با سلام به تمامی دوستان گرامی متقاضی شرکت در آزمون های MSRT وزارت علوم و تحقیقات و فناوری

در اینجا ۳۲ متن مناسب جمع آوری شده اند که بعضی از آنها (۶، ۱۲، ۱۴، ۲۳، ۲۷و ۲۸) به طور کامل در آزمون های که شرکت کرده بودم، مطرح شده بودند[1]. پاسخنامه هر متن را برای شما قرار داده ایم تا صحت پاسخ هایتان را بررسی کنید.

با آرزوی موفقبت برای تمامی دوستان

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Reading Lesson 1 "Photosynthesis"

It has long been known that when the green parts of plants are exposed to light under suitable conditions of temperature and moisture, carbon dioxide is absorbed by the plant from the atmospheric CO2 and oxygen is released into the air. This exchange of gases in plants is the opposite of the process that occurs in respiration. In this plant process, which is called photosynthesis, carbohydrates are synthesized in the presence of light from carbon dioxide and water by specialized structures in the cytoplasm of plant cells called chloroplasts. These chloroplasts contain not only two types of light-trapping green chlorophyll but also a vast array of protein substances called enzymes. In most plants, the water required by the photosynthesis process is absorbed from the soil by the roots and translocated through the xylem of the root and stem to the chlorophyll-laden leaves. Except for the usually small percentage used in respiration, the oxygen released in the process diffuses out of the leaf and into the atmosphere through stomates. In simple terms, carbon dioxide is the fuel, and oxygen is the product of the chemical reaction. For each molecule of carbon dioxide used, one molecule of oxygen is released. Here is a summary chemical equation for photosynthesis:

$$6CO2 + 6H2O = C6H12O6 + 6O2$$

As a result of this process, radiant energy from the sun is **stored** as chemical energy. In turn, the chemical energy is used to decompose carbon dioxide and water. The products of **their** decomposition are recombined into a new compound, which **successively** builds up into the more and more complex substances that

[1] سوالاتی که در اینجا به صورت تشریحی مطرح شده اند در آزمون ها به تستی تغییر پیدا می کنند.

comprise the plant. These organic substances, that is, the sugars, starches, and cellulose, all belong to the class of organic molecules. In other words, the process of photosynthesis can be understood as an enzyme-induced chemical change from carbon dioxide and water into the simple sugar glucose. This carbohydrate, in turn, is utilized by the plant to generate other forms of energy, such as the long chains of plant cells on polymers that comprise the the cellular structures of starches or cellulose. Many intermediate steps are involved in the production of a simple sugar or starch. At the same time, a balance of gases is preserved in the atmosphere by the process of photosynthesis.

Review Questions

Multiple choice. Choose the correct answer for each question.

1. Which title best expresses the ideas in this passage?

- ☐ A Chemical Equation
- ☐ The Process of Photosynthesis
- ☐ The Parts of Vascular Plants
- ☐ The Production of Sugar

2. The combination of carbon dioxide and water to form sugar result in an excess of:

- ☐ Water
- ☐ Oxygen
- ☐ Carbon
- ☐ Chlorophyll

3. Which process is the opposite of photosynthesis?

- ☐ Decomposition

- [ ] Synthesization
- [ ] Diffusion
- [ ] Respiration

4. In photosynthesis, energy from the sun is:

- [ ] changed to chemical energy
- [ ] conducted from the xylem to the leaves of green plants
- [ ] not necessary to the process
- [ ] released one to one for each molecule of carbon dioxide used

5. Find the sentence in paragraph 1 that describes how oxygen is released into the atmosphere and copy it to the space below.

6. The word "stored" in paragraph 2 is closest in meaning to:

- [ ] Retained
- [ ] Converted
- [ ] Discovered
- [ ] Specified

7. The word "their" in paragraph 2 refers to:

- [ ] radiant energy and chemical energy
- [ ] carbon dioxide and water
- [ ] products

- [ ] complex substances

8. The word "successively" in paragraph 2 is closest in meaning to:

- [ ] with effort
- [ ] in a sequence
- [ ] slowly
- [ ] carefully

9. Besides the manufacture of food for plants, what is another benefit of photosynthesis?

- [ ] It produces solar energy
- [ ] It diffuses additional carbon dioxide into the air
- [ ] It maintains a balance of gases in the atmosphere
- [ ] It removes harmful gases from the air

10. Which of the following is NOT true of the oxygen used in photosynthesis?

- [ ] Oxygen is absorbed by the roots
- [ ] Oxygen is the product of photosynthesis
- [ ] Oxygen is used in respiration
- [ ] Oxygen is released into the atmosphere through the leaves

End of Lesson

Reading Lesson 2 "The Nobel Prize"

Alfred Berhard Nobel, a Swedish inventor and philanthropist, bequeathed most of his vast fortune to a trust that he designated as a fund from which annual prizes could be awarded to the individuals and organizations that had acheived through invention or discovery that which would have the greatest benefit to humanity in a particular year. According to the legend, Nobel's death had been erroneously reported in a newspaper, and the focus of the obituary was the fact that Nobel had invented dynamite. He rewrote his **will** in 1895, thereby establishing , with the original amount of nine million dollars, the Nobel Foundation as the legal owner and administering agent of the funds, and instituting the prizes that are named after him. Statutes to govern the awarding of the prizes were written, along with guidelines for operating procedures. Five years after Nobel's death, the first five prizes, worth about forty thousand dollars each, were to be awarded.

Originally the five classifications for **outstanding** contributions designated in Nobel's will included chemistry, physics, physiology or medicine, literature, and international peace. **These prizes have been administered continually by the Nobel Foundation in Stockholm since they were first awarded in 1901.** In 1969, a sixth prize, for accomplishments in the field of economics and endowed by the Central Bank of Sweden, was added. Candidates for the prizes must be nominated in writing by February 1st of each year by a qualified and recognized authority in each of the fields of competition. Recipients in physics, chemistry, and economics are selected by the Royal Swedish Academy, whereas recipients in peace are chosen by the Norwegian Nobel Committee appointed by Norway's parliament. With the King of Sweden officiating, the prizes are usually presented in Stockholm on December 10th, the anniversary of Nobel's death. the value, fame, and prestige of the Nobel Prizes have continued to grow. Today the**prize** includes a medal, a diploma, and a cash award of about one million dollars.

Review Questions

Multiple choice. Choose the correct answer for each question.

1. What does this passage mainly discuss?

- [ ] Alfred Bernhard Nobel
- [ ] The Nobel Prizes
- [ ] Great contributions to mankind
- [ ] Swedish philanthropy

2. Why were the prizes named for Alfred Bernhard Nobel?

- [ ] He left money in his will to establish a fund for the prizes
- [ ] He won the first Nobel Prize for his work in philanthropy
- [ ] He is now living in Sweden
- [ ] He serves as chairman of the committee to choose the recipients of the prizes

3. The word "will" in paragraph 1 refers to:

- [ ] Nobel's wishes
- [ ] A legal document
- [ ] A future intention
- [ ] A free choice

4. How often are the Nobel Prizes awarded?

- [ ] Five times a year
- [ ] Once a year
- [ ] Twice a year
- [ ] Once every two years

5. The following sentence can be added to the passage

When he read this objective summary of his life, the great chemist, it is said, decided that he wanted his name to be remembered for something more positive and humanitarian than inventing an explosive that was a potential weapon.

Where would it best fit in the passage? In the space provided, indicate the insertion point.

6. The word "outstanding" in paragraph 2 could best be replaced by:

- ☐ Recent
- ☐ Unusual
- ☐ Established
- ☐ Exceptional

7. A Nobel Prize would NOT be given to:

- ☐ an author who wrote a novel
- ☐ a doctor who discovered a vaccine
- ☐ a composer who wrote a symphony
- ☐ a diplomat who negotiated a peace settlement

8. What does the author mean in the statement: **These prizes have been administered continually by the Nobel Foundation in Stockholm since they were first awarded in 1901.** ((paragraph 2)

- ☐ The Nobel Foundation oversees the management of the money and distribution of the prizes
- ☐ The Nobel Foundation selects the recipients of the prizes

- [ ] The Nobel Foundation solicits applications and recommendations for the prizes
- [ ] The Nobel Foundation recommends new prize classifications

9. Why are the awards presented on December 10th?

- [ ] It is a tribute to the King of Sweden
- [ ] Alfred Bernhard Nobel died on that day
- [ ] That date was established in Nobel's will
- [ ] The Central Bank of Sweden administers the trust

10. Look at the word "prize" in the last line of the passage. What other word in paragraph 2 is close in meaning to prize? Use the space provided.

End of Lesson

Reading Lesson 3 **"Opera"**

Although stage plays have been set to music since the era of the ancient Greeks, when the dramas of Sophocles and Aeschylus were accompanied by lyres and flutes, the **usually** accepted date for the beginning of opera as we know **it** is 1600. As a part of the celebration of the marriage of King Henry IV of France to the Italian aristocrat Maria de Medici, the Florentine composer Jacopo PerÌ produced his famous *Euridice*, generally considered to be the first opera. Following his example, a group of Italian musicians, poets, and noblemen called the Camerata began to **revive** the style of musical story that had been used in Greek tragedy. The Camerata took most of the **plots** for their operas from Greek and Roman history and mythology, beginning the process of creating an opera by writing a libretto or drama that could be used to establish the framework for the music. They called their compositions *opera in musica* or musical works. It is from this phrase that the word "opera" was borrowed and abbreviated.

For several years, the center of opera was Florence in Northern Italy, but gradually, during the baroque period, it spread throughout Italy. By the late 1600's, operas were being written and performed in many places throughout Europe, especially in England, France, and Germany. However, for many years, the Italian opera was considered the ideal, and many non-Italian composers continued to use Italian librettos. The European form de-emphasized the dramatic aspect of the Italian model. New orchestral effects and even ballet were introduced under the guise of opera. Composers gave in to the demands of singers, writing many operas that were little more than a succession of brilliant tricks for the voice, designed to showcase the splendid voices of the singers who had requested **them**. It was thus that complicated arias, recitatives, and duets evolved. The aria, which is a long solo, may be compared to a song in which the characters express their thoughts and feelings. The recitative, which is also a solo of sorts, is a recitation set to music, the purpose of which is to continue the story line. The duet is a musical piece written for two voices, a musical device that may serve the **function** of either an aria or a recitative within the opera.

Review Questions

Multiple choice. Choose the correct answer for each question.

1. This passage is a summary of:

- ☐ Opera in Italy
- ☐ The Camerata
- ☐ The development of opera
- ☐ *Euridice*

2. Look at the word "usually" in the passage. Which word in paragraph 1 is closest in mean to "usually"? Use the space provided to write your answer.

3. According to this passage, when did modern opera begin?

- ☐ In the time of the ancient Greeks
- ☐ In the fifteenth century
- ☐ At the beginning of the sixteenth century
- ☐ At the beginning of the seventeenth century

4. The word "it" in paragraph 1 refers to:

- ☐ Opera
- ☐ Date
- ☐ Era
- ☐ Music

5. According to the author, what did Jacopo PerÌ write?

- ☐ Greek tragedy
- ☐ The first opera
- ☐ The opera *Maria de Medici*
- ☐ The opera *The Camerata*

6. The author suggests that *Euridice* was produced:

- ☐ in France
- ☐ originally by Sophocles and Aeschylus
- ☐ without much success
- ☐ for the wedding of King Henry IV

7. What was the Camerata?

- ☐ A group of Greek musicians
- ☐ Musicians who developed a new musical drama based upon Greek drama
- ☐ A style of music not known in Italy
- ☐ The name given to the court of King Henry IV

8. The word "revive" in paragraph 1 could best be replaced by:

- ☐ Appreciate
- ☐ Resume
- ☐ Modify
- ☐ Investigate

9. The word "plots" in paragraph 1 is closest in meaning to:

- ☐ Locations
- ☐ Instruments
- ☐ Stories
- ☐ Inspiration

10. From what did the term "opera" derive?

- ☐ Greek and Roman history and mythology
- ☐ Non-Italian composers
- ☐ The Italian phrase that means "musical works"
- ☐ The ideas of composer Jacopo PerÌ

11. Look at the word "them" in the passage. What word in paragraph 2 does "them" refer to? Use the space provided to write your answer.

12. Look at the word "function" in the passage. What word or phrase in paragraph 2 is closest in meaning to "function"? Use the space provided to write your answer.

End of Lesson

Reading Lesson 4 "Sunspot Theory"

According to the **controversial** sunspot theory, great storms of eruptions on the surface of the sun hurl streams of solar **particles** into space and eventually into the atmosphere of our planet, causing shifts in the weather on the Earth and interference with radio and television communications.

A typical sunspot consists of a dark central umbra, a word derived from the Latin word for shadow, which is surrounded by a lighter penumbra of light and dark threads extending out from the center like the spokes of a wheel. **Actually, the sunspots are cooler than the rest of the photosphere, which may account for their apparently darker color**. Typically, the temperature in a sunspot umbra is about 4000 K, whereas the temperature in a penumbra registers 5500 K, and the granules outside the spot are 6000 K.

Sunspots range in size from **tiny** granules to complex structures with areas stretching for billions of square miles. About 5 percent of all sunspots are large enough so that **they** can be seen from Earth without instruments; **consequently**, observations of sunspots have been recorded for thousands of years.

Sunspots have been observed in arrangements of one to more that one hundred spots, but they tend to occur in pairs. there is also a marked tendency for the two spots of a pair to have opposite magnetic polarities. Furthermore, the strength of the magnetic field associated with any given sunspot is closely related to the spot's size. Sunspots have also been observed to occur in cycles, over a period of eleven years. At the beginning of a cycle, the storms occur between 20 and 40 degrees north and south of the equator on the sun. As the cycle continues, some of the storms move closer to the equator. As the cycle diminishes, the number of sunspots decreases to a minimum and they cluster between 5 and 15 degrees north and south latitude.

Although there is no theory that completely explains the nature and function of sunspots, several models show scientists' attempts to relate the phenomenon to

magnetic field lines along the lines of latitude from the north and south poles of the sun.

Review Questions

Multiple choice. Choose the correct answer for each question.

1. What is the author's main purpose in the passage?

- ☐ To propose a theory to explain sunspots
- ☐ To describe the nature of sunspots
- ☐ To compare the umbra and the penumbra in sunspots
- ☐ To argue for the existence of magnetic fields in sunspots

2. The word "controversial" in paragraph 1 is closest in meaning to:

- ☐ Widely accepted
- ☐ Open to debate
- ☐ Just introduced
- ☐ Very complicated

3. Solar particles are hurled into space by:

- ☐ Undetermined causes
- ☐ Disturbances of wind
- ☐ Small rivers on the surface of the sun
- ☐ Changes in the Earth's atmosphere

4. The word "particles" in paragraph 1 refers to:

- [ ] Gas explosions in the atmosphere
- [ ] Light rays from the sun
- [ ] Liquid streams on the sun
- [ ] Small pieces of matter from the sun

5. How can we describe matter from the sun that enters the Earth's atmosphere?

- [ ] Very small
- [ ] Very hot
- [ ] Very bright
- [ ] Very hard

6. What does the author mean by the statement: **Actually, the sunspots are cooler than the rest of the photosphere, which may account for their apparently darker color**?

- [ ] Neither sunspots nor the photosphere is hot
- [ ] Sunspots in the photosphere do not have any color
- [ ] The color of sunspots could be affected by their temperature
- [ ] The size of a sunspot affects its temperature

7. Look at the word "tiny" in the passage. Which word or phrase in the passage is **opposite** in meaning to "tiny"? Use the space provided to write your answer.

8. The word "they" in paragraph 3 refers to:

- [ ] Structures

- [ ] Spots
- [ ] Miles
- [ ] Granules

9. The word "consequently" in paragraph 3 could be best replaced by:

- [ ] As a result
- [ ] Nevertheless
- [ ] Without doubt
- [ ] In this way

10. In which configuration do sunspots usually occur?

- [ ] In one spot of varying size
- [ ] In a configuration of two spots
- [ ] In arrangements of one hundred or more spots
- [ ] In groups of several thousand spots

11. How are sunspots explained?

- [ ] Sunspots appear to be related to magnetic fields on the Earth
- [ ] Sunspots may be related to magnetic fields that follow longitudinal lines on the sun
- [ ] Sunspots are explained by storms that occur on the Earth
- [ ] Sunspots have no theory or model to explain them

12. Which paragraph discusses the visibility of sunspots?

- [ ] Paragraph 1
- [ ] Paragraph 2
- [ ] Paragraph 3
- [ ] Paragraph 4

13. The sunspot theory is:

- [ ] Not considered very important
- [ ] Widely accepted
- [ ] Subject to disagreement
- [ ] Relatively new

End of Lesson

Reading Lesson 5 "Undersea Vehicles"

Recent technological advances in manned and unmanned undersea vehicles, along with breakthroughs in satelite technology and computer equipment, have overcome some of the limitations of divers and diving equipment for scientists doing research on the great oceans of the world. Without a vehicle, divers often became **sluggish**, and their mental concentration was severely limited. Because undersea pressure affects their speech organs, communication among divers has always been difficult or impossible. But today, most oceanographers avoid the use of vulnerable human divers, preferring to reduce the risk to human life and make direct observations by means of instruments that are lowered into the ocean, from samples taken from the water, or from photographs made by orbitting satelites. Direct observations of the ocean floor can be made not only by divers but also by deep-diving submarines in the water and even by the technology of sophisticated aerial photography from vantage points above the surface of the water. Some submarines can dive to depths of more than seven miles and **cruise** at depths of fifteen thousand feet. In addition, radio-equipped buoys can be operated by remote control in order to transmit information back to land-based laboratories via satelite. Particularly important for ocean study are data about water temperature, currents, and weather. Satelite photographs can show the distribution of sea ice, oil slicks, and cloud formations over the ocean. Maps created from satelite pictures can represent the temperature and the color of the ocean's surface, enabling researches to study the ocean currents from laboratories on dry land. Furthermore, computers help oceanographers to collect, organize, and analyze data from submarines and satelites. By creating a model of the ocean's movement and characteristics, scientists can predict the patterns and possible effects of the ocean on the environment.

Recently, many oceanographers have been relying more on satelites and computers than on research ships or even submarine vehicles because they can supply a greater range of **information** more quickly and more effectively. Some of humankind's most serious problems, especially **those**concerning energy and food, may be solved with the help of observations made possible by this new technology.

Review Questions

Multiple choice. Choose the correct answer for each question.

1. With what topic is the passage primarily concerned?

- ☐ Technological advances in oceanography
- ☐ Communication among divers
- ☐ Direct observation of the ocean floor
- ☐ Undersea vehicles

2. The word "sluggish" in paragraph 1 is closest in meaning to:

- ☐ Nervous
- ☐ Confused
- ☐ Slow moving
- ☐ Very weak

3. Divers have had problems in communicating underwater because:

- ☐ the pressure affects their speech organs
- ☐ the vehicles they used have not been perfected
- ☐ they did not pronounce clearly
- ☐ the water destroyed their speech organs

4. This passage suggests that the successful exploration of the ocean depends on:

- ☐ vehicles as well as divers
- ☐ radios that divers use to communicate

- [ ] controlling currents and the weather
- [ ] the limitations of diving equipment

5. Undersea vehicles:

- [ ] are too small for a man to fit inside
- [ ] are very slow to respond
- [ ] have the same limitations that divers have
- [ ] make direct observations of the ocean floor

6. The word "cruise" in paragraph 1 could be best replaced by:

- [ ] travel at a constant speed
- [ ] function without problems
- [ ] stay in communication
- [ ] remain still

7. How is a radio-equipped buoy operated?

- [ ] By operators inside the vehicle in the part underwater
- [ ] By operators outside the vehicle on a ship
- [ ] By operators outside the vehicle on a diving platform
- [ ] By operators outside the vehicle in a laboratory on shore

8. Look at the word "information" in paragraph 2. What word or phrase in the passage is closest in meaning to "information"? Write your answer in the space provided.

9. Which of the following is NOT shown in satelite photographs?

- ☐ The temperature of the ocean's surface
- ☐ Cloud formations over the ocean
- ☐ A model of the ocean's movements
- ☐ The location of sea ice

10. Look at the word "those" in paragraph 2. What word or phrase in paragraph 2 does "those" refer to? Write your answer in the space provided.

11. Which paragraph discusses problems that the new technology might help to eliminate?

- ☐ Paragraph 1
- ☐ Paragraph 2

End of Lesson

Reading Lesson 6 **"Sign, sign, everywhere a sign"**

Although speech is generally accepted as the most advanced form of communication, there are many ways of communicating without using words. In every culture, signals, signs, symbols, and gestures are commonly utilized as instruments of communication. There is a great deal of agreement among communication scientists as to what each of these methods is and how each differs from the others. For instance, the basic function of any signal is to**impinge upon** the environment in such a way that **it** attracts attention, as, for example, the dots and dashes that can be applied in a telegraph circuit. Coded to refer to speech, the **potential** for communication through these dots and dashes - short and long intervals as the circuit is broken - is very great. Less adaptable to the codification of words, signs also contain agreed upon meaning; that is, they convey information in and of **themselves**. Two examples are the hexagonal red sign that conveys the meaning of *stop*, and the red and white swirled pole outside a shop that communicates the meaning of *barber*.

Symbols are more difficult to describe than either signals or signs because of their **intricate** relationship with the receiver's cultural perceptions. In some cultures, applauding in a theater provides performers with an auditory symbol of approval. In other cultures, if done in unison, applauding can be a symbol of the audience's discontent with the performance. Gestures such as waving and handshaking also communicate certain cultural messages.

Although signals, signs, symbols, and gestures are very useful, they also have a major disadvantage in **communication**. They usually do not allow ideas to be shared without the sender being directly adjacent to the receiver. Without an exchange of ideas, interaction comes to a halt. As a result, means of communication intended to be used across long distances and extended periods must be based upon speech. To radio, television, and the telephone, one must add fax, paging systems, electronic mail, and the Internet, and no one doubts but that there are more means of communication on the horizon.

Review Questions

Multiple choice. Choose the correct answer for each question.

1. Which of the following would be the best title for the passage?

- ☐ Signs and Signals
- ☐ Gestures
- ☐ Communication
- ☐ Speech

2. What does the author say about speech?

- ☐ It is the only true form of communication
- ☐ It is dependent upon the advances made by inventors
- ☐ It is necessary for communication to occur
- ☐ It is the most advanced form of communication

3. Which sentence in paragraph 1 describes the function of a signal? Write the sentence in the space provided below.

4. The phrase "impinge upon" in paragraph 1 is closest in meaning to:

- ☐ intrude
- ☐ improve
- ☐ vary
- ☐ prohibit

5. The word "it" in paragraph 1 refers to:

- ☐ function

- [ ] signal
- [ ] environment
- [ ] way

6. The word "potential" in paragraph 1 could be best replaced by:

- [ ] range
- [ ] advantage
- [ ] organization
- [ ] possibility

7. Look at the word "themselves" in the passage. What word or phrase in paragraph 1 does "themselves" refer to? Use the space below to write your answer.

8. The word "intricate" in paragraph 2 could be best replaced by which of the following?

- [ ] Inefficient
- [ ] Complicated
- [ ] Historical
- [ ] Uncertain

9. Applauding was cited as an example of:

- [ ] a signal
- [ ] a sign

- [ ] a symbol
- [ ] a gesture

10. The following sentence can be added to the passage: **A loud smacking of the lips after a meal can be either a kinesthetic and auditory symbol of approval and appreciation, or simply a rude noise.** After what sentence in the passage would this best fit? Use the space below to indicate where.

11. Why were the telephone, radio, and TV invented?

- [ ] People were unable to understand signs, symbols, and signals
- [ ] People wanted to communicate across long distances
- [ ] People believed that signs, signals, and symbols were obsolete
- [ ] People wanted new forms of entertainment

12. Look at the word "communication" in paragraph 3. What other word or phrase in paragraph 3 is closest in meaning to "communication"? Use the space below to write your answer.

End of Lesson

Reading Lesson 7 "Fertilizer Friends"

Fertilizer is any substance that can be added to the soil to provide chemical elements **essential** for plant nutrition so that the yield can be increases. Natural substances such as animal droppings, ashes from wood fires, and straw have been used as fertilizers for thousands of years, and lime has been used since the Romans introduced it during the Empire. It was not until the nineteenth century, however, that chemical fertilizers became widely accepted as normal agricultural practice. Today, both natural and synthetic fertilizers are available in a variety of forms.

A complete fertilizer is usually marked with a formula consisting of three numbers, such as 4-8-2 or 6-6-4, which **designate** the percentage of content of nitrogen, phosphoric acid, and potash in the order stated. Synthetic fertilizers, produced by factories, are available either in solid or liquid form. Solids, in the shape of chemical granules, are in demand because they are not only easy to store but also easy to apply. **(* 1)** Recently, liquids have shown an increase in popularity, accounting for about 20 percent of the nitrogen fertilizer used throughout the world. **(* 2)** Formerly, powders were also used, but **they** were found to be less **convenient** than either solids or liquids. **(* 3)**

Fertilizers have no harmful effects on the soil, the crop, or the consumer as long as they are used according to recommendations based on the results of local research. **(* 4)** Occasionally, however, farmers may use more fertilizer than necessary, in which case the plants do not need, and therefore do not absorb, the total amount of fertilizer applied to the soil. The surplus of fertilizer thus can damage not only the crop but also the animals or human beings that eat the crop. Furthermore, fertilizer that is not used in the production of of a healthy plant is leached into the water table. Accumulations of chemical fertilizer in the water supply accelerate the growth of algae and, consequently, may disturb the natural cycle of life, contributing to the death of fish. Too much fertilizer on grass can cause digestive disorders in cattle and in infants who drink cow's milk. Fertilizer must be used with great attention to responsible use or it can **harm** the environment.

Review Questions

Multiple choice. Choose the correct answer for each question.

1. With which of the following topics is the passage primarily concerned?

- ☐ Local research and harmful effects of fertilizer
- ☐ Advantages and disadvantages of liquid fertilizer
- ☐ A formula for the production of fertilizer
- ☐ Content, form, and effects of fertilizer

2. The word "essential" in paragraph 1 could be replaced by which of the following?

- ☐ limited
- ☐ preferred
- ☐ anticipated
- ☐ required

3. Which of the following has the smallest percentage content in the formula 4-8-2?

- ☐ Nitrogen
- ☐ Phosphorus
- ☐ Acid
- ☐ Potash

4. What is the percentage of nitrogen in a 5-8-7 formula?

- ☐ 3 percent

- [ ] 5 percent
- [ ] 7 percent
- [ ] 8 percent

5. The word "designate" in paragraph 2 could be replaced by:

- [ ] modify
- [ ] specify
- [ ] limit
- [ ] increase

6. Which of the following statements about fertilizer is true?

- [ ] Powders are more popular than ever
- [ ] Solids are difficult to store
- [ ] Liquids are increasing in popularity
- [ ] Chemical granules are difficult to apply

7. The word "they" in paragraph 2 (marked in **bold**) refers to:

- [ ] powders
- [ ] solids
- [ ] liquids
- [ ] fertilizer

8. The word "convenient" in paragraph 2 is closest in meaning to:

- ☐ effective
- ☐ plentiful
- ☐ easy to use
- ☐ cheap to produce

9. Which sentence in paragraph 3 describes the effect of an accumulation of fertilizer in the water supply? Write the sentence in the space provided below.

10. Look at the word "harm" in the passage. What word or phrase in paragraph 3 is closest in meaning to "harm"? Write your answer in the space provided below.

11. The following sentence can be added to the passage. **One objection to powders was their propensity to become solid chunks if the bags got damp.** Where would it best fit in the passage? Choose the (* number) where the sentence may best be inserted. refer back to the passage.

- ☐ **(* 1)**
- ☐ **(* 2)**
- ☐ **(* 3)**
- ☐ **(* 4)**

End of Lesson

Reading Lesson 8 **"Horse Changes"**

The development of the horse has been recorded from the beginning through all of its evolutionary stages to the modern form. It is, in fact, one of the most complete and well-documented chapters of paleontological history. Fossil finds provide us not only with detailed information about the horse itself but also with valuable insights into the migration of herds, and even evidence for speculation about the climatic conditions that could have**instigated** such migratory behavior.

Geologists believe that the first horses appeared on Earth about sixty million years ago as compared with two million years ago for the appearance of human beings. There is evidence of early horses on both the American and European continents, but it has been documented that, almost twelve million years ago at the beginning of the Pliocene Age, a horse about midway through its evolutionary development crossed a land bridge where the Bering Strait is now located, from Alaska into the grasslands of Asia, and traveled all the way to Europe. This early horse was a hipparion, about the size of a modern-day pony with three toes and specialized cheek teeth for grazing. In Europe, the hipparion encountered another less advanced horse called the anchitheres, which had previously invaded Europe by the same route, probably during the Miocene Period. Less developed and smaller than the hipparion, the anchitheres was eventually completely replaced by **it**.

By the end of the Pleistocene Age both the anchitheres and the hipparion had become **extinct** in North America, where they had originated, as fossil evidence clearly indicates. In Europe, they evolved into the larger and stronger animal that is very similar to the horse as we know it today. For many years, the horse was probably hunted for food by early tribes of human beings. Then the qualities of the horse that would have made it a good servant were noted - mainly its strength and speed. It was time for the horse to be tamed, used as a draft animal at the dawning of agriculture, and then ridden as the need for transportation increased. It was the descendant of this domesticated horse that was brought back to the Americas by European colonists.

Review Questions

Multiple choice. Choose the correct answer for each question.

1. What is this passage mainly about?

- ☐ The evolution of the horse
- ☐ The migration of horses
- ☐ The modern-day pony
- ☐ The replacement of the anchitheres by the hipparion

2. According to the author, fossils are considered valuable for all of the following reasons EXCEPT:

- ☐ they suggest how the climate may have been
- ☐ they provide information about migration
- ☐ they document the evolution of the horse
- ☐ they maintain a record of life prior to the Miocene Age

3. The word "instigated" in paragraph 1 could be best replaced by:

- ☐ explained
- ☐ caused
- ☐ improved
- ☐ influenced

4. What does the author mean by the statement **Geologists believe that the first horses appeared on Earth about sixty million years ago as compared with two million years ago for the appearance of human beings** ?

- ☐ Horses appeared long before human beings according to the theories of geologists

☐ Both horses and human beings appeared several million years ago, if we believe geologists

☐ The geological records for the appearance of horses and human beings are not very accurate

☐ Horses and human beings cannot be compared by geologists because they appeared too long ago

5. Which of the following conclusions may be made on the basis of information in the passage?

☐ The hipparions migrated to Europe to feed in developing grasslands

☐ There are no fossil remains of either the anchitheres or the hipparion

☐ There were horses in North America when the first European colonists arrived

☐ Very little is know about the evolution of the horse

6. According to the passage, the hipparions were:

☐ five-toed animals

☐ not as highly developed as the anchitheres

☐ larger than the anchitheres

☐ about the size of a small dog

7. The word "it" in paragraph 2 refers to:

☐ anchitheres

☐ hipparion

☐ Miocene Period

- [ ] route

8. The word "extinct" in paragraph 3 is closest in meaning to:

- [ ] familiar
- [ ] widespread
- [ ] nonexistent
- [ ] tame

9. Which paragraph refers to the potential for conclusions from the evidence supplied by fossil remains

- [ ] paragraph 1
- [ ] paragraph 2
- [ ] paragraph 3

10. Look at the word "domesticated" in paragraph 3. What other word or phrase in paragraph 3 is closest in meaning to "domesticated"? Write your answer in the space provided below.

11. It can be concluded from this passage that the:

- [ ] Miocene Period was prior to the Pliocene
- [ ] Pleistocene Period was prior to the Miocene
- [ ] Pleistocene Period was prior to the Pliocene
- [ ] Pliocene Period was prior to the Miocene

End of Lesson

Reading Lesson 9 "American English"

Few men have influenced the development of American English to the extent that Noah Webster did. Born in West Hartford, Connecticut, in 1758, Webster graduated from Yale in 1778. He was admitted to the bar in 1781 and thereafter began to practice law in Hartford. Later, when he turned to teaching, he discovered how **inadequate** the available schoolbooks were for the children of a new and independent nation. In response to the need for truly American textbooks, Webster published *A Grammatical Institute of the English Language*, a three-volume work that consisted of a speller, a grammar, and a reader. The first volume, which was generally known as *The American Spelling Book*, was so **popular** that eventually it sold more than 80 million copies and provided him with a **considerable** income for the rest of his life. While teaching, Webster began work on the *Compendious Dictionary of the English Language*, which was published in 1806, and was also very successful.

In 1807, Noah Webster began his greatest work, *An American Dictionary of the English Language*, In preparing the manuscript, he devoted ten years to the study of English and its relationship to other languages, and seven more years to the writing itself. Published in two volumes in 1828, *An American Dictionary of the English Language* has become the recognized authority for usage in the United States. Webster¥s purpose in writing **it**was to demonstrate that the American language was developing **distinct** meanings, pronunciations, and spellings from those of British English. He is responsible for advancing simplified spelling forms: *develop* instead of *develope*, *plow* instead of *plough*; *jail* instead of *gaol*; *theater* and *center*instead of *theatre* and *centre*; *color* and *honor* instead of *colour* and *honour*.

Webster was the first author to gain copyright protection in the United States by being awarded a copyright for his *American Speller*. He continued, for the next year, to lobby for improvements in the protection of intellectual properties, that is, authors¥ rights. In 1840 Webster brought out a second edition of his dictionary, which included 70,000 entries instead of the original 38,000. The name Webster has become synonymous with American dictionaries. This edition served as the basis for the many revisions that have been produced by others, ironically, under the uncopyrighted Webster name.

Review Questions

Multiple choice. Choose the correct answer for each question.

1. Which of the following would be the best title for the passage?

- ☐ Webster's Work
- ☐ Webster's Dictionaries
- ☐ Webster's School
- ☐ Webster's Life

2. The word "inadequate" in paragraph 1 could be best replaced by:

- ☐ unavailable
- ☐ expensive
- ☐ difficult
- ☐ unsatisfactory

3. Why did Webster write *A Grammatical Institute of the English Language*?

- ☐ He wanted to supplement his income
- ☐ There were no books available after the Revolutionary War
- ☐ He felt that British books were not appropriate for American children
- ☐ The children did not know how to spell

4. From which publication did Webster earn a lifetime income?

- ☐ *Compendious Dictionary of the English Language*

- [ ] *An American Dictionary of the English Language*
- [ ] *An American Dictionary of the English Language: Second Edition*
- [ ] *The American Spelling Book*

5. Look at the word "popular" in paragraph 1. What other word in paragraph 1 is closest in meaning to "popular"? Write your answer in the space provided below.

6. The word "considerable" in paragraph 1 most nearly means:

- [ ] large
- [ ] prestigious
- [ ] steady
- [ ] unexpected

7. When was *An American Dictionary of the English Language* published?

- [ ] 1817
- [ ] 1807
- [ ] 1828
- [ ] 1824

8. The word "it" in paragraph 2 refers to:

- [ ] language
- [ ] usage

- [ ] authority
- [ ] dictionary

9. Which sentence in paragraph 2 explains Webster's purpose for writing an American dictionary? Write the sentence in the space provided below.

10. The word "distinct" in paragraph 2 is closest in meaning to:

- [ ] new
- [ ] simple
- [ ] different
- [ ] exact

11. According to this passage, which one of the following spellings would Webster have approved in his dictionaries?

- [ ] *Develope*
- [ ] *Theatre*
- [ ] *Color*
- [ ] *Honour*

End of Lesson

Reading Lesson 10 **"Fault Lines"**

The San Andreas Fault line is a fracture at the congruence of two major plates of the Earth's crust, one of which supports most of the North American continent, and the other of which underlies the coast of California, and part of the ocean floor of the Pacific Ocean. The fault **originates**about six hundred miles south of the Gulf of California, runs north in an irregular line along the western coast to San Francisco, and continues north for about two hundred more miles before angling off into the ocean. In places, the trace of the fault is marked by a trench, or, in geological terms, a rift, and small ponds called sag ponds dot the landscape. Its western side always moves north in relation to its eastern side. The total net slip along the San Andreas Fault and the length of time **it** has been active are matters of conjecture, but it has been estimated that, during the past fifteen million years, coastal California along the San Andreas Fault has moved about 190 miles in a northwesterly direction with respect to the North American plate. Although the movement along the fault averages only a few inches a year, it is **intermittent** and variable. Some segments of the fault do not move at all for long periods of time, building up tremendous pressure that must be released. For this reason, tremors are not unusual along the San Andreas Fault, some of which are classified as major earthquakes. Also for this reason, small tremors are interpreted as safe, since they are understood to be pressure that releases without causing mush damage.

It is worth noting that the San Andreas Fault passes uncomfortably close to several major metropolitan areas, including Los Angeles and San Francisco. In addition, the San Andreas Fault has created smaller fault systems, many of which underlie the smaller towns and cities along the California coast. For this reason, Californians have long anticipated the recurrence of what they refer to as the "**Big One**", a chain reaction of**destructive** earthquakes that would measure near 8 on the Richter scale, similar in intensity to **those** that occurred in 1857 and 1906. Such a quake would wreak devastating effects on the life and property in the region. Unfortunately, as pressure continues to build along the fault, the likelihood of such an earthquake increases substantially.

Review Questions

Multiple choice. Choose the correct answer for each question.

1. What is the author's main purpose in the passage?

- ☐ To describe the San Andreas Fault
- ☐ To give a definition of a fault
- ☐ To explain the reason for tremors and earthquakes
- ☐ To classify different kinds of faults

2. How does the author define the San Andreas Fault?

- ☐ A plate that underlies the North American continent
- ☐ A crack in the Earth's crust between two plates
- ☐ Occasional tremors and earthquakes
- ☐ Intense pressure that builds up

3. The word "originates" in paragraph 1 could be best replaced by:

- ☐ gets wider
- ☐ changes direction
- ☐ begins
- ☐ disappears

4. In which direction does the western side of the fault move?

- ☐ West

- East
- North
- South

5. The word "it" in paragraph 1 refers to:

- San Francisco
- ocean
- coast
- fault

6. The word "intermittent" in paragraph 1 could be best replaced by which of the following?

- dangerous
- predictable
- uncommon
- occasional

7. Along the San Andreas Fault, tremors are:

- small and insignificant
- rare, but disastrous
- frequent events
- very unpredictable

8. The phrase "the Big One" refers to which of the following?

- [ ] A serious earthquake
- [ ] The San Andreas Fault
- [ ] The Richter scale
- [ ] California

9. Look at the word "destructive" in the passage. Which word or phrase in paragraph 2 is closest in meaning to "destructive"? Use this space provided below to write your answer.

10. Look at the word "those" in the passage. What word or phrase in paragraph 2 does "those" refer to? Write your answer in the space provided below.

11. Which of the following words best describes the San Andreas Fault?

- [ ] Straight
- [ ] Deep
- [ ] Wide
- [ ] Uneven

End of Lesson

Reading Lesson 11 **"Insect Anatomy"**

The body of an adult insect is **subdivided** into three sections, including a head, a three-segment thorax, and segmented abdomen. Ordinarily, the thorax bears three pairs of legs and a single or double pair of wings. The vision of most adult insects is specialized through two large compound eyes and multiple simple eyes.

Features of an insect's mouth parts are used in classifying insects into types. Biting mouth parts, called mandibles, such as the mouth parts found in grasshoppers and beetles, are **common** among insects. Behind the mandibles are located the maxillae, or lower jaw parts, which serve to direct food into the mouth between the jaws. A labrum above and one below are similar to another animal's upper and lower lips. In an insect with a sucking mouth function, the mandibles, maxillae, labrum, and labium are modified in such a way that they constitute a tube through which liquid such as water, blood, or flower nectar can be drawn. In a butterfly or moth, this coiled drinking tube is called the proboscis because of its resemblance, in miniature. to the trunk of an elephant or a very large nose. Composed chiefly of modified maxillae fitted together, the insect's proboscis can be flexed and extended to reach nectar deep in a flower. In mosquitoes or aphids, mandibles and maxillae are modified to sharp stylets with which the insect can **drill through** surfaces like human or vegetable skin membranes to reach juice. In a housefly, the expanding labium forms a spongelike mouth pad that **it**can use to stamp over the surface of food, sopping up food particles and juices.

(A1) Insects, the most numerous creatures on our planet, are also the most adaptable. **(A2)** They easily find shelter and protection in small crevices in trees and surface geological formations. **(A3)** Species of insects can evolve quickly because of their rapid reproduction cycle; they live in every climate, some making their homes in the frozen Arctic regions and many others choosing the humid, warm, and nutrient-rich rain forest environment. An active part of the natural food cycle, insects provide nutrition for animals and devour waste products of other life forms. **(A4)**

Review Questions

Multiple choice. Choose the correct answer for each question.

1. What is the best title for this passage?

- ☐ An Insect's Environment
- ☐ The Structure of an Insect
- ☐ Grasshoppers and Beetles
- ☐ The Stages of Life of an Insect

2. Look at the word "subdivided" in the passage. What word or phrase in paragraph 1 is closest in meaning to "subdivided"? Use the space below to write your answer.

3. How are insects classified?

- ☐ Be the environment in which they live
- ☐ By the food they eat
- ☐ By the structure of the mouth
- ☐ By the number and type of wings

4. The word "common" in paragraph 2 is closest in meaning to:

- ☐ normal
- ☐ rare
- ☐ important
- ☐ necessary

5. The author compares labrum and labium to:

- ☐ An upper and lower lip
- ☐ Mandibles
- ☐ Maxillae
- ☐ Jaws

6. What is the proboscis?

- ☐ Nectar
- ☐ A tube constructed of modified maxillae
- ☐ A kind of butterfly
- ☐ A kind of flower

7. Which of the following have mandibles and maxillae that have been modified to sharp stylets?

- ☐ Grasshoppers
- ☐ Butterflies
- ☐ Mosquitoes
- ☐ Houseflies

8. The phrase "drill through" in paragraph 2 could be best replaced by:

- ☐ Penetrate
- ☐ Saturate
- ☐ Explore

- [ ] Distinguish

9. The word "it" in paragraph 2 refers to:

- [ ] pad
- [ ] food
- [ ] housefly
- [ ] mouth

10. The following sentence can be added to the passage: **Although some insects, like the cockroach, have remained essentially unchanged for eons, most insects adapt readily to changing environmental conditions.** Where in the passage would it best fit? After mark:

- [ ] (A1)
- [ ] (A2)
- [ ] (A3)
- [ ] (A4)

11. What is the purpose of this passage?

- [ ] To complain
- [ ] To persuade
- [ ] To entertain
- [ ] To inform

End of Lesson

Reading Lesson 12 **"Protozoans"**

The protozoans, **minute** aquatic creatures, each of which consists of a single cell of protoplasm, constitute a classification of the most primitive forms of animal life. The very name *protozoan* indicates the scientific understanding of the animals. *Proto* - means first or primitive, and *zoa* refers to animal. They are fantastically diverse, but three major groups may be identified on the basis of their **motility**. The Mastigophora have one or more long tails that they use to propel themselves forward. The Ciliata, which use the same basic means for locomotion as the Mastigophora, have a larger number of short tails. The Sarcodina, which include amoebae, float or row themselves about on their crusted bodies.

In addition to their form of movement, several other features discriminate among the three groups of protozoans. For example, at least two nuclei per cell have been identified in the Ciliata, usually a large nucleus that regulates growth but decomposes during reproduction, and a smaller one that contains the genetic code necessary to generate the large nucleus.

Chlorophyll, which is the green substance encountered in plants, is found in the bodies of some protozoans, enabling them to make some of their own food from water and carbon dioxide. Protozoans are not considered plants, but animals, because unlike pigmented plants to which some protozoans are otherwise almost identical, they do not live on simple organic compounds. Their cell demonstrates all of the major characteristics of the cell of higher animals, such as eating, breathing, and reproducing.

Many species of protozoans collect into colonies, physically connected to one another and responding **uniformly** to outside stimulae. Current research into this phenomenon along with investigations carried out with advanced microscopes may necessitate a redefinition of what constitutes protozoans, even calling into question the basic premise that they have only one cell. Nevertheless, with the current data available, almost 40,000 species of protozoans have been identified. No doubt, as technology improves methods of observation, better models of classification of these simple single cells will be proposed.

Review Questions

Multiple choice. Choose the correct answer for each question.

1. With what topic is the passage primarily concerned?

- ☐ Colonies of protozoans
- ☐ Mastigophora
- ☐ Motility in protozoans
- ☐ Characteristics of protozoans

2. The word "minute" in paragraph 1 could be best replaced by:

- ☐ very common
- ☐ very fast
- ☐ very old
- ☐ very small

3. What is protoplasm?

- ☐ A class of protozoan
- ☐ The substance that forms the cell of a protozoan
- ☐ A primitive animal similar to a protozoan
- ☐ An animal that developed from a protozoan

4. Look at the word "motility" in paragraph 1. What other word in paragraph 1 is closest in meaning to "motility"? Use the space below to write your answer.

5. What does the author mean by the statement **They are fantastically diverse, but three major groups may be identified on the basis of the their motility** ?

- The three major groups are unique in that they all move in the same manner
- Everything we know about the protozoans is tied into their manner of movement
- The manner of movement is critical when classifying the three major groups of protozoa
- Mobility in the protozoans is insignificant

6. To which class of protozoans do the amoebae belong?

- Mastigophora
- Ciliata
- Sarcodina
- Motility

7. What is the purpose of the large nucleus in the Ciliata?

- It generates the other nucleus
- It contains the genetic code for the small nucleus
- It regulates growth
- It reproduces itself

8. Why are the protozoans classified as animals?

- They do not live on simple organic compounds
- They collect in colonies

- They respond uniformly to outside stimulae
- They may have more than one cell

9. The word "uniformly" in paragraph 4 is closest in meaning to:

- in the same way
- once in a while
- all of a sudden
- in the long run

10. Which of the following statements is NOT true of protozoans?

- There are approximately 40,000 species
- They are the most primitive forms of animal life
- They have a large cell and a smaller cell
- They are difficult to observe

End of Lesson

Reading Lesson 13 **"Precipitation"**

Precipitation, commonly referred to as rainfall, is a measure of the quantity of atmospheric water in the form of rain, hail, or snow that reaches the ground. The average annual precipitation over the whole of the United States is thirty-six inches per year. It should be understood, however, that all precipitation is not measured equally. For example, a foot of snow does not equal a foot of precipitation. According to the general formula for computing the precipitation of snowfall, ten inches of snow equals one inch of precipitation. In upper New York State, for example, where there is typically a large amount of snowfall every winter, a hundred inches of snow in one year would be recorded as only ten inches of precipitation. On the other hand, rain is rain. Forty inches of rain would be recorded as forty inches of precipitation. The total annual precipitation for an area with forty inches of rain and one hundred inches of snow would be recorded as fifty inches of precipitation.

The amount of precipitation that an area receives is a combined result of several factors, including location, altitude, **proximity to** the sea, and the direction of prevailing winds. Most of the precipitation in the Untied States is brought originally by prevailing winds from the Pacific Ocean, the Gulf of Mexico, the Atlantic Ocean, and the Great Lakes. Because these prevailing winds generally come from the west, the Pacific Coast receives more annual precipitation than the Atlantic Coast. Along the Pacific Coast itself, however, altitude causes some diversity in rainfall. The mountain ranges of the United States, especially the Rocky Mountain Range and the Appalachian Mountain Range, influence the amount of precipitation in the areas to the windward and leeward sides of these ranges. East of the Rocky Mountains, the annual precipitation is **substantially** less than that west of the Rocky Mountains. The precipitation north of the Appalachian Mountains averages 40 percent less than **that** south of the Appalachian Mountains. As air currents from the oceans move over land, the air must rise to pass over the mountains. The air cools, and the water that is held in the clouds falls as rain or snow on the ascending side of the mountains. The air, therefore, is much drier on the other side of the mountains.

Review Questions

Multiple choice. Choose the correct answer for each question.

1. What does the passage mainly discuss?

- [ ] Precipitation
- [ ] Snowfall
- [ ] New York State
- [ ] A general formula

2. Which of the following is another word that is often used in place of precipitation?

- [ ] Humidity
- [ ] Wetness
- [ ] Rainfall
- [ ] Rain-snow

3. The term "precipitation" includes:

- [ ] only rainfall
- [ ] rain, hail, and snow
- [ ] rain, snow, and humidity
- [ ] rain, hail, and humidity

4. What is the average annual rainfall in inches in the United States?

- [ ] Thirty-six inches
- [ ] Thirty-eight inches

- [ ] Forty inches
- [ ] Forty-two inches

5. If a state has 40 inches of snow in a year, by how much does this increase the annual precipitation?

- [ ] By two feet
- [ ] By four inches
- [ ] By four feet
- [ ] By 40 inches

6. The phrase "proximity to" in paragraph 2 is closest in meaning to:

- [ ] communication with
- [ ] dependence on
- [ ] nearness to
- [ ] similarity to

7. Which sentence in paragraph 2 identifies the origin of most of the precipitation in the United States? Write the sentence in the space below.

8. Where is the annual precipitation highest?

- [ ] The Atlantic Coast
- [ ] The Great Lakes
- [ ] The Gulf of Mexico

- [ ] The Pacific Coast

9. Which of the following was NOT mentioned as a factor in determining the amount of precipitation that an area will receive?

- [ ] Mountains
- [ ] Latitude
- [ ] The sea
- [ ] The wind

10. The word "substantially" in paragraph 2 could be best replaced by:

- [ ] fundamentally
- [ ] slightly
- [ ] completely
- [ ] apparently

11. The word "that" in paragraph 2 refers to:

- [ ] decreases
- [ ] precipitation
- [ ] areas
- [ ] mountain ranges

End of Lesson

Reading Lesson 14 "19th Century American Women"

During the nineteenth century, women in the United States organized and participated in a large number of reform movements, including movements to reorganize the prison system, improve education, **ban** the sale of alcohol, grant rights to people who were denied them, and, most importantly, free slaves. Some women saw similarities in the social status of women and slaves. Women like Elizabeth Cady Stanton and Lucy Stone were not only feminists who fought for the rights of women but also fervent abolitionists who fought to do away with slavery. These brave people were social leaders who supported the rights of both women and blacks. They were fighting against a belief that voting should be tied to land ownership, and because land was owned by men, and in some cases by their widows, only those who held the greatest stake in government, that is the male landowners, were considered worthy of the vote. Women did not conform to the requirements.

A number of male abolitionists, including William Lloyd Garrison and Wendell Phillips, also supported the rights of women to speak and to participate equally with men in antislavery activities. Probably more than any other movement, abolitionism offered women a previously denied entry into politics. They became involved **primarily** in order to better their living conditions and **improve** the conditions of others. However, the gained the respect of those they convinced and also earned the right to be considered equal citizens.

When the civil was between the North and the South ended in 1865, the Fourteenth and Fifteenth Amendments to the Constitution adopted in 1868 and 1870 granted citizenship and **suffrage** to blacks but not to women. Discouraged but resolved, feminists worked tirelessly to influence more and more women to demand the right to vote. In 1869, the Wyoming Territory had yielded to demands by feminists, but the states on the East Coast resisted more stubbornly than before. A women's suffrage bill had been presented to every Congress since 1878, but **it** continually failed to pass until 1920, when the Nineteenth Amendment granted women the right to vote.

Review Questions

Multiple choice. Choose the correct answer for each question.

1. With what topic is the passage mainly concerned?

- [ ] The Wyoming Territory
- [ ] The Fourteenth and Fifteenth Amendments
- [ ] Abolitionists
- [ ] Women's suffrage

2. The word "ban" in paragraph 1 most nearly means to:

- [ ] encourage
- [ ] publish
- [ ] prohibit
- [ ] limit

3. Which sentence in paragraph 1 explains the relationship between voting and property? Write your answer in the space provided.

4. The word "primarily" in paragraph 2 is closest in meaning to:

- [ ] above all
- [ ] somewhat
- [ ] finally
- [ ] always

5. Look at the word "improve" in paragraph 2. What other word or phrase in paragraph 2 is closest in meaning to "improve"? Write your answer in the space provided.

6. What had occurred shortly after the Civil War?

- ☐ The Wyoming Territory was admitted to the Union
- ☐ A women's suffrage bill was introduced in Congress
- ☐ The eastern states resisted the end of the war
- ☐ Black people were granted the right to vote

7. The word "suffrage" in paragraph 3 could be best replaced by which of the following?

- ☐ pain
- ☐ citizenship
- ☐ freedom from bondage
- ☐ the right to vote

8. The word "it" in paragraph 3 refers to:

- ☐ bill
- ☐ Congress
- ☐ Nineteenth Amendment
- ☐ vote

9. What does the Nineteenth Amendment guarantee?

- ☐ Voting rights for blacks
- ☐ Citizenship for blacks
- ☐ Voting rights for women

- [ ] Citizenship for women

10. When were women allowed to vote throughout the United States?

- [ ] After 1866
- [ ] After 1870
- [ ] After 1878
- [ ] After 1920

End of Lesson

Reading Lesson 15 "The Acacia Tree"

The *Acacia*, a genus of trees and shrubs of the *mimosa* family that originated in Australia, has long been used there in building simple mud and stick structures. (*1) The *acacia* is called a wattle in Australia, and the structures are said to be made of daub and wattle. (*2) The *acacia* is actually related to the family of plants known as *legumes* that include peas, beans, lentils, peanuts, and pods with beanlike seeds. Some *acacias* actually produce edible crops. (*3) Other *Acacia* varieties are valued for the sticky resin, called gum arabic or gum acacia, used widely in medicines, foods, and perfumes, for the dark dense wood **prized** for making pianos, or for the bark, rich in tannin, a dark, acidic substance used to cure the hides of animals, transforming them into leather. (*4)

Nearly five hundred species of *Acacia* have been analyzed, identified, categorized, and proven capable of survival in hot and generally arid parts of the world; however, only a dozen of the three hundred Australian varieties **thrive** in the southern United States. Most *acacia* imports are low spreading trees, but of **these**, only three flower, including the *Bailey Acacia* with fernlike silver leaves and small, fragrant flowers arranged in rounded clusters, the *Silver Wattle*, similar to the *Bailey Acacia*, which grows twice as high, and the squat *Sydney Golden Wattle*, bushy with broad, **flat** leaves, **showy**bright yellow blossoms, and sharp spined twigs. Another variety, the *Black Acacia*, also called the *Blackwood*, has dark green foliage and unobtrusive blossoms. Besides being a popular ornamental tree, the *Black Acacia* is considered valuable for its dark wood, which is used in making furniture, as well as highly prized musical instruments.

The *Acacia's* unusual custom of blossoming in February has been commonly attributed to its Australian origins, as if the date and not the quality of light made the difference for a tree in its flowering cycle. In the Southern Hemisphere, the seasons are reversed, and February, which is wintertime in the United States, is summertime in Australia. Actually, however, the pale, yellow blossoms appear in August in Australia. Whether growing in the Northern or Southern Hemisphere, the lovely *acacia* blossoms in winter.

Review Questions

1. With which of the following topics is the passage primarily concerned?

- [ ] The *Black Acacia*
- [ ] Characteristics and varieties of the *Acacia*
- [ ] Australian varieties of the *Acacia*
- [ ] The use of *Acacia* wood in ornamental furniture

2. Look at the word "prized" in the passage. What other word or phrase in paragraph 1 is closest in meaning to "prized"? Write your answer in the space below.

3. How many species of *Acacia* grow well in the southern United States?

- [ ] Five hundred
- [ ] Three hundred
- [ ] Twelve
- [ ] Three

4. The word "thrive" in paragraph 2 is closest in meaning to which of the following?

- [ ] Grow well
- [ ] Are found
- [ ] Were planted
- [ ] Can live

5. The word "these" in paragraph 2 refers to:

- [ ] United States
- [ ] varieties

- species
- trees and shrubs

6. According to the passage, the *Silver Wattle:*

- is squat and bushy
- has unobtrusive blossoms
- is taller than the *Bailey Acacia*
- is used for making furniture

7. In paragraph 2, the word "flat" most nearly means:

- smooth
- pretty
- pointed
- short

8. The word "showy" in paragraph 2 could be best replaced by:

- strange
- elaborate
- huge
- fragile

9. Which of the following *Acacias* has the least colorful blossoms?

- *Bailey Acacia*

- ☐ *Sydney Golden Wattle*
- ☐ Silver Wattle
- ☐ *Black Acacia*

10. Which of the following would most probably be made from a *Black Acacia* tree?

- ☐ A flower arrangement
- ☐ A table
- ☐ A pie
- ☐ Paper

11. When do *Acacia* trees bloom in Australia?

- ☐ February
- ☐ Summer
- ☐ August
- ☐ Spring

12. The following sentence can be added to the passage: **Some *acacias* are popular in landscaping because of their graceful shapes, lacey foliage, and fragrant blossoms.** At what point in the passage could the sentence best be inserted (*1, *2, *3, *4)

- ☐ *1
- ☐ *2
- ☐ *3

*4

End of Lesson

Reading Lesson 16 "New Amsterdam"

In 1626, Peter Minuit, governor of the Dutch settlements in North America known as New Amsterdam, negotiated with Canarsee chiefs for the purchase of Manhattan Island for merchandise valued at sixty guilders or about $24.12. He purchased the island for the Dutch West India Company.

The next year, Fort Amsterdam was built by the company at the extreme southern tip of the island. Because attempts to encourage Dutch immigration were not immediately successful, offers, generous by the standards of the era, were extended throughout Europe. Consequently, the settlement became the most **heterogeneous** of the North American colonies. By 1637, the fort had expanded into the village of New Amsterdam, other small communities had grown up around it, including New Haarlem and Stuyvesant's Bouwery, and New Amsterdam began to prosper, developing characteristics of religious and linguistic tolerance unusual for the times. By 1643, it was reported the eighteen different languages could be heard in New Amsterdam alone.

Among the multilingual settlers was a large group of English colonists from Connecticut and Massachusetts who supported the English King's claim to all of New Netherlands set out in a charter that gave the territory to **his** brother James, Duke of York. In 1644, when the English sent a **formidable**fleet or warships into the New Amsterdam harbor, Dutch governor Peter Stuyvesant surrendered without resistance.

When the English acquired the island, the village of New Amsterdam was renamed New York in honor of the Duke. By the onset of the Revolution, New York City was already a bustling commercial center. After the war, **it** was selected as the first capital of the United States. Although the government was eventually moved, first to Philadelphia and then to Washington, D.C., New York maintained its status. It became a haven for pirates who conspired with leading merchants to exchange supplies for their ships in return for a share in the plunder. As a colony, New York exchanged many agricultural products for English manufactured goods. In addition, trade with the West Indies prospered. Three centuries after his initial trade with the

Native Americans, Minuit's tiny investment was worth more than seven billion dollars.

Review Questions

Multiple choice. Choose the correct answer for each question.

1. Which of the following would be the best title for this passage?

- ☐ A History of New York City
- ☐ An Account of the Dutch Colonies
- ☐ A Biography of Peter Minuit
- ☐ The First Capital of the United States

2. What did the Native Americans receive in exchange for their island?

- ☐ Sixty Dutch guilders
- ☐ $24.12 U.S.
- ☐ Goods and supplies
- ☐ Land in New Amsterdam

3. Where was New Amsterdam located?

- ☐ In Holland
- ☐ In North America
- ☐ On the island of Manhattan
- ☐ In India

4. What does the author mean by the statement: **Because attempts to encourage Dutch immigration were not immediately successful, offers, generous by the standards of the era, were extended throughout Europe** ?

☐ Other Europeans were given opportunities to immigrate to the new world after a slow response by the Dutch

☐ Since the Dutch immigration was so successful, opportunities were provided for the Europeans to immigrate to the new world also

☐ The Dutch took advantage of opportunities to immigrate to Europe instead of to the new world

☐ Immigration to the new world required that the Dutch and other Europeans wait until opportunities were available

5. The word "heterogeneous" in paragraph 2 could be best replaced by:

☐ liberal

☐ renowned

☐ diverse

☐ prosperous

6. Why were so many languages spoken in New Amsterdam?

☐ The Dutch West India Company was owned by England

☐ The Dutch West India Company allowed freedom of speech

☐ The Dutch West India Company recruited settlers from many different countries in Europe

☐ The Indians who lived there before the Dutch West India Company purchase spoke many languages

7. Look at the word "his" in paragraph 3. What word or phrase in paragraph 3 does "his" refer to? Write your answer in the space below.

8. The word "formidable" in paragraph 3 is closest in meaning to:

- ☐ powerful
- ☐ modern
- ☐ expensive
- ☐ unexpected

9. Which paragraph explains the reason for renaming New Amsterdam?

- ☐ paragraph 1
- ☐ paragraph 2
- ☐ paragraph 3
- ☐ paragraph 4

10. The word "it" in paragraph 4 refers to:

- ☐ Revolution
- ☐ New York City
- ☐ the island
- ☐ the first capital

11. Which city was the first capital of the new United States?

- ☐ New Amsterdam

- [ ] New York
- [ ] Philadelphia
- [ ] Washington

12. On what date was Manhattan valued at $7 billion?

- [ ] 1626
- [ ] 1726
- [ ] 1656
- [ ] 1926

End of Lesson

Reading Lesson 17 "Horace Mann"

Perhaps it was his own lack of adequate schooling the inspired Horace Mann to work so hard to accomplish the important reforms in education that he advocated. While he was still a boy, his father and older brother died, and he became responsible for supporting his family. Like most of the children in his town, he attended school only two or three months a year. Later, with the help of several teachers, he was able to study law and become a member of the Massachusetts bar, but he never forgot those early **struggles**.

While serving in the Massachusetts legislature, he signed an historic education bill that set up a state board of education. Without regret, he gave up his successful legal practice and political career to become the first secretary of the board. **There** he exercised an enormous influence during the critical period of reconstruction that brought into existence the American graded elementary school as a substitute for the older district school system. Under his leadership, the curriculum was restructured, the school year was increased to a minimum of six months, and **mandatory** schooling was **extended**to age sixteen. Other important reforms that came into existence under Mann's guidance included the establishment of state normal schools for teacher training, institutes for for inservice teacher education, and lyceums for adult education. He was also instrumental in improving salaries for teachers and creating school libraries.

Mann's ideas about school reform were developed and distributed in the twelve annual reports to the state of Massachusetts that he wrote during his tenure as secretary of education. Considered quite radical at the time, the Massachusetts reforms later served as a model for the nation's educational system. Mann was formally recognized as the father of public education.

During his lifetime, Horace Mann worked tirelessly to extend educational opportunities to agrarian families and the children of poor laborers. In one of his last speeches he summed up his philosophy of education and life: "Be ashamed to die until

you have won some victory for humanity." Surely, his own life was an example of that philosophy.

Review Questions

Multiple choice. Choose the correct answer for each question.

1. Which of the following titles would best express the main topic of the passage?

- ☐ The Father of American Education
- ☐ Philosophy of Education
- ☐ The Massachusetts State Board of Education
- ☐ Politics of Educational Institutions

2. Why does the author mention Horace Mann's early life?

- ☐ As an example of the importance of an early education for success
- ☐ To make the biography more complete
- ☐ Because it served as the inspiration for his later work in education
- ☐ In tribute to the teachers who helped him succeed

3. The word "struggles" in paragraph 1 could be best replaced by:

- ☐ valuable experiences
- ☐ happy situations
- ☐ influential people
- ☐ difficult times

4. The word "there" refers to:

- [ ] the Massachusetts legislature
- [ ] the state board of education
- [ ] Mann's legal practice
- [ ] his political career

5. The word "mandatory" in paragraph 2 is closest in meaning to:

- [ ] required
- [ ] equal
- [ ] excellent
- [ ] basic

6. Look at the word "extended" in the passage. What word or phrase in paragraph 2 is closest in meaning to the "extended"? Write your answer in the space provided below.

7. Which paragraph explains how educational reforms were distributed.

- [ ] paragraph 1
- [ ] paragraph 2
- [ ] paragraph 3
- [ ] paragraph 4

8. With which of the following statements would the author most probably agree?

- [ ] Horace Mann's influence on American education was very great

- [ ] A small but important influence on American education was exerted by Horace Mann

- [ ] Few educators fully understood Horace Mann's influence on American education

- [ ] The influence on American education by Horace Mann was not accepted or appreciated

9. Horace Mann advocated all of the following EXCEPT:

- [ ] a state board of education

- [ ] a district school system

- [ ] classes for adults

- [ ] graded elementary schools

10. The reforms Horace Mann achieved:

- [ ] were not very radical for the time

- [ ] were used only be the state of Massachusetts

- [ ] were later adopted by the nation as a model

- [ ] were enforced by the Massachusetts bar

11. With which of the following statement would Horace Mann most probably agree?

- [ ] Think in new ways

- [ ] Help others

- [ ] Study as much as possible

- [ ] Work hard

End of Lesson

Reading Lesson 18 "Organic Architecture"

Organic architecture - that is, natural architecture - may vary in concept and form, but **it** is always faithful to natural principles. The architect dedicated to the promulgation of organic architecture rejects outright all rules imposed by individual preference or mere aesthetics in order to remain true to the nature of the site, the materials, the purpose of the structure, and the people who will **ultimately** use it. If these natural principles are **upheld**, then a bank cannot be built to look like a Greek temple. Form does not follow function; rather, form and function are inseparably two aspects of the same phenomenon. In other words, a building should be inspired by nature's forms and constructed with materials that retain and respect the natural characteristics of the setting to create harmony between the structure and its natural environment. It should maximize people's contact with and utilization of the outdoors. Furthermore, the rule of functionalism is upheld; that is, the principle of excluding everything that serves no practical purpose.

Natural principles, then, are principles of deign, not style, expressed by means and modes of construction that reflect unity, balance, proportion, rhythm, and scale. Like a sculptor, the organic architect views the site and materials as an innate form that develops organically from within. Truth in architecture results in a natural, spontaneous structure in total harmony with the setting. For the most part, these structures find their geometric shapes in the **contours** of the land and their colors in the surrounding palette of nature.

From the outside, an organic structure is so much a part of nature that it is often **obscured** by it. In other words, it may not be easy, or maybe not even possible, for the human eye to separate the artificial structure from the natural terrain. Natural light, air, and view permeate the whole structure, providing a sense of communication with the outdoors. From the inside, living spaces open into one another. The number of walls for separate rooms is reduced to a minimum, allowing the functional spaces to flow together. Moreover, the interiors are sparse. Organic architecture incorporates

built-in architectural features such as benches and storage areas to take the place of furniture.

Review Questions

Multiple choice. Choose the correct answer for each question.

1. According to the passage, what is another name for organic architecture?

- ☐ Natural architecture
- ☐ Aesthetic architecture
- ☐ Principle architecture
- ☐ Varied architecture

2. Look at the word "it" in paragraph 1. What word or phrase in paragraph 1 does "it" refer to? Write your answer in the space provided.

3. The word "ultimately" in paragraph 1 could be best replaced by:

- ☐ fortunately
- ☐ eventually
- ☐ supposedly
- ☐ obviously

4. The word "upheld" in paragraph 1 could be best replaced by:

- ☐ invalidated
- ☐ disputed
- ☐ promoted

- [ ] perceived

5. The following examples are all representative of natural architecture EXCEPT:

- [ ] a bank that is built to look like a Greek temple
- [ ] a bank built so that the location is important to the structure
- [ ] a bank that is built to conform to the colors of the natural surroundings
- [ ] a bank that is built to be functional rather than beautiful

6. Why does the author compare an organic architect to a sculptor?

- [ ] To emphasize aesthetics
- [ ] To give an example of natural principles
- [ ] To make a point about the development or geometry
- [ ] To demonstrate the importance of style

7. The word "obscured" in paragraph 3 is closest in meaning to:

- [ ] difficult to see
- [ ] in high demand
- [ ] not very attractive
- [ ] mutually beneficial

8. Look at the word "contours" in the passage. What other word or phrase in paragraph 2 is closest in meaning to "contours"? Write your answer in the space provided below.

9. Which sentence in paragraph 3 describes the furnishings appropriate for natural architecture? Write the sentence in the space below.

10. With which of the following statements would the author most probably agree?

- ☐ Form follows function
- ☐ Function follows form
- ☐ Function is not important to form
- ☐ Form and function are one

11. Which of the following statements best describes the architect's view of nature?

- ☐ Nature should be conquered
- ☐ Nature should not be considered
- ☐ Nature should be respected
- ☐ Nature should be improved

End of Lesson

Reading Lesson 19 **"Alchemy"**

Although its purpose and techniques were often magical, alchemy was, in many ways, the predecessor of the modern science of chemistry. The fundamental premise of alchemy derived from the best philosophical dogma and scientific practice of the time, and the majority of educated persons between 1400 and 1600 believed that alchemy had great merit.

The earliest **authentic** works on European alchemy are **those** of the English monk Roger Bacon and the German philosopher St. Albertus Magnus. In their treatises they maintained that gold was the perfect metal and that inferior metals such as lead and mercury were removed by various degrees of imperfection from gold. They further **asserted** that these base metals could be transmuted to gold by blending them with a substance more perfect than gold. This elusive substance was referred to as the "philosopher's stone." The process was called transmutation.

Most of the early alchemists were artisans who were accustomed to keeping trade secrets and often resorted to **cryptic** terminology to record the progress of their work. The term *sun* was used for gold, *moon* for silver, and the five known planets for base metals. This convention of substituting symbolic language attracted some mystical philosophers who compared the search for the perfect metal with the struggle of humankind for the perfection of the soul. The philosophers began to use the artisan's terms in the mystical literature that they produced. Thus, by the fourteenth century, alchemy had developed two distinct groups of practitioners - the laboratory alchemist and the literary alchemist. Both groups of alchemists continued to work throughout the history of alchemy, but, of course, it was the literary alchemist who was more likely to produce a written record; therefore, much of what is known about the science of alchemy is derived from philosophers rather than from the alchemists who labored in laboratories.

Despite centuries of experimentation, laboratory alchemists failed to produce gold from other materials. However, they gained wide knowledge of chemical substances, discovered chemical properties, and invented many of the tools and techniques that are used by chemists today. Many laboratory alchemists earnestly devoted themselves to the scientific discovery of new compounds and reactions and, therefore, must be considered the legitimate forefathers of modern chemistry. They continued to call themselves alchemists, but they were becoming true chemists.

Review Questions

Multiple choice. Choose the correct answer for each question.

1. Which of the following is the main point of the passage?

☐ There were both laboratory and literary alchemists

☐ Base metals can be transmuted to gold by blending them wit a substance more perfect than gold

☐ Roger Bacon and St. Albertus Magnus wrote about alchemy

☐ Alchemy was the predecessor of modern chemistry

2. The word "authentic" in paragraph 2 could be best replaced by:

☐ valuable

☐ genuine

☐ complete

☐ comprehensible

3. Look at the word "those" in the passage. What other word or phrase does "those" refer to? Write your answer in the space provided.

4. According to the alchemists, what is the difference between base metals and gold?

- [ ] Perfection
- [ ] Chemical content
- [ ] Temperature
- [ ] Weight

5. Look at the word "asserted" in the passage. What other word or phrase in paragraph 2 is closest in meaning to "asserted"? Write your answer in the space below.

6. According to the passage, what is the "philosopher's stone"?

- [ ] Lead that was mixed with gold
- [ ] An element that was never found
- [ ] Another name for alchemy
- [ ] A base metal

7. The word "cryptic" in paragraph 3 could be best replaced by:

- [ ] scholarly
- [ ] secret
- [ ] foreign
- [ ] precise

8. Why did the early alchemists use the terms *sun* and *moon*?

- [ ] To keep the work secret

- ☐ To make the work more literary
- ☐ To attract philosophers
- ☐ To produce a written record

9. Who were the first alchemists?

- ☐ Chemists
- ☐ Writers
- ☐ Artisans
- ☐ Linguists

10. In paragraph 3, the author suggests that we know about the history of alchemy because:

- ☐ the laboratory alchemists kept secret notes
- ☐ the literary alchemists recorded it in writing
- ☐ the mystical philosophers were not able to hide the secrets of alchemy
- ☐ the historians were able to interpret the secret writings of the alchemists

11. With which of the following statements would the author most probably agree?

- ☐ Alchemy must be considered a complete failure
- ☐ Some very important scientific discoveries were made by alchemists
- ☐ Most educated people dismissed alchemy during the time that it was practiced
- ☐ The literary alchemists were more important than the laboratory alchemists

End of Lesson

Reading Lesson 20 "Memory"

Human memory, **formerly** believed to be rather inefficient, is really much more **sophisticated** than **that** of a computer. Researches approaching the problem from a variety of points of view have all concluded that there is a great deal more stored in our minds than has been generally supposed. Dr. Wilder Penfield, a Canadian neurosurgeon, proved that by stimulating their brains electrically, he could elicit the total recall of complex events in his subjects' lives. Even dreams and other minor events supposedly forgotten for many years suddenly emerged in detail.

The memory trace is the term for whatever forms the internal representation of the specific information about the event stored in the memory. Assumed to have been made by structural changes in the brain, the memory trace is not subject to direct observation but is rather a theoretical construct that is used to speculate about how information presented at a particular time can cause performance at a later time. Most theories include the strength of the memory trace as a variable in the degrees of learning, retention, and retrieval possible for a memory. One theory is that the fantastic capacity for storage in the brain is the result of an almost unlimited combination of interconnections between brain cells, stimulated by patterns of activity. Repeated references to the same information support recall. Or, to say that another way, improved performance is the result of strengthening the chemical **bonds** in the memory.

Psychologists generally divide memory into at least two types, short-term and long-term memory, which combine to form working memory. Short-term memory contains what we are actively focusing on at any particular time, but items are not retained longer than twenty or thirty seconds without verbal rehearsal. We use short-term memory when we look up a telephone number and repeat it to ourselves until we can place the call. On the other hand, long-term memory can store facts, concepts, and experiences after we stop thinking about them. All conscious processing of information, as in problem solving for example, involves both short-term and long-term memory. As we repeat, rehearse, and recycle information, the memory trace is

strengthened, allowing that information to move from short-term memory to long-term memory.

Review Questions

Multiple choice. Choose the correct answer for each question.

1. Which of the following is the main topic of the passage?

- ☐ Wilder Penfield
- ☐ Neurosurgery
- ☐ Human memory
- ☐ Chemical reactions

2. The word "formerly" in paragraph 1 could be best replaced by:

- ☐ in the past
- ☐ from time to time
- ☐ in general
- ☐ by chance

3. Compared with a computer, human memory is:

- ☐ more complex
- ☐ more limited
- ☐ less dependable
- ☐ less durable

4. Look at the word "sophisticated" in the passage. What other word or phrase in paragraph 1 is closest in meaning to "sophisticated"? Write your answer in the space below.

5. Look at the word "that" in the passage. What other word or phrase in paragraph 1 does "that" refer to? Write your answer in the space below.

6. How did Penfield stimulate dreams and other minor events from the past?

- ☐ By surgery
- ☐ By electrical stimulation
- ☐ By repetition
- ☐ By chemical stimulation

7. According to the passage, the capacity for storage in the brain:

- ☐ can be understood by examining the physiology of the brain
- ☐ is stimulated by patterns of activity
- ☐ has a limited combination of relationships
- ☐ is not influenced by repetition

8. The word "bonds" in paragraph 2 means:

- ☐ promises
- ☐ agreements
- ☐ connections

- [ ] responsibilities

9. Which sentence in paragraph 3 defines working memory? Write the sentence in the space below.

10. Why does the author mention looking up a telephone number?

- [ ] It is an example of short-term memory
- [ ] It is an example of a weak memory trace
- [ ] It is an example of an experiment
- [ ] It is an example of how we move short-term memory to long-term memory

11. All of the following are true of a memory trace EXCEPT:

- [ ] it is probably made by structural changes in the brain
- [ ] it is able to be observed directly by investigators
- [ ] it is a theoretical construct that we use to form hypotheses
- [ ] it is related to the degree of recall supported by repetition

End of Lesson

Reading Lesson 21 "Underground Water"

A geyser is the result of underground water under the combined conditions of high temperatures and increased pressure beneath the surface of the Earth. Since the temperature rises about 1*f* F for every sixty feet under the Earth's surface, and pressure increases with depth, water that seeps down in cracks and fissures until **it** reaches very hot rocks in the Earth's interior becomes heated to a temperature of **approximately** 290 *f* F.

Water under pressure can remain liquid at temperatures above its normal boiling point, but in a geyser, the weight of the water nearer the surface exerts so much pressure on the deeper water that the water at the bottom of the geyser reaches much higher temperatures than does the water at the top of the geyser. As the deep water becomes hotter, and consequently lighter, it suddenly rises to the surface and shoots out of the surface in the form of steam and hot water. In turn, the explosion agitates all the water in the geyser reservoir, creating further explosions. Immediately afterward, the water again flows into the underground reservoir, heating begins, and the process repeats itself.

In order to function, then, a geyser must have a source of heat, a reservoir where the water can be stored until the temperature rises to an unstable point, an opening through which the hot water and steam can escape, and underground channels for resupplying water after an eruption.

Favorable conditions for geysers exists in regions of geologically recent volcanic activity, especially in areas of more than average precipitation. For the most part, geysers are located in three regions of the world: New Zealand, Iceland, and the Yellowstone National Park area of the United States. The most famous geyser in the world is Old Faithful in Yellowstone Park. Old Faithful erupts every hour, rising to a height of 125 to 170 feet and**expelling** more than ten thousand gallons during each

eruption. Old Faithful earned its name because, unlike most geysers, it has never failed to erupt on schedule even once in eighty years of observation.

Review Questions

Multiple choice. Choose the correct answer for each question.

1. Which of the following is the main topic of this passage?

- ☐ The Old Faithful geyser in Yellowstone National Park
- ☐ The nature of geysers
- ☐ The ratio of temperature to pressure in underground waters
- ☐ Regions of geologically recent volcanic activity

2. In order for a geyser to erupt:

- ☐ hot rocks must rise to the surface of the Earth
- ☐ water must flow underground
- ☐ it must be a warm day
- ☐ the earth must not be rugged or broken

3. Look at the word "approximately" in paragraph 1. What other word or phrase in paragraph 1 is closest in meaning to "approximately"? Write your answer in the space provided.

4. The word "it" in paragraph 1 refers to:

- ☐ Water
- ☐ Depth

- [ ] Pressure
- [ ] Surface

5. Which paragraph explains the role of water pressure in an active geyser?

- [ ] Paragraph 1
- [ ] Paragraph 2
- [ ] Paragraph 3
- [ ] Paragraph 4

6. As depth increases:

- [ ] pressure increases but temperature does not
- [ ] temperature increases but pressure does not
- [ ] both pressure and temperature increase
- [ ] neither pressure nor temperature increase

7. why does the author mention New Zealand and Iceland in paragraph 4?

- [ ] To compare areas of high volcanic activity
- [ ] To describe the Yellowstone National Park
- [ ] To provide examples of areas where geysers are located
- [ ] To name the two regions where all geysers are found

8. How often does Old Faithful erupt?

- [ ] Every 10 minutes

- [ ] Every 60 minutes
- [ ] Every 125 minutes
- [ ] Every 170 minutes

9. The word "expelling" in paragraph 4 is closest in meaning to:

- [ ] heating
- [ ] discharging
- [ ] supplying
- [ ] wasting

10. What does the author mean by the statement: **Old Faithful earned its name because, unlike most geysers, it has never failed to erupt on schedule even once in eighty years of observation**?

- [ ] Old Faithful always erupts on schedule
- [ ] Old Faithful is usually predictable
- [ ] Old Faithful erupts predictably like other geysers
- [ ] Old Faithful received its name because it has been observed for many years

11. According to the passage, what is required for a geyser to function?

- [ ] A source of heat, a place for water to collect, an opening, and underground channels
- [ ] An active volcano nearby and a water reservoir
- [ ] Channels in the Earth and heavy rainfall
- [ ] Volcanic activity, underground channels, and steam

End of Lesson

Reading Lesson 22 "The Wright Brothers"

This question has often been posed: Why were the Wright brothers able to succeed in an effort at which so many others had failed? Many explanations have been mentioned, but three reasons are most often **cited**. First, they were a team. Both men worked congenially and cooperatively, read the same books, located and shared information, talked **incessantly** about the possibility of manned flight, and served as a consistent source of inspiration and encouragement to each other. Quite simply, two geniuses are better than one.

Both were glider pilots. Unlike some other engineers who experimented with the theories of flight, Orville and Wilbur Wright experienced the practical aspects of aerodynamics by building and flying in kites and gliders. Each craft they built was slightly superior to the last, as they incorporated knowledge that they had gained from previous failures. They had realized from their experiments that the most serious challenge in manned flight would be stabilizing and **maneuvering** the aircraft once it was airborne. While other concentrated their efforts on the problem of achieving lift for take-off, the Wright brothers were focussing on developing a three-axis control for guiding their aircraft. By the time that the brothers started to build an airplane, they were already among the world's best glider pilots; they knew the problems of riding the air first hand.

In addition, the Wright brothers had designed more effective wings for the airplane that had been previously engineered. Using a wind tunnel, they tested more than two hundred different wing designs, recording the effects of slight variations in shape on the pressure of air on the wings. The data from these experiments allowed the Wright brothers to construct a superior wing for their aircraft.

In spite of these advantages, however, the Wright brothers might not have succeeded had they not been born at precisely the opportune moment in history. Attempts to achieve manned flight in the early nineteenth century were doomed because the steam engines that powered the aircraft were too heavy in proportion to the power

that **they** produced. But by the end of the nineteenth century, when the brothers were experimenting with engineering options, a relatively light internal combustion engine had already been invented, and they were able to bring the ratio of weight to power within acceptable limits for flight.

Review Questions

Multiple choice. Choose the correct answer for each question.

1. Which of the following is the main topic of the passage?

☐ The reasons why the Wright brothers succeeded in manned flight

☐ The advantage of the internal combustion engine in the Wright brothers' experiments

☐ The Wright brothers' experience as pilots

☐ The importance of gliders to the development of airplanes

2. The word "cited" in paragraph 1 is closest in meaning to which of the following?

☐ disregarded

☐ mentioned

☐ considered

☐ proven

3. The word "incessantly" in paragraph 1 could be best replaced by which of the following?

☐ confidently

☐ intelligently

☐ constantly

- [ ] optimistically

4. What kind of experience did the Wright brothers have that distinguished them from their competitors?

- [ ] They were geniuses
- [ ] They were glider pilots
- [ ] They were engineers
- [ ] They were inventors

5. Which sentence in paragraph 2 explains the most serious problem that the Wright brothers anticipated in constructing a manned aircraft? Write the sentence in the space provided below.

6. Look at the word "maneuvering" in paragraph 2. What other word or phrase in paragraph 2 is closest in meaning to "maneuvering"? Write your answer in the space below.

7. Why does the author suggest that the experiments with the wind tunnel were important?

- [ ] Because they allowed the Wright brothers to decrease the weight of their airplane to acceptable limits
- [ ] Because they resulted in a three-axis control for their airplane
- [ ] Because they were important in the refinement of the wings for their airplane
- [ ] Because they used the data to improve the engine for their airplane

8. The word "they" in paragraph 4 refers to:

- [ ] the Wright brothers
- [ ] aircraft
- [ ] engines
- [ ] attempts

9. The word "doomed" in paragraph 4 is closest in meaning to:

- [ ] destined to fail
- [ ] difficult to achieve
- [ ] taking a risk
- [ ] not well planned

10. In paragraph 4, the author suggests that the steam engines used in earlier aircraft had failed because:

- [ ] they were too small to power a large plane
- [ ] they were too light to generate enough power
- [ ] they did not have internal combustion power
- [ ] they did not have enough power to lift their own weight

11. The passage discusses all of the following reasons that the Wright brothers succeeded EXCEPT:

- [ ] They worked very well together
- [ ] They both had practical experience building other aircraft
- [ ] They made extensive tests before they completed the design

- [ ] They were well funded

End of Lesson

Reading Lesson 23 "Influenza"

The influenza virus is a single molecule composed of millions of individual atoms. Although bacteria can be considered a type of plant, secreting poisonous substances into the body of the organism they attack, viruses, like the influenza virus, are living organisms **themselves**. We may consider them regular chemical molecules since they have **strictly** defined atomic structure; but on the other hand, we must also consider them as being alive since they are able to multiply in **unlimited** quantities.

An attack brought on by the presence of the influenza virus in the body produces a temporary immunity, but, unfortunately, the protection is against only the type of virus that caused the influenza. Because the disease can be produced by any one of three types, referred to as A, B, or C, and many varieties within each type, immunity to one virus will not prevent infection by other types or **strains**. Protection from the influenza virus is also complicated by the fact that immunity to a specific virus persists for less than a year. Finally, because a virus may periodically change characteristics, the problem of mutation makes it difficult to carry out a successful immunization program. Vaccines are often ineffective against newly evolving strains.

(A) Approximately every ten years, worldwide epidemics of influenza called pandemics occur. Thought to be caused by new strains of type-A virus, these pandemic viruses have spread rapidly, infecting millions of people.

Vaccines have been developed that have been found to be 70 to 90 percent effective for at least six months against either A or B types of the influenza virus, and a genetically engineered live-virus vaccine is under development. **(B)** Currently, the United States Public Health Service recommends annual vaccination only for those at greatest risk of complications from influenza, including pregnant women and the elderly. **(C)** Nevertheless, many other members of the general population request and

receive flu shots every year, and even more are immunized during epidemic or pandemic cycles. **(D)**

Review Questions

Multiple choice. Choose the correct answer for each question.

1. Which of the following is the main topic of the passage?

- ☐ The influenza virus
- ☐ Immunity to disease
- ☐ Bacteria
- ☐ Chemical molecules

2. According to the passage, bacteria are:

- ☐ poisons
- ☐ very small
- ☐ larger than viruses
- ☐ plants

3. Look at the word "themselves" in paragraph 1. What word or phrase in paragraph 1 does "themselves" refer to? Write your answer in the space below.

4. The word "strictly" in paragraph 1 could be best replaced by:

- ☐ unusually
- ☐ completely
- ☐ broadly

- [ ] exactly

5. The atomic structures of viruses:

- [ ] is variable
- [ ] is strictly defined
- [ ] cannot be analyzed chemically
- [ ] is more complex than that of bacteria

6. Why does the author say that viruses are alive?

- [ ] They have a complex atomic structure
- [ ] They move
- [ ] They multiply
- [ ] They need warmth and light

7. The word "unlimited" in paragraph 1 could be best replaced by which of the following?

- [ ] very small
- [ ] very large
- [ ] very similar
- [ ] very different

8. Look at the word "strains" in paragraph 2. What other word or phrase in paragraph 2 is closest in meaning to "strains"? Write your answer in the space below.

9. The following sentence can be added to the passage: **Epidemics or regional outbreaks have appeared on the average every two or three years for type-A virus, and every four or five years for type-B virus.** Where would it best fit in the passage?

- Point (A)
- Point (B)
- Point (C)
- Point (D)

10. According to the passage, how does the body react to the influenza virus?

- It prevents further infection to other types and strains of the virus
- It produces immunity to the type and strain of virus that invaded it.
- It becomes immune to types A, B, and C viruses, but not to various strains within the types
- After a temporary immunity, it becomes even more susceptible to the type and strain that caused the influenza

11. The passage discusses all of the following as characteristics of pandemics EXCEPT:

- they spread very quickly
- they are caused by type-A virus
- they are regional outbreaks
- they occur once every ten years

End of Lesson

Reading Lesson 24 "The Fed"

The Federal Reserve System, as an independent agency of the United States government, is charged with **overseeing** the national banking system. Since 1913, the Federal Reserve System, commonly called the Fed, has served as the central bank for the United States. The system consists of twelve District Reserve Banks and their branch offices, along with several committees and councils. All national commercial banks are required by law to be members of the Fed, and all deposit-taking institutions like credit unions are subject to regulation by the Fed regarding the amount of deposited funds that must be held in reserve and that by definition, therefore, are not available for loans. The most powerful body is the seven-member Board of Governors in Washington, appointed by the President and **confirmed** by the Senate.

The System's primary function is to control monetary policy by influencing the cost and availability of money and credit through the purchase and sale of government **securities**. If the Federal Reserve provides too little money, interest rates tend to be high, borrowing is expensive, business activity slows down, unemployment goes up, and danger of recession is augmented. If there is too much money, interest rates decline, and borrowing can lead to excess demand, pushing up prices and fueling inflation.

The Fed has several responsibilities in addition to controlling the money supply. In collaboration with the U.S. Department of the Treasury, the Fed puts new coins and paper currency into circulation by issuing **them** to banks. It also supervises the activities of member banks abroad, and regulates certain aspects of international finance.

(A) It has been said that the Federal Reserve is actually a fourth branch of the United States government because it is composed of national policy makers. **(B)** However, in practice, the Federal Reserve does not stray from the financial policies established by the executive branch of the government. **(C)** Although it is true that the Fed does not depend on Congress for budget allocations, and therefore is free from partisan politics that influence most of the other governmental bodies, it is still responsible for frequent reports to the Congress on the conduct of monetary policies. **(D)**

Review Questions

Multiple choice. Choose the correct answer for each question.

1. Which of the following is the most appropriate title for the passage?

- ☐ Banking
- ☐ The Federal Reserve System
- ☐ The Board of Governors
- ☐ Monetary Policies

2. The word "overseeing" in paragraph 1 is closest in meaning to:

- ☐ supervising
- ☐ maintaining
- ☐ financing
- ☐ stimulating

3. The word "confirmed" in paragraph 1 could be best replaced by:

- ☐ modified
- ☐ considered
- ☐ examined

- [ ] approved

4. According to the passage, the principal responsibility of the Federal Reserve System is:

- [ ] to borrow money
- [ ] to regulate monetary policies
- [ ] to print government securities
- [ ] to appoint the Board of Governors

5. The word "securities" in paragraph 2 is intended to mean:

- [ ] debts
- [ ] bonds
- [ ] protection
- [ ] confidence

6. What happens when the Federal Reserve provides too little money?

- [ ] Demand for loans increases
- [ ] Unemployment slows down
- [ ] Interest rates go up
- [ ] Businesses expand

7. In paragraph 2, the author suggests that inflation is caused by:

- [ ] high unemployment rates
- [ ] too much money in the economy

- very high fuel prices
- a limited supply of goods

8. Look at the word "them" in the passage. What word or phrase in paragraph 3 does "them" refer to? Write your answer in the space below.

9. Which paragraph outlines the responsibilities of the Fed to banks overseas?

- paragraph 1
- paragraph 2
- paragraph 3
- paragraph 4

10. What does the author mean by the statement: **However, in practice, the Federal Reserve does not stray from the financial policies established by the executive branch of the government.**?

- The Fed is more powerful than the executive branch of the government
- The policies of the Fed and those of the executive branch of the government are not the same
- The Fed tends to follow the policies of the executive branch of the government
- The Fed reports to the executive branch of the government

11. All of the following statements could be included in a summary of the passage EXCEPT:

- The Federal Reserve is an independent agency of the United States government
- The Federal Reserve controls the flow of money and credit by buying and selling government securities

- [ ] The Federal Reserve issues new coins and currency to banks
- [ ] The Federal Reserve receives its yearly budget from Congress

12. The following sentence can be added to the passage: **In fact, the Fed is not confined by the usual checks and balances that apply to the three official branches of government - the executive, the legislative, and the judicial.** Where would it best fit?

- [ ] Point (A)
- [ ] Point (B)
- [ ] Point (C)
- [ ] Point (D)

End of Lesson

Reading Lesson 25 **"Smallpox War"**

Smallpox was the first widespread disease ever to be eliminated by human intervention. A highly contagious viral disease, it was endemic in Europe, causing the deaths of millions of people until the development of the vaccination by Edward Jenner around 1800. In many non-European nations, it remained a dreaded, often fatal illness until very recently. Its victims suffered high fever, vomiting, and painful, itchy pustules, pus-filled skin eruptions that left pits or pockmark scars. In villages and cities all over the world, scarred people showed that they had survived smallpox.

In May 1966, the World Health Organization (WHO), an agency of the United Nations, was authorized to initiate a global campaign to **eradicate** smallpox. The goal was to eliminate the disease in one decade. At the time, the disease posed a serious **threat** to people in thirty nations. More than 700 physicians, nurses, scientists, and other personnel from WHO joined about 200,000 health workers in the infected nations to battle the disease. Because similar projects for malaria and yellow fever had failed, few believed that a disease as widespread as smallpox could actually be eradicated, but eleven years after the initial organization of the anti-smallpox campaign, no cases were reported in the field.

The strategy that developed was to combat the disease at several levels. There was an education campaign, of course, so that the people in the threatened countries could be taught more about how the disease spread and became active participants in the fight against smallpox. Other strategies included not only providing mass vaccinations but also isolating patients with active smallpox in order to contain the spread of the disease, thus breaking the chain of human transmission. Monetary rewards for reporting smallpox assisted in motivating the public to aid health workers. One by one, each smallpox victim was sought out, removed from contact with others, and treated. At the same time, the entire village where the victim had lived was vaccinated. **(A)**

By April of 1978, WHO officials announced that **they** had **isolated** the last known case of the disease, but health workers continued to search for new cases for two additional years to be completely sure. **(B)** In May, 1980, a formal statement was made to the global community. **(C)** Today smallpox is no longer a threat to humanity. **(D)** Routine vaccinations have been stopped worldwide.

Review Questions

Multiple choice. Choose the correct answer for each question.

1. Which of the following is the best title for the passage?

- ☐ The World Health Organization
- ☐ The Eradication of Smallpox
- ☐ Smallpox Vaccinations
- ☐ Infectious Diseases

2. Look at the word "eradicate" in paragraph 2. What other word or phrase in paragraph 2 is closest in meaning to "eradicate"? Write your answer in the space below.

3. The word "threat" in paragraph 2 could be best replaced by:

- ☐ debate
- ☐ humiliation
- ☐ risk
- ☐ bother

4. Which paragraph explains the goal of the campaign against smallpox?

- ☐ Paragraph 1

- [ ] Paragraph 2
- [ ] Paragraph 3
- [ ] Paragraph 4

5. According to the passage, what was the strategy used to eliminate the spread of smallpox?

- [ ] Vaccinations of entire villages
- [ ] Treatment of individual victims
- [ ] Isolation of victims and mass vaccinations
- [ ] Extensive reporting of outbreaks

6. The word "they" in paragraph 4 refers to:

- [ ] health workers
- [ ] officials
- [ ] victims
- [ ] cases

7. The word "isolated" in paragraph 4 is closest in meaning to:

- [ ] restored
- [ ] separated
- [ ] attended
- [ ] located

8. How was the public motivated to help the health workers?

- [ ] By educating them
- [ ] By rewarding them for reporting cases
- [ ] By isolating them from others
- [ ] By giving them vaccinations

9. Which one of the statements does NOT refer to smallpox?

- [ ] Previous projects had failed
- [ ] People are no longer vaccinated for it
- [ ] The World Health Organization mounted a worldwide campaign to eradicate the disease
- [ ] It was a serious threat

10. It can be inferred from the passage that:

- [ ] no new cases of smallpox have been reported this year
- [ ] malaria and yellow fever have been reported this year
- [ ] smallpox victims no longer die when they contract the disease
- [ ] smallpox is not transmitted from one person to another

11. The following sentence can be added to the passage: **The number of smallpox-infected countries gradually decreased.** Where would it best fit?

- [ ] Point (A)
- [ ] Point (B)
- [ ] Point (C)

Point (D)

End of Lesson

Reading Lesson 26 "Census of the Family"

The nuclear family, consisting of a mother, father, and their children, may be more an American ideal than an American **reality**. Of course, the so-called traditional American family was always more varied than we had been led to believe, reflecting the very different racial, ethnic, class, and religious customs among different American groups, but today diversity is even more obvious.

The most recent government census statistics reveal that only about one third of all **current** American families fits the traditional mold of two parents and their children, and another third consists or married couples who either have no children or have **none** still living at home. An analysis of the remaining one third of the population reveals that about 20 percent of the total number of American households are single people, the most common descriptor being women over sixty-five years of age. A small percentage, about 3 percent of the total, consists of unmarried people who choose to live together; and **the rest**, about 7 percent, are single parents, with at least one child.

There are several easily identifiable reasons for the growing number of single-parent households. First, the sociological phenomenon of single-parent households reflect changes in cultural attitudes toward divorce and also toward unmarried mothers. A substantial number of adults become single parents as a result of divorce. In addition, the number of children born to unmarried women who choose to keep their children and rear them by themselves has increased dramatically. Finally, there is a small percentage of single-parent families that have resulted from untimely death. Today, these varied family types are typical and, therefore, normal.

In addition, because many families live far from relatives, close friends have become a more important part of family life than ever before. The vast majority of Americans claim that they have people in their lives whom they regard as family although they

are not related. A view of family that only accepts the traditional nuclear arrangement not only ignores the reality of modern American family life, but also **undervalues** the familial bonds created in alternative family arrangements. Apparently, many Americans are achieving supportive relationships in family forms other than the traditional one.

Review Questions

Multiple choice. Choose the correct answer for each question.

1. Which of the following is the main topic of the passage?

- ☐ The traditional American family
- ☐ The nuclear family
- ☐ The current American family
- ☐ The ideal family

2. Look at the word "reality" in paragraph 1. What word or phrase in paragraph 1 is the OPPOSITE of "reality"? Write your answer in the space below.

3. The word "current" in paragraph 2 could be best replaced by:

- ☐ typical
- ☐ present
- ☐ perfect
- ☐ traditional

4. The word "none" in paragraph 2 refers to:

- ☐ parents

- [ ] children
- [ ] couples
- [ ] families

5. How many single people were identified in the survey?

- [ ] One third of the total surveyed
- [ ] One fourth of the total surveyed
- [ ] One fifth of the total surveyed
- [ ] Less than one tenth of the total surveyed

6. Who generally constitutes a one-person household?

- [ ] A single man in his twenties
- [ ] An elderly man
- [ ] A single woman in her late sixties
- [ ] A divorced woman

7. Look at the phrase "the rest" in paragraph 2. What word or phrase in paragraph 2 does "the rest" refer to? Write your answer in the space below.

8. Which sentence in paragraph 4 refers to the way that most Americans feel about close friends? Write the sentence in the space below.

9. The word "undervalues" in paragraph 4 is closest in meaning to:

- [ ] does not appreciate

- does not know about
- does not include
- does not understand

10. The passage discusses all of the following reasons for an increase in single-parent households EXCEPT:

- a rising divorce rate
- death of one of the parents
- increased interest in parenting by fathers
- babies born to single women

11. With which of the following statements would the author most probably agree?

- There have always been a wide variety of family arrangements in the United States
- Racial, ethnic, and religious groups have preserved the traditional family structure
- The ideal American family is the best structure
- Fewer married couples are having children

End of Lesson

Reading Lesson 27 **"Noise!"**

Although noise, commonly defined as unwanted sound, is a widely recognized form of pollution, it is very difficult to measure because the discomfort experienced by different individuals is highly subjective and, therefore, variable. Exposure to lower levels of noise may be slightly irritating, whereas exposure to higher levels may actually cause hearing loss. Particularly in **congested** urban areas, the noise produced as a byproduct of our advanced technology causes physical and psychological harm but it also detracts from the quality of life for those exposed to **it**.

Unlike the eyes, which can be covered by the eyelids against strong light, the ear has no lid, and is, therefore, always open and vulnerable; noise penetrates without protection.

Noise causes effects that the hearer cannot control and to which the body never becomes accustomed. Loud noises instinctively signal danger to any organism with a hearing mechanism, including human beings. In response, heartbeat and respiration **accelerate**, blood vessels constrict, the skin pales, and muscles tense. In fact, there is a general increase in functioning brought about by the flow of adrenaline released in response to fear, and some of these responses persist even longer than the noise, occasionally as long as thirty minutes after the sound has ceased.

Because noise is unavoidable in a complex, industrial society, we are constantly responding in the same ways that we would respond to danger. Recently, researchers have concluded that noise and our response may be much more than an annoyance. **(A)** It may be a serious threat to physical and psychological health and well-being, causing damage not only to the ear and brain but also to the heart and stomach. **(B)** We have long know that hearing loss is America's number one nonfatal health problem, but now we are learning that some of us with heart disease and ulcers

may be victims of noise **as well**. **(C)** Fetuses exposed to noise tend to be overactive, they cry easily, and they are more sensitive to gastrointestinal problems after birth. **(D)** In addition, the psychological effect of noise is very important. Nervousness, irritability, tension, and anxiety increase, affecting the quality or rest during sleep, and the efficiency of activities during waking hours, as well as the way that we interact with one another.

Review Questions

Multiple choice. Choose the correct answer for each question.

1. Which of the following is the author's main point?

- ☐ Noise may pose a serious threat to our physical and psychological health
- ☐ Loud noises signal danger
- ☐ Hearing loss is America's number one nonfatal health problem
- ☐ The ear is not like the eye

2. According to the passage, what is noise?

- ☐ Unwanted sound
- ☐ A byproduct of technology
- ☐ Physical and psychological harm
- ☐ Congestion

3. Why is noise difficult to measure?

- ☐ It causes hearing loss
- ☐ All people do not respond to it in the same way

- [ ] It is unwanted
- [ ] People may become accustomed to it

4. The word "congested" in paragraph 1 could be best replaced by:

- [ ] hazardous
- [ ] polluted
- [ ] crowded
- [ ] rushed

5. According to the passage, people respond to loud noises in the same way that they respond to:

- [ ] annoyance
- [ ] danger
- [ ] damage
- [ ] disease

6. Look at the word "accelerate" in paragraph 3. What other word or phrase in paragraph 3 is closest in meaning to "accelerate"? Write your answer in the space below.

7. Look at the word "it" in paragraph 1. What word or phrase in paragraph 1 does "it" refer to? Write your answer in the space below.

8. The phrase "as well" in paragraph 4 is closest in meaning to:

- [ ] after all

- also
- instead
- regardless

9. It can be inferred from this passage that the eye:

- responds to fear
- enjoys greater protection than the ear
- increases functions
- is damaged by noise

10. With which of the following statements would the author most probably agree?

- Noise is not a serious problem today
- Noise is America's number-one problem
- Noise is an unavoidable problem in an industrial society
- Noise is a complex problem

11. The following sentence can be added to the passage: **Investigations on human subjects have demonstrated that babies are affected by noise even before they are born.** Where would it best fit?

- Point (A)
- Point (B)
- Point (C)
- Point (D)

End of Lesson

Reading Lesson 28 "Hunting for Your Dinner"

Very few people in the modern world obtain their food supply by hunting and gathering in the natural environment surrounding their homes. This method of harvesting from nature's provision, however, is not only the oldest known subsistence strategy, but also the one that has been practiced continuously in some parts of the world for at least the last two million years. It was, indeed, the only way to obtain food until **rudimentary** farming and very crude methods for the domestication of animals were introduced about 10,000 years ago.

Because hunter-gatherers have fared poorly in comparison with their agricultural cousins, their numbers have **dwindled**, and they have been forced to live in the marginal wastelands. In higher latitudes, the shorter growing season has restricted the availability of plant life. **Such conditions** have caused a greater dependence on hunting and, along the coasts and waterways, on fishing. The abundance of vegetation in the lower latitudes of the tropics, on the other hand, has provided a greater opportunity for gathering a variety of plants. In short, the environmental differences have restricted the diet and have limited possibilities for the development of subsistence societies.

Contemporary hunter-gatherers may help us understand our prehistoric ancestors. We know from observation of modern hunter-gatherers in both Africa and Alaska that a society based on hunting and gathering must be very mobile. Following the food supply can be a way of life. If a particular kind of wild herding animal is the basis of the food for a group of people, those people must move to stay within reach of those animals. For many of the native people of the great central plains of North America, following the buffalo, who were in turn following the growth of grazing foods, determined their way of life.

For gathering societies, seasonal changes mean a great deal. While the entire community camps in a central location, a smaller party harvests the food within a reasonable distance from the camp. When the food in the area is exhausted, the community moves on to **exploit** another site. We also notice a seasonal migration pattern evolving for most hunter-gatherers, along with a strict division of labor between the sexes. These patterns of behavior may be similar to those practiced by humankind during the Paleolithic Period.

Review Questions

Multiple choice. Choose the correct answer for each question.

1. Which of the following is the main topic of the passage?

- ☐ The Paleolithic Period
- ☐ Subsistence Farming
- ☐ Hunter-Gatherers
- ☐ Marginal Environments

2. Which is the oldest subsistence strategy?

- ☐ Migrating
- ☐ Domesticating animals
- ☐ Farming
- ☐ Hunting and gathering

3. When was hunting and gathering introduced?

- ☐ Ten million years ago
- ☐ Two million years ago
- ☐ Ten thousand years ago

- [ ] Two thousand years ago

4. Look at the word "rudimentary" in paragraph 1. What other word or phrase in paragraph 1 is closest in meaning to "rudimentary"? Write your answer in the space below.

5. The word "dwindled" in paragraph 2 is closest in meaning to:

- [ ] disagreed
- [ ] decreased
- [ ] disappeared
- [ ] died

6. Look at the phrase "such conditions" in paragraph 2. What word or phrase in paragraph 2 does "such conditions" refer to? Write your answer in the space below.

7. In paragraph 2, the author explains that hunters and gatherers in lower latitudes found

- [ ] more animals to hunt
- [ ] more coasts and waterways for fishing
- [ ] a shorter growing season
- [ ] a large variety of plant life

8. Why does the author mention the contemporary hunter-gatherers in paragraph 3?

- [ ] Their seasonal migration patterns are important
- [ ] Studying them gives us insights into the lifestyle of prehistoric people
- [ ] There are very few examples of modern hunter-gatherer societies

- Their societies are quite different from those of their ancestors

9. The word "exploit" in paragraph 4 is closest in meaning to:

- use
- find
- take
- prepare

10. What does the author mean by the statement: **While the entire community camps in a central location, a smaller party harvests the food within a reasonable distance from the camp** ?

- Everyone is involved in hunting and gathering the food for the community
- When the food has been harvested, the community has a celebration
- A small group hunts and gathers food near the camp
- The reason that the community harvests the food is that it is near the camp

11. All of the patterns of behavior for hunter-gatherers are mentioned in the passage EXCEPT:

- a small group plants food near the camp
- the group moves when the food supply is low
- men and women each have specific roles
- the seasons dictate the movement of the group

12. Which of the following sentences should NOT be included in a summary of the passage?

- ☐ Hunter-gatherers are mobile, tending to migrate seasonally
- ☐ Hunter-gatherers share different responsibilities between the sexes
- ☐ Hunter-gatherers camp in a central location
- ☐ Hunter-gatherers have many social celebrations

End of Lesson

Reading Lesson 29 "The Richter Scale"

Seismologists have devised two scales of measurement to enable them to describe and record information about earthquakes in quantitative terms. The most widely known measurement is the Richter scale, a numerical logarithmic scale developed and introduced by American seismologist Charles R. Richter in 1935. The purpose of the scale is to measure the amplitude of the largest trace recorded by a **standard** seismograph one hundred kilometers from the epicenter of an earthquake. Tables have been formulated to demonstrate the magnitude of any earthquake from any seismograph. For example, a one-unit increase in magnitude translates into an increase of times thirty in released energy. To put that another way, each number on the the Richter scale represents an earthquake ten times as strong as one of the next lower magnitude. Specifically, an earthquake of magnitude 6 is ten times as strong as an earthquake of magnitude 5.

On the Richter scale, earthquakes of 6.75 are considered great and 7.0 to 7.75 are considered major. An earthquake that reads 4 to 5.5 would be expected to have caused localized damage, and **those** of magnitude 2 may be felt.

The other earthquake-assessment scale, introduced by the Italian seismologist Guiseppe Mercalli, measures the intensity of shaking, using gradations from 1 to 12. Because the effects of such shaking dissipate with distance from the epicenter of the earthquake, the Mercalli rating depends on the site of the measurement. Earthquakes of Mercalli 2 or 3 are basically the same as those of Richter 3 or 4; measurements of 11 or 12 on the Mercalli scale can be **roughly** correlated with magnitudes 8 or 9 on the Richter scale. In either case, the relative power or energy released by the earthquake can be understood, and the population waits to hear how bad the earthquake that just passed really was.

It is estimated that almost one million earthquakes occur each year, but most of them are so minor that they pass **undetected**. In fact, more than one thousand earthquakes of a magnitude of 2 or lower on the Richter scale occur every day.

Review Questions

Multiple choice. Choose the correct answer for each question.

1. Which of the following is the main topic of the passage?

- ☐ Earthquakes
- ☐ The Richter scale
- ☐ Charles F. Richter
- ☐ Seismography

2. According to the information in the passage, what does the Richter scale record?

- ☐ The distance from the epicenter
- ☐ The amplitude of the largest trace
- ☐ The degree of damage
- ☐ The location of the epicenter

3. The word "standard" in paragraph 1 could be best replaced by:

- ☐ reliable
- ☐ complex
- ☐ conventional
- ☐ abandoned

4. What is the value of the tables?

- ☐ They allow us to interpret the magnitude of the earthquakes
- ☐ They help us to calculate our distance from earthquakes
- ☐ They record all earthquakes
- ☐ They release the energy of earthquakes

5. How does each number on the Richter scale compare?

- ☐ Each number is one hundred times as strong as the previous number
- ☐ Each magnitude is ten times stronger than the previous magnitude
- ☐ The strength of each magnitude is one less than the previous magnitude
- ☐ The scale decreases by five or six for each number

6. Look at the word "those" in paragraph 2. What word or phrase in paragraph 2 does "those" refer to? Write your answer in the space below.

7. What does the author mean by the statement: **Because the effects of such shaking dissipate with distance from the epicenter of the earthquake, the Mercalli rating depends on the site of measurement**?

- ☐ The Mercalli rating will vary depending on the location of the measurement
- ☐ The results of the Mercalli rating are less accurate at greater distances from the epicenter
- ☐ The stronger shaking of the earthquake at the center is not detected by the Mercalli rating
- ☐ The Mercalli rating is useful because it is taken further away from the center of the earthquake

8. Look at the word "roughly" in paragraph 3. What other word or phrase in paragraph 3 is closest in meaning to "roughly"? Write your answer in the space below.

9. The word "undetected" in paragraph 4 is closest in meaning to:

- ☐ with no damage
- ☐ with no notice
- ☐ with no name
- ☐ with no problem

10. With which of the following statements would the author most probably agree?

- ☐ Only the Richter scale describes earthquakes in quantitative terms
- ☐ Both the Richter scale and the Mercalli Scale measure earthquakes in the same way
- ☐ Most earthquakes are measurable on either the Richter or the Mercalli scale
- ☐ The Mercalli and the Richter scales are different but they can be compared

11. The passage discusses all of the following in the explanation of the Richter scale EXCEPT:

- ☐ It was introduced in 1935
- ☐ It was developed by an American seismologist
- ☐ It has a scale of 1 to 12
- ☐ It measures the magnitude of earthquakes

End of Lesson

Reading Lesson 30 "Charles Ives"

Charles Ives, who is nowadays acclaimed as the first great American composer of the twentieth century, had to wait many years for the public recognition he deserved. Born to music as the son of a bandmaster, Ives played drums in his father's community band, and organ at the local church. He entered Yale University at twenty to study musical composition with Horatio Parker, but after graduation, he chose not to pursue a career in music. He suspected correctly that the public would not accept the music he wrote, for Ives did not follow the musical fashion of his times. While his contemporaries wrote lyrical songs, Ives transfigured music and musical form. He quoted, combined, insinuated, and distorted familiar hymns, marches, and battle songs, while experimenting with the effects of polytonality, or the simultaneous use of two or more keys, and **dissonance**, or the clash of keys with conflicting rhythms and time. Even when he could convince some musicians to show some interest in his compositions, after assessing them, conductors and performers said that **they** were essentially unplayable. **(A)**

Instead, he became a successful insurance executive, building his company into the largest agency in the country in only two decades. **(B)** Although he occasionally hired musicians to play one of his works privately for him, he usually heard his music only in his imagination. **(C)**

After he recovered from a serious heart attack, he **became reconciled to** the fact that his ideas, especially the use of dissonance and special effects, were just too different for the musical mainstream to accept. **(D)** Determined to share his music with the few people who might appreciate it, he published his work privately and distributed it for free.

In 1939, when Ives was sixty-five, American pianist John Kirkpatrick played *Concord Sonata* in Town Hall. The reviews were laudatory. One reviewer proclaimed **it** "the greatest music composed by an American." By 1947, Ives was famous. His *Second Symphony* was presented to the public in a performance by the New York

Philharmonic, fifty years after it had been written. The same year, Ives received the Pulitzer Prize. He was seventy-three.

Review Questions

Multiple choice. Choose the correct answer for each question.

1. Which of the following is the main topic of the passage?

- ☐ Modern musical composition
- ☐ Charles Ives' life
- ☐ The Pulitzer Prize
- ☐ Career choices

2. Why didn't the public appreciate Ives' music?

- ☐ It was not performed for a long time
- ☐ It was very different from the music of the time
- ☐ The performers did not play it well
- ☐ He did not write it down

3. Look at the word "dissonance" in paragraph 1. What other word or phrase in paragraph 1 is closest in meaning to "dissonance"? Write your answer in the space below.

4. The word "they" in paragraph 1 refers to:

- ☐ conductors
- ☐ performers

- [ ] interest
- [ ] compositions

5. How did Ives make a living for most of his life?

- [ ] He conducted a band
- [ ] He taught musical composition
- [ ] He owned an insurance company
- [ ] He published music

6. The phrase "became reconciled to" in paragraph 3 is closest in meaning to:

- [ ] accepted
- [ ] repeated
- [ ] disputed
- [ ] neglected

7. According to the passage, Ives shared his music:

- [ ] by publishing free copies
- [ ] by playing it himself
- [ ] by hiring musicians to perform
- [ ] by teaching at Yale

8. Which of the following characteristics is NOT true of the music of Charles Ives?

- [ ] It included pieces of familiar songs

- ☐ It was very experimental
- ☐ It was difficult to play
- ☐ It was never appreciated

9. How was the performance of *Concord Sonata* received?

- ☐ There were no reviews
- ☐ The musicians felt it was unplayable
- ☐ The public would not accept it
- ☐ It established Ives as an important composer

10. Look at the word "it" in paragraph 4. What word or phrase in paragraph 4 does "it" refer to? Write your answer in the space provided below.

11. The following sentence can be added to the passage: **Even during such a busy time in his career, he still dedicated himself to composing music in the evenings, on weekends, and during vacations.** Where in the passage would it best fit?

- ☐ Point (A)
- ☐ Point (B)
- ☐ Point (C)
- ☐ Point (D)

End of Lesson

Reading Lesson 31 "Dracula's Friends"

Bats are not dirty, bloodthirsty monsters as portrayed in vampire films. These winded mammals groom themselves carefully like cats and only rarely carry rabies. Of the hundreds of species of bats, only three rely on blood meals. In fact, the majority eat fruit, insects, spiders, or small animals; some species gather nectar and pollen from flowers. The environmental benefits of bats are myriad. They consume an **enormous** number of pests, pollinate many variety of plant life, and help reforest huge tracts of barren land by excreting millions of undigested seeds.

Bats also have served as models for sophisticated navigation systems in naval and airplane technology. Living models for radar and sonar, almost all bats use echolocation to navigate, especially at night. As they fly, they **emit** a series of high-pitched squeaks at the rate of about fifty per minute. As these signals bounce off objects in their path, an echo is detected by the bats' sensitive ears that informs **them** of the direction, distance, and nature of obstacles so that they can undertake corrective or evasive action. Echoes are used by bats but not because of physical limitations or impairments, for bats are not blind as widely assumed. In fact, all species of bats can see, probably about as well as human beings. Another myth, about bats being aggressive, intentionally entangling themselves in the hair of human beings, is also totally unfounded. It has been shown in studies not only that bats are timid, but also they they will assiduously avoid contact with larger creatures than themselves if possible.

(A) Aggregation during the day may vary from small groups consisting of a single male and a dozen or more females to huge colonies of many thousands or even millions of individuals, hanging upside down in caves or in hollow trees, buildings, or other protected shelters. **(B)** Within their social systems, bats assume specialized roles. **(C) Some** guard the entrance to their caves, others scout for food, and still others warn the colony of approaching danger. **(D)** An adult female bat usually gives birth to only pup per year, tenderly caring for it, and a nursery colony within a larger

colony may provide mother bats with a safe, supportive environment it which to rear their young.

Review Questions

Multiple choice. Choose the correct answer for each question.

1. With which of the following statements would the author most probably agree?

- ☐ Bats are dirty and they carry rabies
- ☐ Bats are like the monsters in vampire films
- ☐ Bats are clean, helpful members of the animal world
- ☐ Bats are not very important in the animal world

2. According to the passage, what do most bats eat?

- ☐ Blood meals
- ☐ Fruit and insects
- ☐ Leaves and trees
- ☐ Large animals

3. Look at the word "enormous" in paragraph 1. What other word or phrase in paragraph 1 is closest in meaning to "enormous"? Write your answer in the space below.

4. How do bats help reforest the land?

- ☐ By eating pests
- ☐ By hanging upside down in trees at night

- [ ] By excreting seeds
- [ ] By taking evasive action

5. Which of the following is NOT characteristic of most bats?

- [ ] They pollinate plants
- [ ] They have specialized roles in their colony
- [ ] They use echolocation
- [ ] They eat blood

6. The word "emit" in paragraph 2 is closest in meaning to:

- [ ] send
- [ ] continue
- [ ] find
- [ ] stop

7. According to the passage, how do bats navigate?

- [ ] By responding to the echoes of their signals bouncing off objects
- [ ] By warning the colony of approaching danger with high squeaks
- [ ] By beating their wings fifty times per minute
- [ ] By using their sensitive ears to hear the noises in their environment

8. The word "them" in paragraph 2 refers to:

- [ ] signals

- [ ] objects
- [ ] bats
- [ ] squeaks

9. Which sentence in paragraph 2 refers to the visual range of bats? Write the sentence in the space below.

10. Look at the word "Some" in paragraph 3. What word or phrase in paragraph 3 does "Some" refer to? Write your answer in the space provided below.

11. The following sentence can be added to the passage: **It is a little known fact that bats are highly social creatures.** Where would it best fit?

- [ ] Point (A)
- [ ] Point (B)
- [ ] Point (C)
- [ ] Point (D)

End of Lesson

Reading Lesson 32 "Suburban Urbanite"

The fact that most Americans live in urban areas does not mean that they **reside** in the center of large cities. In fact, more Americans live in the suburbs of large metropolitan areas than in the cities themselves.

The Bureau of the Census regards any area with more than 2500 people as an urban area, and does not consider boundaries of cities and suburbs. According to the Bureau, the political boundaries are less significant than the social and economic relationships and the transportation and communication systems that **integrate** a **locale**. The term used by the Bureau for an integrated metropolis is an MSA, which stands for Metropolitan Statistical Area. In general, an MSA is any area that contains a city and **its** surrounding suburbs and has a total population of 50,000 or more.

At the present time, the Bureau reports more than 280 MSAs, which together account for 75 percent of the US population. In addition, the Bureau recognizes eighteen megapolises, that is, continuous adjacent metropolitan areas. One of the most obvious megapolises includes a chain of hundreds of cities and suburbs across ten states on the East Coast from Massachusetts to Virginia, including Boston, New York, and Washington, D.C. In the Eastern Corridor, as it is called, a population of 45 million inhabitants is concentrated. Another megapolis that is growing rapidly is the California coast from San Francisco through Los Angeles to San Diego.

Review Questions

Multiple choice. Choose the correct answer for each question.

1. Which of the following is the best title for the passage?

- [ ] Metropolitan Statistical Areas
- [ ] Types of Population Centers
- [ ] The Bureau of the Census
- [ ] Megapolises

2. According to the passage, where do most Americans live?

- [ ] In the center of cities
- [ ] In the suburbs surrounding large cities
- [ ] In rural areas
- [ ] In small towns

3. Look at the word "reside" in paragraph 1. What other word in paragraph 1 is closest in meaning to "reside"? Write your answer in the space below.

4. According to the Bureau of the Census, what is an urban area?

- [ ] An area with 2500 people or more
- [ ] An area with at least 50,000 people
- [ ] The eighteen largest cities
- [ ] A chain of adjacent cities

5. Which of the following are NOT considered important in defining an urban area?

- [ ] Political boundaries

- [ ] Transportation networks
- [ ] Social relationships
- [ ] Economic systems

6. The word "integrate" in paragraph 2 is closest in meaning to:

- [ ] benefit
- [ ] define
- [ ] unite
- [ ] restrict

7. Look at the word "locale" in paragraph 2. What other word or phrase in paragraph 2 is closest in meaning to "locale"? Write your answer in the space below.

8. The word "its" in paragraph 2 refers to:

- [ ] the MSA's
- [ ] the area's
- [ ] the city's
- [ ] the population's

9. Which paragraph identifies the US population now living in MSAs?

- [ ] paragraph 1
- [ ] paragraph 2

- ☐ paragraph 3

10. The word "adjacent" in paragraph 3 is closest in meaning to:

- ☐ beside each other
- ☐ growing very fast
- ☐ the same size
- ☐ densely populated

11. According to the passage, what is a megapolis?

- ☐ One of the ten largest cities in the United States
- ☐ One of the eighteen largest cities in the United States
- ☐ One of the hundred cities between Boston and Washington
- ☐ Any number of continuous adjacent cities and suburbs

12. Why does the author mention the Eastern Corridor and the California coast in paragraph 3?

- ☐ As examples of megapolises
- ☐ Because 75 percent of the population lives there
- ☐ To conclude the passage
- ☐ The Bureau of the Census is located there

End of Lesson

The key answers

Lesson 1	
1	B
2	B
3	D
4	A
5	Sentence 6
6	A
7	B
8	B
9	C
10	A

Lesson 2	
1	B
2	A
3	B
4	B
5	Invented dynamite. When he read
6	D
7	C
8	A
9	B
10	award

Lesson 3	
1	C
2	generally
3	D
4	A
5	B
6	D
7	B
8	B
9	C
10	C
11	brilliant tricks
12	purpose

Lesson 4	
1	B
2	B
3	B
4	D
5	A
6	C
7	Large
8	B
9	A
10	B
11	B
12	C, Sentence 2
13	C

Lesson 5	
1	A
2	C
3	A
4	A
5	D
6	A
7	D
8	data
9	C
10	problems
11	B, Sentence 2
12	

Lesson 6	
1	C
2	D
3	Sentence 4
4	A
5	B
6	D
7	signs
8	B
9	C
10	A rude noise. Gestures such as
11	B
12	interaction

Lesson 7	
1	D
2	D
3	D
4	B
5	B
6	C
7	A
8	C
9	Sentence 5
10	Damage
11	C

Lesson 8	
1	A
2	D
3	B
4	A
5	A
6	C
7	B
8	C
9	A, Sentence 3
10	Tamed
11	A

Lesson 9	
1	A
2	D
3	C
4	D
5	Very successful
6	A
7	C
8	D
9	Sentence 4
10	C
11	C

Lesson 10[2]	
1	A
2	B
3	C
4	C
5	D
6	D
7	C
8	A
9	Devastating
10	Earth quakes
11	D

Lesson 11	
1	B
2	Segmented
3	C
4	A
5	A
6	B
7	C
8	A
9	C
10	D
11	D

Lesson 12	
1	D
2	D
3	B
4	Locomotion
5	C
6	C
7	C
8	A
9	A
10	C
11	

[2] در مورد درس ۱۰ برای پاسخ سوالات ۷، ۸ و ۱۱، ۱۰۰% مطمئن نیستم

Lesson 13	
1	A
2	C
3	B
4	A
5	B
6	C
7	Sentence 2
8	D
9	B
10	A
11	B
12	

Lesson 14	
1	D
2	C
3	Sentence 5
4	A
5	Better
6	D
7	D
8	A
9	C
10	D
11	
12	

Lesson 15	
1	B
2	Valued
3	C
4	A
5	D
6	C
7	A
8	B
9	D
10	B
11	C
12	C

Lesson 16	
1	A
2	C
3	B
4	A
5	C
6	C
7	The English Kings
8	A
9	D, Sentence 1
10	B
11	B
12	D

Lesson 17	
1	A
2	D
3	D
4	B
5	A
6	Increased
7	C, Sentence 1
8	A
9	B
10	C
11	B
12	

Lesson 18	
1	A
2	Architecture
3	B
4	C
5	A
6	B
7	A
8	Shapes
9	Sentence 7
10	D
11	C
12	

Lesson 19	
1	D
2	B
3	Works
4	A
5	Maintained
6	B
7	B
8	A
9	C
10	B
11	B
Lesson 20	
1	C
2	A
3	A
4	Complex
5	The memory
6	B
7	B
8	C
9	Sentence 1
10	A
11	B
12	

Lesson 21	
1	B
2	B
3	About
4	A
5	B, Sentence 1
6	C
7	C
8	B
9	B
10	A
11	A
Lesson 22	
1	A
2	B
3	C
4	B
5	Sentence 4
6	Guiding
7	C
8	C
9	A
10	D
11	D
12	

Lesson 23	
1	A
2	D
3	The viruses
4	D
5	B
6	C
7	B
8	Types
9	A
10	B
11	C
Lesson 24	
1	B
2	A
3	D
4	B
5	B
6	C
7	B
8	Coins and paper currency
9	C, Sentence 3
10	C
11	D
12	B

Lesson 25	
1	B
2	Eliminate
3	C
4	B, Sentence 2
5	C
6	B
7	B
8	B
9	A
10	A
11	A
Lesson 26	
1	C
2	Ideal
3	B
4	B
5	C
6	C
7	Of the single people
8	Sentence 2
9	A
10	C
11	A
12	

Lesson 27	
1	A
2	A
3	B
4	C
5	B
6	Increase
7	The noise
8	B
9	B
10	C
11	C
Lesson 28	
1	C
2	D
3	B
4	Crude
5	B
6	The shorter growing season
7	D
8	B
9	A
10	C
11	A
12	D

Lesson 29	
1	D
2	B
3	C
4	A
5	B
6	Earthquakes
7	A
8	Basically
9	B
10	D
11	C
Lesson 30	
1	B
2	B
3	Clash of keys
4	D
5	C
6	A
7	A
8	D
9	D
10	Concord Sonata
11	B
12	

Lesson 31	
1	C
2	B
3	Huge
4	C
5	D
6	A
7	A
8	C
9	Sentence 6
10	Bats
11	A
12	

Lesson 32	
1	B
2	B
3	Live
4	A
5	A
6	C
7	Area
8	C
9	C, Sentence 1
10	A
11	D
12	A