- 1. Physics, chemistry, biology, and certain branches of mathematics emerged as unique research fields in their own ---- during the Scientific Revolution in the 17th century.
 - A) belief
- B) prophecy
- C) disruption
- D) right***
- E) conduct
- 2. Charles Darwin popularised the term "natural selection", ---- it with artificial selection, which in his process is intentional, whereas natural selection is not.
 - A) associating
- B) viewing
- C) contrasting***
- D) devising
- E) dealing
- 3. In biology, taxonomy is the scientific study of naming, defining and classifying groups of biological organisms based on ---characteristics.
 - A) challenging
- B) infamous
- C) common***
- D) recent
- E) insistent
- 4. Flood waters provide much-needed water resources in arid and semi-arid regions where precipitation is not ---- distributed throughout the year.
 - A) evenly***
- B) sporadically
- C) frugally
- D) patchily
- E) indiscriminately
- 5. Although its diet consists almost ---- of medium-sized birds, the peregrine falcon will sometimes hunt small mammals, small reptiles, or even insects.
 - A) absolutely
- B) densely
- C) abruptly
- D) exclusively***
- E) particularly

- 6. A drug is most commonly a small organic molecule that activates or inhibits the function of a biomolecule such as a protein, which in turn ---- a therapeutic benefit to the patient.
 - A) results in***
- B) gives off
- C) puts out
- D) breaks out
- E) takes off
- 7. Henri Becquerel suspected that phosphorescent materials, such as some uranium salts, ---- X-ray-like radiation when ---by bright sunlight, and he was right.
 - A) had to emit / illuminating
 - B) will emit / to illuminate
 - C) might emit / illuminated***
 - D) would emit / to be illuminated
 - E) can emit / having illuminated
- 8. In recent years, some large companies ---small but important steps forward in quantum computing ---- the world as we know it.
 - A) have taken / to revolutionise***
 - B) took / revolutionised
 - C) have been taking / to be revolutionised
 - D) have been taken / being revolutionised
 - E) are taking / revolutionising
- 9. The first notable European observatory was that at Uraniborg ---- the remote island of Hven, built by King Frederick II ---- Denmark in 1576.
 - A) to / for
- B) above / off
- C) in / with
- D) out / in
- E) on / of***
- 10. Though popular myths may suggest otherwise, predators are ---- brutal beings devouring the weak ones, ---- a vital part of a food chain, the process of passing energy from one organism to the next.
 - A) both / and
- B) either / or
- C) not / but***
- D) neither / nor
- E) as/as



- 11. The original form of Newton's second law states that the net force acting upon an object is equal ---- the rate at which its momentum changes ---- time.
 - A) out/over
- B) of / across
- C) within / under
- D) to / with***
- E) at / through
- 12. Critics of the term Anthropocene say that this term should not be used because of the difficulty it causes when ---- a specific time when humans started ---- the rock strata.
 - A) to define / to influence
 - B) defined / influenced
 - C) being defined / to be influencing
 - D) defining / influencing***
 - E) to be defined / to be influenced
- 13. Evidence suggests that cacao was domesticated in equatorial South America, and it took a long while, roughly 1500 years, ---- it was domesticated in Central America.
 - A) since
- B) if
- C) before
- D) as though
- E) once
- 14. ---- some barrier islands form when ocean currents pile up sand on sandbars parallel to coastlines, other barrier islands formed during the most recent ice age as glaciers melted and the sea level rose.
 - A) When
- B) Just as
- C) While***
- D) In case
- E) So long as
- 15. A wide variety of foods can cause allergic reactions; ----, some 90% of allergic responses to foods are caused by cow's milk, soy, eggs, wheat, peanuts, tree nuts, fish, and shellfish.
 - A) otherwise
- B) similarly
- C) however***
- D) thus
- E) in contrast

- 16. As it reflects direct sunlight, the Moon is visible and the brightest celestial object in Earth's sky after the Sun ---- veiled by the dark clouds in the sky.
 - A) before
- B) when
- C) unless***
- D) though
- E) as
- 17. We know a lot about Mars from data collected by telescopes and spacecraft ---- through examining meteorites that have come from Mars.
 - A) by means of
- B) in return for
- C) with regard to
- D) due to
- E) as well as***
- 18. According to research, bumblebees are disappearing at an unprecedented rate ---- factors such as climate change, pesticides and habitat loss.
 - A) apart from
- B) compared to
- C) as a result of***
- D) as opposed to
- E) in pursuit of
- 19. When a matter is in the solid state, the forces between particles are still at play and ---- strong in physical terms ---- the particles cannot move freely but can only vibrate.
 - A) so / that***
- B) as/as
- C) such / that
- D) both / and
- E) so/as
- 20. For many years, measurements of the number of neutrinos ---- in the Sun were much lower than theories had predicted, a problem recently ----through a better understanding of neutrino oscillation.
 - A) being produced / having resolved
 - B) having been produced / to resolve
 - C) produced / resolved***
 - D) to be produced / to be resolved
 - E) producing / resolving





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66. - 68. soruları aşağıdaki parçaya göre cevaplayınız.

A volcano is essentially a gap in Earth's crust where the surface is connected to chambers of liquid rock below. Earth's crust is composed of tectonic plates that sit on top of the hotter, softer rock in the mantle. Volcanoes most often occur at the boundaries where plates meet. This happens on land, but there are also many underwater volcanoes, some of which are very large. There are also volcanoes, including those in Hawaii, that sit in the middle of tectonic plates. It is thought that these are connected to the mantle by 3000 km deep chimneys of liquid rock called mantle plumes. According to the US Geological Society, there are about 1500 potentially active volcanoes on land. There are always dozens of them erupting. In 2020, more than 60 volcanoes erupted or continued to erupt. Volcanoes are perhaps best known because of the dangers they present. Streams of lava can burn up and destroy anything in their path, while explosions can inject huge quantities of ash into the atmosphere. It is thought that huge volcanic eruptions in the ancient past clogged up the atmosphere, changing the climate in drastic ways that precipitated major extinction events around the active volcanoes.

66. It can be understood from the passage that although most volcanoes are found where plates meet ----.

- A) some also occur in the middle of them ***
- B) it is rare to see an active one
- C) they are no concern for earthquakes
- D) the ones undersea are more dangerous
- E) the can be spotted everywhere in the world

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

- A) the volcanoes in Hawaii are particularly dangerous
- B) 2020 was the worst year in terms of destruction caused by volcanoes
- C) volcanoes may have wiped out species when they erupted in the past***
- D) volcanoes lay the foundation that allows life to thrive
- E) all volcanoes have similar qualities that make them predictable

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

- A) Formation of Volcanoes
- B) Locations of Volcanoes
- C) Volcanoes Explained***
- D) Avoiding Volcanic Surges
- E) Largest Eruptions in History

Bonus 1

The word "<u>precipitated</u>" in text is closest in meaning to ----.

- A) expanded
- B) explained
- C) predicted
- D) triggered***
- E) recorded

Bonus 2

What is the author's tone in the text?

- A) measured ***
- B) conversational
- C) ironic
- D) reproachful
- E) biting





69. - 71. soruları aşağıdaki parçaya göre cevaplayınız.

"Pass the salt. And the pepper. And while you are at it, the ketchup too." These were the reactions of the two expert "tasters" who got the first taste of a potential food of the future - a burger grown in a laboratory. Funded by a billionaire, the project took cells from organic cows, cultured them in a nutrient solution to develop muscle tissue, and then turned them into thin strands of meat. Such a small amount required billions of lab-grown cells and nearly 20,000 of the cultured strands. Plus, egg powder, beetroot juice, breadcrumbs, salt and saffron to add texture, flavour and colour to the otherwise white meat. And \$330,000. The result? While one tester said it was "close to meat, but not that juicy", another said "like an animal protein cake". Far from meeting the expectations as yet, commercial cultured meat is at least a decade away, yet with the backing of billionaires, issues of taste and feel should be solvable. We do not yet know whether it can ever be produced cheaply and in large quantities. However, with an estimated billion people being clinically obese, another billion seriously malnourished, and the global population expected to grow to nine billion by 2050, it is beyond dispute that the status quo is not, with the current consumption rate, sustainable. So do we now have the appetite for change?

69. The author starts the text with a scene from a fast food to emphasise that ----.

- A) the product developed evokes similar feelings and seems ready to be marketed soon
- B) caution is advised as artificially grown meat may cause reactions in some people
- c) participating in the trial process is not that demanding and can be rewarding
- D) government support is required to improve the taste and texture of the lab-meat
- E) in taste, cultured meat has a long way to go before being commercially available***

70. According to the passage, lab-grown meat ----.

- A) poses serious threats to human health as it lacks nutrients
- B) has a taste that is very close to that of natural meat
- C) wouldn't have been possible without the financial support of a wealthy benefactor***
- could solve the problem of hunger by replacing natural meat
- E) is likely to revolutionise the way animals such as cows are raised

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

- A) the need for cooperation between government and private sector
- B) the studies conducted to overcome obesity in developed countries
- C) the contributions of the wealthy in furthering the scientific advance
- D) efforts to find a scientific solution to the food problem***
- E) innovative and sustainable alternatives to current food production practices

Bonus 1.

The author ends the text with a question to ----

- A) emphasize the need for a change to ensure sustainable consumption
- B) make the reader aware of the fact that the shift to cultured meat is not a luxury but a necessity***
- appreciate the contributions of the well-off investors in furthering the scientific advance
- D) ridicule efforts to find a scientific solution to the food problem
- E) raise questions as to innovative and sustainable alternatives to current food production practices



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"Pass the salt. And the pepper. And while you are at it, the ketchup too." These were the reactions of the two expert "tasters" who got the first taste of a potential food of the future - a burger grown in a laboratory. Funded by a billionaire, the project took cells from organic cows, cultured them in a nutrient solution to develop muscle tissue, and then turned them into thin strands of meat. Such a small amount required billions of lab-grown cells and nearly 20,000 of the cultured strands. Plus, egg powder, beetroot juice, breadcrumbs, salt and saffron to add texture, flavour and colour to the otherwise white meat. And \$330,000. The result? While one tester said it was "close to meat, but not that juicy", another said "like an animal protein cake". Far from meeting the expectations as yet, commercial cultured meat is at least a decade away, yet with the backing of billionaires, issues of taste and feel should be solvable. We do not yet know whether it can ever be produced cheaply and in large quantities. However, with an estimated billion people being clinically obese, another billion seriously malnourished, and the global population expected to grow to nine billion by 2050, it is beyond dispute that the status quo is not, with the current consumption rate, sustainable. So do we now have the appetite for change?

Bonus 2. Which of the following is true according to the passage?

- A) The commercial cultured meat offers a visually appetising sight without colour additives.
- B) The number of trials in the lab is relatively low before they reached an end-product.
- C) The global population expected to grow to nine billion by 2050 can be fed via cultured meat alone.
- D) It is thanks to cultured meat that the current rate of consumption is sustainable.
- E) Those chosen for the test of the cultured meat were not there by coincidence. ***

Bonus 3

What is the author's attitude towards the lack of taste in cultured meat?

- A) positive *** B) cautious
- D) patronizing C) ambivalent
- E) uncompromising









