Building Materials

【Paragraph 1】It is difficult to exaggerate the radical change that the new industrial world of the nineteenth century brought to architectural materials Since the beginning of architectural history, the same basic substances had been employed. They were provided directly by nature and used in their natural or near-natural state, only cut, shaped, and dried into the functional forms of timbers, stone blocks, and clay bricks. The exceptions were lime mortar and Roman concrete. Metals, which had the tensile strength that masonry materials lacked, were employed in minor and supplementary ways. Bronze was expensive as well as brittle Iron, the structurally more important metal, was available in limited quantities and uneven quality, and was too easily converted to rust by the elements. It was, therefore, restricted in use to things such as tie-rods and chains, and, along with bronze, to masonry clamps and decoration. Prior to the nineteenth century, the structural presence of iron in architecture was scarcely noticeable.

【Paragraph 2】The Industrial Revolution changed all that Iron materials became available in such large quantities that they could play far more than a minor architectural role In 1800, the world production of iron stood at 825,000 tons, by 1830 it was 1,825.000 tons, and nearly 40,000,000 in 1900-an increase of almost 50-fold over the century. The growth was not only in quantity, but quality as well. Iron, found bountifully in Earth' s crust as an oxide, is a material of almost protean variability It is not simply pure or impure, but can be made hard or soft, brittle or ductile, strong or weak. These qualities depend on carbon content, freedom from impurities (slag), and heating and cooling treatments of the refined metal. Traditionally, three versions existed: cast iron, wrought iron, and steel. Cast iron is the crudest form, containing the most impurities and thus being extremely brittle. Wrought iron, because it includes almost no carbon, is highly malleable (hence its name), but also comparatively soft. The optimum material is steel, which incorporates a restricted amount of carbon for hardness but is otherwise free of impurities, giving it great strength, and which, as a result of tempering treatments, is also malleable.

【Paragraph 3】Cast and wrought iron came into prodigious manufacture in the early and mid-nineteenth century as a result of rapid growth in demand, new means to transport materials, and more efficient iron-founding techniques. But the mass production of steel required further technological innovations to rid the metal of weakening impurities and to control more perfectly the amount of carbon added Such advances were made with the Bessemer process (put into use in 1860) and the open-hearth process of 1864, scientific iron metallurgy in the last third of the century perfected these techniques.

【Paragraph 4】A significant but little-known fact is that the mam form of increased steel production was technically not steel but a kind of wrought iron. It lacked a crucial property of true steel-its hardening power-yet it differed from the older forms of wrought iron because it was free from the weakening presence of slag, at the same time being malleable (unlike cast iron). It was called steel only because the name carried the status of a high-quality and high-priced product.

【Paragraph 5】Another alternative new building substance was concrete, composed of an aggregate of broken stone, gravel, or other small chunks of hard matter embedded in a matrix of lime, sand, and water First used in Roman times, its modern revival depended on the invention of portland cement in 1824, a substance of many times greater strength, durability, and fire resistance than ancient lime cement Mass-produced concrete began to come into widespread use in the 1850s and 1860s, in the construction of the sewers of Paris, for example However, even with portland cement, the use of concrete was still severely restricted by its low tensile strength, but the remedy was at hand in the newly available iron and steel; their properties complemented those of concrete. The latter material was cheap, easily molded into large structural forms with great compressive but little tensile strength Iron and steel, on the other hand were expensive, difficult to shape, yet endowed with extreme tensile strength and easily procurable in the simple form of long, thin bars.

1. According to paragraph 1, building materials in use before the nineteenth century were

A. not significantly changed from their natural forms

B. strong and durable

C. too expensive to use on a large scale

D. eventually replaced by lime mortar and Roman concrete

2. In paragraph 1, the author discusses the properties of bronze and iron in order to

2. In paragraph 1, the author discusses the properties of bronze and iron in order to

A. contrast the qualities of bronze with those of iron

B. explain why metals were not widely used in architecture before industrialization

C. provide a reason why industrialization radically changed architectural materials

D. demonstrate that decorative materials were used in architecture before industrialization

3. According to paragraph 2, how did iron production change during the Industrial Revolution?

A. As the level of production dramatically increased, the quality of the finished product became more and more variable

B. New, higher-quality sources of iron were discovered in Earth's crust.

C. The distinction between pure and impure iron was replaced by distinctions among cast iron, wrought iron, and steel

D. Better iron was produced through heating and cooling treatments, control of carbon content, and purification of the metal

4. The word "bountifully" in the passage is closest in meaning to

A. originally

B. usually

C. with difficulty

D. abundantly

5. The word "crudest" in the passage is closest in meaning to

A. least common

B. least processed

C. least expensive

D. least useful

6. According to paragraph 2, how does steel compare with other forms of iron?

A. It is the most widely available because it is the easiest to produce

B. It is the hardest because it contains the least carbon

C. It is the easiest to shape because it contains the fewest impurities

D. It is the most useful because it is both strong and flexible.

7. All of the following are mentioned in paragraph 3 as reasons for the increase in production of cast and wrought iron in the early and mid-nineteenth century EXCEPT

A. lack of technology for steel production

B. quickly rising demand for iron

C. improved methods for producing iron

D. new ways to move materials from place to place

8. According to paragraph 4, how did the wrought iron referred to as steel differ from true steel?

A. It was softer than true steel

B. It contained more impurities than true steel did

C. It was less expensive than true steel

D. It could not be shaped as easily as true steel.

9. According to paragraph 4, why did some manufacturers of wrought iron call their product steel?

A. To differentiate their product from cast iron

B. To indicate that their product did not contain slag

C. To take advantage of the value attached to true steel

D. To suggest that steel could be as soft as wrought iron

10. According to paragraph 5, all the following were advantages of concrete made with portland cement EXCEPT:

A. It lasted longer than other types of concrete.

B. It did not burn as easily as other types of concrete

C. It was stronger than other types of concrete.

D. It was cheaper than other types of concrete.

11. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information

【Paragraph 5】Another alternative new building substance was concrete, composed of an aggregate of broken stone, gravel, or other small chunks of hard matter embedded in a matrix of lime, sand, and water First used in Roman times, its modern revival depended on the invention of portland cement in 1824, a substance of many times greater strength, durability, and fire resistance than ancient lime cement Mass-produced concrete began to come into widespread use in the 1850s and 1860s, in the construction of the sewers of Paris, for example However, even with portland cement, the use of concrete was still severely restricted by its low tensile strength, but the remedy was at hand in the newly available iron and steel; their properties complemented those of concrete. The latter material was cheap, easily molded into large structural forms with great compressive but little tensile strength Iron and steel, on the other hand were expensive, difficult to shape,

yet endowed with extreme tensile strength and easily procurable in the simple form of long, thin bars.

A. Even with portland cement, concrete had a lower tensile strength than iron and steel did and thus was used less as these metals became more available.

B. The new availability of iron and steel complemented the use of concrete but could not make up for the low tensile strength of portland cement.

C. Like iron and steel, concrete went from being a material whose use was severely restricted to being one that was widely available.

D. The widespread use of concrete would not have been possible without iron and steel to offset its low tensile strength

12. The word "revival" in the passage is closest in meaning to

A. application

B. return to use

C. manufacture

D. result

13. Look at the four squares 【】 that indicate where the following sentence could be added to the passage

The remedy to concrete' s shortcomings was to reinforce it with such bars.

Where would the sentence best fit? Click on a square 【】 to add the sentence to the passage.

【Paragraph 5】Another alternative new building substance was concrete, composed of an aggregate of broken stone, gravel, or other small chunks of hard matter embedded in a matrix of lime, sand, and water First used in Roman times, its modern revival depended on the invention of portland cement in 1824, a substance of many times greater strength, durability, and fire resistance than ancient lime cement Mass-produced concrete began to come into widespread use in the 1850s and 1860s, in the construction of the sewers of Paris, for example 【A】However, even with portland cement, the use of concrete was still severely restricted by its low tensile strength, but the remedy was at hand in the newly available iron and steel; their properties complemented those of concrete. 【B】The latter material was cheap, easily molded into large structural forms with great compressive but little tensile strength. 【C】 Iron and steel, on the other hand were expensive, difficult to shape, yet endowed with extreme tensile strength and easily procurable in the simple form of long, thin bars. 【D】

14. Industrialization in the nineteenth century revolutionized building materials.

Answer Choices

A. The only early building materials that were not provided directly by nature were lime mortar and Roman concrete

B. In the second half of the nineteenth century, it became possible to mass produce steel that was both strong and malleable

C. The problem with iron as a building material is that, unlike wood and masonry, it quickly rusts.

D. Technological advances and increased demand led to the production of vast quantities of cast and wrought iron in the first half of the nineteenth century

E. Cast iron and wrought iron were the most common building materials until they were replaced by steel in the last third of the nineteenth century.

F. The introduction of portland cement led to the large-scale use of concrete as a building material.

Dealing with Extreme Cold

【Paragraph 1】There are a number of environments in which organisms are exposed to temperatures below 0°C and thus the risk of freezing. In polar regions, terrestrial organisms are exposed to freezing temperatures for most of the year. In more temperate regions, they may have to tolerate several months of winter, when subzero temperatures persist for long periods of time. High mountains are another place where there is permanent snow and ice, even at the equator. Exposure to subzero temperatures may occur on a daily and/or seasonal basis.

【Paragraph 2】Endothermic animals (warm-blooded animals) can stop their bodies from freezing by generating their own heat. They retain heat because of the insulation provided by feathers or fur, and the layer of fat beneath the skin. Other heat conservation measures include huddling together, recovering heat from exhaled breath, and recovering heat from the extremities of the body. Endotherms can remain active in the cold if they can find enough food, or they can reduce their metabolism and lie dormant until warmer conditions return. Although air temperatures may be low, the temperature beneath an insulating layer of snow, under the ground, or at the bottom of a lake may remain above 0°C. Most organisms, however, can neither generate their own heat nor avoid the freezing temperatures, and for them, the choice is to survive ice formation within their bodies or to prevent their bodies from freezing.

【Paragraph 3】Organisms run the risk of freezing at temperatures that are below the melting point of their body and cell fluids. There are two main responses: either they can survive ice forming within them (they are freezing tolerant) or they have mechanisms that ensure that their fluids remain liquid at temperatures that are below the freezing point of water and the melting point of their body fluids (they are freeze avoiding). The strategy that an organism uses depends on the structure and physiology it has developed during its evolutionary history and on the particular demands of its environment. If the organism is living in a wet or damp environment, ice is likely to make contact with its surface when its surroundings freeze This may cause its body fluids to freeze by the ice traveling across the cell or body wall, or through body openings-a process known as inoculative freezing. Most organisms surviving low temperatures in such environments are thus likely to be freezing tolerant, since inoculative freezing will cause their bodies to freeze Some, however, may have a structure such as a cuticle, eggshell, cocoon, or sheath that allows them to prevent inoculative freezing by acting as a barrier to the spread of ice into their bodies This allows them to maintain their body or cell fluids as liquids, despite the fact that their surfaces are in contact with external ice, and enables them to avoid inoculative freezing. In a situation where the organism is likely to be exposed to subzero temperatures with little or no water in contact with its surface (many terrestrial insects, for example), it does not have the problem of inoculative freezing and it is perhaps easier for it to maintain its body fluids in a liquid state at low temperatures and thus survive by avoiding freezing.

【Paragraph 4】The two strategies of cold survival are, however, not always mutually exclusive. There have been a few reports of insects that were apparently freezing tolerant switching to being freeze avoiding. The overwintering larvae of a beetle from northern Indiana, when studied in the winters of 1977-1979. froze at -8°C to -12°C but survived down to -28°C. When examined again in 1982, however, they froze and were killed at -26°C, apparently switching from a freezing-tolerant to a freeze-avoiding strategy during the intervening years. There are adaptations in common between freeze-avoiding and freezing-tolerant insects that may make it easy to switch between the two strategies. It must be said, however, there has been only one other report of an insect, another beetle, displaying a shift in strategy of this sort. One Antarctic nematode is freezing tolerant when immersed in water but, when free of surface water, there is, of course, no inoculative freezing and it can survive by avoiding freezing. The cold-tolerance strategy displayed thus depends on the particular characteristics of the animal's microenvironment.

1. The word "persist " in the passage is closest in meaning to

A. continue

B. return

C. vary widely

D. keep falling

2. The word “conservation" in the passage is closest in meaning to

A. contributing

B. creating

C. distributing

D. saving

3. According to paragraph 2, how does a layer of fat beneath the skin help an animal deal with subzero temperatures?

A. It prevents blood from circulating to the animal's extremities

B. helps the animal generate its own heat.

C. It reduces the loss of body heat

D. It helps the animal to adjust its metabolism

4. Paragraph 2 supports which of the following statements about endothermic animals?

A. Some avoid freezing by remaining under a layer of snow, under the ground, or near the bottom of a lake

B. They are unable to remain active when temperatures are below 0°C over long periods of time.

C. They are sometimes able to survive ice formation within their bodies in addition to being able to avoid freezing

D. The ones that lie dormant in freezing temperatures tend to have less effective insulation than those that remain active.

5. According to paragraph 3, an organism is freezing tolerant if it

A. can live in an environment in which temperatures are generally below freezing

B. has body and cell fluids with a very low melting point

C. has more than one effective response to freezing temperatures

D. can survive having the fluids in its cells freeze

6. According to paragraph 3, organisms that are freezing tolerant are likely to live in an environment that

A. will not subject them to inoculative freezing

B. is wet during periods of below freezing temperatures

C. makes changing demands that allow the organisms to switch between different cold- adaptive strategies as needed

D. has no organisms that survive cold by using strategies that avoid freezing

7. According to paragraph 3, having a cocoon or an eggshell may give an organism living in very low temperatures an advantage by

A. making it freezing tolerant

B. lowering the melting point of its body fluids

C. protecting its outer surface from contact with ice

D. preventing ice from getting inside its body

8. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information

【Paragraph 3】Organisms run the risk of freezing at temperatures that are below the melting point of their body and cell fluids. There are two main responses: either they can survive ice forming within them (they are freezing tolerant) or they have mechanisms that ensure that their fluids remain liquid at temperatures that are below the freezing point of water and the melting point of their body fluids (they are freeze avoiding). The strategy that an organism uses depends on the structure and physiology it has developed during its evolutionary history and on the particular demands of its environment. If the organism is living in a wet or damp environment, ice is likely to make contact with its surface when its surroundings freeze This may cause its body fluids to freeze by the ice traveling across the cell or body wall, or through body openings-a process known as inoculative freezing. Most organisms surviving low temperatures in such environments are thus likely to be freezing tolerant, since inoculative freezing will cause their bodies to freeze Some, however, may have a structure such as a cuticle, eggshell, cocoon, or sheath that allows them to prevent inoculative freezing by acting as a barrier to the spread of ice into their bodies This allows them to maintain their body or cell fluids as liquids, despite the fact that their surfaces are in contact with external ice, and enables them to avoid inoculative freezing. In a situation where the organism is likely to be exposed to subzero temperatures with little or no water in contact with its surface (many terrestrial insects, for example), it does not have the problem of inoculative freezing and it is perhaps easier for it to maintain its body fluids in a liquid state at low temperatures and thus survive by avoiding freezing.

A. Organisms that find it easy to maintain their body fluids in a liquid state at low temperatures may be able to avoid the problem of inoculative freezing when exposed to water.

B. Organisms that are unlikely to be in contact with water can avoid the problem of inoculative freezing at subzero temperatures by maintaining their body fluids in a liquid state

C. it is easier for an organism to tolerate being frozen than to keep its body fluids liquid at subzero temperatures, inoculative freezing may not be a problem.

D. Organisms that are not in contact with water during periods of subzero temperature may find it easier to survive the cold by using a strategy that keeps their body fluids from freezing

9. The information about the "overwintering larvae of a beetle from northern Indiana' ' is presented to show

A. that the particular cold-survival strategy an organism adopts is not necessarily a permanent characteristic of the species

B. how long it takes an organism lo switch from one cold-surviving strategy to the other

C. what types of adaptation make it possible for an organism to switch between the two cold-surviving strategies

D. why adopting a freeze-avoiding strategy for cold survival rather than a freezing-tolerant strategy might be advantageous

10. The phrase "intervening years" in the passage is closest in meaning to

A. remaining years

B. colder years

C. years in between

D. years studied

11. The word "immersed" in the passage is closest in meaning to

A. caught

B. floating

C. hiding

D. covered

12. At the end of paragraph 4, the author discusses an Antarctic nematode because

A. it illustrates the kind of adaptations that freeze-avoiding and freezing-tolerant organisms have in common

B. it shows that it is possible for organisms to switch between the two cold-survival strategies more than once

C. it explains why it is easy for beetles to switch between the two cold-survival strategies

D. the cold-survival strategy it displays is determined by the particular circumstances in which it finds itself

13. Look at the four squares 【】 that indicate where the following sentence could be added to the passage

Thus there are usually places available where an inactive organism can wait out the cold without expending much energy to keep itself from freezing.

Where would the sentence best fit? Click on a square 【】 to add the sentence to the passage.

【Paragraph 2】Endothermic animals (warm-blooded animals) can stop their bodies from freezing by generating their own heat. They retain heat because of the insulation provided by feathers or fur, and the layer of fat beneath the skin. 【A】 Other heat conservation measures include huddling together, recovering heat from exhaled breath, and recovering heat from the extremities of the body. 【B】 Endotherms can remain active in the cold if they can find enough food, or they can reduce their metabolism and lie dormant until warmer conditions return. 【C】 Although air temperatures may be low, the temperature beneath an insulating layer of snow, under the ground, or at the bottom of a lake may remain above 0°C. 【D】 Most organisms, however, can neither generate their own heat nor avoid the freezing temperatures, and for them, the choice is to survive ice formation within their bodies or to prevent their bodies from freezing.

14. In many diverse environments, organisms must deal with the danger of freezing.

Answer Choices

Answer Choices

A. Even in environments in which air temperatures are below freezing for long periods, there are generally some protected places in which temperatures remain safely above freezing.

B. Organisms in wet environments that cannot avoid inoculative freezing can survive extreme cold only by being able to tolerate having their body fluids freeze.

C. Freezing-tolerant beetles have been found to survive temperatures as low as -28°C, whereas beetles of the same species that are freeze avoiding could not survive temperatures below -26°C

D. Most endothermic animals must hibernate below an insulating layer of snow to avoid freezing because fur and feathers alone do not provide enough insulation.

E. Freeze-avoiding organisms have body fluids that remain liquid below 0°C, and they either live in dry environments or are protected from inoculative freezing by their outer covering

F. Certain adaptations are shared by freezing-tolerant and freeze-avoiding organisms, and in rare cases this allows organisms to switch between the two cold-survival strategies.

Ancient Greek Pottery

【Paragraph 1】An extremely important and long-standing industry in ancient Greece was the ceramics industry, giving rise to the huge number of pieces of pottery archaeologists and historians pore over. In reality, pottery production can almost be seen as a combination of a natural resources-based economy and a production-based economy, as the primary material-good clay-was a result of the natural geology. However, not all city-states made equal use of their clay resources, and only two-Corinth and Athens-were really active in pottery export in the Archaic Age (750 -500 BC) and following.

【Paragraph 2】As with weaving, pottery no doubt began as, and in many places remained, a household industry, probably practiced exclusively in the summer when the clay and kindling wood were drier and easier to transport and burn But evidence of a more concentrated effort at production for export appeared already in the Bronze Age (3000-1100 B c.) and continued in the Dark Ages (1100-800 B c), as with the copious export of Euboean scyphi (drinking cups) to such locations in the Mediterranean as Cyprus, the Levant, and even Italy. These were followed by the Corinthian cups and scyphi, and finally the Athenian kylix (a shallow type of wine goblet). The demand for Greek vessels to drink out of appears to have stemmed from a desire for Greek things to drink, and amphorae and pithoi (storage vessels), especially from Attica, also proliferated in the Mediterranean.

【Paragraph 3】This need for commercial production led to the rise of workshops and factories. Such workshops were usually family-owned businesses run by the head of the household, his sons (and possibly daughters), and, depending on the size of the industry, additional servants and/or slaves. The general assumption concerning many professional potters is that they were not citizens of the cities in which they worked. In Athens, these were the metics, or resident aliens, as well as slaves. The identity of the workers in the primary ceramic working area in Corinth-the Potters' Quarter-is uncertain. But an inscribed pottery shard naming the Phoenician goddess Astarte suggests that there were Phoenician immigrants (from what is now Lebanon) working there, or at least a heavy Phoenician influence.

【Paragraph 4】Happily for modern researchers, many artisans signed their works. This gives an idea not only of who these ancient ceramicists were, but also of how labor was divided Modern scholars have the names of a few potter-families from sixth-century B c Athens: Nearkhos, who worked with his sons Tleson and Ergoteles: Ergotimos, who was succeeded by his son Eukheiros (literally, "Good Hand"); and Amasis and his son Kleophrades, who produced pottery from the mid-sixth century B c to the dawn of the fifth. The signatures indicate, however, that although these men fashioned and fired the ceramics, others were employed to paint the more elaborate figural vases. Such artists traveled around to different workshops, like the sixth-century Epictetus, whose name as a painter accompanied about six different names of potters.

【Paragraph 5】Starting around 550 B.C., numbers were scratched onto the bottoms of some vases, often appearing after the name of the vase in full or abbreviated form. These may have been batch numbers, indicating groups of pots fired together and intended for specific merchants or markets. The merchants were also indicated by markings on some vases, whereby a signature sign or abbreviation indicated to which exporter or importer in the receiving city the pottery was destined In the sixth century B c ., such merchants were frequently Iomans (Greeks from cities on the Mediterranean coast of Asia Minor), who were responsible for much of the import-export business at Naucratis in the south and Gravisca in the west.

【Paragraph 6】But the most important markings from the point of view of economics are the actual "price tags" etched into some pots. An important difference in the price occurred between painted and undecorated vases, with a markup of anywhere from 25 to 50 percent for the figural vases. Clearly, this was because the pottery manufacturer had to pay for the additional labor.

1. According to paragraph 1, which of the following is true of Greek pottery?

A. Pottery was produced only in Corinth and Athens because they were the only areas with the necessary clay resources

B. The huge number of pottery pieces surviving today indicates that many city-states all over ancient Greece produced pottery for export.

C. Pottery production in Greece was made possible by the good natural resources of that area

D. Pottery was not really an important industry in ancient Greece because so few city-states were active in it.

2. The word "exclusively" in the passage is closest in meaning to

A. rarely

B. only

C. especially

D. typically

3. According to paragraph 2, weaving and pottery in ancient Greece were similar in which of the following ways?

A. Both originally took place in individual households rather than commercial workshops

B. were probably practiced only during the summer months.

C. Both produced goods that were used only in the houses in which they were made.

D. Both produced goods for export from as early as the Bronze and Dark Ages.

4. The word "copious" in the passage is closest in meaning to

A. abundant

B. occasional

C. profitable

D. combined

5. Why does the author mention "the Athenian kylix"?

A. To give an example of a type of ancient pottery produced for export by Greek potters

B. To emphasize how great a number of Greek city-states produced pottery for export

C. To compare the pottery produced in Athens to the pottery made in Corinth

D. To explain why there was such a demand for Greek drinking vessels

6. It can be inferred from paragraph 2 that amphorae and pithoi were

A. not produced by Greek city-states that made cups and goblets

B. imported by the Greek city-states from other locations in the Mediterranean

C. used by the Greeks to store and export liquids

D. not in demand as Greek export products

7. What is NOT mentioned in paragraph 3 as a characteristic of ancient Greek professional potters?

A. They were generally not citizens of the city in which they worked

B. They often worked in workshops and factories run by family-owned businesses.

C. They were sometimes servants or slaves

D. They probably had a higher social status in Corinth than in Athens

8. Why does the author mention "the Phoenician goddess Astarte"?

A. To contrast the place of origin of professional potters in Corinth and Athens

B. To provide evidence that suggests that professional potters were often not citizens of the Greek city-states in which they worked

C. To illustrate the primary purpose for pottery production in Corinth

D. To provide an example of the type of pots that were produced in the ancient Greek pottery industry

9. The word "elaborate" in the passage is closest in meaning to

A. beautiful

B. expensive

C. complicated

D. numerous

10. According to paragraph 5, numbers scratched on the bottoms of vases probably indicate

A. the year in which the pottery was made

B. the importer or exporter to whom the pottery was destined

C. the group of pots that were fired together and intended for a specific market

D. the name of the vase in an abbreviated form

11. Which of the sentences below best expresses the essential information in the highlighted sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information

【Paragraph 5】Starting around 550 B.C., numbers were scratched onto the bottoms of some vases, often appearing after the name of the vase in full or abbreviated form. These may have been batch numbers, indicating groups of pots fired together and intended for specific merchants or markets. The merchants were also indicated by markings on some vases, whereby a signature sign or abbreviation indicated to which exporter or importer in the receiving city the pottery was destined. In the sixth century B c ., such merchants were frequently lomans (Greeks from cities on the Mediterranean coast of Asia Minor), who were responsible for much of the import-export business at Naucratis in the south and Gravisca in the west.

A. Merchants signed some vases in order to indicate to which city they intended to export the pottery.

B. On some vases, the specific merchant receiving the pottery was indicated by a signature marking

C. The merchants receiving the pottery often added their own signature signs or abbreviations to those already indicated.

D. On some vases? there were both markings to designate merchants and signature signs to indicate the intended destination for the vase

12. Which of the following can be inferred from paragraph 5 about numbers scratched onto the bottom of Greek vases?

A. The numbers were not found on vases destined for Naucratis and Gravisca.

B. The numbers do not appear oft vases made before 550 B.C.

C. The numbers were used only by Ionian merchants.

D. The numbers scratched on a pot increased the pot' s value.

13. Look at the four squares【】that indicate where the following sentence could be added to the passage

These artists therefore did not create the ceramics and were not often attached to any one workshop where the pots were being made.

Where would the sentence best fit? Click on a square 【】 to add the sentence to the passage.

【Paragraph 4】Happily for modern researchers, many artisans signed their works. 【A】This gives an idea not only of who these ancient ceramicists were, but also of how labor was divided. 【B】Modern scholars have the names of a few potter-families from sixth-century B c Athens: Nearkhos, who worked with his sons Tleson and Ergoteles: Ergotimos, who was succeeded by his son Eukheiros (literally, "Good Hand"); and Amasis and his son Kleophrades, who produced pottery from the mid-sixth century B c to the dawn of the fifth. 【C】The signatures indicate, however, that although these men fashioned and fired the ceramics, others were employed to paint the more elaborate figural vases. 【D】Such artists traveled around to different workshops, like the sixth-century Epictetus, whose name as a painter accompanied about six different names of potters.

14. Ceramics was an important industry in ancient Greece that gave rise to the many pieces of pottery that researchers currently study.

Answer Choices

A. Though at first a household activity, in some city-states Greek pottery became an industry exporting products all over the Mediterranean.

B. All of the Greek city-states used their clay resources to build an active pottery production and exporting industry.

C. Professional potters worked in family-run workshops and factories and were often not citizens of the city in which they worked.

D. Different markings found on pots have revealed the identity of potters and various economic factors involved in

the ancient ceramic industry.

E. The making of pots originally took place only in the summer because the clay and kindling were drier and easier to transport and burn.

F. Markings on pottery have shown that elaborately painted vases were made in the Potters' Quarter, the ceramic working area in Corinth