

# İNGİLİZCE FEN BİLİMLERİ TESTİ

2010-ÜDS ilkbahar / İNG-Fen Bil.

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

1. The ---- of sunlight into electricity is possible through the use of solar panels.

- A) inversion      B) conversion      C) refinement  
D) rotation      E) compression

2. Microorganisms are of ---- value to the Earth's ecology, disintegrating animal and plant remains and turning them into simpler substances.

- A) consecutive      B) disputable  
C) controversial      D) resistant  
E) incalculable

3. Cars, coal-generated electric power, and even cement factories ---- affect the environment, causing many serious problems that threaten animal and plant life.

- A) adversely      B) commercially  
C) conscientiously      D) privately  
E) adequately

4. When two or more atoms ----, they form a molecule.

- A) depart      B) eradicate  
C) combine      D) correlate  
E) withdraw

5. A sardine monitoring system was ---- in order to prevent over-fishing.

- A) found out      B) set up      C) put in  
D) taken place      E) made over

6. His comments ---- a very lively debate on the origin of ocean crust.

- A) put up with      B) fell into  
C) handed over      D) gave rise to  
E) figured out

7. Although human contamination of the Earth's atmosphere ---- long before the Industrial Revolution, air pollution ---- a major problem until the 18<sup>th</sup> and 19<sup>th</sup> centuries.

- A) has existed / would not be  
B) would exist / had not been  
C) exists / has not been  
D) would have existed / would not have been  
E) existed / was not

8. If humans ---- at the speed of light, it ---- them about eight minutes to reach the Sun.

- A) have travelled / took  
B) could travel / would take  
C) travel / would have taken  
D) will travel / takes  
E) would travel / has taken

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9. The average surface temperature of Earth ---- roughly 15° centigrade, but over the last century, this average ---- by about 0.6° centigrade.
- A) has been / was rising  
B) would be / rises  
C) used to be / would have risen  
D) had been / had risen  
E) is / has risen
10. Astronomy ---- as the oldest science, going back thousands of years, and seems to have begun when primitive people ---- objects and their movements in the sky.
- A) is to be regarded / notice  
B) was regarded / have noticed  
C) is regarded / noticed  
D) would be regarded / were noticing  
E) had been regarded / had noticed
11. According to some scientists, the global population, which currently ---- at about 6 billion, ---- 13 billion by the year 2050.
- A) stands / will have surpassed  
B) will stand / will surpass  
C) stood / would surpass  
D) has stood / surpassed  
E) is standing / has surpassed
12. Since prehistoric times, man has recognized the influence ---- heredity and has applied its principles ---- the improvement of cultivated crops and domestic animals.
- A) with / off      B) by / under      C) on / from  
D) of / to      E) at / within
13. The most useful geothermal resources are hot water and steam trapped in subsurface formations or reservoirs and having temperatures ranging ---- 80° ---- 350° centigrade.
- A) from / to      B) between / of  
C) among / at      D) within / over  
E) under / off
14. The Alps have been an area of transit trade since ancient times ---- they offer important pathways between central and southern Europe.
- A) so that      B) because      C) as if  
D) whereas      E) whether

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15. ---- ancient peoples in several parts of the world built pyramids, it was the Egyptians who constructed the tallest and most famous of them.

- A) Unless                      B) Now that                      C) Although  
D) Once                      E) As if

16. Aridisols are dry, desert-like soils that have low organic content ---- are sparsely vegetated by drought- or salt-tolerant plants.

- A) so far as                      B) so that                      C) as  
D) so                      E) and

17. The remarkable feature of gases is ---- they appear to have no structure at all.

- A) if                      B) that                      C) when  
D) why                      E) whether

18. ---- populating both the inner and outer surfaces of the human body, microbes abound in the soil, the seas, and the air.

- A) According to                      B) As to  
C) In contrast to                      D) In addition to  
E) In order to

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

Japan is home to almost half the world's industrial robots. Only a few decades ago, when robots (19)---- for the first time, they were used for less sophisticated tasks, (20)---- humans were considered essential for manual precision tasks. This, however, changed with (21)---- in robot technology. Today, robots are used in dirty, dangerous, and inaccessible tasks as well as in (22)---- requiring precision. Today, robots are an indispensable part (23)---- industrial Japan.

19.

- A) have been introduced  
B) had been introduced  
C) were introduced  
D) would have been introduced  
E) would be introduced

20.

- A) so long as                      B) whether                      C) in case  
D) while                      E) so that

21.

- A) advances                      B) conclusions  
C) destinations                      D) devices  
E) burdens

22.

- A) most                      B) those                      C) whose  
D) which                      E) them

23.

- A) for                      B) at                      C) in  
D) among                      E) of

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

24. **Though its manufacture, sale, and servicing have become key elements of industrial economies, ----.**

- A) the automobile changed the world during the 20<sup>th</sup> century, particularly in the United States and other industrialized nations
- B) the automobile has brought noise and air pollution, and car accidents rank among the leading causes of death and injury throughout the world
- C) automobiles are valued by size, style, number of doors, and intended use, and they take different names in accordance with their purpose
- D) the automobile is indispensable for mobility and job opportunities, offering a solution to the problem of unemployment in the early 20<sup>th</sup> century
- E) various systems supply the engine with fuel, cool it during operation, lubricate its moving parts, and remove the exhaust gases it creates

25. **---- if it has erupted one or more times in history.**

- A) All volcanoes are formed by the accumulation of magma
- B) Scientists try to predict volcanic eruptions by observing various events
- C) Volcanic eruptions can cause serious human, economic, and environmental catastrophes
- D) Some volcanic features on earth do not look like volcanoes
- E) Scientists generally consider a volcano active

26. **Unless governments take action to control population growth, ----.**

- A) a great majority of our environmental problems will be solved
- B) population control can be possible through strict policies
- C) the natural resources in the world will soon become insufficient
- D) sustainability policies were formulated by developed countries
- E) thousands starved to death in the poorer parts of the world

27. **Since there is limited room in most deep sea exploration boats, ----.**

- A) it has become increasingly easy to identify various marine species
- B) most marine biologists are trained to chase off sharks
- C) amateur divers are advised to carry extra oxygen tubes with them
- D) the coral reefs attract thousands of divers every year
- E) the divers on board have to use the available space efficiently

28. **---- because they have been found to harm human health.**

- A) Some forms of plastic used in bottles have been banned
- B) The use of plastics and other synthetic materials in medicine is on the rise
- C) Recyclable plastic bottles are widely used in food industry
- D) Certain types of plastic are more suitable for recycling than some others
- E) Researchers are trying to develop a new type of plastic good for the environment

29. **While heavy drinking is known to reduce lifespan, ----.**

- A) alcoholics develop a greater tolerance for alcohol
- B) alcoholism is becoming increasingly common in the modern world
- C) ethanol is the type of alcohol used in drinks like beer, wine, and brandy
- D) genetic, psychological, and social factors influence the development of alcoholism
- E) a moderate consumption of alcohol can reduce the risk of heart disease

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30. Genetic information is encoded and transmitted from generation to generation in deoxyribonucleic acid (DNA), ----.
- A) but this process contributed to the great variation of traits that we see in nature  
B) which is a coiled molecule organized into structures called chromosomes  
C) now that members of the same species inherited different forms of a gene  
D) whereas some of these theories remained in favour for several decades  
E) whose offspring receive a mixture of genetic information from both parents
31. Robotics engineers are now producing robots that mimic the gestures of real people ----.
- A) which might be another form of body language  
B) when someone points towards himself  
C) as if communicating with others were easy  
D) as this makes them appear much more natural  
E) until other problems have been overcome
32. Air pollution results mainly from human activity, ----.
- A) but natural phenomena like volcanic eruptions also cause it  
B) though humans play a major role in the contamination of the environment  
C) in case there are a variety of pollutants causing it  
D) while it is a very common problem in many parts of the world  
E) since great progress has been made in methods to prevent it
33. Debates arise over which voting technology is the most accurate and least susceptible to tampering ----.
- A) that could easily have been prevented  
B) whenever national elections are held  
C) whether it is plausible for the majority or not  
D) until balloting security is jeopardized  
E) as if all votes have been counted
34. Coal burning is responsible for 40 per cent of the 30 billion tonnes of carbon dioxide ----.
- A) though it poses a huge threat to most organisms  
B) as if it were one of the major factors causing global warming  
C) that is emitted by human activity every year  
D) since we are all aware of the dangers of climate change  
E) whereby plants and some animal species interact
35. Quantum theory is the most useful scientific theory ever devised, ----.
- A) since it is impossible to know everything about the world  
B) provided that theorists are perplexed by its equations  
C) even though understanding it could bring new scientific insights  
D) while physicists found evidence that a single photon of light was capable of being in two places at the same time  
E) whereas some scientists choose simply to ignore most of its uses

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

36. Today's scientists are able to generate genetically modified animals with new traits, such as the ability to resist disease, and they use cloning techniques to reproduce these genetically modified animals.

- A) Günümüzde, hastalıklara direnç göstermek gibi yeni özellikleri olan genetiği değiştirilmiş hayvanlar üretebilen bilim adamları, bu hayvanları klonlama teknikleri kullanarak çoğaltabilmektedir.
- B) Günümüz bilim adamları, hastalıklara direnç gösterme yeteneği gibi yeni özellikleri olan genetiği değiştirilmiş hayvanlar üretebilmekte ve bu genetiği değiştirilmiş hayvanları çoğaltmak için klonlama teknikleri kullanmaktadırlar.
- C) Günümüz bilim adamlarının amacı, hastalıklara direnç göstermek gibi yeni özellikleri olan genetiği değiştirilmiş hayvanlar üretmek ve bu genetiği değiştirilmiş hayvanları çoğaltmak için klonlama teknikleri kullanmaktır.
- D) Günümüz bilim adamlarının, hastalıklara direnç göstermek gibi yeni özellikleri olan genetiği değiştirilmiş hayvanlar üretmenin yanı sıra, genetiği değiştirilmiş hayvanları klonlama teknikleri kullanarak çoğalttıkları bilinmektedir.
- E) Günümüz bilim adamları, gerek hastalıklara direnç göstermek gibi yeni özellikleri olan hayvanlar üretebilmekte, gerekse genetiği değiştirilmiş diğer bazı hayvanları klonlama teknikleri kullanarak çoğaltabilmektedirler.

37. The ethanol in biofuels forms through the fermentation of starch and, in principle, any source of starch can be used for this purpose.

- A) Biyoyakıtlardaki etanol, nişastanın mayalanmasıyla oluşur ve ilke olarak, herhangi bir nişasta kaynağı bu amaç için kullanılabilir.
- B) Biyoyakıtlardaki nişastanın mayalanmasıyla oluşan etanol, ilke olarak, herhangi bir nişasta kaynağı olarak kullanılabilir.
- C) Her ne kadar biyoyakıtlardaki etanol nişastanın mayalanmasıyla oluşsa da, ilke olarak, çeşitli nişasta kaynakları bu amaç için kullanılabilir.
- D) İlke olarak, biyoyakıtlardaki etanolün, nişastanın mayalanmasıyla oluşmasına karşın, herhangi bir nişasta kaynağı bu amaç için kullanılabilir.
- E) İlke olarak, herhangi bir nişasta kaynağının aynı amaç için kullanılabilir olmasına karşın, biyoyakıtlardaki etanolün, nişastanın mayalanmasıyla oluşması gerekir.

38. Before the development of quantum theory, physicists assumed that measuring any physical quantity as accurately as desired was possible, provided that perfect equipment and perfect conditions were present.

- A) İlk önce kuantum kuramını geliştiren fizikçiler, daha sonra herhangi bir fiziksel niceliğin ancak kusursuz araçlar ve kusursuz koşullar var olduğu takdirde ölçülebileceğini kanıtladılar.
- B) Kuantum kuramını geliştiren fizikçiler, kusursuz araçlar ve kusursuz koşullar var olduğu takdirde, herhangi bir fiziksel niceliğin istenilen düzeyde bir doğrulukla ölçülebileceğini varsayıyorlar.
- C) Kusursuz araçlar ve kusursuz koşullar sağlandığı takdirde, herhangi bir fiziksel niceliğin istenilen düzeyde bir doğrulukla ölçülebileceğini savunan fizikçiler, kuantum kuramını geliştirmişlerdir.
- D) Kuantum kuramı sayesinde, fizikçiler, kusursuz araçlar ve kusursuz koşullar var olduğu takdirde, herhangi bir fiziksel niceliğin istenilen ölçüde bir doğrulukla ölçülemeyeceği varsayımını çürüttüler.
- E) Kuantum kuramının geliştirilmesinden önce, fizikçiler, kusursuz araçlar ve kusursuz koşullar var olduğu takdirde, herhangi bir fiziksel niceliği, istenilen ölçüde doğru olarak ölçmenin mümkün olabileceğini varsayıyorlardı.

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

39. Nanoteknoloji alanında çalışan bilim insanlarını bekleyen en büyük güçlüklerden biri, arzu edilen bir nano yapı inşa edebilmek ve bu yapıyı, çıplak gözle görülebilen işlevsel bir sistemle bütünleştirebilmektir.

- A) Scientists working in the field of nanotechnology are yet to make a desired nanostructure and then to integrate it with a functional system visible to the naked eye.
- B) Making a desired nanostructure and integrating it into a functional system visible to the naked eye is the biggest difficulty that scientists working in the field of nanotechnology are faced with.
- C) One of the biggest challenges awaiting scientists working in the field of nanotechnology is to be able to make a desired nanostructure and then integrate it with a functional system that is visible to the naked eye.
- D) One of the major challenges that scientists working in the field of nanotechnology have to face is how to make a desired nanostructure without integrating it into a functional system visible to the naked eye.
- E) To make a desired nanostructure without having to integrate it with a system visible to the naked eye is one of the biggest challenges that awaits scientists working in the field of nanotechnology.

40. Bir barajın inşası başlamadan önce, mühendisler, barajın ağırlığını kaldırmaya yetecek kadar güçlü bir temel sağlayacağından emin olmak için, önerilen bölgenin jeolojik yapısını incelerler.

- A) In order for the construction of a dam to begin, the proposed site should first be surveyed by geological engineers so that they can make sure the foundation of the proposed site will be strong enough to support the weight of the dam.
- B) Before the construction of a dam begins, engineers survey the geology of the proposed site to make sure that it will provide a foundation strong enough to support the weight of the dam.
- C) Before they start constructing a dam, geologists and engineers must survey the proposed site, as its foundations may not be strong enough to support the weight of the dam.
- D) Prior to the construction of a dam, the geology of the proposed site should be surveyed by engineers, as they want to make sure that it has a strong foundation capable of supporting the weight of the dam.
- E) By the time the construction of a dam begins, engineers must have surveyed the geological features of the proposed area, in case its foundations are not strong enough to support the weight of the dam.

41. Bilgisayarlar artan yararlarıyla yaşamı kolaylaştır-salar da, kullanımları daha yaygın hâle geldikçe, onları kötüye kullanma olasılığı da artmaktadır.

- A) Despite the fact that computer misuse is growing as computer use becomes more widespread, no one can deny that computers make life easier with their increasing efficacy.
- B) It is true that as computer use becomes more widespread, the possibility of misuse also grows, but the fact that computers make life easier with their increasing efficacy remains.
- C) Although computers make life easier with their increasing efficacy, as they become more widespread, the possibility of their misuse also grows.
- D) Even if computers made life easier with their increasing efficacy, as computer use became more widespread, the possibility of its misuse also grew.
- E) Computers make life easier with their increasing efficacy; as a result, as computer use becomes more widespread, the possibility of misuse also broadens.

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

42. As the hardest substance known, diamond is ideal for cutting rock and other tough stuff. ---- For cutting steel, the first choice is cubic boron nitride, which is almost as hard. But manufacturing the substance requires high temperatures and extreme pressures, which make it expensive.

- A) Making ultrahard materials usually requires extreme pressures.
- B) The hardness of diamond arises because of short, covalent bonds that keep the constituent atoms strongly stuck together.
- C) Scientists want to design new hard materials rather than finding them using trial-and-error methods.
- D) But diamond is costly, and it degrades machining steel and other ferrous metals because of reactions.
- E) The method should lead to even less costly, ultrahard compounds.

43. ---- There are those that affect the body surfaces they contact, and those that damage the general nervous system. Surface agents include phosgene gas, chlorine gas, hydrogen cyanide, and mustard gas. While the principal action of the first three occurs through inhalation, mustard is a blistering agent that damages any surface it contacts, including the skin. Nerve agents, on the other hand, which include the chemicals sarin, soman, and tabun, act by blocking the transmission of nerve messages throughout the body. A single drop of nerve agent can shut down the body's nervous system.

- A) A biological attack involves dispersing agents into the air.
- B) Chemical warfare involves the use of compounds to kill an enemy.
- C) Biological weapons use living microorganisms to infect large masses of people.
- D) Both biological and chemical weapons are considered weapons of mass destruction.
- E) Chemical warfare agents can be grouped into two general types.

44. Organisms use two types of cell division to ensure that DNA is passed down from cell to cell during reproduction. Simple one-celled organisms and some other organisms reproduce by a process called "mitosis", during which a cell doubles its DNA before dividing into two cells and distributing the DNA evenly to each resulting cell. ---- Known as "meiosis", this process involves sexual reproduction. In this process, an egg and sperm unite to form a zygote, in which the full number of chromosomes is restored.

- A) Organisms that reproduce sexually, on the other hand, use a different type of cell division.
- B) In all organisms, cells divide to produce new cells, each of which requires the genetic information in DNA.
- C) Mitosis occurs in five stages, namely interphase, prophase, metaphase, anaphase, and telophase.
- D) Modern genetics offers solutions to the reproductive problems that were once thought to be incurable.
- E) Each new cell needs a complete copy of an organism's genetic information to function properly.

45. The irreversible loss of biodiversity has a serious impact on the ability of the remaining species, including humans, to survive. Humans depend on the diversity of species and healthy ecosystems to provide food, clean air and water, and fertile soil for agriculture. ---- As many as 40 per cent of our modern pharmaceutical medicines are derived from plants or animals. A small plant from Madagascar, the rosy periwinkle, for instance, produces substances that are effective in fighting two deadly cancers, Hodgkin's and leukaemia.

- A) However, the survival of ecosystems depends on their variety of plants, animals, and habitats.
- B) In addition, we benefit greatly from the many drugs that biodiversity provides.
- C) In contrast, modern medicine makes use of medicines derived from both natural and chemical sources.
- D) Biologists believe that the Earth is currently going through a period of mass extinction.
- E) In such cases, direct habitat destruction threatens the greatest number of species.

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46. A handful of countries produce a portion of their electricity from nuclear energy. ---- The world has witnessed one such disaster in recent history. The 1986 accident at the Chernobyl nuclear power plant in Ukraine scattered radioactive contamination over a large part of Europe. Approximately 200,000 people were evacuated, and human health has been dramatically affected ever since. Studies in 1999 found that the rate of thyroid cancer in young Ukrainian children was ten times higher than was the norm prior to the accident.
- A) The decades of the Cold War witnessed the dangerous escalation of a nuclear arms race.
- B) Most people are against its use for the production of electricity, as it is too costly.
- C) Nuclear weapons can cause wide-spread disaster.
- D) The first large-scale nuclear reactors were built in 1944 in the US, for the production of nuclear weapons material.
- E) Many people, however, are opposed to nuclear power stations, on the grounds that an accident can cause massive devastation.

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

47. Robert:  
- **Are you going to include the pygmy marmoset monkeys in your Amazonian fauna assignment?**
- Karen:  
- **I may do so. If I remember rightly, they are only about 2 cm in height.**
- Robert:  
- ----
- Karen:  
- **Can they really? That is remarkable.**
- A) It's their tails that make it possible.
- B) I thought they were taller than that.
- C) That's correct. But they can leap a distance of five metres.
- D) They feed on both insects and fruits.
- E) Very little else is known about them.

48. Henry:  
- **I think we really shouldn't miss this year's National Science Week events. It seems that there's a lot we can learn and even use in our project. Shall we go to at least some of them together?**
- Jane:  
- **What is this year's theme? I remember attending a few events last year. I'm not sure I want to see more insects this year, when we really should be working on our project on global warming.**
- Henry:  
- ----
- Jane:  
- **Great! Let's go then.**
- A) Why? Don't you find insects an interesting species to study?
- B) There are no insects this year; the theme is "Click for the Climate".
- C) Would you rather go to the biology lab to work?
- D) Have you completed your project already?
- E) I really have no clue as to what this year's theme is.
49. Patrick:  
- **Are you going to get a swine flu vaccination?**
- Helen:  
- **Yes, I am. Almost half of my colleagues are down with the flu, and I'm really tired of wearing this protective mask.**
- Patrick:  
- ----
- Helen:  
- **Oh, I already have. I'm getting a type specially developed for expectant women.**
- A) Haven't they been vaccinated?
- B) Then you may already have the flu.
- C) What about your husband?
- D) But you do realize, I hope, that some vaccines are not suitable for pregnant women, so you should consult your doctor first.
- E) No. I'm not going to get a vaccination.

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50. Roger:

- **Why do you always get lower electricity bills than we do? You're six people in the family, whereas we are only two and, unlike you, we spend most of our time outside the house.**

Jennifer:

- ----

Roger:

- **Actually, no. I haven't noticed them.**

Jennifer:

- **Well, ever since we had them installed, we've been paying less than half of what we used to.**

- A) Well, we also spend a lot of time outside the house, as you might have noticed.
- B) We've been using solar energy for lighting for some time. Haven't you seen the solar panels on our roof?
- C) Don't you turn off the lights when you don't need them?
- D) A water heater uses a huge amount of electricity.
- E) Actually, no one in our family likes brightly-lit rooms.

51. Kate:

- **I recently read in a magazine that the activity of plate tectonics ground to a halt at various times in the Earth's geological history.**

Fred:

- **Oh, that's interesting. I thought it was a slow but continuous process.**

Kate:

- ----

Fred:

- **Then, that means geologists might have to revise their theories on how continents evolved.**

- A) Does this mean that Darwin's theory of evolution might have to be revised?
- B) This has been so, especially in the Pacific Ocean.
- C) There isn't much support for the theory.
- D) What exactly do you mean by "a continuous process"?
- E) So did most people until this fact came to light recently.

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

52. (I) Scientists who study tornadoes have a wide variety of powerful research tools at their disposal. (II) Moreover, they classify tornadoes based on the damage they wreak on manmade structures. (III) For instance, advances in computer technology make it possible to stimulate the thunderstorms that cause tornadoes. (IV) Doppler radars allow meteorologists to see the winds inside the storms, and modern video camera footage provides an unprecedented amount of high-quality documentation. (V) All these contribute greatly to the scientific understanding of tornadoes, which may eventually lead to increased tornado warning times, better guidelines for building construction, and improved safety tips.

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

53. (I) Ancient seafarers found their way by observing landmarks, such as large rocks or trees, along rivers and coastlines. (II) When out of sight of land, they derived clues about their location by measuring water depth, monitoring wind patterns and wave shapes, and observing the positions of the Sun and the stars. (III) Later, navigators developed tools to measure a ship's position and progress more precisely. (IV) They can choose from a great variety of high-tech tools to determine their position on Earth and find their way from one place to another. (V) They used a magnetic compass to determine direction, measured the height of the Sun or stars on the horizon to fix their position, and plotted their progress and routes on nautical maps called "charts".

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

54. (I) The oldest known evidence of strange flying objects is from some cave paintings that were found in Europe. (II) Before the end of the 18<sup>th</sup> century, very few Europeans had dedicated themselves to the study of flight. (III) One was the Italian Renaissance artist Leonardo da Vinci. (IV) He was preoccupied chiefly with bird flight and with flapping-wing machines called "ornithopters". (V) His aeronautical work, however, remained unknown until late in the 19<sup>th</sup> century, when it could furnish little of technical value to experimenters but was a source of inspiration to aspiring European engineers.

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

55. (I) While it lights our day and provides energy for life, sunlight can also be harmful to humans. (II) Particles flowing from the Sun can disrupt our planet's magnetic field, and these disruptions can interfere with electronic communications. (III) Human skin is sensitive to ultraviolet light emitted from the Sun. (IV) Earth's atmosphere blocks much of the harmful light, but sunlight is still strong enough to burn skin under some conditions, a major risk factor in the development of skin cancers. (V) Sunlight is also very harmful to our eyes, which can be damaged through a direct gaze at the Sun.

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

56. (I) Galaxies have three common shapes. (II) One is elliptical galaxies, which have an ovoid or globular shape and generally contain older stars. (III) Another, spiral galaxies, which contain both old and young stars, are disk-shaped with arms that curve around the edges. (IV) Astronomers believe that the Milky Way, of which our solar system is a part, is the largest galaxy. (V) Yet another type, irregular galaxies, have no regular structure, and their structures are believed to have been distorted by collisions with other galaxies.

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

Diğer sayfaya geçiniz.

2010-ÜDS İikbahar / İNG-Fen Bil.

57. – 60. soruları aşağıdaki parçaya göre cevaplayınız.

Solar panels turn the sunlight into energy when the sun shines directly on them, but as soon as the sunlight decreases, so does efficiency. A new antireflective film coating could help panels collect sunshine at 96 per cent efficiency from nearly any angle. The newly-developed film consists of seven layers of nanoscopic silicon and titanium-oxide rods arranged in increasing densities, with the topmost nearly as porous as air. This funnel-like structure captures light from almost every direction and focuses it onto the photovoltaic panel while also inhibiting reflection. The film, which is about one hundredth as thick as a human hair, could easily be applied to any solar panel and would help collect 20 per cent more light while eliminating the need for the expensive hardware usually used to rotate solar panels as the sun moves. Before the new film can be marketed, the nanoscientists who developed the film must find a way to protect the outermost layers from wind and heat, a process that might take another year.

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

- A) antireflective films cause a decline in light absorption
- B) most panels in current use employ some inexpensive software which decreases efficiency
- C) even though the sunlight becomes weak, solar panels maintain their efficiency
- D) current solar panels are designed in such a way as to turn almost any form of light into energy
- E) reflection of light has an adverse effect on the efficiency of solar panels

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

- A) the new panels have been on the market for a year
- B) the antireflective film makes it unnecessary to rotate solar panels
- C) the existing software has to be improved to make the new panels work
- D) it took scientists a year to develop the new coating
- E) the newly-developed software helps to rotate the panels and so capture more sunlight

59. One can understand from the passage that the newly-developed film ----.

- A) can only be applied to specially-designed solar panels
- B) is about a hundred times as thick as human hair
- C) helps panels to reflect a greater amount of sunlight
- D) works best with funnel-shaped photovoltaic panels
- E) has a layered structure, arranged in an ascending order of density

60. According to the passage, the panels currently in use ----.

- A) can be made to work much more efficiently with the help of the newly-developed film
- B) can capture enough light owing to their structure, which is as porous as air
- C) lose much of their efficiency as a result of continuous exposure to wind and heat
- D) are positioned at a certain angle with the help of some expensive software
- E) have been specially designed so that they reflect light

*Diğer sayfaya geçiniz.*

2010-ÜDS İkbahar / İNG-Fen Bil.

61. – 64. soruları aşağıdaki parçaya göre cevaplayınız.

The hope with biofuels is that they can offer a carbon-neutral energy source, because the crops that are grown for fuel will remove as much carbon from the atmosphere as will be released when they are eventually burned. This is basically the same thing that happens when we burn coal or oil. The difference is that in the case of the latter, the carbon was absorbed hundreds of millions of years ago, and this is part of the problem. Humans will take just a few hundred years to burn through tens of millions of years of oil deposits. To grow enough crops to keep up with our current demand will require lots of additional lands to be cleared for agriculture. If rainforests are cleared to plant sugar cane, all the carbon that is currently locked in the trees will be released. The other problem is that adding nitrogen fertilizer to these crops releases nitrogen oxide, which is another greenhouse gas. A recent study showed that burning maize biofuels actually increases greenhouse gas emissions for this reason. However, this is more the fault of the choice of biofuel crop and the production method rather than a flaw in the biofuel concept as a whole. The shrub "jatropha", for instance, can be grown on land too poor for trees or other crops to grow on, and is already used for biodiesel in India, Cambodia, and some African countries.

61. According to the passage, the use of nitrogen fertilizers for agricultural purposes ----.

- A) makes maize-based biofuels more environmentally friendly
- B) contributes to a rise in greenhouse gas emissions
- C) has turned the maize into an excellent biofuel crop
- D) helps to reduce greenhouse gas emissions resulting from fossil fuel use
- E) is a problematic and complicated process which is, nevertheless, desirable

62. It is clear from the passage that the main problem about biofuels ----.

- A) is the consequence of a lack of sufficient nitrogen fertilizers
- B) is that the concept itself is faulty and should be discarded
- C) results from the choice of plants for biofuel and production techniques
- D) is essentially related to the methods used in the production of fertilizers
- E) arises from the limitation of biofuel crops to maize and jatropha

63. It can be understood from the passage that when oil or coal is burned, ----.

- A) there are few adverse effects upon the planet
- B) carbon-neutral energy sources are quickly exhausted
- C) a significant amount of carbon is removed from the atmosphere
- D) there is less pollution than when any of the biofuels are used
- E) the carbon that was absorbed millions of years ago is released

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

- A) the demand for biofuels is declining due to the many disadvantages they present
- B) plants used for biofuels can only be grown in fertile lands
- C) clearing rainforests for sugar cane production seems to be the only way of reducing carbon emissions
- D) the plant "jatropha" is a promising and more environmentally friendly source of biofuel
- E) sugar cane and maize are far better sources of biofuels than jatropha, which impoverishes the soil

*Diğer sayfaya geçiniz.*

2010-ÜDS İkbahar / İNG-Fen Bil.

65. – 68. soruları aşağıdaki parçaya göre cevaplayınız.

Cats are famous for their aversion to water. However, the fishing cat, a wild Asiatic species, has no such tendency. In fact, these felines, about twice the size of typical house cats, prefer to be in proximity to water, making their homes in the near rivers and marshes. As their name indicates, the cats fish for their meals, sitting by the water and tapping their paws to create ripples on the surface that resemble insect movements to lure their prey. Their webbed front paws help the fishing cats to remain dry while scooping fish, frogs, and snails out of shallow water. However, they also dive right in to grab large fish and birds in their jaws. Once in the water, the cats can swim on the surface or even glide underwater. Their flat tails, significantly shorter than those of house cats, serve as rudders, helping them to adjust direction below the water surface. Unfortunately, habitat loss and overfishing have decreased the number of these cats by about 50 per cent over the past three generations. Recently, the International Union for the Conservation of Nature (IUCN) changed the status of these cats to “endangered” from the less-severe “vulnerable”.

65. It is clear from the passage that the fishing cats' front paws ----.

- A) help them to adjust direction underneath the surface while chasing their prey
- B) enable them to reach their prey in shallow water without getting completely wet
- C) serve as a defence mechanism against attacks by enemies like large fish and birds
- D) are relatively shorter compared to those of typical house cats
- E) make it possible and easy for them to find food even in dry and barren areas

66. It is clear from the passage that fishing cats ----.

- A) have a weak sense of direction compared to house cats
- B) have tails longer than those of house cats
- C) tend to avoid large fish and birds
- D) have caused many fish species to become endangered
- E) have fully adapted themselves to a life in and by the water

67. According to the passage, the fishing cats ----.

- A) have been increasing in number at a rate of about 50 per cent a year
- B) reproduce at a gradually rising rate
- C) are regarded as a threat to the aquatic species they feed on
- D) used to be twice as many numerous only a few decades ago
- E) are no longer classified as “endangered” thanks to the efforts of the IUCN

68. It is pointed out in the passage that, when a fishing cat hunts underwater, ----.

- A) it prefers marshes to rivers and other waters
- B) it knows exactly where big fish are
- C) its movements attract large numbers of fish
- D) the ripples made by its movements are hardly distinguishable
- E) it uses its tail to find the right direction

*Diğer sayfaya geçiniz.*

2010-ÜDS ilkbahar / İNG-Fen Bil.

69. – 72. soruları aşağıdaki parçaya göre cevaplayınız.

It is to a plant's advantage to be visually attractive to a specific pollinator so that those animals will seek out and concentrate on that particular plant during their search for nectar. This keeps pollen from being spread to other plant species, where pollination won't take place. Flowers appeal to their pollinators' sensory systems by using signals such as alluring odours or colours. Flowers pollinated by nocturnal animals like bats and moths, which rely more on hearing than smell and sight, usually have dull colours but powerful scents. Flowers pollinated by daytime animals like birds and bees, however, rely on a range of colours. Birds see a spectrum somewhat similar to ours but are especially receptive to red, so blossoms pollinated by them tend to be red or orange. Bees, on the other hand, see a different spectrum composed of yellow, blue, green, and ultraviolet. Flowers pollinated by bees, hence, tend to be in those colours and usually have special markings that are visible only in ultraviolet. Like runway lights, these markings guide insects to the right place to land and find nectar, and in the process, pollinate the plant.

69. According to the passage, birds ----.

- A) see a colour spectrum that is identical to humans'
- B) are attracted to plants that have red or orange blossoms
- C) can see dull colours much better than bees and other insects
- D) play a little part in pollination
- E) and bees are far more sensitive to colours than insects

70. It can be understood from the passage that special markings on some flowers ----.

- A) enable nocturnal animals to pollinate flowers
- B) repel insects with ultraviolet vision
- C) help certain pollinators to find the right spot to land
- D) are often misleading to the pollinators
- E) can be seen by both birds and humans

71. The passage makes it clear that animals that are active at night ----.

- A) follow and catch insects and moths by using their sense of hearing and smell
- B) have a strong sense of vision, which helps them to find food more easily
- C) see things that are invisible to other animals with the help of their ultraviolet vision
- D) rely on powerful scents to attract other animals
- E) are attracted mostly to flowers with dull colours but strong scents

72. The passage is mainly concerned with ----.

- A) the significance of plants in the food chain
- B) the question of why birds and insects have common traits
- C) how colour and smell play a major role in plant pollination
- D) the kinds of nocturnal animals that are active in pollination
- E) the process of pollination that takes place in the plant world

*Diğer sayfaya geçiniz.*

2010-ÜDS İikbahar / İNG-Fen Bil.

73. – 76. soruları aşağıdaki parçaya göre cevaplayınız.

A 37,000-year-old baby mammoth could help to explain why the ancient species became extinct as well as giving an insight into climate change. Researchers at a Japanese medical school carried out a computed tomography (CT) scan of the mammoth, which was found frozen in Northern Siberia. They produced some high-resolution 3D pictures which are being analyzed to find out about the animal's internal organs and diet, and to work out how she died. The mammoth's tissues and skeleton have been studied at a zoological museum in Russia. Air samples from her lungs will also be analyzed for clues to the Earth's atmosphere at the time of her death. The mammoth, named Lyuba, was found by a reindeer herder buried in permafrost. She is unusual because of the proportion of her body that is preserved. According to one expert working on Lyuba, with fossils, scientists generally get only bones and teeth, but this specimen is special in that there are also the organs and muscles. The same expert notes that it will be interesting to see how this animal managed to adapt to life high in the Arctic and was able to survive, especially in the Ice Age.

73. It is clear from the passage that the mammoth Lyuba is considered extraordinary because ----.

- A) it had remained buried in permafrost
- B) a great part of its body was conserved
- C) it was found by a reindeer herder
- D) its body was unusually disproportionate
- E) it was a rather muscular animal

74. It can be inferred from the text that ----.

- A) Lyuba was a special animal with unusual features
- B) there were many animals left in the high Arctic by the Ice Age
- C) reindeer were the dominant species in Siberia some 37,000 years ago
- D) scientists have adequate information as to why mammoths disappeared
- E) most fossils do not provide pre-historic air samples

75. According to the passage, the organs and muscles of the baby mammoth ----.

- A) make the animal inapt for a CT scan
- B) will give scientists an insight into the survival and adaptation skills of the mammoths
- C) were found to be different from those of the other members of the same species
- D) did not provide any new insight about the species
- E) were found to be similar to those of the reindeer that lived in the same area

76. It is clear from the passage that the CT scan of the mammoth ----.

- A) did not yield the expected result, as the animal had remained in permafrost for too long
- B) was carried out in northern Siberia
- C) provided extensive information on the Earth's atmosphere at the time of her death
- D) is sure to offer scientists insight into climate change
- E) is expected to give scientists an idea about the eating habits of the animal

*Diğer sayfaya geçiniz.*

2010-ÜDS İkbahar / İNG-Fen Bil.

77. – 80. soruları aşağıdaki parçaya göre cevaplayınız.

Several years ago, biochemists studying marine ecosystems noticed something unusual: a sponge thriving in the middle of a coral reef that was dying from bacterial infection. The researchers identified a substance made by the sponge in order to defend itself from harmful microbes. They realized that it was a natural antibacterial molecule called "ageliferin". This molecule can break down the formation of a protective biofilm coating that bacteria use to shield themselves from threats, including antibiotic drugs. Now the same researchers are using this natural compound to create innovative ways to fight drug-resistant bacteria. They have recently modified the structure of ageliferin to make it more potent and formulated to help conventional medications combat otherwise drug-resistant bacteria, such as staph and cholera. The newly-developed chemical does not stop bacteria from proliferating, but it allows the antibiotic to work again. The researchers hope eventually to incorporate the altered ageliferin as a helper drug within commercial antibiotic products, allowing them to fight off formerly drug-resistant strains of diseases.

77. It can be understood from the passage that bacteria that cause infections ----.

- A) protect themselves from threats using a biofilm coating
- B) preserve their biofilm coating with the help of ageliferin
- C) break down the formation of protective biofilms of other bacteria
- D) defend certain sponge types against harmful microbes
- E) have a naturally occurring molecule called ageliferin

78. It is clear from the passage that ageliferin is a substance ----.

- A) easily broken down by harmful bacteria
- B) produced by a sponge found in coral reefs
- C) used in order to study bacterial infection
- D) helping bacteria to form a protective shield around them
- E) usually abundant in dying coral reefs

79. According to the passage, scientists are using ageliferin ----.

- A) although they wanted to discard conventional medications
- B) so that the natural compound can be used to save dying sponge species
- C) in case they altered the structure of the compound
- D) to develop new methods to fight drug-resistant bacteria
- E) as if it were more potent in combating otherwise drug-resistant bacteria

80. One can understand from the passage that the newly-developed compound ----.

- A) helps ageliferin to proliferate in sponge colonies in coral reefs
- B) can easily be used to alter biofilms like ageliferin
- C) is currently used in most commercial antibiotic products
- D) is ruled out to be an effective way of fighting drug-resistant strains of diseases
- E) does not help to stop bacteria from increasing in number

**TEST BİTTİ.**

**CEVAPLARINIZI KONTROL EDİNİZ.**

**ÜNİVERSİTELERARASI KURUL YABANCI DİL SINAVI (ÜDS)  
21 Mart 2010 İNGİLİZCE**

**FEN BİLİMLERİ TESTİ CEVAP ANAHTARI  
A KİTAPÇIĞI**

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