TOEFL iBT Test 3

READING

This section measures your ability to understand academic passages in English.

There are three passages in the section. Give yourself 20 minutes to read each passage and answer the questions about it. The entire section will take 60 minutes to complete.

You may look back at a passage when answering the questions. You can skip questions and go back to them later as long as there is time remaining.

Directions: Read the passage. Then answer the questions. Give yourself 20 minutes to complete this practice set.

POWERING THE INDUSTRIAL REVOLUTION

In Britain one of the most dramatic changes of the Industrial Revolution was the harnessing of power. Until the reign of George III (1760–1820), available sources of power for work and travel had not increased since the Middle Ages. There were three sources of power: animal or human muscles; the wind, operating on sail or windmill; and running water. Only the last of these was suited at all to the continuous operating of machines, and although waterpower abounded in Lancashire and Scotland and ran grain mills as well as textile mills, it had one great disadvantage: streams flowed where nature intended them to, and water-driven factories had to be located on their banks, whether or not the location was desirable for other reasons. Furthermore, even the most reliable waterpower varied with the seasons and disappeared in a drought. The new age of machinery, in short, could not have been born without a new source of both movable and constant power.

The source had long been known but not exploited. Early in the century, a pump had come into use in which expanding steam raised a piston in a cylinder, and atmospheric pressure brought it down again when the steam condensed inside the cylinder to form a vacuum. This "atmospheric engine," invented by Thomas Savery and vastly improved by his partner, Thomas Newcomen, embodied revolutionary principles, but it was so slow and wasteful of fuel that it could not be employed outside the coal mines for which it had been designed. In the 1760s, James Watt perfected a separate condenser for the steam, so that the cylinder did not have to be cooled at every stroke; then he devised a way to make the piston turn a wheel and thus convert reciprocating (back and forth) motion into rotary motion. He thereby transformed an inefficient pump of limited use into a steam engine of a thousand uses. The final step came when steam was introduced into the cylinder to drive the piston backward as well as forward, thereby increasing the speed of the engine and cutting its fuel consumption.

Watt's steam engine soon showed what it could do. It liberated industry from dependence on running water. The engine eliminated water in the mines by driving efficient pumps, which made possible deeper and deeper mining. The ready availability of coal inspired William Murdoch during the 1790s to develop the first new form of nighttime illumination to be discovered in a millennium and a half. Coal gas rivaled smoky oil lamps and flickering candles, and early in the new century, well-to-do Londoners grew accustomed to gaslit houses and even streets. Iron manufacturers, which had starved for fuel while depending on charcoal, also benefited from ever-increasing supplies of coal; blast furnaces with steam-powered bellows turned out more iron and steel for the new machinery. Steam became the motive force of the Industrial Revolution, as coal and iron ore were the raw materials.

By 1800 more than a thousand steam engines were in use in the British Isles, and Britain retained a virtual monopoly on steam engine production until the 1830s. Steam power did not merely spin cotton and roll iron; early in the new century, it also multiplied ten times over the amount of paper that a single worker could produce in a

day. At the same time, operators of the first printing presses run by steam rather than by hand found it possible to produce a thousand pages in an hour rather than thirty. Steam also promised to eliminate a transportation problem not fully solved by either canal boats or turnpikes. Boats could carry heavy weights, but canals could not cross hilly terrain; turnpikes could cross the hills, but the roadbeds could not stand up under great weights. These problems needed still another solution, and the ingredients for it lay close at hand. In some industrial regions, heavily laden wagons, with flanged wheels, were being hauled by horses along metal rails; and the stationary steam engine was puffing in the factory and mine. Another generation passed before inventors succeeded in combining these ingredients, by putting the engine on wheels and the wheels on the rails, so as to provide a machine to take the place of the horse. Thus the railroad age sprang from what had already happened in the eighteenth century.

Directions: Now answer the questions.

PARAGRAPHS 1 & 2

In Britain one of the most dramatic changes of the Industrial Revolution was the harnessing of power. Until the reign of George III (1760–1820), available sources of power for work and travel had not increased since the Middle Ages. There were three sources of power: animal or human muscles; the wind, operating on sail or windmill; and running water. Only the last of these was suited at all to the continuous operating of machines, and although waterpower abounded in Lancashire and Scotland and ran grain mills as well as textile mills, it had one great disadvantage: streams flowed where nature intended them to, and water-driven factories had to be located on their banks, whether or not the location was desirable for other reasons. Furthermore, even the most reliable waterpower varied with the seasons and disappeared in a drought. The new age of machinery, in short, could not have been born without a new source of both movable and constant power.

The source had long been known but not exploited. Early in the century, a pump had come into use in which expanding steam raised a piston in a cylinder, and atmospheric pressure brought it down again when the steam condensed inside the cylinder to form a vacuum. This "atmospheric engine," invented by Thomas Savery and vastly improved by his partner, Thomas Newcomen, embodied revolutionary principles, but it was so slow and wasteful of fuel that it could not be employed outside the coal mines for which it had been designed. In the 1760s, James Watt perfected a separate condenser for the steam, so that the cylinder did not have to be cooled at every stroke; then he devised a way to make the piston turn a wheel and thus convert reciprocating (back and forth) motion into rotary motion. He thereby transformed an inefficient pump of limited use into a steam engine of a thousand uses. The final step came when steam was introduced into the cylinder to drive the piston backward as well as forward, thereby increasing the speed of the engine and cutting its fuel consumption.

1. Which of the sentences below best expresses the essential information in the highlighted sentence in paragraph 1? Incorrect choices change the meaning in important ways or leave out essential information.

   Ⓐ Running water was the best power source for factories since it could keep machines operating continuously, but since it was abundant only in Lancashire and Scotland, most mills and factories that were located elsewhere could not be water driven.

   Ⓑ The disadvantage of using waterpower is that streams do not necessarily flow in places that are the most suitable for factories, which explains why so many water-powered grain and textile mills were located in undesirable places.

   Ⓒ Since machines could be operated continuously only where running water was abundant, grain and textile mills, as well as other factories, tended to be located only in Lancashire and Scotland.

   Ⓓ Running water was the only source of power that was suitable for the continuous operation of machines, but to make use of it, factories had to be located where the water was, regardless of whether such locations made sense otherwise.

2. It can be inferred from paragraph 1 that before the reign of George III there were no sources of power that

   Ⓐ were movable
   Ⓑ were widely available
   Ⓒ did not disappear during certain seasons of the year
   Ⓓ could provide continuous power

3. Which of the following best describes the relation of paragraph 2 to paragraph 1?

   Ⓐ Paragraph 2 shows how the problem discussed in paragraph 1 arose.

   Ⓑ Paragraph 2 explains how the problem presented in paragraph 1 came to be solved.

   Ⓒ Paragraph 2 provides a more technical discussion of the problem introduced in paragraph 1.

   Ⓓ Paragraph 2 shows why the problem discussed in paragraph 1 was especially important to solve.

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

   Ⓐ utilized
   Ⓑ recognized
   Ⓒ examined
   Ⓓ fully understood

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

   Ⓐ quickly
   Ⓑ ultimately
   Ⓒ greatly
   Ⓓ initially

6. According to paragraph 2, the "atmospheric engine" was slow because

Ⓐ it had been designed to be used in coal mines
Ⓑ the cylinder had to cool between each stroke
Ⓒ it made use of expanding steam to raise the piston in its cylinder
Ⓓ it could be operated only when a large supply of fuel was available

7. According to paragraph 2, Watt's steam engine differed from earlier steam engines in each of the following ways EXCEPT:

Ⓐ It used steam to move a piston in a cylinder.
Ⓑ It worked with greater speed.
Ⓒ It was more efficient in its use of fuel.
Ⓓ It could be used in many different ways.

PARAGRAPH 3

Watt's steam engine soon showed what it could do. It liberated industry from dependence on running water. The engine eliminated water in the mines by driving efficient pumps, which made possible deeper and deeper mining. The ready availability of coal inspired William Murdoch during the 1790s to develop the first new form of nighttime illumination to be discovered in a millennium and a half. Coal gas rivaled smoky oil lamps and flickering candles, and early in the new century, well-to-do Londoners grew accustomed to gaslit houses and even streets. Iron manufacturers, which had starved for fuel while depending on charcoal, also benefited from ever-increasing supplies of coal; blast furnaces with steam-powered bellows turned out more iron and steel for the new machinery. Steam became the motive force of the Industrial Revolution, as coal and iron ore were the raw materials.

8. In paragraph 3, the author mentions William Murdoch's invention of a new form of nighttime illumination in order to

Ⓐ indicate one of the important developments made possible by the introduction of Watt's steam engine
Ⓑ make the point that Watt's steam engine was not the only invention of importance to the Industrial Revolution
Ⓒ illustrate how important coal was as a raw material for the Industrial Revolution
Ⓓ provide an example of another eighteenth-century invention that used steam as a power source

9. The phrase "grew accustomed to" in the passage is closest in meaning to

Ⓐ began to prefer
Ⓑ wanted to have
Ⓒ became used to
Ⓓ insisted on

PARAGRAPH 4

By 1800 more than a thousand steam engines were in use in the British Isles, and Britain retained a virtual monopoly on steam engine production until the 1830s. Steam power did not merely spin cotton and roll iron; early in the new century, it also multiplied ten times over the amount of paper that a single worker could produce in a day. At the same time, operators of the first printing presses run by steam rather than by hand found it possible to produce a thousand pages in an hour rather than thirty. Steam also promised to eliminate a transportation problem not fully solved by either canal boats or turnpikes. Boats could carry heavy weights, but canals could not cross hilly terrain; turnpikes could cross the hills, but the roadbeds could not stand up under great weights. These problems needed still another solution, and the ingredients for it lay close at hand. In some industrial regions, heavily laden wagons, with flanged wheels, were being hauled by horses along metal rails; and the stationary steam engine was puffing in the factory and mine. Another generation passed before inventors succeeded in combining these ingredients, by putting the engine on wheels and the wheels on the rails, so as to provide a machine to take the place of the horse. Thus the railroad age sprang from what had already happened in the eighteenth century.

10. The word "retained" in the passage is closest in meaning to

Ⓐ gained
Ⓑ established
Ⓒ profited from
Ⓓ maintained

11. According to paragraph 4, which of the following statements about steam engines is true?

Ⓐ They were used for the production of paper but not for printing.
Ⓑ By 1800, significant numbers of them were produced outside of Britain.
Ⓒ They were used in factories before they were used to power trains.
Ⓓ They were used in the construction of canals and turnpikes.

12. According to paragraph 4, providing a machine to take the place of the horse involved combining which two previously separate ingredients?

Ⓐ Turnpikes and canals
Ⓑ Stationary steam engines and wagons with flanged wheels
Ⓒ Metal rails in roadbeds and wagons capable of carrying heavy loads
Ⓓ Canal boats and heavily laden wagons

PARAGRAPH 3

■ Watt's steam engine soon showed what it could do. ■ It liberated industry from dependence on running water. ■ The engine eliminated water in the mines by driving efficient pumps, which made possible deeper and deeper mining. ■ The ready availability of coal inspired William Murdoch during the 1790s to develop the first new form of nighttime illumination to be discovered in a millennium and a half. Coal gas rivaled smoky oil lamps and flickering candles, and early in the new century, well-to-do Londoners grew accustomed to gaslit houses and even streets. Iron manufacturers, which had starved for fuel while depending on charcoal, also benefited from ever-increasing supplies of coal; blast furnaces with steam-powered bellows turned out more iron and steel for the new machinery. Steam became the motive force of the Industrial Revolution, as coal and iron ore were the raw materials.

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

The factories did not have to go to the streams when power could come to the factories.

Where would the sentence best fit?

Ⓐ **The factories did not have to go to the streams when power could come to the factories.** Watt's steam engine soon showed what it could do. ■ It liberated industry from dependence on running water. ■ The engine eliminated water in the mines by driving efficient pumps, which made possible deeper and deeper mining. ■ The ready availability of coal inspired William Murdoch during the 1790s to develop the first new form of nighttime illumination to be discovered in a millennium and a half. Coal gas rivaled smoky oil lamps and flickering candles, and early in the new century, well-to-do Londoners grew accustomed to gaslit houses and even streets. Iron manufacturers, which had starved for fuel while depending on charcoal, also benefited from ever-increasing supplies of coal; blast furnaces with steam-powered bellows turned out more iron and steel for the new machinery. Steam became the motive force of the Industrial Revolution, as coal and iron ore were the raw materials.

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Ⓓ ■ Watt's steam engine soon showed what it could do. ■ It liberated industry from dependence on running water. ■ The engine eliminated water in the mines by driving efficient pumps, which made possible deeper and deeper mining. **The factories did not have to go to the streams when power could come to the factories.** The ready availability of coal inspired William Murdoch during the 1790s to develop the first new form of nighttime illumination to be discovered in a millennium and a half. Coal gas rivaled smoky oil lamps and flickering candles, and early in the new century, well-to-do Londoners grew accustomed to gaslit houses and even streets. Iron manufacturers, which had starved for fuel while depending on charcoal, also benefited from ever-increasing supplies of coal; blast furnaces with steam-powered bellows turned out more iron and steel for the new machinery. Steam became the motive force of the Industrial Revolution, as coal and iron ore were the raw materials.

14. **Directions:** An introductory sentence for a brief summary of the passage is provided on the next page. Complete the summary by selecting the THREE answer choices that express the most important ideas in the passage. Some sentences do not belong in the summary because they express ideas that are not presented in the passage or are minor ideas in the passage.

    Write your answer choices in the spaces where they belong. You can either write the letter of your answer choice or you can copy the sentence.

The Industrial Revolution would not have been possible without a new source of power that was efficient, movable, and continuously available.

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Answer Choices

A In the early eighteenth century, Savery and Newcomen discovered that expanding steam could be used to raise a piston in a cylinder.
B In the mid-1700s, James Watt transformed an inefficient steam pump into a fast, flexible, fuel-efficient engine.
C Watt's steam engine played a leading role in greatly increasing industrial production of all kinds.
D In the 1790s, William Murdoch developed a new way of lighting houses and streets using coal gas.
E Until the 1830s, Britain was the world's major producer of steam engines.
F The availability of steam engines was a major factor in the development of railroads, which solved a major transportation problem.

Directions: Read the passage. Then answer the questions. Give yourself 20 minutes to complete this practice set.

WILLIAM SMITH

In 1769 in a little town in Oxfordshire, England, a child with the very ordinary name of William Smith was born into the poor family of a village blacksmith. He received rudimentary village schooling, but mostly he roamed his uncle's farm collecting the fossils that were so abundant in the rocks of the Cotswold hills. When he grew older, William Smith taught himself surveying from books he bought with his small savings, and at the age of eighteen he was apprenticed to a surveyor of the local parish. He then proceeded to teach himself geology, and when he was twenty-four, he went to work for the company that was excavating the Somerset Coal Canal in the south of England.

This was before the steam locomotive, and canal building was at its height. The companies building the canals to transport coal needed surveyors to help them find the coal deposits worth mining as well as to determine the best courses for the canals. This job gave Smith an opportunity to study the fresh rock outcrops created by the newly dug canal. He later worked on similar jobs across the length and breadth of England, all the while studying the newly revealed strata and collecting all the fossils he could find. Smith used mail coaches to travel as much as 10,000 miles per year. In 1815 he published the first modern geological map, "A Map of the Strata of England and Wales with a Part of Scotland," a map so meticulously researched that it can still be used today.

In 1831 when Smith was finally recognized by the Geological Society of London as the "father of English geology," it was not only for his maps but also for something even more important. Ever since people had begun to catalog the strata in particular outcrops, there had been the hope that these could somehow be used to calculate geological time. But as more and more accumulations of strata were cataloged in more and more places, it became clear that the sequences of rocks sometimes differed from region to region and that no rock type was ever going to become a reliable time marker throughout the world. Even without the problem of regional differences, rocks present a difficulty as unique time markers. Quartz is quartz—a silicon ion surrounded by four oxygen ions—there's no difference at all between two-million-year-old Pleistocene quartz and Cambrian quartz created over 500 million years ago.

As he collected fossils from strata throughout England, Smith began to see that the fossils told a different story from the rocks. Particularly in the younger strata, the rocks were often so similar that he had trouble distinguishing the strata, but he never had trouble telling the fossils apart. While rock between two consistent strata might in one place be shale and in another sandstone, the fossils in that shale or sandstone were always the same. Some fossils endured through so many millions of years that they appear in many strata, but others occur only in a few strata, and a few species had their births and extinctions within one particular stratum. Fossils are thus identifying markers for particular periods in Earth's history.

Not only could Smith identify rock strata by the fossils they contained, he could also see a pattern emerging: certain fossils always appear in more ancient sediments, while others begin to be seen as the strata become more recent. By following the fossils, Smith was able to put all the strata of England's earth into relative temporal sequence. About the same time, Georges Cuvier made the same discovery while studying the rocks around Paris. Soon it was realized that this principal of faunal (animal) succession was valid not only in England or France but virtually everywhere. It was actually a principle of floral succession as well, because plants showed the same transformation through time as did fauna. Limestone may be found in the Cambrian or—300 million years later—in the Jurassic strata, but a trilobite—the ubiquitous marine arthropod that had its birth in the Cambrian—will never be found in Jurassic strata, nor a dinosaur in the Cambrian.

Directions: Now answer the questions.

PARAGRAPH 1

In 1769 in a little town in Oxfordshire, England, a child with the very ordinary name of William Smith was born into the poor family of a village blacksmith. He received rudimentary village schooling, but mostly he roamed his uncle's farm collecting the fossils that were so abundant in the rocks of the Cotswold hills. When he grew older, William Smith taught himself surveying from books he bought with his small savings, and at the age of eighteen he was apprenticed to a surveyor of the local parish. He then proceeded to teach himself geology, and when he was twenty-four, he went to work for the company that was excavating the Somerset Coal Canal in the south of England.

15. The word "rudimentary" in the passage is closest in meaning to

Ⓐ thorough
Ⓑ strict
Ⓒ basic
Ⓓ occasional

16. According to paragraph 1, which of the following statements about William Smith is NOT true?

Ⓐ Smith learned surveying by reading and by apprenticing for a local surveyor.
Ⓑ Smith's family lived in a small English town and possessed little wealth.
Ⓒ Smith learned about fossils from books he borrowed from his uncle.
Ⓓ Smith eventually left his village to work on the excavation of an English canal.

PARAGRAPH 2

This was before the steam locomotive, and canal building was at its height. The companies building the canals to transport coal needed surveyors to help them find the coal deposits worth mining as well as to determine the best courses for the canals. This job gave Smith an opportunity to study the fresh rock outcrops created by the newly dug canal. He later worked on similar jobs across the length and breadth of England, all the while studying the newly revealed strata and collecting all the fossils he could find. Smith used mail coaches to travel as much as 10,000 miles per year. In 1815 he published the first modern geological map, "A Map of the Strata of England and Wales with a Part of Scotland," a map so meticulously researched that it can still be used today.

17. Which of the following can be inferred from paragraph 2 about canal building?
   Ⓐ Canals were built primarily in the south of England rather than in other regions.
   Ⓑ Canal building decreased after the steam locomotive was invented.
   Ⓒ Canal building made it difficult to study rock strata which often became damaged in the process.
   Ⓓ Canal builders hired surveyors like Smith to examine exposed rock strata.

18. According to paragraph 2, which of the following is true of the map published by William Smith?
   Ⓐ It indicates the locations of England's major canals.
   Ⓑ It became most valuable when the steam locomotive made rail travel possible.
   Ⓒ The data for the map were collected during Smith's work on canals.
   Ⓓ It is no longer regarded as a geological masterpiece.

19. The word "meticulously" in the passage is closest in meaning to
   Ⓐ carefully
   Ⓑ quickly
   Ⓒ frequently
   Ⓓ obviously

PARAGRAPH 3

In 1831 when Smith was finally recognized by the Geological Society of London as the "father of English geology," it was not only for his maps but also for something even more important. Ever since people had begun to catalog the strata in particular outcrops, there had been the hope that these could somehow be used to calculate geological time. But as more and more accumulations of strata were cataloged in more and more places, it became clear that the sequences of rocks sometimes differed from region to region and that no rock type was ever going to become a reliable time marker throughout the world. Even without the problem of regional differences, rocks present a difficulty as unique time markers. Quartz is quartz—a silicon ion surrounded by four oxygen ions—there's no difference at all between two-million-year-old Pleistocene quartz and Cambrian quartz created over 500 million years ago.

20. Which of the sentences below best expresses the essential information in the highlighted sentence in paragraph 3? Incorrect choices change the meaning in important ways or leave out essential information.

Ⓐ The discovery of regional differences in the sequences of rocks led geologists to believe that rock types could some day become reliable time markers.

Ⓑ Careful analysis of strata revealed that rocks cannot establish geological time because the pattern of rock layers varies from place to place.

Ⓒ Smith's catalogs of rock strata indicated that the sequences of rocks are different from place to place and from region to region.

Ⓓ Because people did not catalog regional differences in sequences of rocks, it was believed that rocks could never be reliable time markers.

21. Why does the author use the phrase "Quartz is quartz"?

Ⓐ To describe how the differences between Pleistocene and Cambrian quartz reveal information about dating rocks

Ⓑ To point out that the chemical composition of quartz makes it more difficult to date than other rocks

Ⓒ To provide an example of how regional differences in rock sequences can make a particular rock difficult to date

Ⓓ To explain that rocks are difficult to use for dating because their chemical compositions always remain the same over time

PARAGRAPH 4

As he collected fossils from strata throughout England, Smith began to see that the fossils told a different story from the rocks. Particularly in the younger strata, the rocks were often so similar that he had trouble distinguishing the strata, but he never had trouble telling the fossils apart. While rock between two consistent strata might in one place be shale and in another sandstone, the fossils in that shale or sandstone were always the same. Some fossils endured through so many millions of years that they appear in many strata, but others occur only in a few strata, and a few species had their births and extinctions within one particular stratum. Fossils are thus identifying markers for particular periods in Earth's history.

22. According to paragraph 4, it was difficult for Smith to distinguish rock strata because

Ⓐ the rocks from different strata closely resembled each other
Ⓑ he was often unable to find fossils in the younger rock strata
Ⓒ their similarity to each other made it difficult for him to distinguish one rock type from another
Ⓓ the type of rock between two consistent strata was always the same

23. The word "endured" in the passage is closest in meaning to

Ⓐ vanished
Ⓑ developed
Ⓒ varied
Ⓓ survived

PARAGRAPH 5

Not only could Smith identify rock strata by the fossils they contained, he could also see a pattern emerging: certain fossils always appear in more ancient sediments, while others begin to be seen as the strata become more recent. By following the fossils, Smith was able to put all the strata of England's earth into relative temporal sequence. About the same time, Georges Cuvier made the same discovery while studying the rocks around Paris. Soon it was realized that this principal of faunal (animal) succession was valid not only in England or France but virtually everywhere. It was actually a principle of floral succession as well, because plants showed the same transformation through time as did fauna. Limestone may be found in the Cambrian or—300 million years later—in the Jurassic strata, but a trilobite—the ubiquitous marine arthropod that had its birth in the Cambrian—will never be found in Jurassic strata, nor a dinosaur in the Cambrian.

24. The word "virtually" in the passage is closest in meaning to

Ⓐ possibly
Ⓑ absolutely
Ⓒ surprisingly
Ⓓ nearly

25. Select the TWO answer choices that are true statements based upon the discussion of the principle of faunal succession in paragraph 5. To receive credit, you must select TWO answers.

[A] It was a principle that applied to fauna but not to flora.
[B] It was discovered independently by two different geologists.
[C] It describes how fossils are distributed in rock strata.
[D] It explains why plants and animals undergo transformations through time.

26. In mentioning "trilobite," the author is making which of the following points?

Ⓐ Fossils cannot be found in more than one rock stratum.
Ⓑ Faunal succession can help put rock layers in relative temporal sequence.
Ⓒ Faunal succession cannot be applied to different strata composed of the same kind of rock.
Ⓓ The presence of trilobite fossils makes it difficult to date a rock.

PARAGRAPH 5

Not only could Smith identify rock strata by the fossils they contained, he could also see a pattern emerging: certain fossils always appear in more ancient sediments, while others begin to be seen as the strata become more recent. ■ By following the fossils, Smith was able to put all the strata of England's earth into relative temporal sequence. ■ About the same time, Georges Cuvier made the same discovery while studying the rocks around Paris. ■ Soon it was realized that this principal of faunal (animal) succession was valid not only in England or France but virtually everywhere. ■ It was actually a principle of floral succession as well, because plants showed the same transformation through time as did fauna. Limestone may be found in the Cambrian or—300 million years later—in the Jurassic strata, but a trilobite—the ubiquitous marine arthropod that had its birth in the Cambrian—will never be found in Jurassic strata, nor a dinosaur in the Cambrian.

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

The findings of these geologists inspired others to examine the rock and fossil records in different parts of the world.

Where would the sentence best fit?

Ⓐ Not only could Smith identify rock strata by the fossils they contained, he could also see a pattern emerging: certain fossils always appear in more ancient sediments, while others begin to be seen as the strata become more recent. **The findings of these geologists inspired others to examine the rock and fossil records in different parts of the world.** By following the fossils, Smith was able to put all the strata of England's earth into relative temporal sequence. ■ About the same time, Georges Cuvier made the same discovery while studying the rocks around Paris. ■ Soon it was realized that this principal of faunal (animal) succession was valid not only in England or France but virtually everywhere. ■ It was actually a principle of floral

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

Write your answer choices in the spaces where they belong. You can either write the letter of your answer choice or you can copy the sentence.

William Smith's contributions to geology have increased our knowledge of the Earth's history.

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Answer Choices

A Smith found success easily in his profession because he came from a family of geologists and surveyors.

B Smith's work on canals allowed him to collect fossils and study rock layers all over England.

C Smith found that fossils are much more reliable indicators of geological time than rock strata are.

D Smith was named "the father of English geology" for his maps rather than for his other contributions to the field.

E Smith and Cuvier discovered that fossil patterns are easier to observe in ancient rock strata than in younger rock strata.

F The discovery of the principle of faunal succession allowed geologists to establish the relative age of Earth's rock layers.

Directions: Read the passage. Then answer the questions. Give yourself 20 minutes to complete this practice set.

INFANTILE AMNESIA

What do you remember about your life before you were three? Few people can remember anything that happened to them in their early years. Adults' memories of the next few years also tend to be scanty. Most people remember only a few events—usually ones that were meaningful and distinctive, such as being hospitalized or a sibling's birth.

How might this inability to recall early experiences be explained? The sheer passage of time does not account for it; adults have excellent recognition of pictures of people who attended high school with them 35 years earlier. Another seemingly plausible explanation—that infants do not form enduring memories at this point in development—also is incorrect. Children two and a half to three years old remember experiences that occurred in their first year, and eleven month olds remember some events a year later. Nor does the hypothesis that infantile amnesia reflects repression—or holding back—of sexually charged episodes explain the phenomenon. While such repression may occur, people cannot remember ordinary events from the infant and toddler periods, either.

Three other explanations seem more promising. One involves physiological changes relevant to memory. Maturation of the frontal lobes of the brain continues throughout early childhood, and this part of the brain may be critical for remembering particular episodes in ways that can be retrieved later. Demonstrations of infants' and toddlers' long-term memory have involved their repeating motor activities that they had seen or done earlier, such as reaching in the dark for objects, putting a bottle in a doll's mouth, or pulling apart two pieces of a toy. The brain's level of physiological maturation may support these types of memories, but not ones requiring explicit verbal descriptions.

A second explanation involves the influence of the social world on children's language use. Hearing and telling stories about events may help children store information in ways that will endure into later childhood and adulthood. Through hearing stories with a clear beginning, middle, and ending, children may learn to extract the gist of events in ways that they will be able to describe many years later. Consistent with this view, parents and children increasingly engage in discussions of past events when children are about three years old. However, hearing such stories is not sufficient for younger children to form enduring memories. Telling such stories to two year olds does not seem to produce long-lasting verbalizable memories.

A third likely explanation for infantile amnesia involves incompatibilities between the ways in which infants encode[1] information and the ways in which older children and adults retrieve it. Whether people can remember an event depends critically on the fit between the way in which they earlier encoded the information and the way in which they later attempt to retrieve it. The better able the person is to reconstruct the perspective from which the material was encoded, the more likely that recall will be successful.

This view is supported by a variety of factors that can create mismatches between very young children's encoding and older children's and adults' retrieval efforts. The world looks very different to a person whose head is only two or three feet above the ground than to one whose head is five or six feet above it. Older children and adults often try to retrieve the names of things they saw, but infants would not have encoded the information verbally. General knowledge of categories of events such as a birthday party or a visit to the doctor's office helps older individuals encode their experiences, but again, infants and toddlers are unlikely to encode many experiences within such knowledge structures.

These three explanations of infantile amnesia are not mutually exclusive; indeed, they support each other. Physiological immaturity may be part of why infants and toddlers do not form extremely enduring memories, even when they hear stories that promote such remembering in preschoolers. Hearing the stories may lead preschoolers to encode aspects of events that allow them to form memories they can access as adults. Conversely, improved encoding of what they hear may help them better understand and remember stories and thus make the stories more useful for remembering future events. Thus, all three explanations—physiological maturation, hearing and producing stories about past events, and improved encoding of key aspects of events—seem likely to be involved in overcoming infantile amnesia.

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1. **encode:** transfer information from one system of communication into another

Directions: Now answer the questions.

PARAGRAPH 2

How might this inability to recall early experiences be explained? The sheer passage of time does not account for it; adults have excellent recognition of pictures of people who attended high school with them 35 years earlier. Another seemingly plausible explanation—that infants do not form enduring memories at this point in development—also is incorrect. Children two and a half to three years old remember experiences that occurred in their first year, and eleven month olds remember some events a year later. Nor does the hypothesis that infantile amnesia reflects repression—or holding back—of sexually charged episodes explain the phenomenon. While such repression may occur, people cannot remember ordinary events from the infant and toddler periods, either.

29. What purpose does paragraph 2 serve in the larger discussion of children's inability to recall early experiences?

Ⓐ To argue that theories that are not substantiated by evidence should generally be considered unreliable
Ⓑ To argue that the hypotheses mentioned in paragraph 2 have been more thoroughly researched than have the theories mentioned later in the passage
Ⓒ To explain why some theories about infantile amnesia are wrong before presenting ones more likely to be true
Ⓓ To explain why infantile amnesia is of great interest to researchers

30. The "plausible" in the passage is closest in meaning to

Ⓐ flexible
Ⓑ believable
Ⓒ debatable
Ⓓ predictable

31. The word "phenomenon" in the passage is closest in meaning to

Ⓐ exception
Ⓑ repetition
Ⓒ occurrence
Ⓓ idea

32. All of the following theories about the inability to recall early experiences are rejected in paragraph 2 EXCEPT:

Ⓐ The ability to recall an event decreases as the time after the event increases.
Ⓑ Young children are not capable of forming memories that last for more than a short time.
Ⓒ People may hold back sexually meaningful memories.
Ⓓ Most events in childhood are too ordinary to be worth remembering.

PARAGRAPH 3

Three other explanations seem more promising. One involves physiological changes relevant to memory. Maturation of the frontal lobes of the brain continues throughout early childhood, and this part of the brain may be critical for remembering particular episodes in ways that can be retrieved later. Demonstrations of infants' and toddlers' long-term memory have involved their repeating motor activities that they had seen or done earlier, such as reaching in the dark for objects, putting a bottle in a doll's mouth, or pulling apart two pieces of a toy. The brain's level of physiological maturation may support these types of memories, but not ones requiring explicit verbal descriptions.

33. What does paragraph 3 suggest about long-term memory in children?

Ⓐ Maturation of the frontal lobes of the brain is important for the long-term memory of motor activities but not verbal descriptions.
Ⓑ Young children may form long-term memories of actions they see earlier than of things they hear or are told.
Ⓒ Young children have better long-term recall of short verbal exchanges than of long ones.
Ⓓ Children's long-term recall of motor activities increases when such activities are accompanied by explicit verbal descriptions.

PARAGRAPH 4

A second explanation involves the influence of the social world on children's language use. Hearing and telling stories about events may help children store information in ways that will endure into later childhood and adulthood. Through hearing stories with a clear beginning, middle, and ending, children may learn to extract the gist of events in ways that they will be able to describe many years later. Consistent with this view, parents and children increasingly engage in discussions of past events when children are about three years old. However, hearing such stories is not sufficient for younger children to form enduring memories. Telling such stories to two year olds does not seem to produce long-lasting verbalizable memories.

34. According to paragraph 4, what role may storytelling play in forming childhood memories?

Ⓐ It may encourage the physiological maturing of the brain.
Ⓑ It may help preschool children tell the difference between ordinary and unusual memories.
Ⓒ It may help preschool children retrieve memories quickly.
Ⓓ It may provide an ordered structure that facilitates memory retrieval.

PARAGRAPHS 5 & 6

A third likely explanation for infantile amnesia involves incompatibilities between the ways in which infants encode[1] information and the ways in which older children and adults retrieve it. Whether people can remember an event depends critically on the fit between the way in which they earlier encoded the information and the way in which they later attempt to retrieve it. The better able the person is to reconstruct the perspective from which the material was encoded, the more likely that recall will be successful.

This view is supported by a variety of factors that can create mismatches between very young children's encoding and older children's and adults' retrieval efforts. The world looks very different to a person whose head is only two or three feet above the ground than to one whose head is five or six feet above it. Older children and adults often try to retrieve the names of things they saw, but infants would not have encoded the information verbally. General knowledge of categories of events such as a birthday party or a visit to the doctor's office helps older individuals encode their experiences, but again, infants and toddlers are unlikely to encode many experiences within such knowledge structures.

35. The word "critically" in the passage is closest in meaning to

Ⓐ fundamentally
Ⓑ partially
Ⓒ consistently
Ⓓ subsequently

36. The word "perspective" in the passage is closest in meaning to

Ⓐ system
Ⓑ theory
Ⓒ source
Ⓓ viewpoint

37. The phrase "This view" in the passage refers to the belief that

Ⓐ the ability to retrieve a memory partly depends on the similarity between the encoding and retrieving process
Ⓑ the process of encoding information is less complex for adults than it is for young adults and infants
Ⓒ infants and older children are equally dependent on discussion of past events for the retrieval of information
Ⓓ infants encode information in the same way older children and adults do

38. According to paragraphs 5 and 6, one disadvantage very young children face in processing information is that they cannot

Ⓐ process a lot of information at one time
Ⓑ organize experiences according to type
Ⓒ block out interruptions
Ⓓ interpret the tone of adult language

PARAGRAPH 7

These three explanations of infantile amnesia are not mutually exclusive; indeed, they support each other. Physiological immaturity may be part of why infants and toddlers do not form extremely enduring memories, even when they hear stories that promote such remembering in preschoolers. Hearing the stories may lead preschoolers to encode aspects of events that allow them to form memories they can access as adults. Conversely, improved encoding of what they hear may help them better understand and remember stories and thus make the stories more useful for remembering future events. Thus, all three explanations—physiological maturation, hearing and producing stories about past events, and improved encoding of key aspects of events—seem likely to be involved in overcoming infantile amnesia.

39. Which of the sentences below best expresses the essential information in the highlighted sentence in paragraph 7? Incorrect choices change the meaning in important ways or leave out essential information.

Ⓐ Incomplete physiological development may partly explain why hearing stories does not improve long-term memory in infants and toddlers.
Ⓑ One reason why preschoolers fail to comprehend the stories they hear is that they are physiologically immature.
Ⓒ Given the chance to hear stories, infants and toddlers may form enduring memories despite physiological immaturity.
Ⓓ Physiologically mature children seem to have no difficulty remembering stories they heard as preschoolers.

40. How does paragraph 7 relate to the earlier discussion of infantile amnesia?

Ⓐ It introduces a new theory about the causes of infantile amnesia.
Ⓑ It argues that particular theories discussed earlier in the passage require further research.
Ⓒ It explains how particular theories discussed earlier in the passage may work in combination.
Ⓓ It evaluates which of the theories discussed earlier is most likely to be true.

PARAGRAPH 1

What do you remember about your life before you were three? ■ Few people can remember anything that happened to them in their early years. ■ Adults' memories of the next few years also tend to be scanty. ■ Most people remember only a few events—usually ones that were meaningful and distinctive, such as being hospitalized or a sibling's birth. ■

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

Other important occasions are school graduations and weddings.

Where would the sentence best fit?

Ⓐ What do you remember about your life before you were three? **Other important occasions are school graduations and weddings.** Few people can remember anything that happened to them in their early years. ■ Adults' memories of the next few years also tend to be scanty. ■ Most people remember only a few events—usually ones that were meaningful and distinctive, such as being hospitalized or a sibling's birth. ■

Ⓑ What do you remember about your life before you were three? ■ Few people can remember anything that happened to them in their early years. **Other important occasions are school graduations and weddings.** Adults' memories of the next few years also tend to be scanty. ■ Most people remember only a few events—usually ones that were meaningful and distinctive, such as being hospitalized or a sibling's birth. ■

Ⓒ What do you remember about your life before you were three? ■ Few people can remember anything that happened to them in their early years. ■ Adults' memories of the next few years also tend to be scanty. **Other important occasions are school graduations and weddings.** Most people remember only a few events—usually ones that were meaningful and distinctive, such as being hospitalized or a sibling's birth. ■

Ⓓ What do you remember about your life before you were three? ■ Few people can remember anything that happened to them in their early years. ■ Adults' memories of the next few years also tend to be scanty. ■ Most people remember only a few events—usually ones that were meaningful and distinctive, such as being hospitalized or a sibling's birth. **Other important occasions are school graduations and weddings.**

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

Write your answer choices in the spaces where they belong. You can either write the letter of your answer choice or you can copy the sentence.

There are several possible explanations why people cannot easily remember their early childhoods.

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Answer Choices

A Preschoolers typically do not recall events from their first year.
B Frontal lobe function of the brain may need to develop before memory retrieval can occur.
C Children recall physical activities more easily if they are verbalized.
D The opportunity to hear chronologically narrated stories may help three-year-old children produce long-lasting memories.
E The content of a memory determines the way in which it is encoded.
F The contrasting ways in which young children and adults process information may determine their relative success in remembering.