

A

İNGİLİZCE

FEN BİLİMLERİ

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

1. In the life sciences, biologists need to be more aware of the ---- between science and technology.

- A) approach B) departure C) complexity
D) extremity E) gap

2. The theory is interesting enough, but is it ----?

- A) solvable B) expressive C) intensive
D) coherent E) resistant

3. However incredible we may now find it, engineers did not ---- welcome the idea of a general purpose microchip.

- A) instantly B) urgently C) crudely
D) scarcely E) reliably

4. His efforts to ---- the threat of global warming with new forms of energy have been much appreciated.

- A) excuse B) counter C) pursue
D) uphold E) deliver

5. The amount of fish caught did not ---- the massive increase in vessel tonnage and fishing effort.

- A) pull through B) make do with
C) keep pace with D) come across
E) break out of

6. Home heating, which ---- less than 7 per cent of all energy consumed in the US, has had a commendable efficiency record.

- A) accounts for B) comes with C) joins in
D) picks up E) brings out

Diğer sayfaya geçiniz.

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7. For a long time now, biologists ---- that bits of tissue placed next to each other ----.

- A) had known / may fuse
- B) have known / can fuse
- C) knew / had fused
- D) would have known / have fused
- E) know / would have fused

8. It ---- that Brazil's new surveillance system ---- a useful tool in the protection of the rain forests.

- A) may be hoped / would have proved
- B) was hoped / had proved
- C) has been hoped / would prove
- D) could be hoped / might have proved
- E) is hoped / will prove

9. Many engineers ---- the thrill of designing a novel product that then ---- mass production.

- A) are having / is entering
- B) had had / had entered
- C) would have / has entered
- D) have had / enters
- E) were having / have entered

10. Over the past eight years, the TES instrument ---- that Martian rocks and sands ---- almost entirely of volcanic minerals.

- A) would discover / had been composed
- B) has discovered / are composed
- C) would discover / were composed
- D) had discovered / had been composed
- E) was discovering / would be composed

11. In order ---- a good sheep-shearing robot I had to understand sheep shearers and the skill of shearing, as well as the technology ---- in building a robot.

- A) having built / to have been involved
- B) building / to be involved
- C) to build / involved
- D) to be building / involving
- E) to have built / having been involved

12. It is estimated that sulphur pollution costs China nearly 45 billion dollars each year ---- lost productivity, health care and damage ---- forests and crops.

- A) from / at
- B) in / to
- C) under / of
- D) over / through
- E) by / for

Diğer sayfaya geçiniz.

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13. One of the great advances ---- astronomy ---- the past decade has been the discovery of planets outside our solar system.

- A) of / over B) through /at C) in / to
D) for / by E) with / for

16. Certain reactions, ---- catalytic methanation, appear to stop before they are complete.

- A) instead of B) such as C) in place of
D) in case of E) with reference to

14. He realized that the world could run out of key resources, ---- he was a harsh critic of the wastefulness of modern industrial society.

- A) so that B) whether C) so long as
D) and so E) but

17. Engineering structures must conform ---- to their type ---- to the laws of physics.

- A) not only / but also B) as / as
C) more / but D) both / as
E) either / and

15. ---- the car is equipped with a sophisticated protection system, you know you are fully protected.

- A) Until B) Even if C) Although
D) So E) Since

18. The harder a material is, ---- ductile or workable it tends to be.

- A) the most B) as much C) the less
D) more E) so much

Diğer sayfaya geçiniz.

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

Natural disturbances, including hurricanes and earthquakes, have affected coral reefs for millions of years. They are typically acute but have short-lived (19) ----. Reef areas (20) ---- human influences often recover within a few years (21) ---- water and substratum quality remain high. Indeed, acute natural disturbances can actually help (22) ---- diversity on coral reefs by knocking back dominant species and allowing (23) ---- competitive species to re-establish themselves.

19.

- A) products B) conditions C) concerns
D) effects E) explanations

20.

- A) down to B) up to C) up against
D) out of E) away from

21.

- A) so that B) unless C) though
D) if E) whether

22.

- A) to have maintained B) maintaining
C) having maintained D) to be maintained
E) to maintain

23.

- A) much B) little C) as
D) less E) least

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

24. Battlefield radios may become obsolete ----.

- A) if software programmable units take over
B) until they are all built to a common standard
C) when local police and fire departments would also benefit
D) since other versions had become tailored to their needs
E) while security features are also innovative

25. In biology, isolating particular enzymes is a tedious process of trial and error ----.

- A) though silicon is not the best choice of material
B) if several hundred steps were involved
C) which involves many different experiments
D) until other problems could be eliminated
E) as lab experiments may prove unnecessary

26. Just try shooting at bullet-proof glass ----.

- A) but you can stand a few meters away
B) if you want to be quite sure that it really is bullet proof
C) while the glass remained unharmed
D) why some gangs have started to fire anti-tank missiles at armoured cars
E) that it withstood every attack

27. The vast oil output of the Caspian must be piped overland to, say, the Mediterranean, ----.

- A) that it is not a landlocked sea
- B) if a pipeline is laid across Iran
- C) before it can be pumped into tankers
- D) which would also pass through Georgia
- E) as a great deal of diplomacy would be required

28. Their latest digital radio is supplied with a pair of active speakers ----.

- A) if the number keys have been moved to the sides
- B) that an FM radio is fitted into its compact dimensions
- C) though the screen itself seemed to be touch-sensitive
- D) so you don't have to plug it into an amplifier
- E) how the graphic display shows the programme you are listening to

29. The engineers ---- took their know-how to Japan and China in the late 19th and early 20th centuries.

- A) that it would be the world's largest dam
- B) who continue to travel around the world transferring technology
- C) who had built railroads and dams across America
- D) as engineering problems can attract worldwide interest
- E) though the spread of technology is not likely to be halted

30. Although global warming was outside the parameters of their study, ----.

- A) countries with high gasoline prices are more innovative in the field of personal transportation vehicles
- B) battery-powered electric vehicles would not have been disregarded
- C) fossil fuel consumption habits will have to be curtailed
- D) for the present the focus is on the efficient use of fossil fuels
- E) it is nevertheless a fact that should have been faced

31. ---- as they are today.

- A) Satellites are providing clear photographs
- B) The fluctuating magnetic field lies deep in the centre of Earth
- C) Several other bodies in the solar system generate their own magnetic fields
- D) Earth's magnetic poles have not always been oriented
- E) Many intriguing explanations are being put forward

32. Since mines may have been laid there, ----.

- A) these fields had not been cultivated
- B) large areas of valuable farmland are being overgrown by bamboo
- C) immense bamboo thickets would have come into being
- D) the costs of restoring farmland to full production have always been high
- E) faster techniques were called for

33. ---- that solar flares triggered geomagnetic storms.

- A) Scientists used to think
- B) The findings were ambiguous
- C) The astronauts were taken by surprise
- D) The facts have to be suppressed
- E) The results of the experiment surprised everyone

34. ----, though none are yet being grown on a commercial scale.

- A) Conifers are dominant trees in northern latitudes
- B) Trees produce copious pollen, which travels up to 16 kilometres
- C) Genetically modified trees have not been planted in natural woods and forests
- D) Plants demonstrate a remarkable diversity in size, habit and form
- E) Genetically modified trees are being developed for a variety of uses

35. Because each leaf is characteristic of the plant on which it grows, ----.

- A) most leaves are composed of three parts: a blade, a petiole and a pair of stipules
- B) water loss by evaporation from the leaf's surface is unavoidable
- C) many plants can be identified by their leaves alone
- D) all parts of a plant can be damaged by air pollution, but leaves are particularly susceptible
- E) many leaves have special structures through which water is literally forced out

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

36. The findings of a ten-year study reveal that two species of seahorses have been living in the waters around Britain without anyone realizing they were there.

- A) İngiltere'nin çevresindeki sularda daha önce onların orada yaşadığını kimsenin bilmediği iki tür denizatının olduğu on yıllık bir çalışmayla ortaya çıktı.
- B) On yıllık bir çalışmanın bulguları İngiltere'nin çevresindeki sularda onların orada olduğunu hiç kimsenin farketmediği iki tür denizatının yaşamakta olduğunu gösteriyor.
- C) İngiltere'nin çevresindeki sularda iki tür denizatının yaşadığını ilk kez ortaya çıkaran on yıllık çalışma bu türlerin hiç farkedilmediğini belirtiyor.
- D) On yıllık çalışmanın sonuçlarına göre İngiltere'nin çevresindeki sularda hiç kimsenin bilmediği iki tür denizatının yaşamakta olduğu bildiriliyor.
- E) İki tür denizati hiç kimseye belli etmeden İngiltere'nin çevresindeki sularda yaşarken on yıllık bir çalışma onları ortaya çıkardı.

37. Though stars appear to the eye as single points of light, very many of them turn out to be double when seen through a telescope.

- A) Teleskopla bakıldığında çift ışık olan yıldızların çoğu göze tek ışık noktası gibi görünür.
- B) Çıplak gözle bakıldığında yıldızlar tek ışık noktası gibi görünür, çoğuna sadece teleskopla bakıldığında çift olduğu anlaşılabilir.
- C) Göze tek ışık noktası gibi görünen yıldızlara teleskopla bakıldığında çoğunun çift olduğu gözlenir.
- D) Yıldızlar çıplak gözle bakıldığında tek ışık noktası gibi algılansa da teleskopla bakıldığında aslında çift olduğu görülür.
- E) Her ne kadar yıldızlar göze tek ışık noktası gibi görünse de pek çoğunun teleskopla bakıldığında çift olduğu ortaya çıkar.

38. Entropy is a physical property like temperature and pressure, and measures how close a system has come to reaching stagnant "equilibrium".

- A) Sıcaklık ve basınç gibi fiziksel bir özellik olan entropi bir sistemin durgun "denge"ye ulaşıp ulaşmadığını ölçer.
- B) Entropi sıcaklık ve basınç gibi fiziksel bir özelliktir ve bir sistemin durgun "denge"ye ne kadar ulaştığını ölçer.
- C) Bir sistemin durgun "denge"ye ulaşıp ulaşmadığı sıcaklık ve basınç gibi fiziksel bir özellik olan entropi ile ölçülür.
- D) Entropi hem sıcaklık ve basınç gibi fiziksel özellikler arasındadır hem de bir sistemin durgun "denge"ye ne kadar ulaştığını belirlemede yardımcıdır.
- E) Sistemlerin durgun "denge"ye ulaşıp ulaşmadığını ölçen entropinin sıcaklık ve basınçla ortak olan yanı, fiziksel bir özellik olmasıdır.

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

39. Bilim adamları bir büyük depremin, bir sonrakinin zamanı ve yeri üzerinde kayda değer bir etkisinin olmadığını düşünürlerdi; fakat, son araştırmalar durumun böyle olmayabileceğine işaret ediyor.

- A) Scientists used to think that there was no connection between one major earthquake and subsequent smaller ones, but new studies suggest there may be.
- B) Formerly scientists thought that one large earthquake could not possibly affect the timing or location of the next, but recent research suggests it may.
- C) Contrary to what scientists used to think, recent research suggests that a major earthquake may considerably affect the timing and location of subsequent earthquakes.
- D) Recent research suggests that a major earthquake may influence the time and place of subsequent earthquakes though this has not been the traditional view of scientists.
- E) Scientists used to think that one large earthquake had no notable influence on the timing or location of the next one but recent research suggests this may not be the case.

40. Aşağı yukarı aynı büyüklükte ve Güneş'e aynı uzaklıkta olan Dünya ve Venüs sıklıkla ikiz gezegenler olarak nitelendirilir.

- A) It is usual to refer to Earth and Venus as twin planets as they are almost the same size and distance from the Sun.
- B) Since Earth and Venus are roughly the same size and distance from the Sun it is only natural that they should be regarded as twin planets.
- C) Earth and Venus, being roughly the same size and distance from the Sun, are often regarded as twin planets.
- D) It is because they are exactly the same size and distance from the Sun that Earth and Venus are known as the twin planets.
- E) By the twin planets we mean Earth and Venus which are nearly the same size and are equidistant from the Sun.

41. Dünyanın iç kısmını araştırma konusunda uzmanlaşan bilim adamları, uzun süre, Dünya'nın derin iç kısmındaki hareketin yüzeydeki dikey değişimlerin arkasında olduğundan şüphelendiler.

- A) Scientists who specialize in studying Earth's interior have long suspected that activity deep inside Earth is behind vertical changes at the surface.
- B) Scientists studying Earth's interior have come to the conclusion that what goes on deep inside Earth affects vertical changes at the surface.
- C) It is generally agreed by scientists studying Earth's interior that events deep inside Earth's core influence vertical changes at the surface.
- D) Scientists specializing in the study of Earth's interior have long been aware of the fact that activity deep inside Earth may be responsible for vertical change at its surface.
- E) Scientists specializing in happenings deep within Earth's core have, for a long time, suspected a relationship between them and vertical changes at the surface.

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

42. Fragile ecosystems like the Arctic could face many more years of contamination from PCBs (polychlorinated biphenyls), despite international treaties banning their use. ----. An estimated 1.3 million tonnes of PCBs were made between the 1930s and 1990s around the world for use in the manufacture of pesticides, lubricants, and plastics. But an investigation to determine the fate of these PCBs has failed to locate most of them.

- A) On the other hand, PCBs may be carried by wind to cold countries where they condense out in the cold air
- B) Indeed, soils in temperate lands have captured most of the PCBs so far released into the environment
- C) On the contrary, PCBs could pose a threat to polar bears for years to come
- D) That is the conclusion of a study into the fate of PCBs manufactured worldwide during much of the 20th century
- E) As a result, urban air contains more PCBs than rural air

43. The Kavli Foundation's approach differs from the increasingly utilitarian focus of most funded research. ----. Kavli opposes this practice for he believes you have to be willing to fund science without knowledge of the benefits.

- A) To obtain funding from any source, scientists must usually frame their ideas in the context of studies already completed and short-term impact
- B) Knowledge about materials and processes in the universe could open up benefits that we can't even imagine
- C) In fact, the foundation pays for nondirected research in its three main areas of interest: astrophysics, nanoscience and neuroscience
- D) It is unrealistic of such agencies to expect these programmes to deliver useful tools and applications rapidly
- E) The foundation has chosen disciplines that are already acknowledged as "growth" areas in science

44. Traditionally, the study of planet formation has proved frustrating, as astronomers have never been sure whether their theories apply to other planetary systems. ----. Now, however, the observations of debris discs around stars of different masses and ages are helping to place our solar system in context.
- A) Some discs look like gigantic versions of the rings of Saturn
- B) Most of the discs, however, could not be seen directly
- C) What the recent images show is wonderfully unexpected
- D) This is because the solar system is the only known example of a planetary system
- E) The dust particles probably result from collisions among asteroids

45. Isaac Newton presented the earliest scientific definition of mass in 1687 in his landmark work *Principium*: "The quantity of matter is the measure of the same arising from its density and bulk conjointly." That very basic definition was good enough for Newton and other scientists for more than 200 years. ----. In recent years, however, the why of mass has become a research topic in physics.
- A) The laws of gravity predict that gravity acts on mass and energy
- B) Most people think they know what mass is, but actually they understand only a very small part of what it entails
- C) Fundamental particles have an intrinsic mass known as their rest mass
- D) Energy and mass are related, as described by Einstein's famous equation, $E=mc^2$
- E) They understood that science should proceed first by describing how things work and later by understanding why

46. Can coal ever become a friend of the environment? Coal-fired power stations supply half the electricity used in many industrial countries. ----. This, of course, is the most worrisome of the so-called "greenhouse gases."
- A) New ones will have to comply with the Clean Air Act
- B) They are, however, responsible for 80% of the power industry's emissions of carbon dioxide
- C) Energy engineers are already talking about "clean coal" technology
- D) Clean coal means different things to different people
- E) Coal treatment and refining processes are rightly getting a lot of attention as well

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

47. Roy:
- If you haven't already read this account of Philip Morrison, make sure you do.
- Michael:
- ----
- Roy:
- That's what impressed me most. He made important contributions in quantum electrodynamics among other things, and then gave courses on physics for poets!
- A) Yes, I will. I've seen him on TV on several occasions, he's both charming and amusing.
- B) Yes, I intend to. What was it that impressed you?
- C) I've already done so. The range of his interests and activities is amazing.
- D) Did you realize he was an assembler of the first atomic bomb?
- E) Of course. I was his student, you know, at Cornell University.

48. Gary:
- **Is this the website you like best when it comes to scientific news?**

Philip:
- **Yes, I suppose it is. It's updated weekly and well-linked to related websites.**

Gary:
- ----

Philip:
- **That's hard to say. So many scientific "facts" are being questioned these days.**

- A) Is it university-owned?
B) Does it keep up with recent developments?
C) What's the level? College stuff?
D) From a scientific point of view, how reliable is it?
E) Does it cover all the sciences?

49. Brian:
- **Have you read this book, *Water Follies*?**

Peter:
- **No I haven't; but I've heard a lot about it. It focuses on how much water is being wasted, doesn't it?**

Brian:
- ----

Peter:
- **Good! It's time someone took a firm stand against the waste.**

- A) That's right. And it's pretty critical of man for being so unconcerned about this waste.
B) No. It actually concentrates on ground water.
C) Yes. Most people seem to think ground water is boundless.
D) And the gold-mining industry is attacked for its vast "dewatering" operations.
E) And the consequences include dry rivers and land subsidence.

50. Sam:
- **Do you think NASA's emergency escape plan for space-bound astronauts will work?**

Robert:
- **That's hard to say. I suppose really it will depend on the kind of emergency that presents itself.**

Sam:
- ----

Robert:
- **Actually, the colour is a survival feature too. It makes a search for the crew easier.**

- A) It reminds one of science-fiction films, with everything neatly planned.
B) It seems a bit like a game to me. The suits are a brilliant orange colour.
C) The antigravity suit squeezes the legs to prevent blood from pooling in them.
D) Apparently shuttle bailout is a last resort, to be used only if landing becomes impossible.
E) Let's hope the *Challenger* catastrophe is not repeated.

51. Larry:
- **They're holding a young designers' competition for designing a robot to put out a house fire.**

Tony:
- **I think you mean to blow out a candle!**

Larry:
- ----

Tony:
- **But you are right. The final aim is, of course, to put out house fires.**

- A) Well, at this stage, that's all they're asking for.
B) Do you think they ever will?
C) That shouldn't be too difficult. The real problem is to locate the fire.
D) If it could set off an alarm even, that would be useful, wouldn't it?
E) Once a fire takes hold it becomes a major problem.

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

52. (I) Computer researchers predict that quantum computers will become a reality within 10 to 15 years. (II) However, these machines pose a security threat, because their ability to perform many calculations at once means they will be able to uncover the encryption keys that are, for practical purposes, untraceable by today's "classical" conventional computers. (III) If that happens, people will be able to tap into cell phone calls. (IV) A quantum computer can represent a 0 and a 1 at the same time in a quantum bit (called a qubit). (V) Furthermore, secure e-commerce will be a thing of the past.

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

53. (I) Everyone knew that freezing rain could be bad, but what the researchers learned was frightening. (II) All aircraft designers are familiar with the challenge of icing. (III) Manufacturers must demonstrate that their aircraft are capable of flying safely in cold, wet conditions where they might ice up. (IV) In the US, those conditions are specified by the Federal Aviation Administration's (FAA) "Appendix C". (V) This appendix clearly states the kinds of cold weather which an aircraft must be able to deal with.

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

54. (I) Mother Columbian rainbow boas, *Epicrates cenchria maurus*, have the strange habit of eating some of their own young. (II) Now new research reveals why. (III) Within two weeks, these mothers regained their lost muscle. (IV) Stillborns and undeveloped eggs in a clutch, which the mother consumes soon after laying or giving birth, are rich in energy and contain a diversity of proteins and essential nutrients. (V) Therefore, maternal cannibalism leads to a quick recovery after giving birth.

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

55. (I) Nyos is a crater lake formed by a volcanic eruption roughly five centuries ago. (II) In these lakes the gas saturates the bottom water. (III) It is one of many such lakes, found the world over in volcanic chains. (IV) It is, however, one of only two lakes known to have exploded. (V) And when it exploded a jet of gas-laden water rose 80 meters high and carbon dioxide filled the air.

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

56. (I) Most of the military robotic systems currently operating are airborne. (II) This is because robots for use in a ground war present serious problems as conditions are more complex and less predictable. (III) The Army's first ground robots were devoted to mine-sweeping. (IV) For instance, what works in a desert will be unsuited to jungles. (V) Similarly, a machine designed for use in cities is unlikely to adapt to mountains.

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

57. – 60. soruları aşağıdaki parçaya göre cevaplayınız.

How have terrestrial organisms met the environmental challenges of living on land? Life began in the oceans, but many life forms have since adapted to terrestrial life in a sea of air. Every single organism living on land has to meet the same environmental challenges: obtaining enough water; preventing excessive water loss; getting enough energy; and in polar regions, tolerating widely varying temperature extremes. How those challenges are met varies from one organism to another, and in large part explains the diversity of life encountered on land today. Some animals avoid colder temperatures by migrating to warmer climates for the winter, whereas others avoid the cold by passing the winter in a dormant state called hibernation. Many plants also spend winter in a dormant state. The aerial parts of some plants die during the winter, but the underground parts remain alive; the following spring they resume metabolic activity and develop new aerial shoots. Many trees are deciduous; that is, they shed their leaves for the duration of their dormancy. Shedding leaves is actually an adaptation to the "dryness" of winter. Roots cannot absorb water from ground that is cold or frozen; by shedding its leaves the plant reduces water loss during the cold winter months when obtaining water from the soil is impossible.

57. It is pointed out in the passage that all terrestrial organisms ----.

- A) in warm regions find it very hard to tolerate extreme temperatures
- B) in polar regions live out the winter through hibernation
- C) face the danger of extinction due to environmental challenges
- D) have, one way or another, adapted themselves to environmental conditions
- E) are most adversely affected by excessive water loss and cold temperatures

58. It is pointed out in the passage that the diversity of life on Earth ----.

- A) is far more extensive in temperate climates than in colder ones
- B) results from the variety of ways whereby organisms meet environmental challenges
- C) is related to plants rather than other organisms
- D) becomes far more apparent in spring than in winter
- E) must be maintained through the conservation of the environment

59. One can understand from the passage that, for deciduous trees, the shedding of leaves ----.

- A) increases the amount of water loss, which is a serious environmental challenge
- B) increases their metabolic activity throughout winter
- C) is an effective mechanism of resistance to heat
- D) is a regular metabolic activity which is not related to environmental conditions
- E) is a kind of hibernation that enables them to survive the cold winter months

60. It is clear from the passage that, for some animals, migration ----.

- A) and hibernation are equally viable options
- B) is comparatively easy
- C) is indispensable for survival
- D) causes a great deal of energy loss
- E) involves various environmental challenges

61. – 64. soruları aşağıdaki parçaya göre cevaplayınız.

Henrik-Jan van Veen has carried out a great deal of research into spinning. This is especially true for “graveyard spins”, the term for what happens when fighter pilots get so disoriented they miscalculate how to get their plane back on course. They can end up in a dangerous and often fatal spin. Van Veen works at a research lab run by the Netherlands Organization for Applied Scientific Research, the TNO. The range of research covered by the TNO is vast, and it sees itself as a practical problem solver. And for the Dutch air force, the graveyard spin is certainly a problem that needs solving. Van Veen’s specialty is “vibrotactile devices”, which use vibrations to convey information. His latest project is a vest studded all over with small discs that can each vibrate independently. In a test room, a pilot is strapped into a seat in a “cockpit”. At the push of a button, the lights go out and the chair starts spinning. After a while the chair is stopped. “He’ll think he’s spinning the other way now”, says van Veen. The pilot is told to correct the spin, but instead, he overcorrects massively, and the chair begins spinning again. In the next test, the pilot dons van Veen’s vest and is told that the patch of the vest that is vibrating will indicate the direction he should force the joystick to correct a spin. This time, when the chair stops spinning the pilot manages to keep the seat still. Van Veen thinks the vibrotactile vest could do more than save the lives of fighter pilots. He’s now working on linking the system to a GPS receiver so that tourists in a foreign city or blind people in an unfamiliar environment can use the vest to find their way around.

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

- A) has contributed significantly to environmental research
- B) could be developed to serve a variety of purposes
- C) has been in use in military aviation for many decades
- D) is the product of an expensive research project undertaken by the Dutch military
- E) could be used to transmit secret military information

62. It is understood from the passage that, because spins in fighter flights can be fatal, ----.

- A) they are referred to as “graveyard spins”
- B) van Veen has been testing a number of devices that could prevent spins
- C) the TNO is making spin-prevention devices a major research project
- D) many aircraft have been indefinitely grounded
- E) all pilots are required to wear a vibrotactile vest

63. We understand from the passage that the Dutch research centre, the TNO, ----.

- A) works in very close association with the Dutch armed forces
- B) oversees all major research projects being carried out in the country
- C) has put a lot of pressure on van Veen to extend the uses of vibrotactile devices
- D) encourages the application of research for the solving of problems
- E) puts safety devices high on its list of priorities

64. It is clear from the passage that van Veen’s immediate purpose in developing the vibrotactile vest is to ----.

- A) help fighter pilots to calculate their course more accurately
- B) warn pilots in advance that a spin is building up
- C) help the blind find their way about
- D) make it possible to reduce the amount of fuel used by aircraft
- E) enable fighter pilots to get over the effects of a spin and thus, avoid a crash

65. – 68. soruları aşağıdaki parçaya göre cevaplayınız.

For almost 200 years, the idea of cosmic events affecting life on Earth was viewed as heretical by the church, which regarded catastrophe as proof of divine intervention, and as nonsense by the scientific establishment, which dismissed it as superstition. Yet in the end, the sheer weight of evidence has swept away all doubt about the reality of global catastrophes. Attempts to make scientific sense of the many legends of global catastrophes date back to the dawn of modern science itself, in the 17th century. Following the publication of Newton's laws of motion and universal gravitation in 1687, Edmond Halley decided to apply them to the mystery of comets. By studying records of their appearance, Halley argued that the bright comets of 1456, 1531, 1607 and 1682 were in fact one comet, later known as the "Halley" comet, that followed a vast elliptical orbit around the Sun in agreement with Newton's laws. But Halley noted something else as well: a comet crossing the orbit of the Earth might one day collide with us with devastating consequences.

65. According to the passage, Newton's laws of motion and gravitation ----.

- A) had no impact whatsoever on the rise of modern science
- B) were approached skeptically by Halley and other contemporary scientists
- C) helped Halley to identify the comet that bears his name
- D) convinced Halley that catastrophes were in fact acts of divine intervention
- E) were dismissed right away by the scientific establishment of his time

66. It is pointed out in the passage that, prior to the rise of modern science in the 17th century,----.

- A) various studies had been made of comets, but Halley disregarded them all
- B) the way people viewed cosmic events varied greatly
- C) all kinds of learning had been subject to the approval of the church
- D) the Earth had experienced several collisions with cosmic objects
- E) attempts had been made to explain certain catastrophes with reference to gravitational laws

67. We learn from the passage that in the opinion of Halley, ----.

- A) the mystery surrounding comets could never be cleared up
- B) Newton's laws of motion and gravitation needed to be further clarified and elaborated
- C) the earlier appearances of the comet "Halley" had not been properly recorded
- D) global catastrophes could be prevented through new scientific developments
- E) a comet may, at some point in the future, strike Earth

68. It is clear from the passage that, in the past, the church ----.

- A) regarded global catastrophes as acts of God
- B) was particularly interested in the movements of comets
- C) consistently banned any research into cosmic events
- D) encouraged scientists to find ways of preventing global catastrophes
- E) wished to suppress all thoughts of cosmic events

69. – 72. soruları aşağıdaki parçaya göre cevaplayınız.

Except perhaps for some remote island dwellers, most people have a natural tendency to view continents as fundamental, permanent and even characteristic features of Earth. One easily forgets that the world's continental platforms amount only to scattered and isolated masses on a planet that is largely covered by water. But when viewed from space, the correct picture of Earth becomes immediately clear. It is a blue planet. From this perspective it seems quite extraordinary that over its long history, Earth could manage to hold a small fraction of its surface always above the sea — enabling, among other things, human evolution to proceed on dry land. Is the persistence of high-standing continents just an accident? How did Earth's complicated crust come into existence? Has it been there all the time, like some primeval icing on a planetary cake, or has it evolved through the ages? Such questions engendered debates that divided scientists for many decades, but the fascinating story of how the terrestrial surface came to take its present form is now partly resolved. That understanding shows, remarkably enough, that the conditions required to form the continents of Earth may be unmatched in the rest of the solar system.

69. One important point made in the passage is that ----.

- A) new questions concerning the solar system are constantly coming to the fore
- B) scientists have finally been able to understand fully the mystery of Earth's crust
- C) people living on remote islands are so cut off from the rest of the world that they have no idea about what is happening elsewhere
- D) the formation of the continents of Earth may have no parallel elsewhere in the solar system
- E) the growing pollution of the oceans is causing a great deal of concern among scientists

70. According to the passage, the question of how Earth's continents came into being ----.

- A) has never attracted much attention
- B) has been one of the concerns of space research and exploration
- C) can best be answered through a comprehensive study of the other planets in the solar system
- D) is not likely to be resolved in the near future
- E) gave rise to considerable disagreement among scientists

71. The passage calls Earth the "blue planet" to underline the fact that ----.

- A) the waters of the oceans are crystal clear
- B) the geographical features of Earth are not very distinct when viewed from space
- C) many things on Earth are blue
- D) there is actually very little land on Earth
- E) it is man's duty to keep the seas clean

72. The passage suggests that the inhabitants of small isolated islands ----.

- A) will be adversely affected if the oceans continue to be polluted
- B) have frequently chosen to live in comparative isolation in preference to living in a crowded city
- C) always demonstrate a keen interest in the solar system
- D) depend for their living more on the sea than on the land
- E) probably have a better perception of the reality of Earth than the majority of us

73. – 76. soruları aşağıdaki parçaya göre cevaplayınız.

In his preface to *Spaceflight Revolution*, David Ashford recalls how he started his research into rocket motors. As he later explains, these were motors that would power a space plane — one that would launch space travellers and satellites cheaply and reliably into orbit. That was 1961. Ashford admits he would probably have taken another job if he'd known that, 42 years later, satellites would still be launched by rockets descended from ballistic missiles. The technology is there, but political and budgetary decisions have so far stopped space planes getting off the ground. But Ashford presents a compelling argument that a small orbital space plane would cost relatively little to design and develop — the equivalent of just two shuttle flights.

73. As we understand from the passage, Ashford's space plane project ----.

- A) has made space travel extremely cheap and reliable
- B) has been welcomed by political authorities and received much attention
- C) has received no political or financial support since the early 1960s
- D) has been proved faulty in the course of several trials
- E) was originally inspired by ballistic missile technology

74. According to the passage, Ashford ----.

- A) has not yet completed his research into rocket motors
- B) feels that his decades-long work on rocket motors has been unjustly ignored
- C) has written his book *Spaceflight Revolution* mainly to criticize politicians
- D) has been recognized as a leading scientist in space research and rocket technology for quite some time now
- E) has proposed a project which can only be realized if a sizeable budget is available

75. As can be understood from the passage, Ashford is firmly convinced that ----.

- A) the development of a space plane would cost no more than two shuttle flights
- B) politicians and financial authorities need to be careful about investing money in space projects
- C) rockets bear no relation to ballistic missiles
- D) there are many people eager to be space travellers and willing and able to pay a reasonable fare
- E) his work on rocket motors has greatly contributed to space research

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

- A) is an ongoing debate on the uses of ballistic missiles
- B) is some discrepancy between Ashford's words and his actions
- C) is much public support for Ashford's project
- D) are many technological differences between Ashford's rocket motors and the conventional rockets currently in use
- E) is much concern among space scientists, including Ashford, about the ever-growing costs of the space programme in general and of shuttle flights in particular

77. – 80. soruları aşağıdaki parçaya göre cevaplayınız.

The Wireless Museum has several of the earliest crystal wireless sets from the 1920s which ran on electromagnetic waves with no external power source, and were easily made at home. Valve radios, which came along in the 1930s, needed electricity to heat up the valves and the museum has both mains and battery-powered valve radios on display. The collection also has some rare wartime civilian receivers — the only type of valve radio manufactured during the Second World War. This was by order of the government, because at this time most manufacturing was focused on the war effort. There are also plenty of modern day transistor radios including a collection of novelty radios dating from the sixties and seventies.

77. It is pointed out in the passage that, during World War II, ----.

- A) transistor radios began to replace traditional valve radios
- B) the production of wireless sets was almost entirely for military purposes
- C) various types of radios requiring no external power source were developed
- D) the government banned all kinds of civilian receivers
- E) the efficiency of valve radios was upgraded through the introduction of new designs

78. We learn from the passage that the very early crystal wireless sets ----.

- A) were the models out of which transistor radios were later developed
- B) were manufactured in large quantities before the arrival of valve radios
- C) are among the museum's most precious exhibits
- D) were still in use during World War II, though in limited numbers
- E) were unconnected to an outside power system

79. It is clear from the passage that valve radios ----.

- A) were still in widespread use in the sixties and seventies
- B) originally operated on electromagnetic waves
- C) consumed more electricity than one might expect
- D) are of two types: mains and battery-powered
- E) were costly products and the government disapproved of them

80. This passage is concerned with ----.

- A) the exhibits of a wireless museum which cover a considerable variety
- B) the government's war efforts and production policies regarding radios
- C) the technical features of transistor radios
- D) the way a valve radio works
- E) why the wireless museum was originally set up

TEST BİTTİ.

CEVAPLARINIZI KONTROL EDİNİZ.