TPO 16

READING

Paragraph 1

1. According to paragraph1, why has trade been so important throughout the history of the Middle East ?

A. The rare and valuable metals and stones found in Middle Eastern deserts have Always been in high demand in surrounding areas.

B. Growing conditions throughout the Middle East are generally poor forcing Middle Eastern people to depend on imported grain.

C. Many useful and decorative raw materials cannot be found naturally in the Middle East but are available from neighboring regions.

D. Frequent travel due to limited water supplies in the Middle East created many Opportunities for trade with neighboring societies.

Paragraph 2

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

A. respect

B. reject

C. review

D. revise

Trade and the Ancient Middle East

Trade was the mainstay of the urban economy in the Middle East, as caravans negotiated the surrounding desert, restricted only by access to water and by mountain ranges. This has been so since ancient times, partly due to the geology of the area, which is mostly limestone and sandstone, with few deposits of metallic ore and other useful materials. Ancient demands for obsidian (a black volcanic rock useful for making mirrors and tools) led to trade with Armenia to the north, while jade for cutting tools was brought from Turkistan, and the precious stone lapis lazuli was imported from Afghanistan. One can trace such expeditions back to ancient Sumeria, the earliest known Middle Eastern civilization. Records show merchant caravans and trading posts set up by the Sumerians in the surrounding mountains and deserts of Persia and Arabia, where they traded grain for raw materials, such as timber and stones, as well as for metals and gems.

Reliance on trade had several important consequences.Production was generally in the hands of skilled individual artisans doing piecework under the tutelage of a master who was also the shop owner.In these shops

differences of rank were blurred as artisans and masters labored side by side in the same modest establishment, were usually members of the same guild and religious sect, lived in the same neighborhoods, and often had assumed (or real) kinship relationships. The worker was bound to the master by a mutual contract that either one could repudiate, and the relationship was conceptualized as one of partnership.

3. According to paragraph 2, how did Middle Eastern shop owners treat their workers?

A. Workers were ranked according to their skill level, with the most-experienced Artisans becoming partial owners of the shop

B. Shop owners treated different workers differently depending on how much the workers had in common with their masters.

C. Workers were bound to their masters by unbreakable contracts that strictly defined the terms of their partnership.

D. The shop owner worked alongside the workers and often considered them partners and members of the family.

Paragraph 3

This mode of craft production favored the growth of self-governing and ideologically egalitarian craft guilds everywhere in the Middle Eastern city. These were essentially professional associations that provided for the mutual aid and protection of their members, and allowed for the maintenance of professional standards. The growth of independent guilds was furthered by the fact that surplus was not a result of domestic craft production but resulted primarily from international trading; the government left working people to govern themselves, much as shepherds of tribal confederacies were left alone by their leaders. In the multiplicity of small-scale local egalitarian or quasi-egalitarian organizations for

4. The author includes the information that "surplus was not a result of domestic craft production but resulted primarily from international trading" in order to

A. Support the claim that the mode of production made possible by the craft guilds was very good for trade

B. Contrast the economic base of the city government with that of the tribal confederacies.

C. Provide a reason why the government allowed the guilds to be self-controlled.

D. Suggest that the government was missing out on a valuable opportunity to tax the guilds.

5. According to paragraph 3, all of the following are true of the Middle Eastern craft guilds EXCEPT:

A. The guilds were created to support

workers and to uphold principles of high-quality craft production
B. Each guild was very large and included members from a broad geographic area
C. The leaders of the guilds were chosen by popular vote
D. All guild members were treated as equals.

6. The word "consensus" in the passage is closest in meaning to
A. Authority
B. Responsibility
C. Custom
D. Agreement

Paragraph 4

7. According to paragraph 4, which of the following was NOT necessary for success in the Mercantile economy?
A. Good business sense
B. Reliable associates
C. Family wealth
D. Constant effort

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.
A. Tribespeople were comfortable forming personal relationships with merchants, Who, like them, were bound by their promises to one another.
B. Because trade was not formally regulated, merchants were careful about whom they trusted and often conducted business with people they knew

fellowship, worship, and production that flourished in this laissez-faire environment, individuals could interact with one another within a community of harmony and ideological equality, following their own popularly elected leaders and governing themselves by shared consensus while minimizing distinctions of wealth and power.

The mercantile economy was also characterized by a peculiar moral stance that is typical of people who live by trade—an attitude that is individualistic, calculating, risk taking, and adaptive to circumstances. As among tribespeople, personal relationships and a careful weighing of character have always been crucial in a mercantile economy with little regulation, where one's word is one's bond and where informal ties of trust cement together an international trade network. Nor have merchants and artisans ever had much tolerance for aristocratic professions of moral superiority, favoring instead an egalitarian ethic of the open market, where steady hard work, the loyalty of

personally.
C. While trade among merchants relied somewhat on regulation, among tribes people trade was based on personal relationships and careful character evaluation.
D. Because tribespeople were bound only by their promises to one another, personal relationships were formed only after careful weighing of character.

9. The word "ethicin" the passage is closest in meaning to
A. set of moral principles
B. division of labors
C. economic system
D. test of character

10. According to paragraph 4,what choice did Middle Eastern merchants and artisans have that many other people have not had?
A. If they were unhappy in the mercantile environment , they could draw on personal connections to find a different kind of work.
B. They were allowed to assert their opinions without having to listen to aristocratic professions of moral superiority.
C. Following the example of the pastoralists ,they could demand, and receive, better working conditions
D. If they didn't like environment, they could move somewhere else.

Paragraph 5
11. The word "intrinsically" in the passage is closest in meaning to Where would the sentence best fit?

one's fellows, and entrepreneurial skill make all the difference. And, like the pastoralists, Middle Eastern merchants and artisans unhappy with their environment could simply pack up and leave for greener pastures—an act of self-assertion wholly impossible in most other civilizations throughout history.

A. fundamentally
B. Surprisingly
C. Consequently
D. Particularly

12. In paragraph 5, why does the author mention the new trade route opened up by Vasco da Gama's fifteenth-century voyage around Africa?
A. To provide evidence that European seafarers took every opportunity to bypass Middle Eastern merchants
B. To present an instance in which Middle Eastern states lost money and power because of their reliance on long-distance trade
C. To argue this new route became necessary when European seafarers wanted to avoid Middle Eastern states whose central power had begun to erode
D. To explain how da Gama helped European traders avoid the dangerous predators prowling the areas surrounding Middle Eastern cities

13. Look at the four squares ■ that indicate where the following sentence could be added to the passage.
For one thing, it created a demand for finished goods to be sold both locally and abroad.
Where would the sentence best fit?

14. Since ancient times, reliance on trade has shaped the culture and organizational structure of Middle Eastern societies

Answer Choices
A. Persian and Arabian merchants traveled great distances tosell their

Dependence on long-distance trade also meant that the great empires of the Middle East were built both literally and figuratively on shifting sand. The central state, though often very rich and very populous, was intrinsically fragile, since the development of new international trade routes could undermine the monetary base and erode state power, as occurred when European seafarers circumvented Middle Eastern merchants after Vasco da Gama's voyage around Africa in the late fifteenth-century opened up a southern route. The ecology of the region also permitted armed predators to prowl the surrounding barrens, which were almost impossible for a state to control. Peripheral peoples therefore had a great advantage in their dealings with the center, making government authority insecure and anxious.

Reliance on trade had several important consequences. ■ Production was generally in the hands of skilled individual artisans doing piecework under the tutelage of a master who was also the shop owner. ■ In these shops differences of rank were blurred as artisans and masters labored side by side in the same modest establishment, were usually members of the same guild and religious sect, lived in the

finished goods at the marketaplaces of ancientSumeria.
B. Revenue from trade was merchants traveled great distances tosell their finished goods at the marketplaces of ancient Sumeria.
C. Revenue from trade was unevenlly distrbuted,causingMiddle Eastern societies to be characterized by growingdistinctions in wealth and power.
D. Qualities that were valued in the mercantile economyincluded individualism, hard work, loyalty, and the willingnessto take risks.
E. As production increased, centralized control over productionalso increased, leading in turn to more-centralized control over fellowship and worship.
F. Crafts were produced by skilled artisans working in close,egalitarian relationships with their masters and other fellowguild members.
G. The stability of Middle Eastern governments was threatenedby their lack of control over international trade patterns andover their own peripheral territories.

same neighborhoods, and often had assumed (or real) kinship relationships. The worker was bound to the master by a mutual contract that either one could repudiate, and the relationship was conceptualized as one of partnership.

Paragraph 1

1. The phrase "interplay" in the passage is closest in meaning to
A. Sequence
B. Interpretation
C. Requirement
D. Interaction

2. According to paragraph 1, what pattern did

Development of the Periodic Table

The periodic table is a chart that reflects the periodic recurrence of chemical and physical properties of the elements when the elements are arranged in order of increasing atomic number (the number of protons in the nucleus). It is a monumental scientific achievement, and its development illustrates the essential

scientists notice when the known elements were written in order of increasing atomic mass?

A. The elements of the group of alkali metals were the first elements in the order of increasing atomic mass.

B. Repetition of the same atomic masses for elements in different groups appeared.

C. Elements with similar chemical properties appeared in the listing at regular intervals.

D. Elements were chemically most similar to those just before and after them in the order.

Paragraph 2

3. In paragraph 2. what is the author's purpose in presenting the information about thedecision by Meyer and Mendeleyev to leave gaps in the periodic table?

A. To illustrate their confidence that the organizing principles of the periodic table would govern the occurrence of all chemical elements

B. To indicate that some of their analyses of periodic physical and chemical properties were later found to be wrong

C. To support the idea that they were unwilling

interplay between observation, prediction, and testing required for scientific progress. In the 1800's scientists were searching for new elements. By the late 1860's more than 60 chemical elements had been identified, and much was known about their descriptive chemistry. Various proposals were put forth to arrange the elements into groups based on similarities in chemical and physical properties.The next step was to recognize a connection between group properties (physical or chemical similarities) and atomic mass (the measured mass of an individual atom of an element).When the elements known at the time were ordered by increasing atomic mass, it was found that successive elements belonged to different chemical groups and that the order of the groups in this sequence was fixed and repeated itself at regular intervals.Thus when the series of elements was written so as to begin a new horizontal row with each alkali metal, elements of the same groups were automatically assembled in vertical columns in a periodic table of the elements.This table was the forerunner of the modern table.

When the German chemist Lothar Meyer and (independently) the Russian Dmitry Mendeleyev first introduced the periodic table in 1869-70, one-third of the naturally occurring chemical elements had not yet been discovered. Yet both chemists were sufficiently farsighted to leave gaps where their analyses of periodic physical and

to place new elements in the periodic table
D. To indicate how they handled their disagreement about where to place new elements

4. What reason does the author provide for the claim that "Mendeleyev was bolder than Meyer"?
A. Mendeleyev corrected incorrect information Meyer had proposed.
B. Mendeleyev assumed that some information believed to be true about the elements was incorrect.
C. Mendeleyev argued that Meyer had not left enough gaps in the periodic table.
D. Mendeleyev realized that elements were not ordered by atomic mass in the periodic table.

5. According to paragraph 2, why did Mendeleyev suggest changing the atomic mass of indium?
A. Because indium did not fit into the periodic table in the place predicted by its atomic mass
B. Because there was experimental evidence that the atomic mass that had been assigned to indium was incorrect
C. Because there was an empty space between cadmium and tin in the periodic table
D. Because the chemical properties of indium were similar to those of arsenic and selenium

6. It can be inferred from paragraph 2 that tellurium comes before iodine in the periodic table even though tellurium's atomic mass is slightly greater because
A. iodine is less common than tellurium
B. both iodine and tellurium have no isotopes
C. the chemical behavior of tellurium is highly variable
D. the atomic number of tellurium is smaller than that of iodine

chemical properties indicated that new elements should be located. Mendeleyev was bolder than Meyer and even assumed that if a measured atomic mass put an element in the wrong place in the table, the atomic mass was wrong. In some cases this was true. Indium, for example, had previously been assigned an atomic mass between those of arsenic and selenium. Because there is no space in the periodic table between these two elements, Mendeleyev suggested that the atomic mass of indium be changed to a completely different value, where it would fill an empty space between cadmium and tin. In fact, subsequent work has shown that in a periodic table, elements should not be ordered strictly by atomic mass. For example, tellurium comes before iodine in the periodic table, even though its atomic mass is slightly greater. Such anomalies are due to the relative abundance of the "isotopes" or varieties of each element. All the isotopes of a given element have the same number of protons, but differ in their number of neutrons, and hence in their atomic mass. The isotopes of a given element have the same chemical properties but slightly different physical properties. We now know that atomic number (the number of protons in the nucleus), not atomic mass number (the number of protons and neutrons), determines chemical behavior.

7. The phrase "abundance" in the passage is
A.closest in meaning to
A.weight
B. requirement
C. plenty
D. sequence

Paragraph 3

8. The phrase "analogous" to in the passage is closest in meaning to
A. predicted by
B. expected of
C. similar
D. superior

9. Paragraph 3 suggests that Mendeleyev predicted the properties of eka-aluminum on the basis of
A. the atomic mass of aluminum
B. the position of the gap in the periodic table that eka-aluminum was predicted to fill
C. e the similarity of eka-aluminum to the other five missing elements
D. observation of the properties of gallium

10. It can be inferred from paragraph 3 that the significance of the discovery of gallium was that it supported which of the following?
A. The idea that aluminum was correctly placed in the periodic table
B. Mendeleyev's prediction that eka-silicon would be discovered next
C. The organizing principle of the periodic table
D. The idea that unknown elements existed

Paragraph 4

11. Which of the sentences below best expresses the essential information in the highlighted

Mendeleyev went further than Meyer in another respect: he predicted the properties of six elements yet to be discovered. For example, a gap just below aluminum suggested a new element would be found with properties analogous to those of aluminum. Mendeleyev designated this element "eka-aluminum" (eka is the Sanskrit word for "next") and predicted its properties. Just five years later an element with the proper atomic mass was isolated and named gallium by its discoverer. The close correspondence between the observed properties of gallium and MendeleyeVs predictions for eka-aluminum lent strong support to the periodic law. Additional support came in 1885 when eka-silicon, which had also been described in advance by Mendeleyev, was discovered and named germanium.

sentence in the passage? Incorrect choices change the meaning in important ways or leave out essential information.

A. Ramsay found evidence of helium in the spectrum of sunlight before he discovered that the element was also contained in natural gas deposits on Earth.

B. Ramsay thought he had discovered a new element present in natural gas deposits, but he was wrong since that element had been previously observed elsewhere on Earth

C. After Ramsay had discovered a new element, called helium, in natural gas deposits on Earth, he also found evidence of its presence in the Sun.

D. Ramsay later discovered that helium, an element that was already known to be present in the Sun, was also present in natural gas deposits on Earth.

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

A. hypothesized

B. discovered

C. reported

D.generated

13. Look at the four squares [■] that indicate where the following sentence could be added to the passage.

it was a natural idea to break up the series of elements at the points where the sequence of chemical groups to which the elements belonged began to repeat itseM-

here would the sentence best fit?

14. To review passage. Click View Text

The periodic table introduced by Meyer and Mendeleyev was the forerunner of the modern table of elements.

The structure of the periodic table appeared to limit the number of possible elements. It was therefore quite surprising when John William Strutt, Lord Rayleigh, discovered a gaseous element in 1894 that did not fit into the previous classification scheme. A century earlier, Henry Cavendish had noted the existence of a residual gas when oxygen and nitrogen are removed from air, but its importance had not been realized. Together with William Ramsay, Rayleigh isolated the gas (separating it from other substances into its pure state) and named it argon. Ramsay then studied a gas that was present in natural gas deposits and discovered that it was helium, an element whose presence in the Sun had been noted earlier in the spectrum of sunlight but that had not previously been known on Earth. Rayleigh and Ramsay postulated the existence of a new group of elements, and in 1898 other members of the series (neon, krypton, and xenon) were isolated.

The periodic table is a chart that reflects the periodic recurrence of chemical and physical properties of the elements when the elements are arranged in order of increasing atomic number (the number of protons in the nucleus). It is a monumental scientific achievement, and

A. Lord Rayleigh provided evidence that the structure of the
B. periodic table limited the potential number of elements.
differently from older military organizations.
C. Mendeleyev and Meyer organized the known elements into a chart that revealed periodic recurrences of chemical and physical properties.
D. Mendeleyev's successful prediction of the properties of then- unknown elements lent support to the acceptance of the periodic law.
E. Ramsay and Lord Rayleigh challenged the importance of the chemical research that Henry Cavendish had done a century earlier.
F. Isotopes of a given element have exactly the same physical properties, but their chemical properties are slightly different

In the 1890's, Ramsay and Lord Rayleigh isolated argon and proposed the existence of a new series of elements.

its development illustrates the essential interplay between observation, prediction, and testing required for scientific progress. In the 1800's scientists were searching for new elements. By the late 1860's more than 60 chemical elements had been identified, and much was known about their descriptive chemistry. Various proposals were put forth to arrange the elements into groups based on similarities in chemical and physical properties. The next step was to recognize a connection between group properties (physical or chemical similarities) and atomic mass (the measured mass of an individual atom of an element). When the elements known at the time were ordered by increasing atomic mass, it was found that successive elements belonged to different chemical groups and that the order of the groups in this sequence was fixed and repeated itself at regular intervals. Thus when the series of elements was written so as to begin a new horizontal row with each alkali metal, elements of the same groups were automatically assembled in vertical columns in a periodic table of the elements. This table was the forerunner of the modern table.

Planets in Our Solar System

Paragraph 1

1. According to the passage, each of the

The Sun is the hub of a huge

following statements comparing terrestrial planets with Jovian planets is true EXCEPT:

A. Terrestrial planets are closer to the Sun than Jovian planets.

B. Terrestrial planets have smaller diameters than Jovian planets.

C. Terrestrial planets have smaller masses than Jovian planets.

D. Terrestrial planets travel in a different direction than Jovian planets do.

rotating system consisting of nine planets, their satellites, and numerous small bodies, including asteroids, comets, and meteoroids. An estimated 99.85 percent of the mass of our solar system is contained within the Sun, while the planets collectively make up most of the remaining 0.15 percent. The planets, in order of their distance from the Sun, are Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune, and Pluto. Under the control of the Sun's gravitational force, each planet maintains an elliptical orbit and all of them travel in the same direction.

The planets in our solar system fall into two groups: the terrestrial (Earth-like) planets (Mercury, Venus, Earth, and Mars) and the Jovian (Jupiter-like) planets (Jupiter, Saturn, Uranus, and Neptune). Pluto is not included in either category, because its great distance from Earth and its small size make this planet's true nature a mystery.

The most obvious difference between the terrestrial and the Jovian planets is their size. The largest terrestrial planet, Earth has a diameter only one quarter as great as the diameter of the smallest Jovian planet, Neptune, and its mass is only one seventeenth as great. Hence, the Jovian planets are often called giants. Also, because of their relative locations, the four Jovian planets are known as the outer planets, while the terrestrial planets are known as the inner planets. There appears to be a

correlation between the positions of these planets and their sizes.

Other dimensions along which the two groups differ markedly are density and composition. The densities of the terrestrial planets average about 5 times the density of water, whereas the Jovian planets have densities that average only 1.5 times the density of water. One of the outer planets, Saturn, has a density of only 0.7 that of water, which means that Saturn would float in water. Variations in the composition of the planets are largely responsible for the density differences. ■The substances that make up both groups of planets are divided into three groups—gases, rocks, and ices—based on their melting points. ■The terrestrial planets are mostly rocks: dense rocky and metallic material, with minor amounts of gases. ■The Jovian planets, on the other hand, contain a large percentage of the gases hydrogen and helium, with varying amounts of ices: mostly water, ammonia, and methane ices.■

Paragraph 4

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

A. essentially
B. typically
C. consistently
D. noticeably

3 . Paragraph 4 mentions which of the following as a reason why terrestrial planets are dense?

A. They are made up of three groups of substances.
B. They are composed mainly of rocky and metallic materials.
C. They contain more ice than Jovian planets.
D. They contain relatively small amounts of water.

4. Paragraph 4 supports each of the following statements about Saturn EXCEPT:

A. It is less dense than any of the terrestrial planets
B. It contains no rocky material.
C. It contains ices.
D. It contains a large percentage of gases.

Paragraph 5

The Jovian planets have very thick atmospheres consisting of varying amounts of hydrogen, helium, methane, and ammonia. By comparison, the terrestrial planets have meager atmospheres at best. A planet's ability to retain an atmosphere depends on its temperature and mass. Simply stated,

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

A. rich
B. thin
C. unique
D. complex

6. According to paragraph 5. which of the

following statements is true of both Jovian and terrestrial planets?

A. The thicker the atmosphere, the smaller the planet's mass

B. The more varied the gases in the atmosphere, the higher the temperature

C. The higher the surface gravity, the higher the escape velocity

D. The less the atmosphere contributes to the total mass, the lower the temperature

7. According to paragraph 5, what is a major reason that Jovian planets have much thicker atmospheres than terrestrial planets do?

A. Jovian planets have lower surface gravities.

B. Jovian planets have lower temperatures.

C. Jovian planets have lower escape velocities.

D. Jovian planets' gas molecules have higher average speeds.

8. Paragraph 5 supports which of the following statements about the ability of planets to retain gases?

A. More-massive planets are less able to retain gases than less-massive ones.

B. Planets are more likely to retain heavy gases than light gases.

C. Jovian planets are unlikely to retain the lightest gases.

D. Only terrestrial planets have been able to retain carbon dioxide.

a gas molecule can "evaporate" from a planet if it reaches a speed known as the escape velocity. For Earth, this velocity is 11 kilometers per second. Any material, including a rocket, must reach this speed before it can leave Earth and go into space. The Jovian planets, because of their greater masses and thus higher surface gravities, have higher escape velocities (21-60 kilometers per second) than the terrestrial planets. Consequently, it is more difficult for gases to "evaporate" from them. Also, because the molecular motion of a gas depends on temperature, at the low temperatures of the Jovian planets even the lightest gases are unlikely to acquire the speed needed to escape. On the other hand, a comparatively warm body with a small surface gravity, like Earth's moon, is unable to hold even the heaviest gas and thus lacks an atmosphere. The slightly larger terrestrial planets Earth, Venus, and Mars retain some heavy gases like carbon dioxide, but even their atmospheres make up only an infinitesimally small portion of their total mass.

Paragraph 6

9. In calling the cloud of gas and dust from which the Sun and all the planets are thought to have condensed "primordial,"

The orderly nature of our solar system leads most astronomers to conclude that the planets formed at

the author means that the cloud was
A. immense in size
B. composed of similar particles
C. present at the very beginning of our solar system's formation O created
D. from a great variety of different materials

10. The word "eventually" in the passage is closest in meaning to
A. overtime
B. long ago
C. simply
D. certainly

11. According to paragraph 6. what is a possible explanation for the lack of light gases and ices on terrestrial planets?
A. The location of terrestrial planets caused them to lose some of the materials they once contained.
B. Terrestrial planets were formed much later than Jovian planets.
C. The composition of terrestrial planets was different from that of Jupiter.
D. Terrestrial planets were formed out of different material than the Sun was.

12. Look at the four squares ■ that indicate where the following sentence could be added to the passage.
This explains their relatively low densities.
Where would the sentence best fit?

13. To review passage. Click View Text
Answer Choices
A. Have relatively small sizes
B. Are grouped in the same category as Pluto
C. Contain relatively high proportions of

essentially the same time and from the same material as the Sun. It is hypothesized that the primordial cloud of dust and gas from which all the planets are thought to have condensed had a composition somewhat similar to that of Jupiter. However, unlike Jupiter, the terrestrial planets today are nearly void of light gases and ices. The explanation may be that the terrestrial planets were once much larger and richer in these materials but eventually lost them because of these bodies' relative closeness to the Sun, which meant that their temperatures were relatively high.

Other dimensions along which the two groups differ markedly are density and composition. The densities of the terrestrial planets average about 5 times the density of water, whereas the Jovian planets have densities that average only 1.5 times the density of water. One of the outer planets, Saturn, has a density of

ices
D. Have relatively high temperatures
E. Have densities that are generally lower than the density of water
F. Have relatively high escape velocities
G.Have a composition closer to that of the cloud from which they condensed

only 0.7 that of water, which means that Saturn would float in water. Variations in the composition of the planets are largely responsible for the density differences. The substances that make up both groups of planets are divided into three groups—gases, rocks, and ices—based on their melting points. The terrestrial planets are mostly rocks: dense rocky and metallic material, with minor amounts of gases. The Jovian planets, on the other hand, contain a large percentage of the gases hydrogen and helium, with varying amounts of ices: mostly water, ammonia, and methane ices.

LISTENING

1. What does the woman want the man to do?
A. Postpone a choir performance to allow more time for rehearsals.
B. Change the rehearsal schedule at the music building.
C. Give approval for her group to move a piano to a different room.
D. Help her reserve a rehearsal space on campus.

2. What problem concerning Lincoln Auditorium is mentioned?
A. There is no piano in the auditorium.
B. The auditorium has been booked by the jazz ensemble.
C. The auditorium is located near a construction site.
D. The auditorium's stage is not large enough to hold the whole choir.

3. What does the woman imply about having rehearsals in the evening?
A. Most auditoriums are already reserved in the evening for performances.
B. Groups must finish rehearsals before campus buildings close.
C. Students are usually too tired to rehearse in the evening.
D. Many students are not available in the evening.

4. What is the woman's attitude toward the jazz ensemble?
A. She is worried that they have not rehearsed enough.
B. She believes they may have deceived her.
C. She would like to work together with them on a project.
D. She admires the way they solved their acoustical problems.

5. What does the woman imply when she says this
A. She will give the man the answers to his questions at another time.
B. She is sorry that she cannot change the rehearsal time.
C. She wishes that she could explain the problem more clearly.\
D. She believes the man already knows the answers to his own questions.

6. What is the main purpose of the lecture?
A. To explain the various ways that sulfuric acid is involved in the formation of caves.

B. To describe caves and other geologic formations in U.S. national parks.

C. To use Lechuguilla Cave as an example of how most caves form.

D. To discuss the formation and characteristics of an unusual type of cave.

7. The professor mentions parts of the process involved in the formation of Lechuguilla Cave. Indicate which of the statements below describe part of the process. Click in the correct box for each phrase.

Yes

No

A. Gypsum residue accumulated to form decorative structures

B. Gas generated by bacteria reacted with gypsum deposits

C. Hydrogen sulfide gas mixed with underground water

D. Acid dissolved parts of the limestone

E. Bacteria fed on underground oil

F. Flowing surface water enlarged the cracks in the limestone

8. According to the professor, what substance found in surface water is important for the formation of typical limestone caves?

A. Gypsum

B. Oxygen

C. Carbonic acid

D. Sulfuric acid

9. What does the presence of gypsum in Lechuguilla Cave indicate?

A. The cave was not formed by flowing water.

B. The cave is no longer forming.

C. Bacteria are present in high concentrations inside the cave.

D. No type of acid was involved in the formation of the cave.

10. What can be inferred from the fact that Lechuguilla Cave is no longer forming?

A. The cave has stopped attracting visitors.

B. The cave no longer contains any limestone.

C. The air in the cave is safer to breathe now than it was in the past.

D. Gypsum deposits inside the cave are growing thicker.

11. What does the professor mean when he says this

A. Lechuguilla Cave is not completely absent of water.

B. Lechuguilla Cave is not totally safe to explore.

C. Water long ago flowed through Lechuguilla Cave.

D. Scientists do not agree about how Lechuguilla Cave was formed.

12. What is the lecture mainly about?

A. Professional pianists of the 18th and 19th centuries.

B. The influence of the piano on music and society.

C. A comparison of the piano and harpsichord.

D. A comparison of musical styles before and after the invention of the piano.

13. What does the professor mention as influences on musical styles before the invention of the piano?

A. The preferences of particular patrons

B. The low numbers of available instruments.

C. Increase in the number of music schools.

D. Reductions in the costs of producing instruments.

14. Why does the professor describe how a piano works?

A. To explain why pianos are easy to play.

B. To explain why pianos are expensive to construct.

C. To explain why pianos are not classified as string instruments.

D. To explain why pianos do not require frequent tuning.

15. According to the professor, why did the piano become more popular than the harpsichord?

A. Piano music was easier to compose than harpsichord music.

B. Piano music was better for accompanying the popular new dances of the 1700s.

C. The piano had a more attractive size and shape than the harpsichord.

D. The piano could express a wider range of emotions than the harpsichord.

16. Why does the professor discuss Clara Schumann?

A. She influenced the design of the modern piano.

B. She grew up in an environment that encouraged female musicians.

C. Her musical talents were inherited from her parents.

D. Her background and Robert Schumann's background were similar.

17. What does the professor imply when he says this?

A. He will not write a term on the blackboard.
B. The students do not have to take notes.
C. The situation was described in the reading.
D. The students can easily guess what he means..

18. Why does the student go to see the professor?

A. To find out his grade on the midterm exam.
B. To explain why he missed a class
C. To get help writing an essay.
D. To ask to take a test at a different time.

19. Why does the professor congratulate the student?

A. He received the highest grade on a recent test.
B. He recently won an award.
C. He was accepted into a history program in France.
D. He wrote an essay that was published in a magazine.

20. What will the student do this weekend?

A. Take a trip with his medieval history class.
B. Practice speaking French.
C. Attend an awards ceremony.
D. Write a paper about Montreal.

21. What are two of the criteria the professor will use to evaluate students' essays? Click on 2 answers.

A. How completely they describe the factual details of historical events.
B. How successfully they defend their own opinions.
C. How carefully they analyze ideas discussed in class.
D. How much information from the textbook they include.

22. What does the professor imply when she says this

A. She has not yet seen the student's paper.
B. She will not hold class on Monday.
C. She needs more time to grade the student's exam.
D. She wants to confirm her plans for a test.

23. What is the lecture mainly about?
A. Different foraging strategies among animals.
B. Methods beavers use to gather building materials.
C. Decisions beavers make about where to live.
D. Choices beavers face when foraging.

24. What differences between aspen trees and ash trees does the professor point out?
A. Aspen trees are easier to transport.
B. Aspen trees provide better wood for construction.
C. Aspen trees provide less nutrition for beavers.
D. Aspen trees have more overall value to beavers.

25. What does the professor identify as the two central issues involved in beavers' behavior? Click on 2 answers.
A. How far from home to forage.
B. How to cope with competition.
C. What size tree to cut down.
D. What time of year material for construction is available.

26. What does the professor say about the cutting down of large trees?
A. Beavers generally prefer cutting down large trees to small trees.
B. Beavers generally do not travel long distances to cut down large trees.
C. Beavers will not cut large trees of certain species.
D. Beavers use large trees mainly for the purpose fo building shelters.

27. According to the professor, why do beavers generally forage at night?
A. Beavers are safe from predators if they forage at night.
B. Foraging at night requires less energy than foraging in the daytime.
C. Beavers stay with their offspring during the daytime.
D. Beavers face less competition for food from other animals during the night.

28. Why does the professor say this

A. To explain her reasoning.

B. To indicate why her belief was wrong.

C. To give an example of a decision beavers make.

D. To explain the reason beavers travel far for wood.

29. What is the lecture mainly about?

A. The images in stained-glass windows.

B. The history of stained-glass art.

C. The importance of religious art during the Middle Ages.

D. Techniques for making glass during the Middle Ages.

30. What are two points the professor makes about stained-glass windows made during the Middle Ages? Click on 2 answers.

A. They typically were small size.

B. The glass was colored during the glassmaking process.

C. They were used mainly for churches.

D. They had simple designs.

31. During the Middle Ages, what was one of the first steps that artists used in making a stained-glass window?

A. They drew the design onto the top of a table.

B. They created models of the design with lead strips.

C. They drew an outline of the design directly onto a piece of glass.

D. They painted the design on paper.

32. According to the professor, what are two ways in which stained-glass windows made in the sixteen century differed from those made in earlier centuries? Click on 2 answers.

A. The way the glass was colored.

B. The role played by lead strips.

C. The scenes that were depicted.

D. The way glass pieces were cut.

33. What does the professor imply contributed to the popularity of Tiffany glass?

A. The use of lead compounds to enhance its colors.

B. The reuse of stained glass from old church windows.

C. The invention of electric lighting.

D. A new process for painting glass.

34. What does the professor imply when she says this

A. It is unfortunate that people in the 19th century destroyed old stained-glass windows.

B. Stained-glass windows made in the 19th century are more beautiful than those made earlier.

C. It was necessary for people in the 19th century to break stained-glass windows.

D. Stained-glass windows made in the 19th century are more valuable today than windows in previous centuries.

SPEAKING

1.If you could have any job or career you wanted, which would you choose and why? Give specific details to explain your response. 【事件】

2. Some people who unexpectedly receive a large amount of money spend it on practical things, while others spend it for pleasure only. Which do you think is better and why? 【prefer】

3.Student Health Services Need Improvement

The situation at the health center is unacceptable: you sit in a crowded waiting room for hours waiting to get treatment for minor ailments. Then when it's your turn, you get about three minutes with an overworked doctor. I have two suggestions. First, the health center needs to hire more doctors so that each patient receives quality treatment. And as far as the wait time issue is concerned, the health center is currently open only Monday through Fridays, which means that people who get sick over the weekend wait until the following week to get treatment. So, opening the health center on weekends should solve that problem too.

The man expresses her opinion about the student's suggestions that are made in the letter. Then state his opinion and explain the reasons he gives for holding that opinion.

4.Social loafing

When people work in groups to perform a task, individual group members may feel less motivated to contribute, since no one person is held directly responsible for completing the task. The result is that people may not work as hard, or accomplish as much, as they would if they were working alone and their individual output were being measured. This decrease in personal efforts, especially on a simple group task, is known as social loafing. While it is not a deliberate behavior, the consequence of social loafing is less personal efficiency when working in groups than when working on one's own.

Using the example from the lecture, explain what social loafing is and how it affects people's behavior.

5.The students discuss two possible solutions to the man's problem. Briefly summarize the problem. Then state which solution you would recommend and explain the reasons for your recommendation.

6.Using the points and examples from the talk, explain internal and external locus of control.

WRITING

TASK 1

The United Kingdom (sometimes referred to as Britain) has a long and rich history of human settlement. Traces of buildings, tools, and art can be found from periods going back many thousands of years: from the Stone Age, through the Bronze Age, the Iron Age, the time of the Roman colonization, the Middle Ages, up to the beginnings of the industrial age. Yet for most of the twentieth century, the science of archaeology—dedicated to uncovering and studying old cultural artifacts—was faced with serious problems and limitations in Britain.

First, many valuable artifacts were lost to construction projects. The growth of Britain's population, especially from the 1950s on, spurred a lot of new construction in British cities, towns, and villages. While digging foundations for new buildings, the builders often uncovered archaeologically valuable sites. Usually, however, they proceeded with the construction and did not preserve the artifacts. Many archaeologically precious artifacts were therefore destroyed.

Second, many archaeologists felt that the financial support for archaeological research was inadequate. For most of the twentieth century, archaeology was funded mostly through government funds and grants, which allowed archaeologists to investigate a handful of the most important sites but which left hundreds of other interesting projects without support. Furthermore, changing government priorities brought about periodic reductions in funding.

Third, it was difficult to have a career in archaeology. Archaeology jobs were to be found at universities or with a few government agencies, but there were never many positions available. Many people who wanted to become archaeologists ended up pursuing other careers and contributing to archaeological research only as unpaid amateurs.

Summarize the points made in the lecture, being sure to explain how they support/contradict specific points made in the reading passage.

TASK 2

The best way to travel is in a group led by a tour guide.