

SET 3 Science and Technology temalı ileri seviye yeni sorular:

1. Vocabulary (Advanced Verb)

The **discovery** of CRISPR-Cas9 technology has ---- the field of genetic engineering, **allowing** scientists to edit DNA sequences **with an unprecedented level of precision and ease.**

- A) curtailed — curb/retire - diminish
 B) revolutionized + step
 C) undermined —
 D) exasperated - frustrate
 E) exploited use + / colonize —

2. Grammar (Modals & Passive Voice)

Evidence suggests that **if the Mars rover** ---- **with more advanced spectroscopic sensors**, it ---- **the presence of organic compounds in the sub-surface layers much earlier in the mission.**

- A) **had been equipped** / might have detected
 B) ~~was equipped~~ / ~~could detect~~ 4 now
 C) has been equipped / should detect
 D) ~~would be equipped~~ / must have detected
 E) were equipped / ~~to have detected~~

If Type 3 past Conditional

3. Sentence Completion (Technological Ethics)

While the integration of autonomous systems into the manufacturing sector significantly enhances productivity and reduces human error; ----.

A) most consumers prefer products that are handcrafted by artisans rather than mass-produced by machines

B) engineers are focusing on developing more efficient battery technologies to power these robots for longer periods

C) the initial investment required for such high-tech infrastructure is often recouped within a few years of operation

D) profound ethical concerns regarding the displacement of low-skilled workers and the accountability of AI-driven decisions should be taken into consideration. it also raises concerns regarding....

E) the software used to control these systems is becoming increasingly resistant to external cyber-attacks

4. Turkish - English Translation (Scientific Precision)

Kuantum bilgisayarların, geleneksel süper bilgisayarların binlerce yılda çözebileceği karmaşık algoritmaları sadece birkaç saniye içinde işleme potansiyeline sahip olduğu düşünülmektedir.

- 4 A) It is assumed that quantum computers have the potential to process complex algorithms in thousands of years that traditional supercomputers could solve in just a few seconds.
- 4 B) Quantum computers are thought to be more powerful than traditional supercomputers when it comes to solving complex algorithms that take thousands of years.
- C) It is believed that quantum computers have the potential to process complex algorithms in just a few seconds that traditional supercomputers could solve in thousands of years.
- D) Complex algorithms which are solved by traditional supercomputers in thousands of years can only be processed by quantum computers in a few seconds.
- E) Although traditional supercomputers solve complex algorithms in thousands of years, it is potential for quantum computers to do it in seconds.

5. Dialogue Completion (Space Exploration)

Engineer A: The **main hurdle for long-term lunar habitation isn't just the lack of oxygen; it's the pervasive and abrasive nature of lunar dust.**

Engineer B: **Right, it wreaks havoc on seals, gaskets, and even the respiratory systems of astronauts if it infiltrates the habitat.**

Engineer A: ----

Engineer B: **Exactly. Without a way to effectively repel those electrostatically charged particles, any equipment we send will have a very short operational lifespan.**

A) I think we should focus more on finding liquid water beneath the lunar poles instead of worrying about dust.

B) We need to develop specialized electromagnetic shields or coatings that can prevent the dust from adhering to surfaces.

C) The cost of transporting oxygen from Earth is far more significant than the maintenance of mechanical seals.

D) Most astronauts report that the dust actually smells like spent gunpowder once they bring it inside.

E) Previous missions have shown that lunar dust is actually quite easy to clean with standard vacuuming equipment.

6. Restatement (Scientific Nuance)

Despite the initial skepticism surrounding the feasibility of nuclear fusion, recent breakthroughs in magnetic confinement suggest that achieving a net energy gain may finally be within reach. *viable* *accessible* *viable*

A) Nuclear fusion was once thought to be impossible, but magnetic confinement has proven that it is the most efficient energy source available.

B) Even though many were doubtful at first, latest developments in magnetic confinement indicate that producing more energy than is consumed in fusion is likely possible now. *net*

C) Magnetic confinement is the only way to achieve a net energy gain in nuclear fusion, regardless of what skeptics might have argued in the past.

D) Skeptics of nuclear fusion have finally been silenced because recent breakthroughs have already produced a net energy gain using magnets.

E) Although magnetic confinement is a difficult process, it is the most promising method for those who want to reach a net energy gain in nuclear fusion.

7. Paragraph Completion (Biotechnology)

Synthetic biology aims to redesign organisms for useful purposes by engineering them to have new abilities. This multidisciplinary field involves the application of engineering principles to biology, often focusing on the creation of genetic circuits. ---- Proponents envision a future where custom-built microbes can produce biofuels, sequester carbon from the atmosphere, or even detect diseases within the human body. *2/5*

A) However, the complexity of biological systems often leads to unpredictable outcomes when synthetic genes are introduced.

B) Consequently, the global market for synthetic biology products is expected to shrink due to strict government regulations.

C) By treating DNA as a biological code that can be written and edited, researchers can "program" cells to perform specific tasks. *process : işlemek* *(A)*

D) Traditional breeding methods remain more cost-effective than synthetic biology for improving agricultural yields.

E) Most scientists agree that the ethical risks of gene editing outweigh the potential benefits of synthetic biology.

also → even / extreme için gelebilir

8. Irrelevant Sentence (Astrophysics)

(I) Black holes are regions of spacetime where gravity is so strong that nothing, not even light, can escape from them. (II) The boundary ^{around} surrounding a black hole from which no escape is possible is known as the event horizon. (III) Albert Einstein first predicted the existence of black holes in 1916 with his general theory of relativity. (IV) Stephen Hawking later proposed that black holes are not entirely black but emit small amounts of thermal radiation. (V) Many science fiction movies depict black holes as portals to other dimensions or parallel universes, though there is no empirical evidence for this.

- A) I
B) II → *tanım*
C) III
D) IV
E) V → *film*

Cevap Anahtarı:

1. B | 2. A | 3. D | 4. C | 5. B | 6. B | 7. C | 8. E