rare on Earth but prevalent on asteroids, had been found in a thin layer of clay separating the fossil-rich rock of the late Cretaceous period (the end of the dinosaur age) and the sparsely fossilized rock of the Tertiary period that followed. The Alvarezes hypothesized that a very large extraterrestrial object had slammed into the planet, sending an enormous fireball into the stratosphere, along with vast amounts of debris. A great cloud of dust enshrouded Earth, blocking sunlight for months, even years, and plants and animals perished in the ensuing cold and dark. When the dust finally settled back to Earth, it formed the telltale worldwide layer of iridium in the clay. The scientific world was not impressed by the theory. Indeed, some scientists scoffed at the Alvarezes' hypothesis, but in 1990 scientists realized that a crater of 112 miles in diameter in Mexico and dated at 65 million years old might be evidence that the dinosaurs had indeed died out due to the effects of a giant meteor.

73. It is clear from the passage that, when the Alvarezes advanced their meteor-impact theory, ----.

- A) their focus was mostly on the Tertiary period
- B) it was not a surprising idea
- C) they didn't make use of core samples
- D) few scientists believed them
- E) there were vast amounts of debris in the stratosphere

74. It is pointed out in the passage that the cloud of dust caused by the supposed meteor impact ----.

- A) caused the fossils of that period to be particularly easy to extract
- B) poisoned the plants and animals living on Earth at that time
- C) made the Earth dark and cold for a very long time, causing plants and animals to die
- D) did not contain iridium
- E) formed a very large crater in Mexico when it settled

75. We understand from the passage that, by the time of the Tertiary period, ----.

- A) the dinosaurs had died out
- B) forces from beyond this world had invaded the planet
- C) the dust from the meteor impact had still not settled
- D) fossils were well-preserved
- E) the age of the dinosaurs was thriving

76. According to the passage, the main proof given by Luís and Walter Alvarez of a giant meteor impact that could have destroyed the dinosaurs was ----.

- A) the fossil-rich rock of the late Cretaceous period
- B) a great cloud of dust surrounding Earth
- C) the 112-mile-wide crater they had discovered
- D) an enormous fireball in the stratosphere
- E) the presence of iridium in soil all over the world

77. – 80. soruları aşağıdaki parçaya göre cevaplayınız.

Mount Vesuvius in southern Italy is actually a volcano inside the exploded skeleton of an older volcano. Looked at from above, the remaining ridge of a much larger volcano can be seen on the north side. This older volcano had probably erupted violently long before human settlement. Southern Italy is unstable ground. The African continental plate, on which most of the Mediterranean Sea rests, is actually diving beneath the European plate. That kind of underground collision produces molten rock, or magma, rich in volatile gases such as sulfur dioxide. Under pressure underground, these gases stay dissolved. But when the magma rises to the surface, the gases are released. Accordingly, when volcanoes like Vesuvius erupt, they tend to erupt explosively. To this day, in fact, Vesuvius remains one of the world's most dangerous volcanoes; some 3.5 million Italians live in its shadow. Although monitoring devices are in place to warn of the volcano's activity, if there were a major eruption with little warning, there could be a tremendous loss of life.

77. We see from the passage that although Mount Vesuvius is a very dangerous volcano ----.

- A) it is safe to live nearby because of the monitoring devices that warn of the volcano's activity
- B) many people still live nearby
- C) it is more dangerous than the older volcano that used to be in its place
- D) it does not result from an underground collision of continental plates
- E) its eruption would never result in people's deaths

78. We can understand from the passage that the pushing of the African continental plate beneath the European continental plate ----.

- A) does not create magma containing sulfur dioxide and other unstable gases
- B) is the result of volcanic activity such as we see in Southern Italy
- C) makes Southern Italy a region prone to volcanic eruptions
- D) has made Northern Africa a "hot spot" for volcanic activity
- E) means that the Mediterranean Sea is slowly widening

79. We understand from the passage that Mount Vesuvius's eruptions are usually very explosive because of ----.

- A) the exploded skeleton of an older volcano within which it is located
- B) the strong skeletal structure of the volcano
- C) its proximity to a large body of water
- D) the unstable gases released when the volcano's magma reaches the surface of the Earth
- E) the monitoring devices placed near the volcano

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

- A) Mount Vesuvius is a dying volcano which will someday cease to erupt
- B) the Mediterranean Sea is part of the European continental plate
- C) the European continental plate will one day completely cover the African one
- D) 3.5 million Italians lost their lives in Vesuvius's last eruption
- E) there was once a much larger volcano where Mount Vesuvius is today

TEST BİTTİ.

CEVAPLARINIZI KONTROL EDİNİZ.