Day 10. Inference (2)

PRACTICE 02

Passage 9

Based on the passage, you can be inferred that A) Forest ecosystems always remain stable without wildfires. B) People who visit wild areas should be careful to prevent fires. C) Without wildfires, it takes much longer for new vegetation to develop. D) Wildfires are useful for farmers who exploit slash and burn agriculture.	**Wildfires** Not realizing its advantages, people usually see a wildfire as a conflagration that decimates forests and natural habitats. In fact, wildfires stimulate vegetation growth during the recovery period in the area where the fire took place. It is true to a great extent that it takes tremendous time and effort for a forest to recover from a devastating wildfire, but such fires play an important role in the prosperity of the forest. By burning the grasses, branches or other dead organic material, they become valuable and nutritious compost for new plants to consume as they grow. Otherwise, the majority of the forest floor would be heaped with dead branches and leaves, leaving no space for new vegetation to sprout. Also, it takes approximately 50 years for dead branches or foliage to otherwise decompose to become fuel for other plants' growth. As plant life flourishes, insects and other small animals are attracted, and they then appeal to a range of omnivorous and carnivorous animals. After a while, the biodiversity and stability of the burnt area increase once again.

Passage 12

According to the passage, the author implies that A) The fumes from the part of Io farthest from Jupiter protrudes much less. B) All of the satellites of Jupiter are bigger than that of the Earth. C) The height of the smoke fluctuates depending on the season. D) Io possesses enormous geothermal energy.	**Io's Volcanoes** Io is the third largest among Jupiter's sixty three known moons, being slightly greater in size than the Earth's moon. The smoke pillars from Io's erupting volcanoes can reach up to 190 miles above its surface, making it the most volcanically active body in the entire solar system. Scientists have come up with two possible reasons behind this exceptionally fierce volcanic activity. The first is Jupiter's gravitational force. Because Io orbits very closely to the surface of Jupiter, it is inevitable that Jupiter's enormous gravitational influence would actually pull the volcanic surfaces out. In fact, the part of Io directly facing Jupiter bulges toward the planet more than the rest of the surface. The other possible reason behind Io's aggressive volcanic activity can be traced to its orbit's shape. Io's orbit is not perfectly circular,

	rather it is an oval shape, meaning that Io orbits more closely to Jupiter at some times than at others. Without external forces from Jupiter's other moons, Io would have long ago settled into a consistent orbit in which the same part of its surface always pointed towards Jupiter.

Passage 16

According to the passage, what can be inferred about the cichlid in Lake Victoria? A) Cichlid colors became darker to better hide from the predators in the cloudier water. B) The number of species of cichlid in the unclear water was much less diverse. C) Cichlids competed with each other for prey in unclear water because of low visibility. D) There was a swelling population in the unclear water.	**The Cichlid** The cichlid population in Lake Victoria is very unique in that it shows enormous diversity in terms of the number of species that exist within such a small amount of space. However, since the 1970s, over half of the species have been disappearing. The scientific world has possible explanations about the extinction of these species, but recently some reasons why these species have diminished seem more likely. One of the reasons is the very high correlation of fish having bright diverse colors, the number of species, and clear water. Researchers discovered that there was a high number of species in well lit clear water, but soil erosion from local foresting activities had made the water muddier by moving around the sediment, and chemical pollutants such as agricultural runoff also contributed to the water becoming murkier. Therefore, the visibility of deep water in the middle of Lake Victoria decreased from 12 meters to 6.8 meters. Though female cichlids did not have bright colors, the males normally showed vibrant colors, and females used these colors in mate selection. It is further hypothesized that the reduced visibility of the water in Lake Victoria meant that the colors of the males no longer had any particular function in mating since females could not distinguish them. It is believed that female cichlids were interbreeding with other species and that the males with the bright colors disappeared since it was no longer providing a reward to the fish.

TEST PRACTICE

Test 2

1. The word its in the passage refers to

A) Industrial Revolution
B) England
C) wood
D) coal

2. According to paragraph 1, which of the following is NOT mentioned as an interrelated factor that caused the fuel resource change from wood to coal?

A) Increase in food demand
B) Rise in population
C) The reforestation of farmland
D) Increased demand for wood

The Energy Transition in Europe

Throughout history, shifts in development were often marked by the utilization of a new, more efficient energy resource. Previous to the start of the Industrial Revolution, England, in addition to other European countries, switched their energy source from wood to coal, which became its predominant fuel resource. There were several interrelated factors leading up to this influential change. First, there was massive deforestation in Europe. This created a problem in and of itself, which was then magnified when crops were planted to replace the trees. This increase in food supply corresponded with a rapid rise in population. Overpopulation only worsened the environment and led to even more demand for lumber as an energy source. To remedy this problem, governments took action and sought out ways to limit the use of wood and replace it as the primary energy source.

Prior to the beginning of the Industrial Revolution, the price of lumber in England rose due to depleted domestic quantities. The forests in England were all but destroyed in providing enough wood to fuel small towns and overcrowded cities, which relied on wood for energy to heat homes and fuel industries. In reaction to the economic and environmental impacts of long time clear-cutting within its borders, the English government took steps to protect its forests. As early as the 14th century, the King of England sought to protect areas like the Forest of Dean from widespread logging; however, he still allowed just enough logging for his personal use and nothing more. To make up for the lack of supply, England had to import timber from Scandinavia and Eastern Europe, an expensive option, or seek out alternative energy resources.

Coal, which had been used since medieval times, was initially used only by blacksmiths to heat their furnaces. Although an abundant energy source, it had several disadvantages. The main issue with coal was its copious

	emission of the impurities sulfur and carbon dioxide upon combustion. When used as a household heating source, coal would soil clothes, give food a foul taste, and make a house unbearably smoky. Even in industrial conditions, coal was unsuitable for most processes. Breweries, which had attempted to use coal for the process of making their beers, discovered that the sulfur emitted from coal altered the taste of their brews, making them undrinkable. In addition, when used for smelting in the archaic furnaces of the time, coal left high amounts of sulfur impurities infused in metals, making them useless.
3. Which of the following can be inferred about coal from paragraph 4? A) It was not a universal heating source before the Industrial Revolution. B) Prior to the Industrial Revolution, scientists had failed to improve coal's usefulness. C) Abraham Darby wanted to make coal a stronger and cleaner source of fuel. D) It was more difficult to purchase coal due to the availability and price **4.** According to paragraph 5, all of the following are true of coal EXCEPT A) coal use rose significantly in the first four years of the 21st century B) coal is still a somewhat poor energy source C) much more of coal's stored energy will soon be available D) England contributed significantly to the widespread use of coal **5.** Which of the following best expresses the essential information in the highlighted sentence? *Incorrect* answer choices change the meaning in important ways or leave out important information. A) Coal wasn't yet a good energy alternative, but with England initiating the change, it would soon become the world's number one source of energy. B) England and, later, other countries made coal their final	On the other hand, there were still many reasons to pursue coal as an alternative energy source. Coal supplied more energy than wood with the same amount of production input. Moreover, coal was both more bountiful and cheaper to supply than wood. With the start of the Industrial Revolution, a plentiful energy source was needed to produce the iron necessary for industry. In response to this growing need, scientists began placing more attention on making it a feasible resource and worked to develop new inventions to improve coal's use. In 1709, Abraham Darby, an Englishman, invented the coking process, a way to purify coal to eliminate its smoke-producing substances. Another advantage of this technological breakthrough was that it made the coal itself more resistant to being crushed by its own weight. This not only allowed coal to become a possible resource for heating stoves and furnaces but also spurred the development of larger and more effective furnaces, thus opening up the use of coal as a universal heating source in homes and industry. Although new technologies needed to be invented and implemented before coal could be a viable fuel replacement, with England leading the way, the world soon saw it emerge as the principal energy resource. Once considered an inferior source of energy, coal became one of the world's leading energy resources. In fact, this is true even today, as the United States relies on coal for 90% of its energy for electricity. It is still the fastest growing energy source used in the world, with a 25% increase in use between 2001 and 2004. In addition, with coal burning technologies still improving, it will soon

energy choice soon after the creation of improved coal burning technologies. C) Because inventions were needed to make coal an excellent source of energy, England became a world leader in designing coal burning technology. D) Unable to make improvements to coal's usefulness, England and then other European countries soon abandoned coal as their primary source of energy.	be possible to harness upwards of 85% of coal's potential energy, 40% more than what can be utilized today. Indeed, the problems that pre-industrial England faced led to the acceptance of coal as an energy source both at home and for the rest of the world until now.

Paragraph Summary

- ✓ Paragraph 1 **Cause of deforestation**
- ✓ Paragraph 2 **Before I.R. deforestation & Price increase**
- ✓ Paragraph 3 **Drawbacks of Coal**
- ✓ Paragraph 4 **Coal as an alternative energy source –Coking process**
- ✓ Paragraph 5 **Coal as a primary energy source**

6. **Directions:** An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage. ***This question is worth 2 points.***

Due to many factors at the start of the Industrial Revolution, coal replaced wood as the leading energy source.

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Answer Choices

A) Deforestation, or the collapse of wood supplies, strongly motivated England's search for an alternative fuel.

B) The switch to coal was intended to reduce the population explosion.

C) Breweries used coal for making beers.

D) Coal was rightly considered an environmentally hazardous and a dubious source of energy.

E) Coal was a troublesome source of energy, but the coking process corrected this problem.

F) Today, coal has continued being used as our primary energy source.

Answers

[Practice 02]

Passage 9 C)

산불	Wildfires
산불의 이익을 고려하지 못한 채 사람들은 대개 산불을 숲과 자연 서식지를 황폐화시키는 대형 화재로만 생각한다. 사실, 산불은 화재가 발생한 지역에 회복의 시기 동안에 식물의 성장을 활발하게 한다. 숲이 엄청난 파괴를 가져온 화재로부터 회복하는 데 많은 시간과 노력이 필요한 것은 사실이지만, 그러한 불은 숲의 번영에 있어서 중요한 역할을 한다. 잔디, 가지, 다른 죽은 유기 물질을 태움으로 해서, 그들은 새로운 식물들이 자라면서 흡수하는 데 가치 있고 영양이 풍부한 퇴비층이 된다. 그렇지 않으면, 숲 지면의 대부분은 새로운 식물이 자라날 공간이 없는 상태에서 죽은 나무와 나뭇잎이 쌓일 것이다. 죽은 나뭇가지와 나뭇잎들이 부패하여 다른 식물들이 자라는 데 윤활유로서의 역할을 하는 데 대략 50년의 시간이 걸린다. 식물들이 무성해지면서, 곤충과 다른 작은 동물들이 모이게 되고, 그다음에는 그들이 더 다양한 잡식동물과 육식 동물들을 모이게 한다. 얼마 후, 종의 다양성이 증가하면서 이 화재가 발생했던 지역에서의 안정성도 다시 한 번 증가할 것이다.	Not realizing its advantages, people usually see a wildfire as a conflagration that decimates forests and natural habitats. In fact, wildfires stimulate vegetation growth during the recovery period in the area where the fire took place. It is true to a great extent that it takes tremendous time and effort for a forest to recover from a devastating wildfire, but such fires play an important role in the prosperity of the forest. By burning the grasses, branches or other dead organic material, they become valuable and nutritious compost for new plants to consume as they grow. Otherwise, the majority of the forest floor would be heaped with dead branches and leaves, leaving no space for new vegetation to sprout. Also, it takes approximately 50 years for dead branches or foliage to otherwise decompose to become fuel for other plants' growth. As plant life flourishes, insects and other small animals are attracted, and they then appeal to a range of omnivorous and carnivorous animals. After a while, the biodiversity and stability of the burnt area increase once again.
지문에서 산불에 대해 유추할 수 있는 것은 무엇인가? A) 숲의 생태계는 순환적 패턴이 없이 항상 안정적이다. B) 야생 지역을 방문하는 사람들은 항상 화재에 조심해야 한다. **C) 화재가 없다면, 새로운 식물들이 자라는 데 더 오랜 시간이 걸릴 것이다.** D) 산불은 화전법을 사용하는 농부들에게 유용하다.	**What can be inferred from the passage about wildfires?** A) Forest ecosystems always remain stable without cyclical patterns. B) People who visit wild areas should be careful to prevent fires. **C) Without wildfires, it takes much longer for new vegetation to develop.** D) Wildfires are useful for farmers who exploit slash and burn agriculture.

어휘
conflagration [ˌkɑːnfləˈgreɪʃn] 큰불, 대화재 | **decimate** [ˈdesɪmeɪt] 대량으로 죽이다 | **tremendous** [trəˈmendəs] 엄청난
devastating [ˈdevəsteɪtɪŋ] 대단히 파괴적인 | **heap** [hiːp] (아무렇게나) 쌓다 | **foliage** [ˈfoʊliɪdʒ] 나뭇잎
omnivorous [omnivorous] 잡식성의 | **carnivorous** [kɑːrnívərəs] 육식성의 | **stoutness** [staʊtnis] 튼튼함

Passage 12 A)

Io의 화산	Io's Volcanoes
Io는 알려져 있는 목성의 63개의 위성 중 세 번째로 큰 위성으로서 지구의 위성의 크기보다 약간 크다. Io의 분출하는 화산으로부터 뻗은 연기 기둥은 표면으로부터 190마일까지 치솟을 수 있으며, 이로 인해 그것은 전체 태양계 내에서 가장 화산 활동이 격렬한 천체가 되었다. 과학자들은 이것에 대한 이유를 유난히 맹렬한 화산활동 외에도 두 가지 가능한 이유들을 제시하고 있다. 첫 번째(이유)는 목성의 중력이다. Io는 목성의 표면에 매우 가깝게 공전하기 때문에 목성의 엄청난 중력의 영향이 사실상 그 화산의 표면을 떼어내는 것은 불가피한 일이다. 사실 Io가 목성과 바로 마주하고 있는 부분은 나머지 표면보다도 더욱 그 행성을 향해 돌출되어 있다. Io의 활발한 화산 활동 뒤에 놓인 두 번째	Io is the third largest among Jupiter's sixty three known moons, being slightly greater in size than the Earth's moon. The smoke pillars from Io's erupting volcanoes can reach up to 190 miles above its surface, making it the most volcanically active body in the entire solar system. Scientists have come up with two possible reasons behind this exceptionally fierce volcanic activity. The first is Jupiter's gravitational force. Because Io orbits very closely to the surface of Jupiter, it is inevitable that Jupiter's enormous gravitational influence would actually pull the volcanic surfaces out. In fact, the part of Io directly facing Jupiter bulges toward the planet more than the rest of the surface. The other possible reason behind Io's aggressive

이유는 Io의 궤도 모양으로 추정할 수 있다. Io의 궤도는 완벽하게 원형이 아니라 타원형 꼴로 생겼고, 이는 Io가 어떤 때에는 다른 때보다 더욱 목성에 가깝게 공전한다는 것이다. 목성의 다른 위성으로부터 오는 외부의 힘이 없었더라면 Io는 오래 전에 그 표면의 같은 부분이 항상 목성 방향으로 기울어져 있는 일정한 궤도에 자리했을 것이다. **지문에 따르면, 글쓴이가 암시하는 내용은** A) 목성에서 가장 멀리 있는 Io의 일부에서 나오는 연기는 훨씬 덜 돌출되었다 B) 목성의 모든 위성은 달의 위성보다 크다 C) 연기 기둥의 높이는 계절에 따라 변화한다 D) Io는 엄청난 지열 에너지를 가지고 있다	volcanic activity can be traced to its orbit's shape. Io's orbit is not perfectly circular, rather it is an oval shape, meaning that Io orbits more closely to Jupiter at some times than at others. Without external forces from Jupiter's other moons, Io would have long ago settled into a consistent orbit in which the same part of its surface always pointed towards Jupiter. **According to the passage, the author implies that** A) the fumes from the part of Io farthest from Jupiter protrude much less B) all of the satellites of Jupiter are bigger than that of the Earth C) the height of the smoke pillar fluctuates depending on season D) Io possesses enormous geothermal energy
어휘 **erupt** [ɪ|rʌpt] 분출하다 | **fierce** [fɪrs] 맹렬한 | **inevitable** [ɪn|evɪtəbl] 불가피한	

Passage 16 B)

씨클리드 호수라는 작은 공간 안에 다양한 종류의 수가 살고 있다는 점에서 빅토리아 호의 씨클리드는 매우 독특하다. 그러나 1970년대 이후 절반 이상의 종의 수가 사라지고 있다. 과학계에서는 이 종들의 멸종에 대한 가능성 있는 설명들을 내놓았지만, 이 종들이 줄어든 최근의 이유들이 좀 더 그럴듯하다. 그 이유들 중 하나는 맑게 빛나는 물에는 종의 수가 많다는 조사를 기반으로, 다양한 색을 지니고 있는 물고기, 종의 수, 맑은 물과 높은 연관성이 있다. 연구자들은 햇빛이 잘 비치는 물에 다량의 종들이 있음을 발견하였으나, 지역의 산림 활동으로 인한 토양 부식이 퇴적물을 움직임으로써 물이 탁해졌고, 농업용수 같은 화학 오염물질이 호수 물을 더 불투명하게 만들었다. 그래서 호수 중앙에 깊은 물에서의 가시 정도는 12미터에서 6.8미터로 줄어들게 되었다. 암컷 씨클리드는 밝은 색을 지니지 않지만 수컷은 대개 밝은 색을 가지고 있고 암컷은 짝을 고를 때 이러한 색을 이용한다. 이 호수 물이 불투명해진 것이 의미하는 바는 암컷이 그들을 구별할 수가 없기 때문에 수컷의 색이 교배를 할 때 더는 특정한 역할을 하지 못한다는 것이다. 암컷 씨클리드는 다른 종과 이종 교배했었고, 밝은 색을 지닌 수컷이 더 이상 이 물고기에게 장점으로 작용되지 않기 때문에 점점 사라지게 되었을 것으로 여겨진다. **지문에 따르면, 빅토리아 호에 있는 씨클리드에 대해 유추할 수 있는 것은?** A) 씨클리드 색들은 흐려진 물에서 포식자로부터 잘 숨기 위해 더 흐려졌다. B) 탁한 물에서는 씨클리드의 종의 수가 훨씬 더 적다. C) 낮은 가시성 때문에 탁한 물에서 먹잇감을 두고 서로 싸운다.	**The Cichlid** The cichlid population in Lake Victoria is very unique in that it shows enormous diversity in terms of the number of species that exist within such a small amount of space. However, since the 1970s, over half of the species have been disappearing. The scientific world has possible explanations about the extinction of these species, but recently some reasons why these species have diminished seem more likely. One of the reasons is the very high correlation of fish having bright diverse colors, the number of species, and clear water. Researchers discovered that there was a high number of species in well lit clear water, but soil erosion from local foresting activities had made the water muddier by moving around the sediment, and chemical pollutants such as agricultural runoff also contributed to the water becoming murkier. Therefore, the visibility of deep water in the middle of Lake Victoria decreased from 12 meters to 6.8 meters. Though female cichlids did not have bright colors, the males normally showed vibrant colors, and females used these colors in mate selection. It is further hypothesized that the reduced visibility of the water in Lake Victoria meant that the colors of the males no longer had any particular function in mating since females could not distinguish them. It is believed that female cichlids were interbreeding with other species and that the males with the bright colors disappeared since it was no longer providing a reward to the fish. **According to the passage, what can be inferred about the cichlid in Lake Victoria?** A) Cichlid colors became darker to better hide from the predators in the cloudier water. B) The number of species of cichlid in unclear water was much less diverse. C) Cichlids competed with each other for prey in unclear

D) 탁한 물에서 개체 수가 늘었다.	water because of low visibility. D) There was a swelling population in the unclear water.

어휘

enormous [ɪ|nɔːrməs] 막대한, 거대한 | **correlation** [|kɔːrə|leɪʃn] 연관성 | **erosion** [iróuʒən] 부식, 침식
muddy [|mʌdi] 흙탕물의, 탁한 | **pollutant** [pə|luːtənt] 오염물질 | **runoff** [rʌnɔːf] 유출 액체 | **murky** [|mɜːrki] 흐린, 탁한

Test 2

1. B) **2.** C) **3.** A) **4.** B) **5.** A) **6.** A), E, F)

유럽의 에너지 전환 역사를 통틀어, 발전의 변화는 새롭고 보다 효율적인 에너지원의 이용과 함께 이루어지는 경우가 많았다. 산업혁명이 시작되기 전, 영국을 비롯한 기타 유럽 국가들은 나무에서 석탄으로 에너지원을 대체하게 되었고 이것은 그것의 지배적인 연료 자원으로 자리잡게 되었다. 이러한 중대한 변화가 일어나기까지는 상호 연관된 몇 가지 요인들이 함께 작용했다. 첫째는 유럽 지역의 대대적인 산림벌채였다. 이것은 그 자체만으로도 문제였지만 나무를 대체하기 위해 작물을 심으면서 문제점은 더욱 증폭되었다. 식량 공급의 증가는 급속한 인구 증가와 맞물렸다. 인구 과밀은 경제를 악화시킬 뿐이었고 에너지원인 나무의 수요 증가로 이어졌다. 이러한 문제점을 해결하기 위해 정부는 앞장서 나무의 사용을 제한하고 일차적인 에너지원으로서 나무를 대체할 수단을 찾기 시작했다.	**The Energy Transition in Europe** Throughout history, shifts in development were often marked by the utilization of a new, more efficient energy resource. Preceding the advent of the Industrial Revolution, England, in addition to other European countries, switched their energy source from wood to coal, which became its predominant fuel resource. There were several interrelated factors leading up to this influential change. First, there was massive deforestation in Europe. This created a problem in and of itself, which was then magnified when crops were planted to replace the trees. This increase in food supply corresponded with a rapid rise in population. Overpopulation only worsened the environment and led to even more demand for lumber as an energy source. To remedy this problem, governments took action and sought out ways to limit the use of wood and replace it as the primary energy source.
산업혁명이 시작되기 전, 국내 공급량의 고갈로 인해 영국의 목재 가격이 치솟았다. 난방 및 산업용 에너지를 얻기 위해 전적으로 나무에 의존하던 작은 마을과 혼잡한 도시에서, 연료로 사용할 나무를 충분히 구하기에는 영국의 숲이 너무나 파괴되어 있는 상태였다. 국내의 장기적인 개벌(皆伐)로 인한 경제적, 환경적 영향에 대응해, 영국 정부는 산림을 보호하기 위한 조치를 취했다. 실제로, 14세기에 벌써 영국 왕은 딘 숲(Forest of Dean)과 같은 지역을 광범위한 벌채로부터 보호하려는 노력을 기울였다. 왕실을 위해 필요한 만큼의 나무를 제외하고는 그곳에서의 채벌을 전면 금지했던 것이다. 부족한 공급량을 메우기 위해 영국은 값비싼 방법이지만 스칸디나비아와 동부 유럽으로부터 목재를 수입하든가, 아니면 대체 에너지원을 찾아야 했다.	Prior to the beginning of the Industrial Revolution, the cost of lumber in England dramatically escalated due to depleted domestic quantities. The forests in England were all but destroyed in providing enough wood to fuel small towns and overcrowded cities, which relied on wood for energy to heat homes and fuel industries. In reaction to the economic and environmental impacts of long time clear-cutting within its borders, the English government took steps to protect its forests. As early as the 14th century, the King of England sought to protect areas like the Forest of Dean from widespread logging; however, he still allowed just enough logging for his personal use and nothing more. To make up for the lack of supply, England had to import timber from Scandinavia and Eastern Europe, an expensive option, or seek out alternative energy resources.
석탄은 중세 시대부터 사용되어 왔으며 처음에는 용광로를 가열하려는 대장장이들만이 사용했었다. 석탄은 고밀도의 에너지원이지만 몇 가지 단점도 있었다. 석탄의 가장 큰 문제점은 연소 시 황 불순물과 이산화탄소가 다량 방출된다는 사실이었다. 가정용 난방원으로 석탄을 사용하면 옷이 더러워지고 음식에 나쁜 맛이 나며 참을 수 없을 정도로 많은 연기가 집안에 가득 차곤 했다. 산업 현장에서조차 석탄은 대부분의 프로세스에 부적합했다. 양조장들은 맥아즙을 데우기 위해 석탄을 사용하려고 했지만 석탄으로부터 방출되는 황이 맥주 맛을 바꾸어 마실 수 없는 상태로 만들어 버린다는 걸 알게 되었다. 뿐만 아니라, 당시의 낡은 용광로에서 석탄을 제련에 사용할 경우, 많은 양의 황 불순물이 금속에 들어가 금속을 못쓰게 만들었다.	Coal, which had been used since medieval times, was initially used only by blacksmiths to heat their furnaces. Although an abundant energy source, it had several disadvantages. The main issue with coal was its copious emission of the impurities sulfur and carbon dioxide upon combustion. When used as a household heating source, coal would soil clothes, give food a foul taste, and make a house unbearably smoky. Even in industrial conditions, coal was unsuitable for most processes. Breweries, which had attempted to use coal for the process of making their beers, discovered that the sulfur emitted from coal altered the taste of their brews, making them undrinkable. In addition, when used for smelting in the archaic furnaces of the time, coal left high amounts of sulfur impurities infused in metals, making them useless. On the other hand, there were still many reasons to

반면, 대체 에너지원으로서 석탄 사용의 장점 또한 여러 가지가 있었다. 석탄은 동일한 양의 생산 투입량으로 나무보다 더 많은 에너지를 공급해주었다. 또 석탄은 나무보다 풍부한데다가 공급 가격도 저렴했다. 산업혁명이 본격화되면서 산업에 필요한 철을 생산하기 위해서는 많은 양의 에너지원이 필요했다. 이러한 필요성의 증가에 따라, 과학자들은 석탄을 편리한 에너지원으로 만드는데 보다 많은 관심을 쏟기 시작했고 석탄의 이용을 개선하기 위한 새로운 발명품 개발에 착수했다. 1709년, 영국인인 에이브러햄 다비는 코킹법, 즉 증류를 통해 석탄에서 연기를 발생시키는 물질을 없애는 방법을 발명했다. 이 혁신적인 기술의 또 다른 장점은 석탄의 내성을 강화시켜 자체 무게에 의해 석탄이 부서지지 않게 해준다는 점이었다. 이 기술로 인해 석탄은 화로와 용광로를 가열하는 편리한 자원이 되었을 뿐만 아니라, 보다 크고 효과적인 용광로의 개발에 박차가 가해지면서 석탄은 가정과 산업에서 보편적인 발열체로 사용되기 시작했다.

석탄이 실용적인 대체 연료가 되기 위해서는 아직 새로운 기술이 발명되고 실용화되어야 했지만, 영국을 주축으로 한 세계는 머지 않아 석탄이 일차적인 에너지원으로 출현하게 되는 상황을 목격하게 되었다. 한때 변변찮은 에너지원으로 간주되던 석탄은 세계적으로 손꼽히는 에너지원 중의 하나가 되었다. 미국은 전기 에너지의 90%를 석탄으로부터 얻고 있다. 석탄은 여전히 세계에서 가장 빠른 속도의 사량 증가를 보이는 에너지원으로서, 2001년에서 2004년 사이에 사용량이 25% 증가하기도 했다. 또한 석탄 연소 기술이 여전히 향상되고 있는 상황을 감안한다면, 석탄의 잠재 에너지 가운데 현재보다 40% 높은 85% 이상을 활용할 수 있는 날이 곧 다가올 것이다. 사실, 산업혁명 이전의 영국이 직면했던 문제점들은 석탄이 현재까지 가정과 세계 곳곳에서 에너지원으로 널리 이용되는 계기가 되었다고 볼 수 있다.

1. 지문의 단어 its (그것의)가 가리키는 것은?

A) 산업혁명
B) 영국
C) 나무
D) 석탄

2. 단락 1에 따르면, 다음 중 연료 자원이 나무에서 석탄으로 바뀌게 된 상호 연관된 요인들로 언급되지 않은 것은?

A) 도시의 성장으로 숲이 있을 만한 공간이 없었다.
B) 나무들은 벌채되어 연료로 사용되었다.
C) 건축 자재로 사용되었다.
D) 국내 땅이 엄격히 규제되었다.

3. 단락 4에서 다음 중 석탄에 대해 유추할 수 있는 것은 무엇인가?

A) 산업혁명 이전에는 보편적 연료는 아니었다.

B) 산업혁명 이전에, 과학자들은 석탄의 유용성을 개선하는 것에 실패했다.
C) 아브라함 다비는 석탄을 더 강하고 깨끗한 연료로 만들기

pursue coal as an alternative energy source. Coal supplied more energy than wood with the same amount of production input. Moreover, coal was both more bountiful and cheaper to supply than wood. With the start of the Industrial Revolution, a plentiful energy source was needed to produce the iron necessary for industry. In response to this growing demand, scientists began placing more attention on making it a feasible resource and worked to develop new inventions to improve coal's use. In 1709, Abraham Darby, an Englishman, invented the coking process, a way to purify coal to eliminate its smoke-producing substances. Another advantage of this technological breakthrough was that it made the coal itself more resistant to being crushed by its own weight. This not only allowed coal to become a possible resource for heating stoves and furnaces but also spurred the development of larger and more effective furnaces, thus opening up the use of coal as a universal heating source in homes and industry.

Although new technologies needed to be invented and implemented before coal could be a viable fuel replacement, with England leading the way, the world soon saw it emerge as the principal energy resource. Once considered an inferior source of energy, coal became one of the world's leading energy resources. In fact, this is true even today, as the United States relies on coal for 90% of its energy for electricity. It is still the fastest growing energy source used in the world, with a 25% increase in use between 2001 and 2004. In addition, with coal burning technologies still improving, it will soon be possible to harness upwards of 85% of coal's potential energy, 40% more than what can be utilized today. Indeed, the problems that pre-industrial England faced led to the acceptance of coal as an energy source both at home and for the rest of the world until now.

1. The word its in the passage refers to

A) Industrial Revolution
B) England
C) wood
D) coal

2. According to paragraph 1, which of the following is NOT mentioned as an interrelated factor that caused the fuel resource change from wood to coal?

A) Increase in food demand
B) Rise in population
C) The reforestation of farmland
D) Increased demand for wood

3. Which of the following can be inferred about coal from paragraph 4?

A) It was not a universal heating source before the Industrial Revolution.
B) Prior to the Industrial Revolution, scientists had failed to improve coal's usefulness.
C) Abraham Darby wanted to make coal a stronger and cleaner source of fuel.

원했다.
D) 가용성과 가격 때문에 석탄을 구하는 것이 더 어려웠다.

4. 단락 5에 따르면, 다음 중 석탄에 대한 내용으로 사실이 아닌 것은?

A) 21세기 초반 4년 동안 사용이 상당히 증가했다.

B) 석탄은 아직도 다소 열악한 에너지원이다.
C) 훨씬 더 많은 저장된 석탄 에너지원이 곧 이용가능 할 것이다
D) 영국은 석탄 보급에 상당한 기여를 했다

5. **다음의 문장 중에서 지문의 음영 처리된 문장의 핵심 정보가 가장 잘 표현하고 있는 것은 어느 것 인가? 오답은 의미를 현저하게 바꾸거나, 중요한 정보를 빠뜨리고 있다.**

A) 석탄은 효율적 대체 에너지원은 아니지만 영국이 변화한 것을 시작으로, 곧 세계에서 최고의 에너지원이 되었다.

B) 영국과 다른 나라들은 석탄 연소 기술력이 진보된 직후, 그들의 에너지원으로 석탄을 선택했다.

C) 발명들이 석탄을 좋은 에너지원으로 만들기 위해 필요로 되어서, 영국은 석탄 연소 기술을 만드는데 선두의 역할을 했다.
D) 석탄의 유용성을 개선할 수 없었던, 영국과 다른 유럽의 나라들은 곧 석탄을 주요한 에너지원으로 석탄을 포기했다.

6. 지문을 간략하게 요약한 글의 첫 문장이 아래에 제시되어 있다. 지문의 가장 중요한 내용을 표현하는 3개의 선택지를 골라 요약문을 완성하시오. 일부 문장들은 지문에 제시되지 않았거나 지문의 지엽적인 내용을 표현하기 때문에 요약문에 포함되지 않는다. 이 문제의 배점은 2점이다.

산업혁명의 시작에 여러 요소들 때문에, 산업혁명 초기에 석탄은 주요한 에너지원으로 나무를 대신했다.

- A) 산림 벌채, 또는 나무의 공급량 감소는 영국이 대체 에너지원을 찾게 했던 원인이 되었다.
- E) 석탄은 문제가 많은 에너지원이었지만, 코킹 과정이 이 문제를 해결했다.
- F) 오늘날, 석탄 연소기술의 발전과 함께, 석탄을 주 연료로 사용하는 것을 계속할 타당한 이유들이 많이 있다.

B) 석탄으로의 전환은 인구 폭발을 줄이기 위해 의도되었다.
C) 양조장에서는 맥주를 만들 때 석탄을 사용했다.
D) 석탄은 환경적으로 위험하고 불확실한 에너지원으로 간주되었다.

D) It was more difficult to purchase coal due to the availability and price.

4. According to paragraph 5, all of the following are true of coal EXCEPT

A) coal use rose significantly in the first four years of the 21st century
B) coal is still a somewhat poor energy source
C) much more of coal's stored energy will soon be available

D) England contributed significantly to the widespread use of coal

5. Which of the following best expresses the essential information in the highlighted sentence? *Incorrect* answer choices change the meaning in important ways or leave out important information.

A) Coal was not yet a good energy alternative, but with England initiating the change, it would soon become the world's number one source of energy.
B) England and, later, other countries made coal their final energy choice soon after the creation of improved coal burning technologies.
C) Because inventions were needed to make coal an excellent source of energy, England became a world leader in designing coal burning technology.
D) Unable to make improvements to coal's usefulness, England and then other European countries soon abandoned coal as their primary source of energy.

6. Directions: An introductory sentence for a brief summary of the passage is provided below. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that are not presented in the passage, or are minor ideas in the passage. This question is worth 2 points.

Due to many factors at the start of the Industrial Revolution, coal replaced wood as the leading energy source.

- A) Deforestation, or the collapse of wood supplies, strongly motivated England's search for an alternative fuel.
- E) Coal was a troublesome source of energy, but the coking process corrected this problem.
- F) Today, coal has continued being used as our primary energy source.

B) The switch to coal was intended to reduce the population explosion.
C) Breweries used coal for making beers.
D) Coal was rightly considered an environmentally hazardous and a dubious source of energy.

어휘

shift [ʃɪft] 변화 | **utilization** [jù:təlizéiʃən] 이용 | **interrelated** [ìntərriléitid] 밀접한 | **magnified** [|mægnɪfaɪd] 증폭되다
lumber [|lʌmbə(r)] 목재, 나무 | **escalate** [|eskəleɪt] 확대되다 | **deplete** [dɪ|pli:t] 격감시키다 | **logging** [|lɔ:gɪŋ] 벌목
timber [|tɪmbə(r)] 수목, 산림 | **medieval** [|medi|i:vl] 중세의 | **blacksmith** [|blæksmɪθ] 대장장이 | **furnace** [|f3:rnɪs] 용광로
copious [copious] 방대한 | **impurity** [ɪm|pjʊrəti] 불순물 | **combustion** [kəm|bʌstʃən] 연소
unbearably [ʌn|berəbli] 참을 수 없을 정도로 | **brew** [bru:] 양조 맥주 | **archaic** [ɑ:r|keɪɪk] 낡은 | **pursue** [pər|su:] 추구하다
bountiful [|baʊntɪfl] 많은, 풍부한